European EINECS: All of the ingredients are listed on the EINECS inventory.

Japan: All the components are listed in the Japanese Existing and New Chemical Substances Inventory.

Korea: All the components are listed on the Korean Existing Chemical List.

New Zealand: All the components are listed on the New Zealand Inventory of Chemicals.

Philippines: All the components are listed on the Philippine Inventory of Chemical and Chemical Substances inventory.

US EPA Toxic Substances Control Act: All of the components of this product are listed on the TSCA inventory.

SECTION 16: OTHER INFORMATION

SDS Revision History: Converted to GHS format – all Sections revised
Date of current revision: November 24, 2014
Date of previous revision: July 22, 2013

National Fire Protection Association (U.S.A)

Health: 2
Flammability : 4
Instability: 0
Specific Hazard:

Disclaimer: This product material safety data sheet provides health and safety information. The product should be used in applications consistent with this product literature. For any other uses, exposures should be evaluated so that appropriate handling practices and training programs can be established to ensure safe workplace operations.

This material safety data sheet is provided in good faith and meets the requirements of the hazardous communication provisions of SARA TITLE III and 29 CFR 1910.1200(g) of the OSHA regulations. The above information is based on review of available information Sinclair believes is reliable and is supplied for informational purposes only. Sinclair does not guarantee its completeness or accuracy. Since conditions of use are outside the control of Sinclair, Sinclair disclaims all warranties, express or implied, and any liability for damage or injury which results from the use of the above data. Nothing herein is intended to permit infringement of valid patents and licenses.

SDS 5: Solder Tin 30/70

SAFETY DATA SHEET

9730 Metallpasta

The safety data sheet is in accordance with Commission Regulation (EU) 2015/830 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

SECTION 1: Identification of the substance / mixture and of the company / undertaking

Date issued	15.03.2018

1.1. Product identifier

Product name	9730 Metallpasta

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance / preparation	Metal paste with flux.

1.3. Details of the supplier of the safety data sheet

Company name	Meltolit AB
Postal address	J A Gahms gata 4
Postcode	SE-421 32
City	Västra Frölunda
Country	Sverige
Telephone number	+46 31 7485225
Fax	+46 31 286465
Email	info@meltolit.se
Website	www.meltolit.se

1.4. Emergency telephone number

Emergency telephone	Telephone number: 112 Description: In case of emergency

SECTION 2: Hazards identification

2.1. Classification of substance or mixture

Classification according to Regulation (EC) No 1272/2008 [CLP / GHS]	Skin Corr. 1B; H314 Eye Dam. 1; H318 STOT SE 2; H335

	Aquatic Chronic 3; H412

2.2. Label elements

Hazard pictograms (CLP)

Signal word	Danger
Hazard statements	H314 Causes severe skin burns and eye damage. H335 May cause respiratory irritation. H412 Harmful to aquatic life with long lasting effects.
Precautionary statements	P101 If medical advice is needed, have product container or label at hand. P102 Keep out of reach of children. P103 Read label before use. P280 Wear protective gloves / protective clothing / eye protection / face protection. P303+P361+P353 IF ON SKIN (or hair): Remove / Take off immediately all contaminated clothing. Rinse skin with water / shower. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P310 Immediately call a POISON CENTER or doctor / physician. P403+P233 Store in a well-ventilated place. Keep container tightly closed. P405 Store locked up. P501 Dispose of contents / container to waste central

2.3. Other hazards

PBT / vPvB	Not PBT/vPvB

SECTION 3: Composition / information on ingredients

3.2. Mixtures

Substance	Identification	Classification	Contents
Tin	CAS No.: 7440-31-5 EC No.: 231-141-8		50 -100 %
Zinc chloride	CAS No.: 7646-85-7 EC No.: 231-592-0 Index No.: 030-003-00-2	Acute tox. 4; H302; Skin Corr. 1B; H314; Aquatic Acute 1; H400; M-factor 1; Aquatic Chronic 1; H410; M-factor 1;	< 10 %
Copper	CAS No.: 7440-50-8 EC No.: 231-159-6		< 2,5 %
Substance comments	The full text for all hazard statements is displayed in section 16.		

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation	Fresh air.
Skin contact	Cool skin rapidly with cold water after contact with molten product. Burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Continue flushing during transport to hospital. Gently wash with plenty of soap and water.
Eye contact	Immediately flush with plenty of water for up to 15 minutes. Remove any contact lenses and open eyes wide apart. Get medical attention immediately! Continue flushing during transport to hospital.
Ingestion	Rinse mouth. Drink plenty of water. Get medical attention immediately! DO NOT INDUCE VOMITING!

4.2. Most important symptoms and effects, both acute and delayed

General symptoms and effects	Treat Symptomatically.

4.3. Indication of any immediate medical attention and special treatment needed

Medical treatment	Treat Symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Foam, carbon dioxide or dry powder. Extinguish with water fog. Use fire fighting measures that suit the surrounding fire.

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products	Hydrogen chloride (HCl).

5.3. Advice for firefighters

Personal protective equipment	Use personal protective equipment as required. Wear respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal protection measures	Ventilate well. For personal protection, see section 8.

6.2. Environmental precautions

Environmental precautionary measures	Collect spillage. Do not discharge into drains, water courses or onto the ground. Contact local authorities in case of spillage to drain/aquatic environment.

6.3. Methods and material for containment and cleaning up

Containment	Absorb in vermiculite, dry sand or earth and place into containers. Flush area clean with lots of water. Be aware of potential for surfaces to become slippery.

6.4. Reference to other sections

Other instructions	See section 7, 8 and 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Handling	Avoid contact with skin and eyes. Observe good chemical hygiene practices. When using do not eat, drink or smoke. Wash hands before breaks and before smoking, eating or drinking. Immediately change contaminated clothes.

7.2. Conditions for safe storage, including any incompatibilities

Storage	Keep away from food, drink and animal feeding stuffs. Store above freezing. Store in tightly closed original container.

7.3. Specific end use(s)

Specific use(s)	The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure controls / personal protection

8.1. Control parameters

Substance	Identification	Value	TWA Year
Tin	CAS No.: 7440-31-5	TWA (8h) : 2 mg/m3 **OEL short term value** Value: 4 mg/m3	
Zinc chloride	CAS No.: 7646-85-7	TWA (8h) : 1 mg/m³ **OEL short term value** Value: 2 mg/m³	
Copper	CAS No.: 7440-50-8	TWA (8h) : 1 mg/m3 Source: Dust and mists TWA (8h) : 0,2 mg/m3 Source: Fume **OEL short term value** Value: 2 mg/m3 Source: Dust and mists	

8.2. Exposure controls

Safety signs

Precautionary measures to prevent exposure

Appropriate engineering controls	Well-ventilated area.

Eye / face protection

Eye protection, comments	Wear tight-fitting goggles or face shield.

Hand protection

Suitable gloves type	Nitrile gloves are recommended. EN 374
Thickness of glove material	Value: > 0,4 mm
Hand protection, comments	Wear protective gloves.

Skin protection

Skin protection remark	Wear suitable protective clothing as protection against splashing or contamination.

Respiratory protection

Respiratory protection necessary at	Wear suitable respiratory protection.
Tasks needing respiratory protection	Dust filter P2 (for fine dust).

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Thick, cloudy fluid.
Colour	Grey.
Odour	Characteristic.
Odour limit	Comments: Not determined.
pH	Value: 6,5
Melting point / melting range	Value: 230 -250 °C
Freezing point	Comments: Not determined
Boiling point / boiling range	Comments: Not determined
Flash point	Value: 135 °C
Evaporation rate	Comments: Not determined.
Flammability (solid, gas)	Not relevant.
Explosion limit	Comments: Not explosive
Vapour pressure	Value: 23 hPa Temperature: 20 °C
Vapour density	Comments: Not relevant.
Specific gravity	Comments: No information.
Density	Value: 2,81 g/cm³ Temperature: 20 °C
Bulk density	Comments: Not relevant.
Solubility	Medium: Water Comments: Insoluble in water.

Partition coefficient: n-octanol/water	Comments: Not determined.
Spontaneous combustability	Comments: Not relevant.
Decomposition temperature	Comments: Not determined.
Viscosity	Comments: Not determined
Explosive properties	Not relevant.
Oxidising properties	No information.

9.2. Other information

Physical hazards

Content of VOC	Value: 0 %

Other physical and chemical properties

Comments	No recommendation given.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	There are no known reactivity hazards associated with this product.

10.2. Chemical stability

Stability	Stable under normal temperature conditions and recommended use.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	None.

10.4. Conditions to avoid

Conditions to avoid	Strong oxidising agents.

10.5. Incompatible materials

Materials to avoid	No recommendation given.

10.6. Hazardous decomposition products

Hazardous decomposition products	Irritating gases/vapours/fumes of: Hydrogen chloride (HCl). Ammonia or amines. Chlorine.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	Type of toxicity: Acute Effect tested: LD50

	Route of exposure: Oral Value: 350 mg/kg Species: rat

Other information regarding health hazards

Assessment of acute toxicity, classification	No specific health warnings noted.
Assessment of skin corrosion / irritation, classification	Causes severe skin burns and eye damage.
Assessment of eye damage or irritation, classification	Strongly corrosive. Causes severe burns and serious eye damage. Immediate first aid is imperative.
Assessment of respiratory sensitisation, classification	No specific health warnings noted.
Sensitisation	Not Sensitising.
Mutagenicity	No specific health warnings noted.
Carcinogenicity, other information	No specific health warnings noted.
Assessment of reproductive toxicity, classification	No specific health warnings noted.
Assessment of specific target organ SE, classification	May cause respiratory irritation.
Assessment of specific target organ toxicity RE, classification	No recommendation given.
Assessment of aspiration hazard, classification	No specific health warnings noted.

Symptoms of exposure

In case of ingestion	May have a corrosive effect on the digestive canal.
In case of skin contact	Corrosive to skin.
In case of inhalation	Irritating.
In case of eye contact	Corrosive.

SECTION 12: Ecological information

12.1. Toxicity

Acute aquatic, fish	Toxicity type: Acute Value: 1000 mg/kg Effect dose concentration : EC50 Species: fish
Acute aquatic, algae	Toxicity type: Acute Value: 73 mg/l Effect dose concentration : ERC50 Exposure time: 72 hour(s) Species: alga
Acute aquatic, Daphnia	Toxicity type: Acute

	Value: 33 mg/l Effect dose concentration : EC50 Exposure time: 48 hour(s) Species: daphnia
Ecotoxicity	NOEC(fish)= 100 mg/l, NOEC(daphnia)= 10mg/l, NOEC(algae)= 10mg/l The product contains a substance which may cause long term adverse effects in the environment.

12.2. Persistence and degradability

Persistence and degradability description	No recommendation given.

12.3. Bioaccumulative potential

Bioaccumulative potential	No recommendation given.

12.4. Mobility in soil

Mobility	No recommendation given.

12.5. Results of PBT and vPvB assessment

PBT assessment results	Not Classified as PBT/vPvB by current EU criteria.

12.6. Other adverse effects

Other adverse effects, comments	No recommendation given.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Specify the appropriate methods of disposal	Dispose of waste and residues in accordance with local authority requirements.
EWC waste code	EWC waste code: 060313 solid salts and solutions containing heavy metals Classified as hazardous waste: Yes

SECTION 14: Transport information

Dangerous goods	Yes

14.1. UN number

ADR / RID / ADN	3260
IMDG	3260
ICAO / IATA	3260

14.2. UN proper shipping name

Proper shipping name english ADR / RID / ADN	CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S.
ADR / RID / ADN	CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S.

IMDG	CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S.
ICAO / IATA	CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S.

14.3. Transport hazard class(es)

ADR / RID / ADN	8
Classificaton code ADR / RID / ADN	C2
IMDG	8
ICAO / IATA	8

14.4. Packing group

ADR / RID / ADN	III
IMDG	III
ICAO / IATA	III

14.5. Environmental hazards

Comments	Not relevant.

14.6. Special precautions for user

Special safety precautions for user	Not relevant.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Product name	CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S.
Pollution category	Not relevant.

Additional information

ADR / RID / ADN hazard label	8
IMDG Hazard label	8
ICAO / IATA Hazard label	8

ADR / RID - Other information

Tunnel restriction code	E
Limited quantity	5 kg
Transport category	3
Hazard No.	80
RID other applicable information	80

IMDG / ICAO / IATA Other information

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EmS	F-A, S-B
Limited quantity	1 kg

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations / legislation specific for the substance or mixture

Legislation and regulations	Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, including amendments. Work Environment Authority regulations and guidelines on exposure limits. The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (S.I 2009 No. 716). The Waste (England and Wales) (Amendment) Regulations 2014

15.2. Chemical safety assessment

Chemical safety assessment performed	No

SECTION 16: Other information

Supplier's notes	The information on this data sheet represents our current data and is reliable provided that the product is used under the prescribed conditions and in accordance with the application specified on the packaging and/or in the technical guidance literature. Any other use of the product which involves using the product in combination with any other product or any other process is the responsibility of the user.
List of relevant H-phrases (Section 2 and 3)	H302 Harmful if swallowed. H314 Causes severe skin burns and eye damage. H318 Causes serious eye damage. H335 May cause respiratory irritation. H400 Very toxic to aquatic life. H410 Very toxic to aquatic life with long lasting effects. H412 Harmful to aquatic life with long lasting effects.
Classification according to Regulation (EC) No 1272/2008 [CLP / GHS]	Skin Corr. 1B; H314 Eye Dam. 1; H318 STOT SE 2; H335 Aquatic Chronic 3; H412
Key literature references and sources for data	MSDS supplied by the manufacturer.
Version	1

SDS 6: Solder Leg6

BOLIDEN

Safety Data Sheet

Solder tin with lead (Hafnia, Starli, Starli HQ/X/Refresher, 90Sn, Sn60Pb38Cu2, Sn60Pb38Cu2P, Sn62Pb36Ag2, Sn39Pb60Bi1, Bera Super Tin Solder, Fluks, HK)

Replaces date: 5/7/2018
Revision date: 9/17/2021
Version: 3.0.0

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name: Solder tin with lead (Hafnia, Starli, Starli HQ/X/Refresher, 90Sn, Sn60Pb38Cu2, Sn60Pb38Cu2P, Sn62Pb36Ag2, Sn39Pb60Bi1 , Bera Super Tin Solder, Fluks, HK)

1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended uses: Soldering.

1.3. Details of the supplier of the safety data sheet

Supplier

Company:	Boliden Bergsøe A/S
Address:	Hvissingevej 116
Zip code:	2600
City:	Glostrup
Country:	DENMARK
E-mail:	metal.glostrup@boliden.com
Phone:	+45 43268300

1.4. Emergency Telephone Number

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

CLP-classification: Repr. 1A;H360FD Lact.;H362 STOT RE 1;H372

Most serious harmful effects: May damage fertility. May damage the unborn child. May cause harm to breast-fed children. Causes damage to organs through prolonged or repeated exposure. Prolonged exposure to welding smoke and particles constitutes a risk of developing asthmatic diseases, various respiratory disorders and cancer of the respiratory system. Harmful if vapours from molten metal are inhaled or if the skin comes in contact with molten metal. Prolonged or repeated exposure by skin contact or inhalation of vapours may cause damage to the central nervous system.

2.2. Label elements

H-phrases

The specific provisions on labelling laid down in section 1.3 of Annex I of the CLP Regulation apply to this product.

H360FD	May damage fertility. May damage the unborn child.
H362	May cause harm to breast-fed children.
H372	Causes damage to organs through prolonged or repeated exposure.

Supplemental information

Restricted to professional users.

2.3. Other hazards

PBT/vPvB: No assessment required, as the product contains inorganic matter only.

SECTION 3: Composition/information on ingredients

NEW BOLIDEN

Safety Data Sheet

Solder tin with lead (Hafnia, Starli, Starli HQ/X/Refresher, 90Sn, Sn60Pb38Cu2, Sn60Pb38Cu2P, Sn62Pb36Ag2, Sn39Pb60Bi1, Bera Super Tin Solder, Fluks, HK)

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3.2. Mixtures

Substance	CAS No./ EC No./ REACH Reg. No.	Concentration	Notes	CLP-classification
Lead	7439-92-1 231-100-4 01-2119513221-59-0085	9 - 80%		Repr. 1A;H360FD Lact.;H362 STOT RE 1;H372
Tin	7440-31-5 231-141-8 01-2119486474-28-0024	20 - 95%		
Zinc	7440-66-6 231-175-3 01-2119467174-37-0023	0 - 25%		
Silver, metallic	7440-22-4 231-131-3 01-2119555669-21-0074	0 - 2.5%		
Antimony	7440-36-0 231-146-5 01-2119475609-24-0026	0 - 3%		
Copper	7440-50-8 231-159-6 01-2119480154-42-0184	0 - 2.5%		
Bismuth	7440-69-9 231-177-4	0 - 1.5%		

Please see section 16 for the full text of H- / EUH-phrases..

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation: Seek fresh air. Seek medical advice in case of persistent discomfort.

Ingestion: Wash out mouth thoroughly and drink 1-2 glasses of water in small sips. Seek medical advice in case of persistent discomfort.

Skin contact: Remove contaminated clothing. Wash skin with soap and water. Seek medical advice in case of persistent discomfort.

Eye contact: Flush with water (preferably using eye wash equipment) until irritation subsides. Seek medical advice if symptoms persist.

General: When obtaining medical advice, show the safety data sheet or label.

4.2. Most important symptoms and effects, both acute and delayed

May cause harm to breast-fed children. May damage fertility. May damage the unborn child. Causes damage to organs through prolonged or repeated exposure. Harmful if vapours from molten metal are inhaled or if the skin comes in contact with molten metal. Prolonged or repeated exposure by skin contact or inhalation of vapours may cause damage to the central nervous system. Prolonged exposure to welding smoke and particles constitutes a risk of developing asthmatic diseases, various respiratory disorders and cancer of the respiratory system.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptoms. No special immediate treatment required.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media: The product is not directly flammable. Choose extinguishing agents based on the

NEW BOLIDEN

Safety Data Sheet

Solder tin with lead (Hafnia, Starli, Starli HQ/X/Refresher, 90Sn, Sn60Pb38Cu2, Sn60Pb38Cu2P, Sn62Pb36Ag2, Sn39Pb60Bi1, Bera Super Tin Solder, Fluks, HK)

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surrounding fire.

Unsuitable extinguishing media: Do not use water stream, as it may spread the fire.

5.2. Special hazards arising from the substance or mixture

The product is not directly flammable. Avoid inhalation of vapour and fumes - seek fresh air.

5.3. Advice for firefighters

Move containers from danger area if it can be done without risk. Avoid inhalation of vapour and flue gases - seek fresh air. Wear Self-Contained Breathing Apparatus (SCBA) with a chemical protection suit only where personal (close) contact is likely.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel: Wear safety goggles if there is a risk of eye splash. In case of insufficient ventilation, wear respiratory protective equipment. Wear gloves. Stay upwind/keep distance from source.

For emergency responders: In addition to the above: Protective suit equivalent to EN 368, type 3, is recommended.

6.2. Environmental precautions

Prevent spillage from entering drains and/or surface water.

6.3. Methods and material for containment and cleaning up

Sweep up/collect spills for possible reuse or transfer to suitable waste containers.

6.4. Reference to other sections

See section 8 for type of protective equipment. See section 13 for instructions on disposal.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Work under effective process ventilation (e.g. local exhaust ventilation). Running water and eye wash equipment must be available. Wash hands before breaks, before using restroom facilities, and at the end of work. A workplace assessment must be conducted to ensure that employees are not exposed to effects that may involve a risk during pregnancy. A workplace assessment must be conducted to ensure that employees are not exposed to effects that may involve a risk when breastfeeding.

7.2. Conditions for safe storage, including any incompatibilities

Store safely, out of reach of children and away from food, animal feeding stuffs, medicines, etc. Store in a cool, dry place. Do not store with the following: Acids/ Alkalis/ Strong oxidisers/ Chlorine-containing compounds/ Chlorine

7.3. Specific end use(s)

None.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limit

Substance name	Time period	ppm	mg/m³	fiber/cm3	Comments	Remarks
Lead	-		0.15			

NEW BOLIDEN

Safety Data Sheet

Solder tin with lead (Hafnia, Starli, Starli HQ/X/Refresher, 90Sn, Sn60Pb38Cu2, Sn60Pb38Cu2P, Sn62Pb36Ag2, Sn39Pb60Bi1, Bera Super Tin Solder, Fluks, HK)

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Measuring methods: Compliance with occupational exposure limits may be checked by occupational hygiene measurements.

Legal basis: Commission Directive 2000/39/EC (Occupational Exposure Limits) as subsequently amended. Last amended by Commission Directive 2019/1831/EU. Directive 2004/37/EC (Exposure to carcinogens or mutagens at work) as subsequently amended. Last amended by Directive 2019/983/EU.

PNEC

Lead, cas-no 7439-92-1				
Exposure	Value	Assessment Factor	Extrapolation Method	Note
PNEC aqua (freshwater)	2,4 µg/l			
PNEC aqua (marine water)	3,3 µg/l			
PNEC sediment (freshwater)	49,7 - 186 mg/kg dw			
PNEC sediment (marine water)	168 mg/kg dw			
PNEC STP (wastewater-treatment facilities)	0,1 mg/l			
Zinc, cas-no 7440-66-6				
Exposure	Value	Assessment Factor	Extrapolation Method	Note
PNEC sediment (freshwater)	117,8 mg/kg dw			
PNEC sediment (marine water)	56,5 mg/kg dw			
PNEC soil	35,6 mg/kg dw			
	52 µg/l			
PNEC aqua (freshwater)	20,6 µg/l			
PNEC aqua (marine water)	6,1 µg/l			
Antimony, cas-no 7440-36-0				
Exposure	Value	Assessment Factor	Extrapolation Method	Note
PNEC aqua (freshwater)	0,113 µg/l			
PNEC aqua (marine water)	0,0113 µg/l			
PNEC sediment (freshwater)	7,8 mg/kg dw			
PNEC sediment (marine water)	1,56 mg/kg dw			
PNEC soil	37 mg/kg dw			
PNEC STP (wastewater-treatment facilities)	2,55 g/l			
Silver, metallic, cas-no 7440-22-4				
Exposure	Value	Assessment Factor	Extrapolation Method	Note
PNEC aqua (freshwater)	0,04 µg/l			
PNEC aqua (marine water)	0,86 µg/l			
PNEC sediment (freshwater)	438 mg/kg			
PNEC sediment (marine water)	438 mg/kg			
PNEC soil	0,794 mg/kg			

NEW BOLIDEN

Safety Data Sheet

Solder tin with lead (Hafnia, Starli, Starli HQ/X/Refresher, 90Sn, Sn60Pb38Cu2, Sn60Pb38Cu2P, Sn62Pb36Ag2, Sn39Pb60Bi1, Bera Super Tin Solder, Fluks, HK)

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PNEC STP (wastewater-treatment facilities)	0,025 mg/l			

Copper, cas-no 7440-50-8				
Exposure	Value	Assessment Factor	Extrapolation Method	Note
PNEC aqua (freshwater)	7,8 µg/l			
PNEC aqua (marine water)	5,2 µg/l			
PNEC sediment (freshwater)	87 mg/kg dw			
PNEC sediment	288 mg/kg dw			
PNEC sediment (marine water)	676 mg/kg dw			
PNEC soil	65,5 mg/kg dw			
PNEC STP (wastewater-treatment facilities)	230 g/l			

Bismuth, cas-no 7440-69-9				
Exposure	Value	Assessment Factor	Extrapolation Method	Note
PNEC STP (wastewater-treatment facilities)	17,5 mg/l			

DNEL - workers

Zinc, cas-no 7440-66-6					
Exposure	Value	Assessment Factor	Dose Descriptor	Main Impact Parameter	Note
Oral DNEL (long-term exposure - systemic effects)	50 mg/kg bw/day				
Dermal DNEL (long-term exposure - systemic effects)	5000 mg/kg bw/day				
Inhalation DNEL (long-term exposure - systemic effects)	5 mg/kg bw/day				

Antimony, cas-no 7440-36-0					
Exposure	Value	Assessment Factor	Dose Descriptor	Main Impact Parameter	Note
Dermal DNEL (long-term exposure - systemic effects)	281 mg/kg bw/day				
Inhalation DNEL (long-term exposure - local effects)	0,5 mg/m³				

Silver, metallic, cas-no 7440-22-4					
Exposure	Value	Assessment Factor	Dose Descriptor	Main Impact Parameter	Note
Inhalation DNEL (long-term exposure - systemic effects)	0,1 mg/kg bw/day				
Oral DNEL (long-term exposure - systemic effects)	0,12 mg/kg bw/day				

Copper, cas-no 7440-50-8					
Exposure	Value	Assessment Factor	Dose Descriptor	Main Impact Parameter	Note

NEW BOLIDEN

Safety Data Sheet

Solder tin with lead (Hafnia, Starli, Starli HQ/X/Refresher, 90Sn, Sn60Pb38Cu2, Sn60Pb38Cu2P, Sn62Pb36Ag2, Sn39Pb60Bi1, Bera Super Tin Solder, Fluks, HK)

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Dermal DNEL (long-term exposure - systemic effects)	0,041 mg/kg bw/day				
Inhalation DNEL (long-term exposure - systemic effects)	0,041 mg/kg bw/day				
Oral DNEL (long-term exposure - systemic effects)	0,041 mg/kg bw/day				
Dermal DMEL (acute/short-term exposure - systemic effects)	0,082 mg/kg bw/day				
Inhalation DNEL (acute/short-term exposure - systemic effects)	0,082 mg/kg bw/day				
Oral DMEL (acute/short-term exposure - systemic effects)	0,082 mg/kg bw/day				
Bismuth, cas-no 7440-69-9					
Exposure	Value	Assessment Factor	Dose Descriptor	Main Impact Parameter	Note
Inhalation DNEL (long-term exposure - systemic effects)	13,1 mg/m³				

DNEL - general population

Zinc, cas-no 7440-66-6					
Exposure	Value	Assessment Factor	Dose Descriptor	Main Impact Parameter	Note
Oral DNEL (long-term exposure - systemic effects)	50 mg/kg bw/day				
Dermal DNEL (long-term exposure - systemic effects)	5000 mg/kg bw/day				
Inhalation DNEL (long-term exposure - systemic effects)	2,5 mg/kg bw/day				
Silver, metallic, cas-no 7440-22-4					
Exposure	Value	Assessment Factor	Dose Descriptor	Main Impact Parameter	Note
Inhalation DNEL (long-term exposure - systemic effects)	0,04 mg/kg bw/day				
Oral DNEL (long-term exposure - systemic effects)	0,12 mg/kg bw/day				
Bismuth, cas-no 7440-69-9					
Exposure	Value	Assessment Factor	Dose Descriptor	Main Impact Parameter	Note
Oral DNEL (long-term exposure - systemic effects)	13,3 mg/kg bw/day				

NEW BOLIDEN

Safety Data Sheet

Solder tin with lead (Hafnia, Starli, Starli HQ/X/Refresher, 90Sn, Sn60Pb38Cu2, Sn60Pb38Cu2P, Sn62Pb36Ag2, Sn39Pb60Bi1, Bera Super Tin Solder, Fluks, HK)

Replaces date: 5/7/2018
Revision date: 9/17/2021
Version: 3.0.0

8.2. Exposure controls

Appropriate engineering controls: Wear the personal protective equipment specified below.

Personal protective equipment, eye/face protection: Wear safety goggles if there is a risk of eye splash. Eye protection must conform to EN 166.

Personal protective equipment, skin protection: Wear protective gloves which protect against contact and splashing from molten metal. Gloves must conform to EN 12477.

Personal protective equipment, respiratory protection: In case of heating/use of the product in an area with inadequate ventilation, wear respiratory protection with filter B/P3. Respiratory protection must conform to one of the following standards: EN 136/140/145.

Environmental exposure controls: Ensure compliance with local regulations for emissions.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Parameter	Value/unit
State	Solid substance
Colour	Grey
Odour	Characteristic
Solubility	No data

Parameter	Value/unit	Remarks
Odour threshold	No data	
Melting point	179 - 325 °C	
Freezing point	179 - 325 °C	
Initial boiling point and boiling range	No data	
Flammability (solid, gas)	No data	
Flammability limits	No data	
Explosion limits	No data	
Flash Point	No data	
Auto-ignition temperature	No data	
Decomposition temperature	No data	
pH (solution for use)	No data	
pH (concentrate)	No data	
Kinematic viscosity	No data	
Viscosity	No data	
Partition coefficient n-octonol/water	No data	
Vapour pressure	No data	
Density	No data	
Relative density	8 - 11.1	
Vapour density	No data	
Relative density (sat. air)	No data	
Particle characteristics	No data	

9.2. Other information

Other Information: None.

SECTION 10: Stability and reactivity

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Safety Data Sheet

Solder tin with lead (Hafnia, Starli, Starli HQ/X/Refresher, 90Sn, Sn60Pb38Cu2, Sn60Pb38Cu2P, Sn62Pb36Ag2, Sn39Pb60Bi1, Bera Super Tin Solder, Fluks, HK)

Replaces date: 5/7/2018
Revision date: 9/17/2021
Version: 3.0.0

10.1. Reactivity

Reacts with the following: Strong oxidisers/ Acids/ Alkalis/ Chlorine-containing compounds/ Chlorine

10.2. Chemical stability

The product is stable when used in accordance with the supplier's directions.

10.3. Possibility of hazardous reactions

None known.

10.4. Conditions to avoid

None known.

10.5. Incompatible materials

Strong oxidisers/ Acids/ Alkalis/ Chlorine-containing compounds/ Chlorine

10.6. Hazardous decomposition products

Product decomposes in fire conditions or when heated to high temperatures, and inflammable and toxic gases may be released.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity - oral

Tin, cas-no 7440-31-5

Organism	Test Type	Exposure time	Value	Conclusion	Test method	Source
Rat	LD50		> 2000mg/kg		OECD 423	

Silver, metallic, cas-no 7440-22-4

Organism	Test Type	Exposure time	Value	Conclusion	Test method	Source
Rat	LD50		> 2000mg/kg			

Copper, cas-no 7440-50-8

Organism	Test Type	Exposure time	Value	Conclusion	Test method	Source
Rat	LD50		> 300mg/kg bw			

Bismuth, cas-no 7440-69-9

Organism	Test Type	Exposure time	Value	Conclusion	Test method	Source
Rat	LD50		> 2000mg/kg			

Ingestion may cause discomfort. The product does not have to be classified. Based on existing data, the classification criteria are deemed not to have been met.

Acute toxicity - dermal

Tin, cas-no 7440-31-5

Organism	Test Type	Exposure time	Value	Conclusion	Test method	Source
Rat	LD50		> 2000mg/kg		OECD 402	

The product does not have to be classified. Based on existing data, the classification criteria are deemed not to have been met.

Acute toxicity - inhalation

Tin, cas-no 7440-31-5

Organism	Test Type	Exposure time	Value	Conclusion	Test method	Source
Rat	LD50		> 5mg/l		OECD 403	

NEW BOLIDEN

Safety Data Sheet

Solder tin with lead (Hafnia, Starli, Starli HQ/X/Refresher, 90Sn, Sn60Pb38Cu2, Sn60Pb38Cu2P, Sn62Pb36Ag2, Sn39Pb60Bi1, Bera Super Tin Solder, Fluks, HK)

Replaces date: 5/7/2018
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The product does not have to be classified. Based on existing data, the classification criteria are deemed not to have been met. The product does not release hazardous vapours in metallic form. Metallic oxides which are hazardous to inhale are formed during soldering/welding.

Skin corrosion/irritation

Tin, cas-no 7440-31-5

Organism	Test Type	Exposure time	Value	Conclusion	Test method	Source
Rabbit				Non-irritating		

May cause slight irritation. The product does not have to be classified. Based on existing data, the classification criteria are deemed not to have been met.

Serious eye damage/eye irritation

Tin, cas-no 7440-31-5

Organism	Test Type	Exposure time	Value	Conclusion	Test method	Source
Rabbit				Non-irritating		

May cause eye irritation. The product does not have to be classified. Based on existing data, the classification criteria are deemed not to have been met.

Respiratory sensitisation or skin sensitisation: The product does not have to be classified. Test data are not available.

Germ cell mutagenicity: The product does not have to be classified. Test data are not available.

Carcinogenic properties: The product does not have to be classified. Test data are not available.

Reproductive toxicity: May damage fertility. May damage the unborn child. May cause harm to breast-fed children.

Single STOT exposure: The product does not have to be classified. Test data are not available. Inhalation of smoke from the soldering / welding process may cause irritation to the upper airways. May cause a burning sensation in the nose, mouth and throat, as well as headaches, coughing and discomfort.

Repeated STOT exposure: Causes damage to organs through prolonged or repeated exposure. Prolonged inhalation may cause water in the lungs. Prolonged or repeated exposure by skin contact or inhalation of vapours may cause damage to the central nervous system. Prolonged exposure to welding smoke and particles constitutes a risk of developing asthmatic diseases, various respiratory disorders and cancer of the respiratory system.

Aspiration hazard: The product does not have to be classified. Test data are not available.

11.2. Information on other hazards

Other toxicological effects: None known.

SECTION 12: Ecological information

12.1. Toxicity

Tin, cas-no 7440-31-5

Organism	Species	Exposure time	Test Type	Value	Conclusion	Test method	Source
Fish	Pimephales promelas		96hLC50	> 12.4µg/l		OECD 203	
Crustacea	Daphnia magna		7dEC50	> 3200µg/l			

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Solder tin with lead (Hafnia, Starli, Starli HQ/X/Refresher, 90Sn, Sn60Pb38Cu2, Sn60Pb38Cu2P, Sn62Pb36Ag2, Sn39Pb60Bi1, Bera Super Tin Solder, Fluks, HK)

Replaces date: 5/7/2018
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Algae	Pseudokirchneriella subcapitata		72hEC50	> 19.2µg/l	OECD 201

Antimony, cas-no 7440-36-0

Organism	Species	Exposure time	Test Type	Value	Conclusion	Test method	Source
Fish	Pimephales promelas		96hLC50	14.4mg/l			
Algae	Pseudokirchneriella subcapitata		72hErC50	> 36.6mg/l			
Fish	Pimephales promelas		28dNOEC	1.13 - 2.31mg/l			
Crustacea	Daphnia magna		21dNOEC	1.74 - 3.13mg/l			
Algae	Pseudokirchneriella subcapitata		72hNOEC	2.11 - 4.00mg/l			
Crustacea	Chlorohydra viridissima		96hEC50	1.77mg/l			
Fish	Pagrus major		96hLC50	6.9mg/l			
Algea or other acquatic plants	Lemna minor		4dEC50	> 25.5mg/l			

Silver, metallic, cas-no 7440-22-4

Organism	Species	Exposure time	Test Type	Value	Conclusion	Test method	Source
Fish	Pimephales promelas		96hLC50	1.2mg/l			
Fish	Oncorhynchus mykiss	196 d	EC10	0.17mg/l			
Fish	Pimephales promelas	32 d	EC10	0.44mg/l			
Crustacea	Daphnia magna		48hLC50	0.22mg/l			
Fish	Pimephales promelas	32 d	NOEC	0.351mg/l	Permanent dammage		
Crustacea	Daphnia magna	21 d	EC10	2.14mg/l	Permanent dammage		
Algae	Chlamydomonas reinhardtii	21 d	EC10	0.54mg/l			
Algae	Pseudokirchneriella subcapitata	24 h	EC10	0.41mg/l			
Crustacea	Ceriodaphnia dubia		48hLC50	0.76mg/l			
Crustacea	Ceriodaphnia dubia		EC10	2.48mg/l	Reproduction		
Fish	Salmo trutta	217 d	EC10	0.19mg/l			
Fish	Oncorhynchus mykiss		96hLC50	1.48mg/l			
Fish	Pimephales promelas	32 d	EC10	0.76mg/l	Permanent dammage		
Crustacea	Ceriodaphnia reticulata		NOEC	1mg/l	Reproduction		

NEW BOLIDEN

Safety Data Sheet

Solder tin with lead (Hafnia, Starli, Starli HQ/X/Refresher, 90Sn, Sn60Pb38Cu2, Sn60Pb38Cu2P, Sn62Pb36Ag2, Sn39Pb60Bi1, Bera Super Tin Solder, Fluks, HK)

Replaces date: 5/7/2018 Revision date: 9/17/2021
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Fish	Salmo gairdneri		96hLC50	6.5g/l		Soft water	
Fish	Salmo gairdneri		96hLC50	13mg/l		Hard water	
Fish	Salmo trutta	217 d	EC10	1.23mg/l			

The product does not have to be classified. Based on existing data, the classification criteria are deemed not to have been met.

12.2. Persistence and degradability

The concept of biodegradability is not relevant, as the substance is inorganic.

12.3. Bioaccumulative potential

Tin, cas-no 7440-31-5

Organism	Species	Exposure time	Test Type	Value	Conclusion	Test method	Source
			Log Kd:	2.1 - 4.3			

Antimony, cas-no 7440-36-0

Organism	Species	Exposure time	Test Type	Value	Conclusion	Test method	Source
			Log Kp	2.07			

Test data are not available.

12.4. Mobility in soil

Test data are not available.

12.5. Results of PBT and vPvB assessment

No assessment required, as the product contains inorganic matter only.

12.6. Endocrine disrupting properties

12.7. Other adverse effects

None known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Avoid discharge to drain or surface water.
If this product as supplied becomes a waste, it meets the criteria of a hazardous waste (Dir. 2008/98/EU). Collect spills and waste in closed, leak-proof containers for disposal at the local hazardous waste site.
Empty, cleansed packaging should be disposed of for recycling. Uncleansed packaging is to be disposed of via the local waste-removal scheme.

Category of waste: EWC code: Depends on line of business and use, for instance 06 04 05* wastes containing other heavy metals
Absorbent/cloth contaminated with the product: EWC code: 15 02 02 absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by dangerous substances.

SECTION 14: Transport information

14.1. UN number or ID number: Not applicable.
14.2. UN proper shipping name: Not applicable.
14.3. Transport hazard class(es): Not applicable.
14.4. Packing group: Not applicable.
14.5. Environmental hazards: Not applicable.

NEW BOLIDEN

Safety Data Sheet

Solder tin with lead (Hafnia, Starli, Starli HQ/X/Refresher, 90Sn, Sn60Pb38Cu2, Sn60Pb38Cu2P, Sn62Pb36Ag2, Sn39Pb60Bi1, Bera Super Tin Solder, Fluks, HK)

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14.6. Special precautions for user

None.

14.7. Maritime transport in bulk according to IMO instruments

Not included.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Special Provisions:

Regulation (EU) of the European Parliament and of the Council concerning the export and import of hazardous chemicals.
Special care should be applied for employees under the age of 18. Young people under the age of 18 may not carry out any work causing harmful exposure to this product.

Covered by:
The product is comprised by Regulation 1907/2006/EC, Annex XVII concerning restrictions.

Council Directive (EC) on the protection of young people at work.
Council Directive (EC) on the introduction of measures to encourage improvements in the safety and health at work of pregnant workers and workers who have recently given birth or are breastfeeding.

15.2. Chemical Safety Assessment

REACH Reg. No.	Substance name
01-2119467174-37-0023	Zinc
01-2119475609-24-0026	Antimony
01-2119480154-42-0184	Copper
01-2119486474-28-0024	Tin
01-2119513221-59-0085	Lead
01-2119555669-21-0074	Silver, metallic

SECTION 16: Other information

Version history and indication of changes

Version	Revision date	Responsible	Changes
3.0.0	9/17/2021	Bureau Veritas HSE / MPE	1 - 16

Abbreviations:

STOT: Specific Target Organ Toxicity
PBT: Persistent, Bioaccumulative and Toxic
vPvB: Very Persistent and Very Bioaccumulative
DNEL: Derived No Effect Level
PNEC: Predicted No Effect Concentration

Other Information:

This safety data sheet has been prepared for and applies to this product only. It is based on our current knowledge and the information that the supplier was able to provide about the product at the time of preparation. The safety data sheet complies with applicable law on preparation of safety data sheets in accordance with 1907/2006/EC (REACH) as subsequently changed.

Training advice:

A thorough knowledge of this safety data sheet should be a prerequisite condition.

Classification method:

Calculation based on the hazards of the known components.

List of relevant H-statements

BOLIDEN

Safety Data Sheet

Solder tin with lead (Hafnia, Starli, Starli HQ/X/Refresher, 90Sn, Sn60Pb38Cu2, Sn60Pb38Cu2P, Sn62Pb36Ag2, Sn39Pb60Bi1, Bera Super Tin Solder, Fluks, HK)

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Version. 3.0.0

H360FD	May damage fertility. May damage the unborn child.
H362	May cause harm to breast-fed children.
H372	Causes damage to organs through prolonged or repeated exposure

SDS is prepared by

Company	Bureau Veritas HSE Denmark A/S
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Document language: EU

SDS 7: Cold Asphalt

SAFETY DATA SHEET
Cold Asphalt

The safety data sheet is in accordance with Commission Regulation (EU) 2015/830 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

SECTION 1: Identification of the substance / mixture and of the company / undertaking

Date issued	18.09.2017
Revision date	02.12.2020

1.1. Product identifier

Product name	Cold Asphalt
UFI	4R40-50VK-3007-0GSY
Article no.	10900

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance / preparation	Moisture barrier on building sites and concrete surfaces above and below ground.
Relevant identified uses	SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites SU19 Building and construction work SU21 Consumer uses: Private households (= general public = consumers) PC1 Adhesives, Sealants PC9 Coatings and Paints, Fillers, Putties, Thinners

1.3. Details of the supplier of the safety data sheet

Manufacturer

Company name	Auson AB
Postal address	Verkstadsgatan 3
Postcode	S-434 42
City	KUNGSBACKA
Country	SVERIGE
Telephone number	+46 300-562000
Fax	+46 300-562021
Email	nina.nyth@auson.se
Website	http://www.auson.se/
Contact person	Nina Nyth

Emergency telephone	Telephone number: 112 Description: SOS Alarm

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [CLP / GHS]	Flam. Liq. 3; H226 STOT SE 3; H336 EUH 066
Additional information on classification	See section 16 for explanation of hazard statements (H) listed above.

2.2. Label elements

Hazard pictograms (CLP)

Composition on the label	Naphtha (petroleum), hydrotreated heavy, benzene < 0,1% 35 – 45 %, Oxidized bitumen 55 – 65 %
Signal word	Warning
Hazard statements	H226 Flammable liquid and vapour. H336 May cause drowsiness or dizziness.
Precautionary statements	P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. 261 Avoid breathing vapours. P271 Use only outdoors or in a well-ventilated area. P280 Wear protective gloves. P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor / physician. P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. P403+P235 Store in a well-ventilated place. Keep cool. P501 Dispose of contents at hazardous or special waste collection point.
Supplemental label information	EUH 066 Repeated exposure may cause skin dryness or cracking.
VOC	Product subcategory : Binding primers Relevant VOC limit values: 750 g/l Maximum content of VOC: 364 g/l

2.3. Other hazards

Hazard description, general	Flammable
Other hazards	Not relevant.

SECTION 3: Composition / information on ingredients

3.2. Mixtures

Substance	Identification	Classification	Contents	Notes
Naphtha (petroleum),	CAS No.: 64742-48-9	Flam. Liq. 3; H226	35 – 45 %	1

hydrotreated heavy, benzene < 0,1%	EC No.: 919-857-5 Index No.: 649-327-00-6 REACH Reg. No.: 01-2119463258-33-xxxx	Asp. Tox. 1; H304 STOT SE 3; H336 EUH 066	
Oxidized bitumen	CAS No.: 64742-93-4 EC No.: 265-196-4 REACH Reg. No.: 01-2119498270-36-0027		55 – 65 %

[1]Substance classified with a health or environmental hazard

Remarks, substance	See section 16 for explanation of hazard statements (H) listed above.
Substance comments	H304 is not required on the label due to the product's viscosity.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation	Fresh air and rest.
Skin contact	Wash the skin with water and soap. Remove contaminated clothing. Get medical advice if discomfort develops.
Eye contact	Flush immediately with water for at least 5 minutes. Keep eye wide open while flushing. Get medical attention if any discomfort continues.
Ingestion	Never give anything by mouth to an unconscious person. DO NOT INDUCE VOMITING! Immediately consult a doctor.

4.2. Most important symptoms and effects, both acute and delayed

General symptoms and effects	No further relevant information available.

4.3. Indication of any immediate medical attention and special treatment needed

Specific details on antidotes	No information available.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Dry chemical, foam or carbon dioxide (CO2).
Improper extinguishing media	Do not use a direct water jet that could spread the fire.

5.2. Special hazards arising from the substance or mixture

Fire and explosion hazards	Burning material may cause toxic vapours.

5.3. Advice for firefighters

Personal protective equipment	Breathing apparatus should be used in fire fighting.
Other information	Containers close to fire should be removed immediately or cooled with water.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal protection measures	Use the specified protective equipment. Keep unauthorized personnel away.

6.2. Environmental precautions

Environmental precautionary measures	Do not allow spill to enter sewers or watercourses. Inform appropriate authorities if large amounts are involved.

6.3. Methods and material for containment and cleaning up

Clean up	Collect with absorbent, non-combustible material into suitable containers. Destroy according to applicable regulations.

6.4. Reference to other sections

Additional information	See Section 8 and section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Handling	Wear prescribed personal protective equipment.

7.2. Conditions for safe storage, including any incompatibilities

Storage	Keep container tightly closed. Keep away from ignition sources. Store in original container.
Conditions to avoid	Heating forms toxic gases.

7.3. Specific end use(s)

Specific use(s)	See Section 1.2

SECTION 8: Exposure controls / personal protection

8.1. Control parameters

Substance	Identification	Exposure limits	TWA Year
Naphtha (petroleum) , hydrotreated heavy, benzene < 0,1%	CAS No.: 64742-48-9	Limit value (8 h) : 50 ppm Limit value (8 h) : 300 mg/m³ **Limit value (short term)** Value: 100 ppm **Limit value (short term)** Value: 600 mg/m³	TWA Year: 2011

Control parameters comments	List source(s): EU – Commission Directive 2006/15/EC of 7 February 2006 establishing a second list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC and amending Directives 91/322/EEC and 2000/39/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

DNEL / PNEC

Summary of risk management measures, human	No information available.
Summary of risk management measures, environment	No information available.

8.2. Exposure controls

Safety signs

Precautionary measures to prevent exposure

Appropriate engineering controls	No smoking, fire, sparks or welding. Provide good ventilation. Eyewash facilities should be available at the workplace. Keep containers closed, as much as possible.

Eye / face protection

Suitable eye protection	Wear approved, tight fitting safety glasses where splashing is probable.

Hand protection

Skin- / hand protection, short term contact	Protective gloves must be used if there is a risk of direct contact or splashes.
Suitable materials	Nitrile rubber.
Breakthrough time	Value: > 8 hour(s) Comments: Change protective gloves regularly in order to avoid penetration problems.
Thickness of glove material	Value: ≥ 0,38 mm

Skin protection

Skin protection remark	Protective clothing as needed.

Respiratory protection

Respiratory protection necessary at	In case of inadequate ventilation wear respiratory protection.
Recommended respiratory protection	Filter apparatus type: Respirator with A filter (brown).

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	High viscosity liquid.
Colour	Black.
Odour	Characteristic.
Odour limit	Comments: Not applicable.

Melting point / melting range	Comments: Not applicable.
Boiling point / boiling range	Value: > 150 °C
Flash point	Value: 40 °C
Explosion limit	Value: 1 – 7 %
Density	Value: 900 kg/m³ Temperature: 20 °C
Solubility	Comments: Soluble in organic solvents.
Partition coefficient: n-octanol/ water	Comments: No data available

9.2. Other information

Other physical and chemical properties

Comments	No further relevant information available.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	Keep away from heat / sparks / open flames / hot surfaces. — No smoking.

10.2. Chemical stability

Stability	Stable with normal handling.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	No hazardous reactions known.

10.4. Conditions to avoid

Conditions to avoid	No information available.

10.5. Incompatible materials

Materials to avoid	No hazardous reactions known.

10.6. Hazardous decomposition products

Hazardous decomposition products	No formation of hazardous decomposition products are expected under normal conditions.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Substance	Naphtha (petroleum), hydrotreated heavy, benzene < 0,1%
Acute toxicity	**Effect tested:** LD50 **Route of exposure:** Oral **Value:** > 2000 mg/kg

	Animal test species: Rat **Effect tested:** LD50 **Route of exposure:** Dermal **Value:** > 2000 mg/kg **Animal test species:** Rabbit **Effect tested:** LC50 **Route of exposure:** Inhalation. **Duration:** 4h **Value:** > 5000 mg/m³ **Animal test species:** Rat

Other information regarding health hazards

Acute toxicity, human experience	No aspiration hazards known.
Skin corrosion / irritation, human experience	Repeated exposure may cause skin dryness or cracking.
Eye damage or irritation, human experience	Based on available data, the classification criteria are not met.
General	Solvent vapours may evaporate from the product.
Inhalation	Headache. Dizziness. Indisposition.
Skin contact	Defats the skin. Prolonged or repeated contact may cause irritation.
Eye contact	May cause irritation.
Ingestion	Abdominal pains. Vomiting. Causes similar symptoms as by inhalation.
Assessment of germ cell mutagenicity, classification	The chemical structure does not suggest a mutagenic effect.
Carcinogenicity, other information	Does not present any cancer or reproductive hazards.
Reproductive toxicity	The chemical structure does not suggest such an effect.
Specific target organ toxicity - single exposure, human experience	May cause drowsiness or dizziness.

SECTION 12: Ecological information

12.1. Toxicity

Substance	Naphtha (petroleum), hydrotreated heavy, benzene < 0,1%
Aquatic toxicity, fish	**Value:** > 100 mg/L **Test duration:** 96h **Method:** LC50
Substance	Naphtha (petroleum), hydrotreated heavy, benzene < 0,1%
Aquatic toxicity, algae	**Value:** > 100 mg/L **Test duration:** 72h **Method:** EC50
Substance	Naphtha (petroleum), hydrotreated heavy, benzene < 0,1%
Aquatic toxicity, crustacean	**Value:** > 100 mg/L

	Test duration: 48h **Method:** EC50
Ecotoxicity	Exhibits low toxicity to water organisms.

12.2. Persistence and degradability

Persistence and degradability description/evaluation	Not readily degradable.

12.3. Bioaccumulative potential

Bioaccumulation, comments	Has the potential to bioaccumulate.

12.4. Mobility in soil

Mobility	Expected to have relatively low mobility in soil.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment	The product does not contain any PBT or vPvB substance.

12.6. Other adverse effects

Additional ecological information	Does not cause long term adverse effects in the aquatic environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Appropriate methods of disposal for the chemical	Dispose of in compliance with local regulations. Do not allow outlets to sewer or watercourse.
Appropriate methods of disposal for the contaminated packaging	Empty containers should be transported to local recycling facility or waste treatment facility. Containers with liquid residues are hazardous waste.
EWC waste code	EWC waste code: 170302 bituminous mixtures other than those mentioned in 17 03 01 Classified as hazardous waste: Yes
EWL packing	Classified as hazardous waste: No
Other information	EWC code is only a suggestion, final consumer selects a suitable EWC code.

SECTION 14: Transport information

Dangerous goods	Yes

14.1. UN number

ADR/RID/ADN	1139
IMDG	1139
ICAO/IATA	1139

14.2. UN proper shipping name

Proper shipping name English ADR/RID/ADN	COATING SOLUTION
Technical name/Danger releasing substance English ADR/RID/ADN	Petroleum products
ADR/RID/ADN	COATING SOLUTION
Technical name/danger releasing substance ADR/RID/ADN	Petroleum products
IMDG	COATING SOLUTION
Technical name/danger releasing substance IMDG	Petroleum products
ICAO/IATA	COATING SOLUTION
Technical name/danger releasing substance ICAO/IATA	Petroleum products

14.3. Transport hazard class(es)

ADR/RID/ADN	3
Classificaton code ADR/RID/ADN	F1
IMDG	3
ICAO/IATA	3

14.4. Packing group

ADR/RID/ADN	III
IMDG	III
ICAO/IATA	III

14.5. Environmental hazards

ADR/RID/ADN	No
IMDG	No

14.6. Special precautions for user

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Product name	COATING SOLUTION

Additional information

Hazard label ADR/RID/ADN	3
Hazard label IMDG	3
Hazard label ICAO/IATA	3

ADR/RID Other information

Tunnel restriction code	D/E
Limited quantity	ADR-S: The products are not comprised by the regulations in ADR-S according

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	to section 2.2.3.1.5 or IMDG according to section 2.3.2.5.
Transport category	3
Hazard No.	30
Other applicable information ADR/ RID	30

IMDG Other information

EmS	F-E, S-E

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations / legislation specific for the substance or mixture

EEC-directive	2006/121/2006
Biocides	No
Nanomaterial	No
References (laws/regulations)	The product is classified and labelled in accordance with EEC guidelines or national legislation.
Legislation and regulations	Regulation (EC) nr. 2015/830 Regulation (EC) nr. 1272/2008.

15.2. Chemical safety assessment

Chemical safety assessment performed	No

SECTION 16: Other information

Supplier's notes	These data are based on our best knowledge to date, however they do not imply any guarantee on the properties or quality of the product. In case of uncertainties we advise you to make own tests or ask for written directions from us.
List of relevant H-phrases (Section 2 and 3)	EUH 066 Repeated exposure may cause skin dryness or cracking. H226 Flammable liquid and vapour. H304 May be fatal if swallowed and enters airways. H336 May cause drowsiness or dizziness.
Version	9
Expired date	02.12.2023

SDS 8: Ecosolv A

According to EC-Regulation 2015/830

SAFETY DATA SHEET

ECOSOLV A

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier
Trade name
ECOSOLV A
▼REACH registration number
-
▼Other means of identification
-
1.2. Relevant identified uses of the substance or mixture and uses advised against
Relevant identified uses of the substance or mixture
Solvent - Industrial purposes.
▼Relevant identified uses of the substance or mixture (REACH)
No special
▼Uses advised against
No special
1.3. Details of the supplier of the safety data sheet
Company and address
Solveco AB
Tallbacksgatan 10
S-195 72 Rosersberg
Sverige
T: +46 (0)8 732 72 75
F: +46 (0)8 732 72 76
http://www.solveco.se
Contact person
Habib Hourani
E-mail
info@solveco.se
SDS date
2020-02-24
SDS Version
2.0
1.4. Emergency telephone number
Contact The National Poisons Information Service (dial 111, 24 h service). See section 4 "First aid measures".

SECTION 2: Hazards identification

▼2.1. Classification of the substance or mixture
Flam. Liq. 2; H225, Highly flammable liquid and vapour.

Eye Irrit. 2; H319, Causes serious eye irritation.

STOT SE 3; H336, May cause drowsiness or dizziness.

▼
2.2. Label elements
▼
Hazard pictogram(s)

Signal word

Danger

Hazard statement(s)

Highly flammable liquid and vapour.
Causes serious eye irritation.
May cause drowsiness or dizziness.

Safety statement(s)

General

Prevention

P280, Wear eye protection.
P210, Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Response

P337+P313, If eye irritation persists: Get medical advice/attention.
P370+P378, In case of fire: Use carbonic acid/water mist/carbon dioxide/alcohol-resistant foam to extinguish.

Storage

P403+P235, Store in a well-ventilated place. Keep cool.

Disposal

P501, Dispose of contents/container to an approved waste disposal plant.

▼Hazardous substances

Isopropanol

2.3. Other hazards

▼Additional labelling

Not applicable

▼Additional warnings

This mixture/product does not contain any substances considered to meet the criteria classifying them as PBT and/or vPvB.

SECTION 3: Composition/information on ingredients

▼3.2 Mixtures

Product/Ingredient name	Identifiers	% w/w	Classification	Note
Ethanol	CAS No.: 64-17-5 EC No.: 200-578-6 REACH No.: Index No.: 603-002-00-5	60 - 70%	Flam. Liq. 2, H225 Eye Irrit. 2, H319	
Isopropanol	CAS No.: 67-63-0 EC No.: 200-661-7 REACH No.: Index No.: 603-117-00-0	30 - 40%	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336	

See full text of H-phrases in section 16. Occupational exposure limits are listed in section 8, if these are available.

Other information

No special

SECTION 4: First aid measures

▼4.1. Description of first aid measures

General information

In the case of accident: Contact a doctor or casualty department – take the label or this safety data sheet. Contact a doctor if in doubt about the injured person's condition or if the symptoms persist. Never give an unconscious person water or other drink.

▼Inhalation

Upon breathing difficulties or irritation of the respiratory tract: Bring the person into fresh air and stay with him/her.

Skin contact

Immediately remove contaminated clothing and shoes. Ensure that skin, which has been exposed to the material, is washed thoroughly with water and soap. Skin cleanser can be used. DO NOT use solvents or thinners.

▼Eye contact

Upon irritation of the eye: Remove contact lenses. Flush eyes immediately with plenty of water or isotonic water (20-30°C) for at least 5 minutes and continue until irritation stops. Make sure to flush under upper and lower eyelids. If irritation continues, contact a doctor. Continue flushing during transport.

Ingestion

Provide plenty of water for the person to drink and stay with him/her. In case of malaise, seek medical advice immediately and bring the safety data sheet or label from the product. Do not induce vomiting, unless recommended by the doctor. Have the victim lean forward with head down to avoid inhalation of- or choking on vomited material.

Burns

Rinse with water until pain stops then continue to rinse for 30 minutes.

4.2. Most important symptoms and effects, both acute and delayed

Irritation effects: This product contains substances, which may cause irritation upon exposure to skin, eyes or lungs. Exposure may result in an increased absorption potential of other hazardous substances at the area of exposure.

Neurotoxic effects: This product contains organic solvents, which may cause adverse effects to the nervous system. Symptoms of neurotoxicity include: loss of appetite, headache, dizziness, ringing in ears, tingling sensations of skin, sensitivity to the cold, cramps, difficulty in concentrating, tiredness, etc. Repeated exposure to solvents can result in the breaking down of the skin's natural fat layer and may result in an increased absorption potential of other hazardous substances at the area of exposure.

▼4.3. Indication of any immediate medical attention and special treatment needed

If eye irritation persists: Get medical advice/attention.

Information to medics

Bring this safety data sheet.

SECTION 5: Firefighting measures

▼5.1. Extinguishing media

Extinguish fire with carbonic acid, powder or foam. Do not use water, as this will spread the fire.

▼5.2. Special hazards arising from the substance or mixture

Fire will result in dense black smoke. Exposure to combustion products may harm your health. Closed containers, which are exposed to fire, should be cooled with water. Do not allow fire-extinguishing water to enter the sewage system and nearby surface waters.

If the product is exposed to high temperatures, e.g. in the event of fire, dangerous decomposition compounds are produced. These are:

Carbon oxides.

5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective clothing to prevent contact. Upon direct exposure contact The National Poisons Information Service (dial 111, 24 h service) in order to obtain further advice.

According to EC-Regulation 2015/830

SECTION 6: Accidental release measures

▼6.1. Personal precautions, protective equipment and emergency procedures

Storages not yet ignited must be cooled by water mist. Remove flammable materials if conditions allow it. Ensure sufficient ventilation.
Avoid inhalation of vapours from spilled material.

▼6.2. Environmental precautions

Avoid discharge to lakes, streams, sewers, etc.

6.3. Methods and material for containment and cleaning up

Limit spillage and collect using granular absorbent or similar materials, and dispose of it in accordance with the regulations on dangerous waste.
Use sand, sawdust, earth, vermiculite, diatomaceous earth to contain and collect non-combustible absorbent materials and place in container for disposal, according to local regulations.
To the extent possible cleaning is performed with normal cleaning agents. Avoid use of solvents.

6.4. Reference to other sections

See section on "Disposal considerations" in regard of handling of waste.
See section on 'Exposure controls/personal protection' for protective measures.

SECTION 7: Handling and storage

▼7.1. Precautions for safe handling

Ground and bond container and receiving equipment.
Use explosion-proof [electrical/lighting/ventilating]equipment.
Use non-sparking tools.
The product should be tested for peroxides before distillation or evaporation and tested for peroxide formation or discarded after 1 year.
Peroxide formation may be present anywhere in the container, including the sides, bottom, exterior and threaded cap. Peroxide formation in ppm concentrations may not be visually observable and must be identified through the use of appropriate testing procedures. If any of the following conditions exist, the material may be explosively unstable and will require stabilization prior to use:
1. Material appears to be degraded and or contaminated.
2. Material appears to be discolored.
3. Deterioration or distortion of storage container.
4. Thermal shock (sunlight).
5. Age of material exceeds recommended storage time.
Smoking, drinking and consumption of food is not allowed in the work area.
See section on 'Exposure controls/personal protection' for information on personal protection.

▼7.2. Conditions for safe storage, including any incompatibilities

Always store in containers of the same material as the original container.
Store in tightly closed containers and store protected from moisture and light. Containers should be dated when opened and tested periodically for the presence of peroxides. Do not exceed storage time limits.
Containers that have been opened must be carefully resealed and kept upright to prevent leakage.
Must be stored in a cool and well-ventilated area, away from possible sources of ignition.
Take action to prevent static discharges.

Storage temperature

Dry, cool and well ventilated

7.3. Specific end use(s)

This product should only be used for applications quoted in section 1.2

SECTION 8: Exposure controls/personal protection

▼8.1. Control parameters

—

According to EC-Regulation 2015/830

Ethanol
Long term exposure limit (8 hours): 1000 ppm
Long term exposure limit (8 hours): 1920 mg/m³

—

Isopropanol
Long term exposure limit (8 hours): 400 ppm
Long term exposure limit (8 hours): 999 mg/m³
Short term exposure limit (15 minutes): 500 ppm
Short term exposure limit (15 minutes): 1250 mg/m³

The Control of Substances Hazardous to Health Regulations 2002. SI 2002/2677 The Stationery Office 2002.

▼DNEL

Product/Ingredient name	DNEL	Route of exposure	Duration
Isopropanol	500 mg/m3	Inhalation	Long term – Systemic effects
Isopropanol	888 mg/kg kroppsvikt	Dermal	Long term – Systemic effects - Workers

▼PNEC

Product/Ingredient name	PNEC	Route of exposure	Duration of Exposure
Isopropanol	28 mg/kg	Soil	No data available
Isopropanol	140,9 mg/L	Freshwater	No data available
Isopropanol	552 mg/kg	Freshwater sediment	No data available
Isopropanol	140,9 mg/L	Marine water	No data available
Isopropanol	552 mg/kg	Marine water sediment	No data available
Isopropanol	2251 mg/L	Sewage Treatment Plant	No data available
Isopropanol	140,9 mg/L	Intermittent release	No data available

8.2. Exposure controls

Compliance with the given occupational exposure limits values should be controlled on a regular basis.

General recommendations

Smoking, eating and drinking are not allowed in the work premises

▼Exposure scenarios

There are no exposure scenarios implemented for this product.

Exposure limits

Professional users are subjected to the legally set maximum concentrations for occupational exposure. See occupational hygiene limit values above.

Appropriate technical measures

Airborne gas and dust concentrations must be kept at a minimum and below current limit values (see above). Installation of an exhaust system if normal air flow in the work room is not sufficient is recommended. Ensure emergency eyewash and -showers are clearly marked.

Hygiene measures

In between use of the product and at the end of the working day all exposed areas of the body must be washed thoroughly. Always wash hands, forearms and face.

Measures to avoid environmental exposure

No specific requirements

Individual protection measures, such as personal protective equipment

According to EC-Regulation 2015/830

Generally

Use only CE marked protective equipment.

Respiratory Equipment

Work situation	Recommended Filter type	Class	Colour	Standards	
If ventilation at the work place is insufficient, use a half- or full mask with an appropriate filter or an air-supplied breathing apparatus.	A	-	Brown	EN14387	

Skin protection

Work situation	Recommended	Type/Category	Standards	
	Dedicated work clothing should be worn.	-	-	

▼Hand protection

Work situation	Material	Glove thickness (mm)	Breakthrough time (min.)	Standards	
	Nitrile	-	-	EN374-2	
	Butyl	-	-	EN374-2, EN374-3, EN388, EN421	

Eye protection

Work situation	Recommended	Standards	
	Use face protection or safety glasses with side shields.	EN166	

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

▼Form

Liquid

▼Colour

Colourless

▼Odour

Characteristic

▼Odour threshold (ppm)

Testing not relevant or not possible due to nature of the product.

▼pH

Testing not relevant or not possible due to nature of the product.

▼Density (g/cm³)

0.78

▼Viscosity

Testing not relevant or not possible due to nature of the product.

Phase changes

▼Melting point (°C)

Testing not relevant or not possible due to nature of the product.

Boiling point (°C)

~ 78 °C

(CAS: 64-17-5)

Vapour pressure

5.90 kPa (20.00 °C)

(CAS: 64-17-5)

▼Vapour density

Testing not relevant or not possible due to nature of the product.

▼Decomposition temperature (°C)

Testing not relevant or not possible due to nature of the product.

▼Evaporation rate (n-butylacetate = 100)

Testing not relevant or not possible due to nature of the product.

Data on fire and explosion hazards

Flash point (°C)

~ 12.0 °C

(CAS: 67-63-0)

▼Ignition (°C)

Testing not relevant or not possible due to nature of the product.

▼Auto flammability (°C)

Testing not relevant or not possible due to nature of the product.

▼Explosion limits (% v/v)

2.00 - 19.00 v/v%

▼Explosive properties

Testing not relevant or not possible due to nature of the product.

▼Oxidizing properties

Testing not relevant or not possible due to nature of the product.

Solubility

▼Solubility in water

Soluble

n-octanol/water coefficient

-0.32

(CAS: 64-17-5)

▼Solubility in fat (g/L)

Testing not relevant or not possible due to nature of the product.

9.2. Other information

SECTION 10: Stability and reactivity

10.1. Reactivity

No data available

10.2. Chemical stability

The product is stable under the conditions, noted in the section "Handling and storage".

10.3. Possibility of hazardous reactions

No special

10.4. Conditions to avoid

Avoid static electricity.

Do not expose to any forms of heat (e.g. solar radiation). May lead to excess pressure.

10.5. Incompatible materials

Strong acids, strong bases, strong oxidizing agents, and strong reducing agents.

10.6. Hazardous decomposition products

The product is not degraded when used as specified in section 1.

According to EC-Regulation 2015/830

SECTION 11: Toxicological information

11.1. Information on toxicological effects

▼Acute toxicity

Product/Ingredient name	Species	Test	Route of exposure	Result
Ethanol	Rat	LD50	Oral	6200.00 mg/kg
Ethanol	Rat	LC50 (4 hours)	Inhalation	124.70 mg/l
Ethanol	Rabbit	LD50	Dermal	>20000.00 mg/kg
Isopropanol	Rat	LD50	Oral	4396.00 mg/kg
Isopropanol	Rat	LC50 (4 hours)	Inhalation	46.5-72.0 mg/l
Isopropanol	Rabbit	LD50	Dermal	12800.00 mg/kg

▼Skin corrosion/irritation
Based on available data, the classification criteria are not met.

▼Serious eye damage/irritation
Causes serious eye irritation.

▼Respiratory or skin sensitisation
Based on available data, the classification criteria are not met.

▼

▼Germ cell mutagenicity
Based on available data, the classification criteria are not met.

▼Carcinogenicity
Based on available data, the classification criteria are not met.

▼Reproductive toxicity
Based on available data, the classification criteria are not met.

STOT-single exposure
May cause drowsiness or dizziness.

▼STOT-repeated exposure
Based on available data, the classification criteria are not met.

▼Aspiration hazard
Based on available data, the classification criteria are not met.

Long term effects
Irritation effects: This product contains substances, which may cause irritation upon exposure to skin, eyes or lungs. Exposure may result in an increased absorption potential of other hazardous substances at the area of exposure.
Neurotoxic effects: This product contains organic solvents, which may cause adverse effects to the nervous system. Symptoms of neurotoxicity include: loss of appetite, headache, dizziness, ringing in ears, tingling sensations of skin, sensitivity to the cold, cramps, difficulty in concentrating, tiredness, etc. Repeated exposure to solvents can result in the breaking down of the skin's natural fat layer and may result in an increased absorption potential of other hazardous substances at the area of exposure.

▼Other information
Ethanol has been classified by IARC as a group 1 carcinogen.
Isopropanol has been classified by IARC as a group 3 carcinogen.

SECTION 12: Ecological information

▼12.1. Toxicity

Product/Ingredient	Species	Test	Duration	Result

name				
Ethanol	Fish (Pimephales promelas)	LC50	96 hours	13480.00 mg/l
Ethanol	Algae	IC50	72 hours	>10.9 mg/l
Ethanol	Daphnia (Daphnia magna)	EC50	48 hours	5400.00 mg/l
Ethanol	Algae (Scenedesmus subspicatus)	IC50	7 days	5000.00 mg/l
Isopropanol	Fish	LC50	96 hours	4200.00 mg/l
Isopropanol	Algae (Scenedesmus subspicatus)	IC50	96 hours	>1000.00 mg/l
Isopropanol	Daphnia	EC50	48 hours	13299.00 mg/l

12.2. Persistence and degradability

Product/Ingredient name	Biodegradability	Test	Result
Ethanol	Yes	BOD5/COD	0.4 - 0.8
Isopropanol	Yes	OECD 301 C (Modified MITI Test)	84 %

▼12.3. Bioaccumulative potential

Product/Ingredient name	Potential bioaccumulation	LogPow	BCF
Ethanol	No	No data available	< 10
Isopropanol	No	No data available	No data available

12.4. Mobility in soil

No data available

12.5. Results of PBT and vPvB assessment

This mixture/product does not contain any substances considered to meet the criteria classifying them as PBT and/or vPvB.

12.6. Other adverse effects

No special

SECTION 13: Disposal considerations

▼13.1. Waste treatment methods

To the extent the material has not been subject to regular tests of peroxide formation the waste shall be treated as explosive waste.

Product is covered by the regulations on hazardous waste.

EWC code

Not applicable

Specific labelling

Not applicable

Contaminated packing

Packaging containing residues of the product must be disposed of similarly to the product.

SECTION 14: Transport information

According to EC-Regulation 2015/830

14.1 - 14.4

This product is within scope of the regulations of transport of dangerous goods.

▼ADR/RID

UN number	Proper Shipping Name	Class	Packing group	Tunnel restriction code
1987	ALCOHOLS, N.O.S.	3	II	2 (D/E)

▼IMDG

UN number	Proper Shipping Name	Class	Packing group	EmS
1987	ALCOHOLS, N.O.S.	3	II	F-E, S-D

▼IATA

Not applicable

▼Marine pollutant

No

14.5. Environmental hazards

Not applicable

14.6. Special precautions for user

Not applicable

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Restrictions for application

Pregnant women and women breastfeeding must not be exposed to this product. The risk, and possible technical precautions or design of the workplace needed to eliminate exposure, must be considered.

▼Demands for specific education

No specific requirements

SEVESO - Categories / dangerous substances:

▼

P5c

▼

Additional information

Not applicable

▼Sources

Council Directive 92/85/EEC on the introduction of measures to encourage improvements in the safety and health at work of pregnant workers and workers who have recently given birth or are breastfeeding.
The Control of Major Accident Hazards (COMAH) Regulations 2015.
Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 (CLP).
Regulation (EC) 1907/2006 (REACH).

15.2. Chemical safety assessment

No

SECTION 16: Other information

Full text of H-phrases as mentioned in section 3

H225, Highly flammable liquid and vapour.
H319, Causes serious eye irritation.
H336, May cause drowsiness or dizziness.

According to EC-Regulation 2015/830

Abbreviations and acronyms

ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway
ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
CAS = Chemical Abstracts Service
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
CSA = Chemical Safety Assessment
CSR = Chemical Safety Report
DMEL = Derived Minimal Effect Level
DNEL = Derived No Effect Level
EINECS = European Inventory of Existing Commercial chemical Substances
ES = Exposure Scenario
EUH statement = CLP-specific Hazard statement
EWC = European Waste Catalogue
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IARC = International Agency for Research on Cancer (IARC)
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
OECD = Organisation for Economic Co-operation and Development
PBT = Persistent, Bioaccumulative and Toxic
PNEC = Predicted No Effect Concentration
RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
RRN = REACH Registration Number
SVHC = Substances of Very High Concern
STOT-RE = Specific Target Organ Toxicity - Repeated Exposure
STOT-SE = Specific Target Organ Toxicity - Single Exposure
TWA = Time weighted average
UN = United Nations
UVCB = Complex hydrocarbon substance
VOC = Volatile Organic Compound
vPvB = Very Persistent and Very Bioaccumulative

Additional information

In accordance with Regulation (EC) No. 1272/2008 (CLP) the evaluation of the classification of the mixture is based on:
The classification of the mixture in regard of health hazards are in accordance with the calculation methods given by Regulation (EC) No. 1272/2008 (CLP)
The classification of the mixture in regard of physical hazards has been based on experimental data.

The safety data sheet is validated by

Habib Hourani

Other

A change (in proportion to the last essential change (first cipher in SDS version, see section 1)) is marked with a blue triangle.
The information in this safety data sheet applies only to this specific product (mentioned in section 1) and is not necessarily correct for use with other chemicals/products.
It is recommended to hand over this safety data sheet to the actual user of the product. Information in this safety data sheet cannot be used as a product specification.

SDS 9: PF Solvent

Safety Data Sheet (Regulation (EC) n. 1907/2006 (REACH))
PF Solvent

Safety Data Sheet dated 26/11/2020, version 5

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name: PF Solvent
SDS code: P20301
UFI: 8DKN-SGJP-0V1G-GKSE

1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended use:
Cleaner
Industrial uses

Uses advised against:
No uses advised against are identified.

1.3. Details of the supplier of the safety data sheet

Manufacturers:
Socomore SASU
Zone Industrielle du Prat - CS 23707 - 56037 VANNES CEDEX - France
Tel : +33 (0)2 97 43 76 83 - Fax : +33 (0)2 97 54 50 26
Socomore Ireland Ltd. - Meenane, Watergrasshill, Co. Cork, Ireland - Tel +353 21 4889922 / Fax +353 21 4889923 / ireland@socomore.com

Distributors:
SOCOMORE SASU
Zone Industrielle du Prat - CS 23707 - 56037 VANNES CEDEX - France
Tel : +33 (0)2 97 43 76 83 - Fax : +33 (0)2 97 54 50 26
Socomore Ireland Ltd. - Meenane, Watergrasshill, Co. Cork, Ireland - Tel +353 21 4889922 / Fax +353 21 4889923 / ireland@socomore.com
Socomore GmbH - c/o MAZARS GmbH - Theodor-Stern-Kai 1 - 60596 Frankfurt am Main - Deutschland - Tel: +49 (0)89 20 70 28 83 - Fax: +49 (0) 89 88 91 98 16
Socomore Iberia - Calle Diputació, 260 - 08007 Barcelona - Espana - Tel: +34 917 693 962 - Fax: +34 902 908 966
SOCOMORE SPzoo - Ul. Piekna 18, 00-549 Warszawa Polska - Tel : +48 608 454 114 - Fax : +48 (22) 621 61 09

Competent person responsible for the safety data sheet:
techdirsocomore@socomore.com

1.4. Emergency telephone number

France : ORFILA (INRS) +33 (0)1 45 42 59
International : CHEMTEL +1-813-248-0585.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

EC regulation criteria 1272/2008 (CLP)

Warning, Skin Sens. 1, May cause an allergic skin reaction.
Danger, Asp. Tox. 1, May be fatal if swallowed and enters airways.
Aquatic Chronic 2, Toxic to aquatic life with long lasting effects.

Adverse physicochemical, human health and environmental effects:
No other hazards

2.2. Label elements

Hazard pictograms:

socomore

Safety Data Sheet (Regulation (EC) n. 1907/2006 (REACH))
PF Solvent

Danger
Hazard statements:
H317 May cause an allergic skin reaction.
H304 May be fatal if swallowed and enters airways.
H411 Toxic to aquatic life with long lasting effects.
Precautionary statements:
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P273 Avoid release to the environment.
P280 Wear protective gloves and eye/face protection.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P331 Do NOT induce vomiting.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P391 Collect spillage.
Special Provisions:
None
Contains
HYDROCARBONS, C11-C13, , ISOALKANES, <2% AROMATICS
ORANGE, SWEET, EXTRACT
Special provisions according to Annex XVII of REACH and subsequent amendments:
None

2.3. Other hazards

vPvB Substances: None - PBT Substances: None
Other Hazards:
No other hazards

SECTION 2: Hazards identification
If brought into contact with the skin, the product may cause sensitisation of the skin.
The product is harmful: may cause lung damage if swallowed.
Repeated exposure to the product may cause skin dryness or cracking.
Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

SECTION 3: Composition/information on ingredients

3.1. Substances

N.A.

3.2. Mixtures

Hazardous components within the meaning of the CLP regulation and related classification:

Qty	Name	Ident. Number		Classification
>= 90%	HYDROCARBONS, C11-C13, , ISOALKANES, <2% AROMATICS	EC: REACH No.:	920-901-0 01-2119456810-40	3.10/1 Asp. Tox. 1 H304 EUH066
>= 7% - < 10%	ORANGE, SWEET, EXTRACT	CAS: EC: REACH No.:	8028-48-6 232-433-8 01-2119493353	2.6/3 Flam. Liq. 3 H226 3.2/2 Skin Irrit. 2 H315 3.4.2/1 Skin Sens. 1 H317

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		-35	3.10/1 Asp. Tox. 1 H304 4.1/A1 Aquatic Acute 1 H400 4.1/C1 Aquatic Chronic 1 H410

SECTION 4: First aid measures

4.1. Description of first aid measures

In case of skin contact:

Immediately take off all contaminated clothing.
Areas of the body that have - or are only even suspected of having - come into contact with the product must be rinsed immediately with plenty of running water and possibly with soap.
Wash thoroughly the body (shower or bath).
Remove contaminated clothing immediately and dispose of safely.

In case of eyes contact:

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

In case of Ingestion:

Do NOT induce vomiting.

In case of Inhalation:

Remove casualty to fresh air and keep warm and at rest.

4.2. Most important symptoms and effects, both acute and delayed

Eye contact : Burning feeling and temporary redness.
Repeated exposure may cause skin dryness or cracking.
Vapours inhaled in strong concentration have a narcotic effect on the central nervous system.
Inhalation of vapours or aerosols may be irritating to the respiratory tract and mucous membranes.
If swallowed, aspiration into the lungs may occur and cause a chemical pneumonia.
Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea, abdominal pain.

4.3. Indication of any immediate medical attention and special treatment needed

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).
Treatment:
No particular treatment.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:
Water.
Carbon dioxide (CO_2).
Extinguishing media which must not be used for safety reasons:
None in particular.

5.2. Special hazards arising from the substance or mixture

Do not inhale explosion and combustion gases.
Burning produces heavy smoke.

5.3. Advice for firefighters

Use suitable breathing apparatus .
Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Move undamaged containers from immediate hazard area if it can be done safely.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Wear personal protection equipment.
Remove persons to safety.
See protective measures under point 7 and 8.

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6.2. Environmental precautions
Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.
Retain contaminated washing water and dispose it.
In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.
Suitable material for taking up: absorbing material, organic, sand

6.3. Methods and material for containment and cleaning up
Wash with plenty of water.

6.4. Reference to other sections
See also section 8 and 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Avoid contact with skin and eyes, inhalation of vapours and mists.
Don't use empty container before they have been cleaned.
Before making transfer operations, assure that there aren't any incompatible material residuals in the containers.
See also section 8 for recommended protective equipment.
Advice on general occupational hygiene:
Contamined clothing should be changed before entering eating areas.
Do not eat or drink while working.

7.2. Conditions for safe storage, including any incompatibilities
Avoid vapor emissions.
Keep away from food, drink and feed.
Incompatible materials:
None in particular.
Instructions as regards storage premises:
Adequately ventilated premises.

7.3. Specific end use(s)
None in particular

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limit values
HYDROCARBONS, C11-C13, , ISOALKANES, <2% AROMATICS
- OEL Type: National - TWA: 1200 mg/m3, 171 ppm - Notes: vapour, ExxonMobil

DNEL Exposure Limit Values
ORANGE, SWEET, EXTRACT - CAS: 8028-48-6
Worker Professional: 8.89 mg/kg b.w./day - Consumer: 4.44 mg/kg b.w./day - Exposure: Human Dermal - Frequency: Long Term, systemic effects
Worker Professional: 185.8 µg/cm2 - Consumer: 92.9 µg/cm2 - Exposure: Human Dermal - Frequency: Short Term, local effects
Worker Professional: 31.1 mg/m3 - Consumer: 7.78 mg/m3 - Exposure: Human Inhalation - Frequency: Long Term, systemic effects
Consumer: 4.44 mg/kg b.w./day - Exposure: Human Oral - Frequency: Long Term, systemic effects

PNEC Exposure Limit Values
ORANGE, SWEET, EXTRACT - CAS: 8028-48-6
Target: Fresh Water - Value: 5.4 mg/l
Target: Marine water - Value: 0.54 mg/l
Target: PNEC01 - Value: 5.77 mg/l

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Target: Freshwater sediments - Value: 1.3 mg/kg
Target: Marine water sediments - Value: 0.13 mg/kg
Target: Soil (agricultural) - Value: 0.261 mg/kg
Target: Microorganisms in sewage treatments - Value: 2.1 mg/l
Target: PNEC02 - Value: 13.3 mg/l

Biological Exposure Index
N.A.

8.2. Exposure controls
See below, example of PPE to use.
Eye protection:
Safety goggles (EN 166)
Protection for skin:
Chemical protection clothing. (type 3 - EN14605)
Chemical protection clothing. (type 5 - EN13982-1)
Chemical protection clothing. (type 6 - EN13034)
Protection for hands:
Suitable gloves type: NF EN374
NBR (nitrile rubber).
PVA (Polyvinyl alcohol).
Respiratory protection:
Use adequate protective respiratory equipment.
Filtering Half-face mask (EN 149).
Thermal Hazards:
None
Environmental exposure controls:
None
Appropriate engineering controls:
None
Other conditions affecting workers exposure:
None

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Properties	Value	Method:	Notes
Appearance and colour:	FLUID LIQUID	--	--
Odour:	N.A.	--	--
Odour threshold:	N.A.	--	--
pH:	N.A.	--	--
Melting point / freezing point:	Not Relevant	--	--
Initial boiling point and boiling range:	193 °C	--	--
Flash point (°C):	> 60°C	--	--

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Flash Point (°F):	> 140°F	--	--
Evaporation rate:	N.A.	--	--
Solid/gas flammability:	N.A.	--	liquid
Upper/lower flammability or explosive limits:	0.6-7%	--	--
Vapour pressure:	N.A.	--	--
Vapour density:	N.A.	--	--
Relative density:	0.765	--	--
Solubility in water:	INSOLUBLE	--	--
Solubility in oil:	N.A.	--	--
Partition coefficient (n-octanol/water):	N.A.	--	--
Auto-ignition temperature:	>200°C	--	--
Decomposition temperature:	N.A.	--	--
Viscosity:	v < 7 mm2/s (40°C)	--	--
Explosive properties:	N.A.	--	--
Oxidizing properties:	N.A.	--	--

9.2. Other information

Properties	Value	Method:	Notes
Miscibility:	N.A.	--	--
Fat Solubility:	N.A.	--	--
Conductivity:	N.A.	--	--
Substance Groups relevant properties	N.A.	--	--

Volatile Organic compounds - VOCs = 100 %
Volatile Organic compounds - VOCs = 765 g/l

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions

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10.2. Chemical stability
Stable under normal conditions
10.3. Possibility of hazardous reactions
None
10.4. Conditions to avoid
Stable under normal conditions.
10.5. Incompatible materials
None in particular.
10.6. Hazardous decomposition products
None.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicological information of the product:
N.A.

Toxicological information of the main substances found in the product:
HYDROCARBONS, C11-C13, , ISOALKANES, <2% AROMATICS
Acute toxicity:
Test: Genotoxicity - Route: Inhalation Vapour - Species: Rat > 5000 mg/m3 - Duration: 8h
Test: LD50 - Route: Oral - Species: Rat > 5000 mg/kg
Test: LD50 - Route: Skin - Species: Rabbit > 5000 mg/kg
ORANGE, SWEET, EXTRACT - CAS: 8028-48-6
Acute toxicity:
Test: LD50 - Route: Oral - Species: Rat > 5000 mg/kg
Test: LD50 - Route: Skin - Species: Rat > 5000 mg/kg
STOT-repeated exposure:
Test: LOAEL
- Species: Mouse = 1000 MGKGBWDAY

If not specified in other sections, the information required in Regulation (EU)2015/830 listed below must be considered as not relevant.:
Acute toxicity;
Skin corrosion/irritation;
Serious eye damage/irritation;
Respiratory or skin sensitisation;
Germ cell mutagenicity;
Carcinogenicity;
Reproductive toxicity;
STOT-single exposure;
STOT-repeated exposure;
Aspiration hazard.

Other toxicological information:
ORANGE, SWEET, EXTRACT
Skin contact:
May cause skin irritation. May cause skin allergy.

SECTION 12: Ecological information

12.1. Toxicity
Adopt good working practices, so that the product is not released into the environment.
HYDROCARBONS, C11-C13, , ISOALKANES, <2% AROMATICS

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a) Aquatic acute toxicity:
Endpoint: DSEO-R (NOELR) - Species: Algae = 1000 mg/l - Duration h: 72 - Notes: Pseudokirchneriella subcapitata
Endpoint: EL0 - Species: Algae = 1000 mg/l - Duration h: 72 - Notes: Pseudokirchneriella subcapitata
Endpoint: EL0 - Species: Daphnia = 1000 mg/l - Duration h: 48 - Notes: Daphnia magna
Endpoint: LL0 - Species: Fish = 1000 mg/l - Duration h: 96 - Notes: Onchohynchus mykiss
b) Aquatic chronic toxicity:
Endpoint: DSEO-R (NOELR) - Species: Daphnia = 1 mg/l - Duration h: 504 - Notes: Daphnia magna
ORANGE, SWEET, EXTRACT - CAS: 8028-48-6
a) Aquatic acute toxicity:
Endpoint: EC50 - Species: Daphnia = 0.67 mg/l - Duration h: 48
Endpoint: LC50 - Species: Fish = 0.7 mg/l - Duration h: 96
Endpoint: EC50 - Species: Algae = 150 mg/l - Duration h: 72 - Notes: GrünalgeDesmodesmusSub

12.2. Persistence and degradability
HYDROCARBONS, C11-C13, , ISOALKANES, <2% AROMATICS
Biodegradability: Biodegradability rate - Duration: 28 days - %: 31.3
ORANGE, SWEET, EXTRACT - CAS: 8028-48-6
Biodegradability: Biodegradability rate - Test: OECD 301B - Duration: 28 days - %: 72 - 83.4

12.3. Bioaccumulative potential
ORANGE, SWEET, EXTRACT - CAS: 8028-48-6
BCF 1.502 - 2.597

12.4. Mobility in soil
N.A.

12.5. Results of PBT and vPvB assessment
vPvB Substances: None - PBT Substances: None

12.6. Other adverse effects
No harmful effects expected.

SECTION 13: Disposal considerations

13.1. Waste treatment methods
Recover, if possible. Send to authorised disposal plants or for incineration under controlled conditions. In so doing, comply with the local and national regulations currently in force.
Codes of wastes (Décision 2001/573/EC, Directive 2006/12/EEC, Directive 94/31/EEC on hazardous waste):
14 06 03* Other solvents and solvent mixtures

SECTION 14: Transport information

14.1. UN number

ADR-UN Number:	3082
IATA-UN Number:	3082
IMDG-UN Number:	3082

14.2. UN proper shipping name

ADR-Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (ORANGE, SWEET, EXTRACT, HYDROCARBONS, C11-C13, ISOALKANES, <2% AROMATICS)
IATA-Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (ORANGE, SWEET, EXTRACT, HYDROCARBONS, C11-C13, ISOALKANES, <2% AROMATICS)

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IMDG-Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (ORANGE, SWEET, EXTRACT, HYDROCARBONS, C11-C13, ISOALKANES, <2% AROMATICS)

14.3. Transport hazard class(es)

ADR-Class: 9
ADR - Hazard identification number: 90
IATA-Class: 9
IATA-Label: 9
IMDG-Class: 9

14.4. Packing group

ADR-Packing Group: III
IATA-Packing group: III
IMDG-Packing group: III

14.5. Environmental hazards

ADR-Enviromental Pollutant: Yes
IMDG-Marine pollutant: Yes
Most important toxic component: ORANGE, SWEET, EXTRACT

14.6. Special precautions for user

ADR-Subsidiary hazards: -
ADR-S.P.: 274 335 375 601
ADR-Transport category (Tunnel restriction code): 3 (E)
IATA-Passenger Aircraft: 964
IATA-Subsidiary hazards: -
IATA-Cargo Aircraft: 964
IATA-S.P.: A97 A158 A197
IATA-ERG: 9L
IMDG-EmS: F-A , S-F
IMDG-Subsidiary hazards: -
IMDG-Stowage and handling: Category A
IMDG-Segregation: -
Q.L.: 5L
Q.E.: E1

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

N.A.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Dir. 98/24/EC (Risks related to chemical agents at work)
Dir. 2000/39/EC (Occupational exposure limit values)
Regulation (EC) n. 1907/2006 (REACH)
Regulation (EC) n. 1272/2008 (CLP)
Regulation (EC) n. 790/2009 (ATP 1 CLP) and (EU) n. 758/2013
Regulation (EU) 2015/830
Regulation (EU) n. 286/2011 (ATP 2 CLP)
Regulation (EU) n. 618/2012 (ATP 3 CLP)
Regulation (EU) n. 487/2013 (ATP 4 CLP)
Regulation (EU) n. 944/2013 (ATP 5 CLP)
Regulation (EU) n. 605/2014 (ATP 6 CLP)
Regulation (EU) n. 2015/1221 (ATP 7 CLP)
Regulation (EU) n. 2016/918 (ATP 8 CLP)
Regulation (EU) n. 2016/1179 (ATP 9 CLP)
Regulation (EU) n. 2017/776 (ATP 10 CLP)
Regulation (EU) n. 2018/669 (ATP 11 CLP)

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Regulation (EU) n. 2018/1480 (ATP 13 CLP)
Regulation (EU) n. 2019/521 (ATP 12 CLP)

Restrictions related to the product or the substances contained according to Annex XVII Regulation (EC) 1907/2006 (REACH) and subsequent modifications:
Restrictions related to the product:
Restriction 3
Restriction 40
Restrictions related to the substances contained:
No restriction.

Listed or in compliance with the following international inventories:
N.A.

The following substance(s) in this product has/have an identification by CAS number either in countries not affected by the REACH regulation or in regulations not yet updated to reflect the new naming convention for hydrocarbon solvents:
HYDROCARBONS, C11-C13, ISOALKANES, <2% AROMATICS (CAS: 90622-58-5)

Labelling of detergents (EC Regulations 648/2004 and 907/2006):
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aliphatic hydrocarbons >= 30%

Labelling of biocides (Regulations 1896/2000, 1687/2002, 2032/2003, 1048/2005, 1849/2006, 1451/2007 and Directive 98/8/EC):
N.A.

Where applicable, refer to the following regulatory provisions :
Directive 2003/105/CE ('Activities linked to risks of serious accidents') and subsequent amendments.
1999/13/EC (VOC directive)
Dir. 2004/42/EC (VOC directive)

Provisions related to directive EU 2012/18 (Seveso III):
Seveso III category according to Annex 1, part 1
Product belongs to category: E2

15.2. Chemical safety assessment
No

SECTION 16: Other information

N.A.: Not Applicable or Not Available

Full text of phrases referred to in Section 3:
H304 May be fatal if swallowed and enters airways.
EUH066 Repeated exposure may cause skin dryness or cracking.
H226 Flammable liquid and vapour.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.

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Hazard class and hazard category	Code	Description
Flam. Liq. 3	2.6/3	Flammable liquid, Category 3
Asp. Tox. 1	3.10/1	Aspiration hazard, Category 1
Skin Irrit. 2	3.2/2	Skin irritation, Category 2
Skin Sens. 1	3.4.2/1	Skin Sensitisation, Category 1
Aquatic Acute 1	4.1/A1	Acute aquatic hazard, category 1
Aquatic Chronic 1	4.1/C1	Chronic (long term) aquatic hazard, category 1
Aquatic Chronic 2	4.1/C2	Chronic (long term) aquatic hazard, category 2

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Classification according to Regulation (EC) Nr. 1272/2008	Classification procedure
Skin Sens. 1, H317	Calculation method
Asp. Tox. 1, H304	Calculation method
Aquatic Chronic 2, H411	Calculation method

This document was prepared by a competent person who has received appropriate training.
Main bibliographic sources:

ECDIN - Environmental Chemicals Data and Information Network - Joint Research Centre, Commission of the European Communities
SAX's DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS - Eight Edition - Van Nostrand Reinold
CCNL - Appendix 1
Insert further consulted bibliography

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Safety Data Sheet (Regulation (EC) n. 1907/2006 (REACH))
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The information is considered correct, but it is not exhaustive and it shall be used only as a guide which is based on the current knowledge of the substance or mixture and it is applicable to the safety precautions appropriate for the product.

ADR:	European Agreement concerning the International Carriage of Dangerous Goods by Road.
ATE:	Acute Toxicity Estimate
ATEmix:	Acute toxicity Estimate (Mixtures)
CAS:	Chemical Abstracts Service (division of the American Chemical Society).
CLP:	Classification, Labeling, Packaging.
DNEL:	Derived No Effect Level.
EINECS:	European Inventory of Existing Commercial Chemical Substances.
GefStoffVO:	Ordinance on Hazardous Substances, Germany.
GHS:	Globally Harmonized System of Classification and Labeling of Chemicals.
IATA:	International Air Transport Association.
IATA-DGR:	Dangerous Goods Regulation by the "International Air Transport Association" (IATA).
ICAO:	International Civil Aviation Organization.
ICAO-TI:	Technical Instructions by the "International Civil Aviation Organization" (ICAO).
IMDG:	International Maritime Code for Dangerous Goods.
INCI:	International Nomenclature of Cosmetic Ingredients.
KSt:	Explosion coefficient.
LC50:	Lethal concentration, for 50 percent of test population.
LD50:	Lethal dose, for 50 percent of test population.
LTE:	Long-term exposure.
PNEC:	Predicted No Effect Concentration.
RID:	Regulation Concerning the International Transport of Dangerous Goods by Rail.
STE:	Short-term exposure.
STEL:	Short Term Exposure limit.
STOT:	Specific Target Organ Toxicity.
STOT SE:	May cause drowsiness or dizziness
TLV:	Threshold Limiting Value.
TWA:	Time-weighted average
TWATLV:	Threshold Limit Value for the Time Weighted Average 8 hour day. (ACGIH Standard).
WGK:	German Water Hazard Class.

SDS 10: White Spirit

Kemetyl

Safety data sheet

According to Regulation (EU) No. 2020/878

EPISODE 1 THE NAME OF THE SUBSTANCE/MIXTURE AND THE COMPANY/COMPANY

1.1. Product designation

Product name	:	KEMETHYL T-LOW AROMATIC LACNAPHTA
Article no.	:	1293, 3088
Chemical name	:	Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclic, <2% aromatic
Registration no.	:	01-2119457273-39
EC number	:	918-481-9
UFI	:	75G0-9A1S-C008-2CQW

1.2. Relevant identified uses of the substance or mixture and uses advised against

Areas of use : SU21 Consumer product. PC35 Cleaning agent.

1.3. More information about the supplier of safety data sheets

Supplier	:	Kemetyl AB Rörvägen 7 13650 Jordbro, Sweden
Phone	:	+ 46 8 504 10100
E-mail	:	msds@kemetyl.com
Web page	:	www.kemetyl.com

FO number (Finland) : 2202835-4

1.4. Telephone number for emergencies

EMERGENCY TELEPHONE NUMBER, for DOCTOR/FIRE DEPARTMENT/POLICE only:
SE - Phone : +46 8 504 10100 (Only during office hours)

EMERGENCY TELEPHONE NUMBER:
The poison information centre 112 – request poison information (Around the clock)

SECTION 2 DANGEROUS TRAITS

2.1. Classification of the substance or mixture

CLP classification (1272/2008/EC) : Aspiration hazard, category 1.

Health hazard : May be fatal if swallowed if inhaled. Repeated exposure may cause skin dryness or cracking.

Physical/chemical risks : Not classified as dangerous according to the current EC Directive. Combustible. Not
Environmental hazard : classified as dangerous according to the current EC Directive.

2.2. Labeling information

Labeling information (1272/2008/EC):
Hazard pictograms :

Signal word : Danger

H and P phrases : H304 May be fatal if swallowed if inhaled.

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Safety data sheet

According to Regulation (EU) No. 2020/878

EUH066	Repeated exposure may cause skin dryness or cracking.
P101	Have the package or label handy if you need to seek medical attention.
P102	Keep out of reach of children.
P301+P310	IF SWALLOWED: Immediately contact a POISON CENTER/physician. DO NOT
P331	induce vomiting.
P405	Stored locked up.
P501	The contents/container are handed over to an approved waste recipient.

Labeling of packages whose content does not exceed 125 ml and where it is technically impossible to list all phrases: The hazard pictograms :

Signal word : Danger

H and P phrases :

H304	May be fatal if swallowed if inhaled. Repeated exposure may
EUH066	cause skin dryness or cracking.
P101	Have the package or label handy if you need to seek medical attention.
P102	Keep out of reach of children.
P301+P310	IF SWALLOWED: Immediately contact a POISON CENTER/physician. DO NOT
P331	induce vomiting.
P405	Stored locked up.
P501	The contents/container are handed over to an approved waste recipient.

Additional labeling (for all pack sizes)
: Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatic EC
: number: 918-481-9

Contents declaration in accordance with Regulation no. 648/2004:

Contains:	Concentration (%)
Aliphatic hydrocarbons	> 30

Other information : According to Regulation (EC) No. 1272/2008, Annex II, Part 3, containers must be provided with a recognizable warning label and child-proof closures.

2.3. Other hazards

Other information : Not classified as PBT or vPvB.

SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

Product description : Subject. Not classified as PBT or vPvB. Not included in the EU list of SVHC substances.

Information on subjects:

Subject name	Concentration (w/w) (%)	CAS no.	EC number	Remark	REACH no.
Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics	100	.....	918-481-9		01-2119457273-39

Hygienic limit value(s), if relevant, can be found under section 8.

Subject name	Hazard class	H phrases	The pictograms	
Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics	Aspen. Tox. 1	H304; EUH066	GHS08	

See also section 16 for the full text of each relevant H-phrase.

Kemetyl

Safety data sheet

According to Regulation (EU) No. 2020/878

SECTION 4 FIRST AID MEASURES

4.1. Description of first aid measures

First aid measures

Inhalation	:	Move the exposed person to fresh air. Contact a doctor if nausea occurs.
Skin contact	:	Remove contaminated clothing. Wash the skin with plenty of water and soap before the product dries. Contact a doctor if irritation persists.
Eye contact	:	Rinse with plenty of (lukewarm) water. Take out any Contact lenses. Contact a doctor if irritation persists. Do
Ingestion	:	not induce vomiting. Give nothing to drink. Rinse your mouth. Possibly give 1 or 2 tablespoons of laxative (Sodium sulfate). Never give an unconscious person anything to eat or drink. Contact a doctor immediately.

4.2. The most important symptoms and effects, both acute and delayed

Effects and symptoms

Inhalation	:	May cause headache, dizziness and nausea. Repeated
Skin contact	:	exposure may cause skin dryness or cracking. May
Eye contact	:	cause slight eye irritation and redness.
Ingestion	:	May cause nausea, vomiting and diarrhoea. Can cause lung damage, sore throat and shortness of breath.

4.3. Indication of immediate medical attention and special treatment that may be required

Information for doctors	:	
General	:	Call the Poisons Information Center for advice on treatment.

SECTION 5 FIRE FIGHTING MEASURES

5.1. Extinguishing media

Extinguishing media

Appropriate	:	CO2. Foam. Powder. Water mist.
Inappropriate	:	Water jet. Use of a strong water jet can spread the fire.

5.2. Special hazards that the substance or mixture may present

Special risks at exposure	:	Floats and can accumulate on the water surface.
Hazardous thermal decomposition or combustion products	:	Carbon monoxide can be evolved during incomplete combustion.

5.3. Advice for firefighting personnel

Special protective equipment for fire fighting personnel	:	Use suitable respiratory protection in case of insufficient ventilation.

SECTION 6 ACCIDENTAL RELEASE MEASURES

6.1. Personal protective measures, protective equipment and measures in emergency situations

Personal protective measures	:	Risk of slipping. Remove any spillage immediately. Use shoes with non-slip soles. Avoid contact with spilled or released material. The vapors are heavier than air.

Kemetyl

Safety data sheet

According to Regulation (EU) No. 2020/878

6.2. Environmental protection measures

Environmental protection measures : Prevent discharge into drains, surface water and/or groundwater. Larger spills: dig in.
Other information : Notify authorities if the public or the environment is, or is likely to be, exposed to any type of exposure.

6.3. Methods and materials for containment and cleanup

Cleaning methods : Collect spilled material in containers. Absorb residues in sand or other inert material. Hand over to an approved waste recipient. Clean dirty surfaces with plenty of soap and water.

6.4. Reference to other sections

Reference to other sections : See also section 8.

SECTION 7 HANDLING AND STORAGE

7.1. Precautions for safe handling

Management : Handled in accordance with good hygiene and safety standards in a well-ventilated area. Store away from sources of ignition — No smoking. Avoid inhalation of vapour. Avoid contact with skin and eyes. Avoid splashes. Use protective clothing.

7.2. Conditions for safe storage, including any incompatibilities

Storage : Store in a cool, dry and well-ventilated place. Store away from oxidizing substances. Stored separately from food and animal feed.
Recommended packaging : Store only in the original packaging.
Not recommended packaging : PE and PP.

Fire class : Not applicable.

7.3. Specific end use

Areas of use : Only according to the instructions for use. Do not mix with other products.

SECTION 8 EXPOSURE LIMITATION/PERSONAL PROTECTION

8.1. Control parameters

Limit values for occupational exposure (mg/m³):

Chemical name	Country	NGV 8 hours (mg/m3)	KTV 15 min. (mg/m3)	Task	Source
Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclic, <2% aromatic	FI	500	-	-	
		1200	-	-	CEFIC-HSPA
	SEE	300	600	-	

8.2. Limitation of exposure

Technical measures : Ensure good ventilation. Usual protective measures when handling chemicals.
Hygienic steps : Do not eat, drink or smoke during handling.

Personal protective equipment:
The effect of the personal protective equipment depends, among other things, on temperature and ventilation. Always seek professional help for advice on specific local situations.

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Body protection	:	Not required in normal use. In case of greater exposure, use suitable protective clothing, overalls or protective clothing and similar boots. Suitable materials: nitrile. Indication of penetration time: approx. 6 hours.
Respiratory protection	:	Ensure adequate ventilation. For greater exposure, use appropriate respiratory protection. Suitable: gas filter type A (brown), class I or higher on face mask in accordance with EN 140.
Hand protection	:	Special gloves are not required for normal use. For frequent or long-term use and for greater exposure use suitable gloves Suitable materials: nitrile. ± 0.5 mm. Indication of penetration time: approx. 6 hours.
Eye protection	:	Use suitable safety glasses, as there is a risk of eye contact.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical condition	:	Liquid.	
Color	:	Colorless.	
Smell	:	Characteristic.	
Odor threshold	:	Not known.	
pH	:	Not applicable.	Anhydrous product.
Solubility in water	:	Not soluble.	
Partition coefficient (noctanol/water)	:	> 3	
Flash-point	:	> 60 °C	Closed cup.
Flammability (solid, gas)	:	Not applicable.	Liquid. See flash point.
Auto-ignition temperature	:	> 200 °C	
Boiling point/boiling range	:	175 °C	
Melting point/melting range	:	< -20 °C	
Explosive properties	:	Not explosive.	Does not contain explosive substances.
Explosive range (% in air) :		0.6 - 7	
Oxidising properties	:	Non-oxidizing.	
Ignition temperature	:	Not applicable.	
Viscosity (20°C)	:	Not known.	
Viscosity (40°C)	:	< 7 mm2/sec	
Vapor pressure (20°C)	:	50 Pa	
Relative vapor density	:	> 1	(air = 1)
Relative density (20°C)	:	0.8 g/ml	
Particle properties	:	Not applicable.	Liquid.

9.2. Other information

Other information : Irrelevant.

SECTION 10 STABILITY AND REACTIVITY

10.1. Reactivity

Reactivity : See subsection below.

10.2. Chemical stability

Stability : Stable under normal conditions.

10.3. The risk of dangerous reactions

Reactivity : No other dangerous reactions known.

10.4. Conditions to avoid

Conditions to : See section 7. be avoided

10.5. Incompatible materials

Materials to avoid : Store away from oxidizing substances.

10.6. Hazardous decomposition products

Dangerous decomposition products : Not known.

SECTION 11 TOXICOLOGICAL INFORMATION

11.1. Information on hazard classes according to Regulation (EC) No. 1272/2008

Inhalation

Acute toxicity	: ATE: > 5 mg/l. Low toxicity. Not classified - the criteria for classification cannot be considered on the basis of available data to be met. May cause headache, dizziness and nausea.
Corrosive/irritant	: Not classified due to missing information. Not
Sensitization	: classified due to missing information.
Carcinogenicity	: Not expected to be carcinogenic. Not classified - the criteria for classification cannot be considered on the basis of available data to be met.
Mutagenicity	: Not expected to be mutagenic. Not classified - the criteria for classification cannot be considered on the basis of available data to be met.
Toxic for reproduction	: Development: Not classified due to lack of data. Fertility: Not classified due to lack of data.

Skin contact

Acute toxicity	: ATE: > 2000 mg/kg.bw. Low toxicity. Not classified - the criteria for classification cannot be considered on the basis of available data to be met.
Corrosive/irritant	: Mild irritation possible. Repeated exposure may cause skin dryness or cracking. Prolonged contact can dry out and degrease the skin. Not classified - the criteria for classification cannot be considered on the basis of available data to be met.
Sensitization	: Not classified - the criteria for classification cannot be considered on the basis of available data to be met.
Carcinogenicity	: Not expected to be carcinogenic. Not classified - the criteria for classification cannot be considered on the basis of available data to be met.
Mutagenicity	: Not expected to be mutagenic. Not classified - the criteria for classification cannot be considered on the basis of available data to be met.
Toxic for reproduction	: Not classified due to missing data.

Eye contact

Corrosive/irritant	: Mild irritation possible. Not classified - the criteria for classification cannot be considered on the basis of available data to be met.

Ingestion

Acute toxicity	: ATE: > 2000 mg/kg.bw. Low toxicity. Not classified - the criteria for classification cannot be considered on the basis of available data to be met.
Aspiration	: Aspiration into the lungs when the substance is swallowed or when vomited can cause chemical pneumothorax, which can lead to death. If the substance is swallowed, if any of the following delayed signs and symptoms appear within the next 6 hours, transport to the nearest hospital is arranged: fever over 38.3 °C, shortness of breath, chest tightness, persistent cough or wheezing.
Corrosive/irritant	: May cause nausea, vomiting, stomach pain and diarrhoea.

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Carcinogenicity	:	Not expected to be carcinogenic. Not classified - the criteria for classification cannot be considered on the basis of available data to be met.
Mutagenicity	:	Not expected to be mutagenic. Not classified - the criteria for classification cannot be considered on the basis of available data to be met.
Toxic for reproduction	:	Development: Not expected to be toxic to reproduction. Development: Not classified - the criteria for classification cannot be considered to be met on the basis of available data. Fertility: Not expected to be toxic to reproduction. Fertility: Not classified - based on available data, the classification criteria cannot be considered met.

Toxicological information:

Chemical name	Property		Method	Experimental animals
Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclic, <2% aromatic	Eye irritation - appreciation	Non irritating	-----	-----
	LD50 (oral) - appreciation	> 5000 mg/kg bw	OECD 401	Rat
	LD50 (dermal) - appreciation	> 5000 mg/kg bw	OECD 402	Rabbit
	Skin irritation	Mildly irritating	-----	-----
	Mutagenicity	Non mutagenic	-----	-----
	NOEL (carcinogenicity) - appreciation	Non-carcinogenic	-----	-----
	Irritation i respiratory system - appreciation	Non irritating	-----	-----
	NOAEL (development) - appreciation	Not teratogenic	-----	-----
	NOAEL (fertility) - appreciation	Not toxic to reproduction	-----	-----
	LC50 (inhalation)	> 5610 mg/m3	OECD 403	Rat
	NOAEL (oral) - appreciation	> 5000 mg/kg bw/d	Read across	Rat
	NOAEL (inhalation) - appreciation	> 1160 mg/m3	Read across	Rat
	Skin sensitization - appreciation	Non sensitizing	Read across	Guinea pig

11.2. Information on other hazards

Hormone disruptor characteristics	:	Not applicable.
Other information	:	Not applicable.

SECTION 12 ECOLOGICAL INFORMATION

12.1. Toxicity

Ecotoxicity : Calculated LC50 (fish): 913 mg/l. Calculated EC50 (daphnia): 952 mg/l. Contains 0% ingredients whose danger to the aquatic environment is unknown. Not classified - the criteria for classification cannot be considered on the basis of available data to be met. Can form an oil film on the water surface which causes a decrease in the oxygen content with possible negative effects for aquatic organisms.

12.2. Persistence and degradability

Persistence and degradability : No specific information known.

12.3. Bioaccumulative potential

Bioaccumulation : No BCF available. Has the potential to bioaccumulate.

12.4. Movement in soil

Mobility : Adsorbs to soil and has low mobility. Floats on water.

12.5. Results of the PBT and vPvB assessment

The PBT/vPvB assessment : Not classified as PBT or vPvB.

12.6. Endocrine disrupting properties

Hormone disruptor characteristics : Not applicable.

12.7. Other adverse effects

Other harmful effects : Not applicable.

SECTION 13 WASTE DISPOSAL

13.1. Waste treatment methods

Product residues : Do not put empty packaging in the household waste. Packaging can be reused. Treat product residues and uncleaned packaging as hazardous waste.

Additional warning : No.

Discharge of waste water : Do not dispose of in the environment, drains, sewers or waterways.

European waste the directory : Leave hazardous waste, in accordance with Directive 91/689/EEC with the correct waste code according to Commission Decision 2000/532/EC, to an approved waste recipient.

Local regulations : Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more binding than regional or national requirements and must be followed.

SECTION 14 TRANSPORT INFORMATION

14.1. UN number or ID number

UN number : None.

14.2. Official shipping name

Shipping name : Not regulated.

14.3/14.4/14.5. Hazard class for transport/Hazard class for transport/Environmental hazards

ADR/RID/ADN (road/rail/inland waterways)

Class : This product is not classified according to ADR/RID/ADN.

IMDG (maritime)

Class : This product is not classified according to IMDG.

Water pollutant subject : No

IATA (air transport)

Class : This product is not classified according to IATA.

14.6. Special precautions

Other information : Different rules may apply in different countries.

14.7. Bulk transport at sea according to IMO instruments

Marpol : Not intended for bulk transport in accordance with IMO instruments. Packaged liquids are not considered bulk.

SECTION 15 APPLICABLE REGULATIONS

15.1. Safety, health and environmental regulations/legislation on the substance or mixture

EU regulations : Regulation (EU) No. 2020/878 (REACH), Regulation (EC) No. 1272/2008 (CLP), and other regulations. Regulation (EC) No 648/2004 (cleaning agents). directive 2008/98/EC (waste).

15.2. Chemical safety assessment

chemical safety assessment : Not available.

SECTION 16 OTHER INFORMATION

16.1. Other information

The information in this safety data sheet is in accordance with Regulation (EU) No. 2020/878 of 18 June 2020 and is based on knowledge and experience at the time of issue. It is the user's responsibility to use this product safely and to comply with all applicable laws and regulations regarding the use of the product. This safety data sheet supplements the technical information sheets, but does not replace them and does not provide any guarantees for the properties of the products.

The user should be aware that the use of the product for purposes other than those for which it was produced, poses a potential risk.

Changed or new information in relation to the previous version is marked with an asterisk (*).

List of abbreviations and acronyms that may be used (but not necessarily present) on this MSDS:

ADR	: European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	: Estimated acute toxicity
CLP	: Classification, labeling and packaging Carcinogenic,
CMR	: Mutagenic or toxic for reproduction European
EEG	: Economic Community
GHS	: Globally Harmonized System of Classification and Labeling of Chemicals
IATA	: International Air Transport Association
The IBC Code	: International Code for the Construction and Equipment of Ships Carrying Hazardous Chemicals in Bulk
IMDG	: International Code for the Carriage of Dangerous Goods by
LD50/LC50	: Sea Dose/concentration killing 50% of test animals
MAC	: Maximum Allowable Concentration
MARPOL	: The International Convention for the Prevention of Pollution from Ships Level
NO(A)EL	: where no (harmful) effect is observed
OECD	: Organization for Economic Co-operation and
PBT	: Development Persistent, bioaccumulative and toxic
PC	: Chemical product category
PT	: Product type
REACH	: Registration, evaluation, approval and restriction of chemicals Regulations on
RIDE	: the international carriage of dangerous goods by rail Wastewater treatment
STP	: plant
SU	: Sector of use
NGV/KTV	: Level limit value/Short-term value

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UN	:	United Nations
UFI	:	Unique formulation identifier
VOCs	:	Volatile organic compound
vPvB	:	Very long-lived and highly bioaccumulating substances

Important data used in the compilation of the data sheet is taken from, but not limited to, one or more information sources, e.g. toxicological data of material suppliers, CONCAWE, IFRA, CESIO, EC 1272/2008-ordinance etc.

Procedure used to derive the classification in accordance with Regulation (EC) No. 1272/2008:

Aspen. Tox. 1 : Based on test data. Calculation method.

Explanations for hazard classes in Section 3:

Aspen. Tox. 1 : Aspiration hazard, category 1.

Explanations of H-phrases in section 3:

H304	May be fatal if swallowed if inhaled. Repeated exposure may
EUH066	cause skin dryness or cracking.

Advice on appropriate training for employees: none.

End of document.

Print date : 2022-11-25

SDS 11: Red Ethanol

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SECTION 1 IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product name : KEMETYL T-RÖD RED ETHANOL
Product code : 1276, 3111

1.2. Relevant identified uses of the substance or mixture and uses advised against

Application : SU21 Consumer product. PC35 Cleaning agent. All-purpose (or multi-purpose) non-abrasive cleaners.

1.3. Details of the supplier of the safety data sheet

Supplier : Kemetyl AB
Rörvägen 7
13650 Jordbro, Sweden
Telephone : +46 8 504 10100
E-mail : msds@kemetyl.com
Website : www.kemetyl.com

1.4. Emergency telephone number

EMERGENCY TELEPHONE NUMBER, for DOCTORS/FIRE BRIGADE/POLICE only:
SE - Telephone : +46 8 504 10100 (During office hours only)

SECTION 2 HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

CLP classification (1272/2008/EC) : Flammable liquid, category 2. Eye irritation, category 2.

Human health hazards : Causes serious eye irritation.
Physical/chemical hazards : Highly flammable. Keep away from sources of ignition — No smoking.
Environmental hazards : Not classified as dangerous according to statutory EC-Directives.

2.2. Label elements

Label elements (1272/2008/EC):
Hazard pictograms :

Signal word : Danger

H- and P-phrases :

H225	Highly flammable liquid and vapour.
H319	Causes serious eye irritation.
P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233	Keep container tightly closed.
P280 eyes only	Wear eye protection.

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	P305+P351 +P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	P337+P313	If eye irritation persists: Get medical advice/attention.
	P501	Dispose of contents/container to an official chemical waste depot.

Labelling of packagings where the contents do not exceed 125 ml and it is technically impossible to list all phrases:

Hazard pictograms :

Signal word : Danger

H- and P-phrases :

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.

Other information : According to Regulation (EC) No 1272/2008, the packaging of this product shall carry a tactile warning of danger.

2.3. Other hazards

Other information : Does not contain PBT or vPvB substances.

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS *

3.2. Mixtures

Product description : Mixture.

Information on hazardous substances:

Substance name	Concentration (w/w) (%)	CAS nr.	EC number	Remark	REACH nr.
Ethanol	> 75	64-17-5	200-578-6		01-2119457610-43
Propan-2-ol	10 - < 20	67-63-0	200-661-7		01-2119457558-25
Acetone	0,1 - < 1	67-64-1	200-662-2		01-2119471330-49
Butanone	0,1 - < 1	78-93-3	201-159-0		01-2119457290-43

Substance name	Hazard Class	H-phrases	Pictograms	
Ethanol	Flam. Liq. 2; Eye Irrit. 2	H225; H319	GHS02; GHS07	H319 : C >= 50 %
Propan-2-ol	Flam. Liq. 2; Eye Irrit. 2; STOT SE 3	H225; H319; H336	GHS02; GHS07	
Acetone	Flam. Liq. 2; Eye Irrit. 2; STOT SE 3	H225; H319; H336; EUH066	GHS02; GHS07	
Butanone	Flam. Liq. 2; Eye Irrit. 2; STOT SE 3	H225; H319; H336; EUH066	GHS02; GHS07	

Occupational exposure limit(s), if relevant, are listed in section 8.

Reference is made to chapter 16 for full text of each relevant H phrase.

SECTION 4 FIRST-AID MEASURES

4.1. Description of first aid measures

First aid measures

Inhalation : Move victim into fresh air. Consult a doctor if victim feels unwell.

Skin contact	:	Take off contaminated clothing. Wash off skin with plenty of water and soap before product dries up.
Eye contact	:	Wash out with (lukewarm) water. Remove contact lenses. Consult a doctor.
Ingestion	:	Do not induce vomiting. Do rinse the mouth. Give one glass of water. Never give anything by mouth to an unconscious person. Consult a doctor if victim feels unwell.

4.2. Most important symptoms and effects, both acute and delayed

Effects and symptoms

Inhalation	:	May cause headache, dizziness and a feeling of sickness.
Skin contact	:	May cause dry skin.
Eye contact	:	Irritant. May cause redness and pain.
Ingestion	:	May cause a feeling of sickness, vomiting and diarrhoea.

4.3. Indication of any immediate medical attention and special treatment needed

Note to physicians : None known.

SECTION 5 FIRE-FIGHTING MEASURES *

5.1. Extinguishing media

Extinguishing media

Suitable	:	Carbondioxide (CO_2). Alcohol resistant foam. Dry chemical. Water fog.
Not suitable	:	Water jet. Use of heavy stream of water may spread fire.

5.2. Special hazards arising from the substance or mixture

Special exposure hazards	:	None known.
Hazardous thermal decomposition products	:	Carbon monoxide may be evolved if incomplete combustion occurs.

5.3. Advice for firefighters

Special protective equipment for fire-fighters	:	Use adequate respiratory equipment in case of insufficient ventilation.

SECTION 6 ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions	:	Danger of slipping. Clean up spills immediately. Wear shoes with non-slip soles. Avoid contact with spilled or released material. Keep away from sources of ignition — No smoking. Vapours are heavier than air. Build up (of gasses) in low areas involves risk of suffocation.

6.2. Environmental precautions

Environmental precautions	:	Avoid release of product into sewers, surface water and/or ground water. In case of large spills: contain with dike.
Other information	:	Notify authorities if any exposure to the general public or the environment occurs or is likely to occur.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up	:	Collect spilled material in containers. Absorb residues in sand or other inert material. Dispose at an authorised waste collection point. Wash away remainder with plenty of water and soap.

6.4. Reference to other sections

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Reference to other sections : See also section 8.

SECTION 7 HANDLING AND STORAGE

7.1. Precautions for safe handling

Handling : Handle in accordance with good occupational hygiene and safety practices in well-ventilated areas. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Electrostatic discharge may cause fire. Ensure electrical continuity by bonding and grounding (earthing) all equipment. Do not breathe vapour. Avoid contact with skin and eyes.

7.2. Conditions for safe storage, including any incompatibilities

Storage : Keep in a cool, dry and well-ventilated place (< 35 °C). Protect from sunlight. Keep away from oxidizing agents.

Recommended packaging : Keep only in the original container.

Non recommended packaging : Steel (except stainless steel).

7.3. Specific end use(s)

Use : Use only as directed. Do not mix with other products.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION *

8.1. Control parameters

Occupational exposure limits : Occupational exposure limits have not been established for this product. Derived no-effect levels (DNEL) have not been established for this product. Predicted no-effect concentrations (PNEC) have not been established for this product.

Workplace exposure limits (mg/m³):

Chemical name	Country	TWA 8 hour (mg/m3)	STEL 15 min (mg/m3)	Comments	Source
Ethanol		260	1900	-	MAC: NL
Ethanol	GB	1920	-	-	
Propan-2-ol	GB	999	1250	-	
Acetone	EC	1210	-	-	Directive 2000/39/EC
Acetone	GB	1210	3620	-	
Butanone	EC	600	900	-	Directive 2000/39/EC
Butanone	GB	600	899	Skin; BMGV	

Biological limit values (BMGV):

Substance	Country	Determinant	BMG-value	Specimen/Sampling Time/Remarks
			None known.	

Abbreviations BMG-list : B = Blood. U = Urine. b = At the end of the period of exposure. d = pre-shift.

Source : EH40/2005 (Fourth edition, 2020).

Derived no-effect level (DNEL) for workers:

Chemical name	Route of exposure	DNEL, short-term		DNEL, long-term	
		Local effect	Systemic effect	Local effect	Systemic effect
Ethanol	Inhalation Dermal	1900 mg/m3			950 mg/m3 343 mg/kg bw/day

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Propan-2-ol	Dermal				888 mg/kg bw/day
	Inhalation				500 mg/m3
Acetone	Dermal				186 mg/kg bw/day
	Inhalation			2420 mg/m3	1210 mg/m3
Butanone	Dermal				1161 mg/kg bw/day
	Inhalation				600 mg/m3

Derived no-effect level (DNEL) for consumers:

Chemical name	Route of exposure	DNEL, short-term		DNEL, long-term	
		Local effect	Systemic effect	Local effect	Systemic effect
Ethanol	Inhalation	950 mg/m3			114 mg/m3
	Dermal				206 mg/kg bw/day
	Oral				87 mg/kg bw/day
Propan-2-ol	Dermal				319 mg/kg bw/day
	Inhalation				89 mg/m3
	Oral				26 mg/kg bw/day
Acetone	Dermal				62 mg/kg bw/day
	Inhalation				200 mg/m3
	Oral				62 mg/kg bw/day
Butanone	Dermal				412 mg/kg bw/day
	Inhalation				106 mg/m3
	Oral				31 mg/kg bw/day

Predicted no-effect concentration (PNEC):

Chemical name	Route of exposure	Fresh water	Marine water	
Ethanol	Water	0,96 mg/l	0,79 mg/l	
	Sediment	3,6 mg/kg	2,9 mg/kg	
	Intermittent water			2,75 mg/l
	STP			580 mg/l
	Soil			0,63 mg/kg
	Oral			0,72 mg/kg food
Propan-2-ol	Water	140,9 mg/l	140,9 mg/l	
	Sediment	552 mg/kg	552 mg/kg	
	Intermittent water			140,9 mg/l
	STP			2251 mg/l
	Soil			28 mg/kg
	Oral			160 mg/kg food
Acetone	Water	10,6 mg/l	1,06 mg/l	
	Sediment	30,4 mg/kg	3,04 mg/kg	
	Intermittent water			21 mg/l
	STP			100 mg/l
	Soil			29,5 mg/kg
Butanone	Water	55,8 mg/l	55,8 mg/l	
	Sediment	284,74 mg/kg	284,7 mg/kg	
	Intermittent water			55,8 mg/l
	STP			709 mg/l
	Soil			22,5 mg/kg
	Oral			1000 mg/kg food

8.2. Exposure controls

Engineering measures : Use only in well-ventilated areas. Comply with standard precautionary measures for working with chemicals.

Hygienic measures : When using do not eat, drink or smoke.

Personal protective equipment:

The efficiency of personal protective equipment depends among other things on temperature and degree of ventilation. Always get professional advice for the particular local situation.

Body protection	:	Use of specific protective industrial clothing is not required under normal conditions of use.
Respiratory protection	:	Take care of sufficient ventilation. Wear suitable respiratory protection in case of large scale exposure. Suitable: gas filter type A (brown), class I or higher on e.g. a facemask in accordance with EN 140.
Hand protection	:	Under normal conditions of use specific gloves are not required.
Eye protection	:	Wear appropriate safety glasses with side shields, in accordance with EN 166, when there is danger of possible eye contact.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES *

9.1. Information on basic physical and chemical properties

Physical state	:	Liquid.	
Colour	:	Pink.	
Odour	:	Characteristic.	
Odour threshold	:	Not known.	
pH	:	7	10% solution.
Solubility in water	:	Soluble.	
Partition coefficient (n-octanol/water)	:	Not known.	Not measured. Not relevant for mixtures.
Flash point	:	12 °C	Closed Cup (ISO 2719, EN 11, DIN 51758, ASTM D 93).
Flammability (solid, gas)	:	Not applicable.	Liquid. See flashpoint.
Auto ignition temperature	:	> 399 °C	
Boiling point/boiling range	:	78 °C	
Melting point/melting range	:	-114 °C	
Explosive properties	:	Not an explosive.	
Explosion limits (% in air)	:	Not known.	Lower explosion limit in air (%): 2 (Propan-2-ol) Upper explosion limit in air (%): 19 (Ethanol)
Oxidising properties	:	Not applicable.	Does not contain oxidizing substances.
Decomposition temperature	:	Not applicable.	
Viscosity (20°C)	:	1 mm2/sec	(1 mm2/sec = 1cSt)
Viscosity (40°C)	:	1 mm2/sec	
Vapour pressure (20°C)	:	> 2300 Pa	
Relative vapour density	:	> 1	(air = 1)
Relative density (20°C)	:	0,8 g/ml	
Particle characteristics	:	Not applicable.	Liquid.

9.2. Other information

Other information	:	Not relevant.

SECTION 10 STABILITY AND REACTIVITY

10.1. Reactivity

Reactivity	:	See sub-sections below.

10.2. Chemical stability

Stability	:	Stable under normal conditions.

10.3. Possibility of hazardous reactions

Reactivity	:	No other hazardous reactions known.

10.4. Conditions to avoid

Conditions to avoid : See section 7.

10.5. Incompatible materials

Materials to avoid : Keep away from oxidizing agents.

10.6. Hazardous decomposition products

Hazardous decomposition products : Not known.

SECTION 11 TOXICOLOGICAL INFORMATION *

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

No toxicological research has been carried out on this product.

Inhalation

- Acute toxicity : Calculated LC50: > 10 mg/l. Ingredients of unknown toxicity: < 1 %. ATE: > 5 mg/l. Low toxicity. Not classified - based on available data, the classification criteria are not met. May cause headache, dizziness and a feeling of sickness.
- Corrosion/irritation : Not classified - based on available data, the classification criteria are not met.
- Sensitisation : Does not contain substances classified as respiratory sensitiser. Not classified - based on available data, the classification criteria are not met.
- Carcinogenicity : Not classified - based on available data, the classification criteria are not met.
- Mutagenicity : Not expected to be mutagenic. Not classified - based on available data, the classification criteria are not met.

Skin contact

- Acute toxicity : Calculated LD50: > 5000 mg/kg.bw. Ingredients of unknown toxicity: < 1 %. ATE: > 5000 mg/kg.bw. Low toxicity. Not classified - based on available data, the classification criteria are not met.
- Corrosion/irritation : Prolonged contact may dry out and defat the skin. Not classified - based on available data, the classification criteria are not met.
- Sensitisation : Not classified - based on available data, the classification criteria are not met.
- Mutagenicity : Does not contain mutagenic substances. Not classified - based on available data, the classification criteria are not met.

Eye contact

- Corrosion/irritation : Irritant.

Ingestion

- Acute toxicity : Calculated LD50: > 5000 mg/kg.bw. Ingredients of unknown toxicity: < 1 %. ATE: > 2000 mg/kg.bw. Low toxicity. Not classified - based on available data, the classification criteria are not met. May cause hampered eyesight.
- Aspiration : Not classified - based on available data, the classification criteria are not met. Does not contain substances with an aspiration hazard.
- Corrosion/irritation : May cause a feeling of sickness, vomiting and diarrhoea.
- Carcinogenicity : Not classified - based on available data, the classification criteria are not met.
- Mutagenicity : Not expected to be mutagenic. Not classified - based on available data, the classification criteria are not met.
- Reprotoxicity : Development: Not expected to be reprotoxic. Development: Not classified - Based on available data, the classification criteria are not met. Fertility: not expected to be reprotoxic. Fertility: Not classified - based on available data, the classification criteria are not met.

Toxicological information:

Chemical name	Property		Method	Test animal
Ethanol	Mutagenicity	Negative	OECD 471	Salmonella typhimurium

Kemetyl

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	Genotoxicity - in vitro	Not genotoxic	OECD 476	
	Genotoxicity - in vivo	Not genotoxic	OECD 478	Mouse
	NOEL (carcinogenicity, oral)	> 4400 mg/kg bw/d		Mouse
	Eye irritation	Irritant	OECD 405	Rabbit
	LC50 (inhalation)	> 99999 mg/m3	OECD 403	Rat
	LD50 (oral)	10470 mg/kg bw	OECD 401	Rat
	NOAEL (development, oral)	6400 mg/kg bw/d		
	Skin sensitisation	Not sensitizing	OECD 406	Guinea pig
	NOAEL (fertility, oral)	20000 mg/kg bw/d	OECD 415	Rat
	NOAEL (oral)	2400 mg/kg bw/d		Rat
	NOAEL (inhalation)	23000 mg/m3		Rat
	LD50 (dermal)	15800 mg/kg bw	-----	Rabbit
	Skin irritation	Non-irritant	-----	Rabbit
Propan-2-ol	LD50 (oral)	5840 mg/kg bw	OECD 401	Rat
	LD50 (dermal)	12800 mg/kg bw	-----	Rat
	LC50 (inhalation)	46600 mg/m3	-----	Rat
	Skin irritation	Slightly irritant	OECD 404	Rabbit
	Eye irritation	Irritant	OECD 405	Rabbit
	NOAEL (fertility, oral)	853 mg/kg bw/d	OECD 415	Rat
	NOAEL (development, oral)	596 mg/kg bw/d	OECD 414	Rat
	NOEL (carcinogenicity, oral)	Not carcinogenic	OECD 416	Rat
	Skin sensitisation	Not sensitizing	OECD 406	Guinea pig
	Mutagenicity	Negative	OECD 471	
	NOAEL (inhalation)	12500 mg/m3	OECD 451	Rat
	Genotoxicity - in vivo	Not genotoxic	OECD 474	Mouse
	NOEL (carcinogenicity, inh.)	12500 mg/m3		Mouse
	Genotoxicity - in vitro	Not genotoxic	OECD 476	
	NOAEL (oral)	870 mg/kg bw/d	-----	Rat

11.2. Information on other hazards

Endocrine disrupting properties : Not applicable.
Other information : Not applicable.

SECTION 12 ECOLOGICAL INFORMATION *

12.1. Toxicity

No ecotoxicological research has been carried out on this product.
Ecotoxicity : Calculated LC50 (fish): 12627 mg/l. Calculated EC50 (waterflea): 4992 mg/l. Contains 0 % of components with unknown hazards to the aquatic environment. Not classified - based on available data, the classification criteria are not met.

12.2. Persistence and degradability

Persistence – degradability : No specific information known.

12.3. Bioaccumulative potential

Bioaccumulative potential : No specific information known.

12.4. Mobility in soil

Mobility : If product enters soil, it will be highly mobile and may contaminate groundwater.

12.5. Results of PBT and vPvB assessment

PBT/vPvB assessment : Does not contain PBT or vPvB substances.

12.6. Endocrine disrupting properties

Endocrine disrupting properties : Not applicable.

12.7. Other adverse effects

Other adverse effects : Not applicable.

SECTION 13 DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Product residues : Do not dispose empty pack with waste produced by households. Containers may be recycled. Treat product residues and non-empty pack as hazardous waste.
Additional warning : Residues may cause an explosion hazard. Do not puncture, cut or weld uncleaned drums.
Waste water discharge : Do not dispose of into the environment, drains, sewers or water courses.
European waste catalogue : Dispose hazardous waste in accordance with Directive 91/689/EEC under acknowledgement of a waste code according to Commission Decision 2000/532/EC to an official chemical waste depot.
Local legislation : Disposal should be in accordance with applicable regional, national, and local laws and regulations. Local regulations may be more stringent than regional or national requirements and must be complied with.

SECTION 14 TRANSPORT INFORMATION *

14.1. UN number or ID number

UN nr. : UN 1993

14.2. UN proper shipping name

Transport name : FLAMMABLE LIQUID, N.O.S. (Ethanol ; Propan-2-ol)
Transport name (IMDG, IATA) : FLAMMABLE LIQUID, N.O.S. (Ethanol ; Propan-2-ol)

14.3/14.4/14.5. Transport hazard class(es)/Packing group/Environmental hazards

ADR/RID/ADN (road/railway/inland waterways)
Class : 3
Classification code : F1
Packaging group : II
Danger label : 3
Tunnel restriction code : D/E

:

Other information : Not intended for carriage by tank-vessels on inland waterways.

IMDG (sea)
- Class : 3
- Packaging group : II
- EmS (fire / spill) : F - E / S - E
- Marine pollutant : No

IATA (air)
- Class : 3
- ERG code : 3H
- Packaging group : II

14.6. Special precautions for user

Other information : Country specific variations may apply. It is possible that a "Limited Quantity" exemption applies to the transport of this product.

14.7. Maritime transport in bulk according to IMO instruments

Marpol : Not intended to be carried in bulk according to International Maritime Organisation (IMO) instruments. Packaged liquids are not considered bulk.

SECTION 15 REGULATORY INFORMATION *

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Community regulations : Regulation (EU) No 2020/878 (REACH), Regulation (EC) No 1272/2008 (CLP) and other regulations. Regulation (EC) No 648/2004 (detergents). Directive 2008/98/EC (waste).

15.2. Chemical safety assessment

Chemical safety assessment : Not applicable.

SECTION 16 OTHER INFORMATION *

16.1. Other information

The information in this safety data sheet is compiled in compliance with Regulation (EU) No 2020/878 dated 18 June 2020 and accurate to the best of our knowledge and experience at the date of issue specified. It is the user's obligation to use this product safely and to comply with all applicable laws and regulations concerning the use of the product. This safety data sheet complements the technical information sheets but does not replace them and offers no warranty with regard to product properties.

Users are also forewarned for any hazards involved when the product is used for other purposes than those for which it is designed.

Changed or new information with regard to the previous release is indicated with an asterisk (*).

List of abbreviations and acronyms that could be (but not necessarily are) used in this safety data sheet:
- ADR : European Agreement concerning the International Carriage of Dangerous Goods by Road
- ATE : Acute Toxicity Estimate
- CLP : Classification, Labeling & Packaging
- CMR : Carcinogenic, Mutagenic or toxic for Reproduction
- EEC : European Economic Community
- GHS : Globally Harmonized System of Classification and Labelling of Chemicals
- IATA : International Air Transport Association
- IBC code : International Bulk Chemical Code

IMDG	:	International Maritime Dangerous Goods Code
LD50/LC50	:	Lethal Dose/Concentration for 50% of a population
MAC	:	Maximum Allowable Concentration
MARPOL	:	International Convention for the Prevention of Pollution From Ships
NO(A)EL	:	No Observed (Adverse) Effect Level
OECD	:	Organisation for Economic Co-operation and Development
PBT	:	Persistent, Bioaccumulative and Toxic
PC	:	Chemical product category
PT	:	Product type
REACH	:	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	:	Regulations concerning the International Carriage of Dangerous Goods by Rail
STP	:	Sewage Treatment Plant
SU	:	Sector of Use
TWA/STEL	:	Time-Weighted Average/Short Term Exposure Limit
UN	:	United Nations
UFI	:	Unique formula identifier
VOC	:	Volatile Organic Compounds
vPvB	:	Very Persistent and Very Bioaccumulative

Key data used to compile the Safety Data Sheet are from, but not limited to, one or more sources of information e.g. toxicological data from material suppliers, CONCAWE, IFRA, CESIO, Regulation EG 1272/2008, etc.

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008:

Flam. Liq. 2	:	On basis of test data.
Eye Irrit. 2	:	Calculation method.

Full text of hazard classes mentioned in section 3:

Flam. Liq. 2	:	Flammable liquid, category 2.
Eye Irrit. 2	:	Eye irritation, category 2.
STOT SE 3	:	Specific target organ toxicity after single exposure, category 3.

Full text of H-phrases mentioned in section 3:

H225	Highly flammable liquid and vapour.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
EUH066	Repeated exposure may cause skin dryness or cracking.

Advice on any training appropriate for workers: none.

Number format : "," used as decimal separator.

End of safety data sheet.

Print date : 2022-10-12

SDS 12: Lead

Lead

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 12/15/2014 Revision date: 12/15/2014 Version: 1.1

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form	:	Substance
CAS No	:	7439-92-1
Formula	:	Pb
Synonyms	:	C.I. 77575, in massive state / elemental lead, in massive state / glover, in massive state
BIG no	:	10073

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture	:	Solder Battery: component Construction Electrodes

1.3. Details of the supplier of the safety data sheet

GSC International, Inc.
1747 N. Deffer Drive
Nixa,
MO 65714
United States of America

Tel: 417-374-7431
Fax: 417-374-7442
Email: info@gscinternationalinc.com

1.4. Emergency telephone number

Country	Organization/Company	Address	Emergency number
MEXICO	Servicio de Informacion Toxicologica Sintox	Tintoreto #32 Edif. a Desp. Col. Nochebuena Mixcoac México, D.F.	1 800 009 2800 +52 55 5611 2634 /+52 55 5598 9095
UNITED STATES OF AMERICA	American Association of Poison Control Centers		1-800-222-1222

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (GHS-US)

Acute Tox. 4 (Oral)	H302
Acute Tox. 4 (Inhalation)	H332
Carc. 1B	H350
Repr. 1A	H360
STOT RE 2	H373
Aquatic Acute 1	H400
Aquatic Chronic 1	H410

Full text of H-phrases: see section 16

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US) :

GHS07 GHS08 GHS09

Signal word (GHS-US) : Danger

Hazard statements (GHS-US) : H302+H332 - Harmful if swallowed or if inhaled
H350 - May cause cancer
H360 - May damage fertility or the unborn child
H373 - May cause damage to organs through prolonged or repeated exposure

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H400 - Very toxic to aquatic life
H410 - Very toxic to aquatic life with long lasting effects

Precautionary statements (GHS-US) : P201 - Obtain special instructions before use
P202 - Do not handle until all safety precautions have been read and understood
P260 - Do not breathe dust, fume
P264 - Wash hands thoroughly after handling
P270 - Do not eat, drink or smoke when using this product
P273 - Avoid release to the environment
P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing
P308+P313 - If exposed or concerned: Get medical advice/attention
P314 - Get medical advice/attention if you feel unwell
P501 - Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection site except for empty clean containers which can be disposed of as non-hazardous waste

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS-US)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substance

Name	Product identifier	%	Classification (GHS-US)
Lead (Main constituent)	(CAS No) 7439-92-1	> 99,9	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation), H332 Carc. 1B, H350 Repr. 1A, H360 STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

Full text of H-phrases: see section 16

3.2. Mixture

Not applicable

4.1. Description of first aid measures

First-aid measures general : If you feel unwell, seek medical advice. IF exposed or concerned: Get medical advice/attention. Call a poison center/doctor/physician if you feel unwell.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Not applicable. Call a poison center/doctor/physician if you feel unwell.

First-aid measures after skin contact : Not applicable. Wash skin with plenty of water.

First-aid measures after eye contact : Not applicable. Rinse eyes with water as a precaution.

First-aid measures after ingestion : Not applicable. Rinse mouth. Call a poison center/doctor/physician if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries after inhalation : No effects known.

Symptoms/injuries after skin contact : No effects known.

Symptoms/injuries after eye contact : No effects known.

Symptoms/injuries after ingestion : No effects known.

Chronic symptoms : No effects known.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Adapt extinguishing media to the environment.

Unsuitable extinguishing media : No unsuitable extinguishing media known.

5.2. Special hazards arising from the substance or mixture

Fire hazard : DIRECT FIRE HAZARD. Non combustible.

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Explosion hazard	:	DIRECT EXPLOSION HAZARD. No data available on direct explosion hazard. INDIRECT EXPLOSION HAZARD. No data available on indirect explosion hazard.
Reactivity	:	On burning: formation of metallic fumes. Oxidizes on exposure to air.

5.3. Advice for firefighters

Precautionary measures fire	:	Exposure to fire/heat: keep upwind. Exposure to fire/heat: consider evacuation. Exposure to heat: have neighborhood close doors and windows.
Firefighting instructions	:	Dilute toxic gases with water spray. Take account of toxic fire-fighting water. Use water moderately and if possible collect or contain it.
Protection during firefighting	:	Heat/fire exposure: compressed air/oxygen apparatus. Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment	:	Gloves. Protective clothing. See "Material-Handling" to select protective clothing.
Emergency procedures	:	Mark the danger area. No naked flames.

6.1.2. For emergency responders

Protective equipment	:	Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment. Prevent soil and water pollution. Prevent spreading in sewers. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment	:	Not applicable. Collect spillage.
Methods for cleaning up	:	Recover mechanically the product. Pick-up the material. Take collected spill to manufacturer/competent authority. Notify authorities if product enters sewers or public waters.
Other information	:	Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	:	Meet the legal requirements. Do not discharge the waste into the drain. Handle unclean empty containers as full ones. Observe strict hygiene. Measure the concentration in the atmosphere. Carry out operations in the open/under local exhaust/ventilation or with respiratory protection. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust, fume. Use only outdoors or in a well-ventilated area. Take all necessary technical measures to avoid or minimize the release of the product on the workplace. Limit quantities of product at the minimum necessary for handling and limit the number of exposed workers. Provide local exhaust or general room ventilation. Wear personal protective equipment. Floors, walls and other surfaces in the hazard area must be cleaned regularly.
Hygiene measures	:	Separate working clothes from town clothes. Launder separately. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures	:	Does not require any specific or particular technical measures. Comply with applicable regulations.
Storage conditions	:	Store locked up. Store in a well-ventilated place. Keep cool.
Incompatible materials	:	Strong acids, strong bases and oxidation agents.
Heat-ignition	:	KEEP SUBSTANCE AWAY FROM: heat sources.
Prohibitions on mixed storage	:	KEEP SUBSTANCE AWAY FROM: oxidizing agents. Strong acids. Strong bases.
Storage area	:	Meet the legal requirements.
Special rules on packaging	:	SPECIAL REQUIREMENTS: closing. correctly labeled. meet the legal requirements. Secure fragile packaging in solid containers.

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7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Lead (7439-92-1)		
ACGIH	ACGIH TWA (mg/m³)	0,05 mg/m³
ACGIH	Remark (ACGIH)	CNS & PNS impair
OSHA	Not applicable	

8.2. Exposure controls

Appropriate engineering controls : Provide adequate general and local exhaust ventilation. Ensure good ventilation of the work station.

Personal protective equipment : Protective goggles. Gloves.

Materials for protective clothing : GIVE EXCELLENT RESISTANCE: No data available. GIVE GOOD RESISTANCE: butyl rubber. PVC. GIVE LESS RESISTANCE: No data available. GIVE POOR RESISTANCE: No data available.

Hand protection : protective gloves.

Eye protection : Safety glasses.

Skin and body protection : Not required for normal conditions of use.

Respiratory protection : Wear respiratory protection.

Environmental exposure controls : Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Solid

Appearance : Metal.

Molecular mass : 207,20 g/mol

Color : White to blue-grey

Odor : Odorless

Odor threshold : No data available

pH : No data available

Relative evaporation rate (butyl acetate=1) : No data available

Melting point : 327 °C

Freezing point : No data available

Boiling point : 1740 °C

Flash point : Not applicable

Auto-ignition temperature : No data available

Decomposition temperature : No data available

Flammability (solid, gas) : No data available

Vapor pressure : < 0,1 hPa

Relative vapor density at 20 °C : No data available

Relative density : 11,3

Specific gravity / density : 11340 kg/m³

Solubility : insoluble in water. Substance sinks in water. Soluble in nitric acid. Insoluble in organic solvents. Water: < 0,1 g/100ml

Log Pow : 0,73 (Estimated value)

Log Kow : No data available

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Viscosity, kinematic	:	Not applicable
Viscosity, dynamic	:	No data available
Explosive properties	:	No data available
Oxidizing properties	:	No data available
Explosive limits	:	No data available

9.2. Other information

VOC content : Not applicable (inorganic)

SECTION 10: Stability and reactivity

10.1. Reactivity

On burning: formation of metallic fumes. Oxidizes on exposure to air.

10.2. Chemical stability

Unstable on exposure to air.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

No additional information available

10.5. Incompatible materials

Acids. Bases.

10.6. Hazardous decomposition products

Thermal decomposition generates : fume.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Oral: Harmful if swallowed. Inhalation: Harmful if inhaled.

Lead (\f)7439-92-1	
LD50 oral rat	> 2000 mg/kg body weight (Rat; Weight of evidence)
LD50 dermal rat	> 2000 mg/kg body weight (Rat; Experimental value; OECD 402: Acute Dermal Toxicity)
ATE US (oral)	500,000 mg/kg body weight
ATE US (gases)	4500,000 ppmV/4h
ATE US (vapors)	11,000 mg/l/4h
ATE US (dust, mist)	1,500 mg/l/4h
Additional information	Lead massive metal is not considered to be acutely toxic. It is not easily inhaled or ingested, and if it is accidentally ingested normally passes through the gastrointestinal system without significant absorption into the body. Lead is not easily absorbed through the skin.

Skin corrosion/irritation : Not classified
(Based on available data, the classification criteria are not met)

Serious eye damage/irritation : Not classified
(Based on available data, the classification criteria are not met)

Respiratory or skin sensitization : Not classified
(Based on available data, the classification criteria are not met)

Germ cell mutagenicity : Not classified
(Based on available data, the classification criteria are not met)

Carcinogenicity : May cause cancer.