



HOUGHTON®

Revision Date 04-10-2018

Version 6

SAFETY DATA SHEET

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

1.1. Product identifier

Product Code(s) 42014646-M
Product Code(s) (IT): - 01H0016
Product Code(s) (ES): - 125240
Product Name HOCUT 4646
Product Registration number
Denmark -
Norway -
Sweden -
EC #
Pure substance/mixture

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

Recommended Use Metalworking fluid Emulsifiable fluid
Uses advised against Any other purpose.

1.3. Details of the supplier of the safety data sheet

Manufacturer, Importer, Supplier

Houghton plc
Beacon Road
Trafford Park
Manchester
M17 1AF
Tel: +44 (0)161 874 5000
productstewardship@houghtonintl.com

Houghton S.A.S.
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BP 60041
69652 Villefranche sur saone
France
Tel: (0) 4 74 65 65 00
Fax: (0) 4 74 60 08 44

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SPAIN
Tel: +(34 93) 718 85 00
Fax: +(34 93) 718 93 00
msds.es@houghtonintl.com

Houghton Deutschland GmbH
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 DK-4180 Sorø
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Tel: +45 45 85 23 00
 E-mail: houghton@houghton.dk

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 013219 Bucharest
Phone: +40 21 667 06 15
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Houghton Kimya San. A.Ş
 Kosuyolu Mah
 Asma Dall Sok
 No: 1434718 Kadıköy
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Phone Number: +90 216 325 15 15 0

Houghton CZ s.r.o.
 Bartošova 3
 602 00 Brno
 Czech Republic
Phone: +420 542 213 332
 office@houghton.cz

1.4. Emergency telephone number

Carechem 24 International: +44 1235 239670

Austria		Notfall-Telefonnummer +43 (0) 1 406 4343
Belgium		Telefoonnummer voor +32 (0)70 245 245
Bulgaria		Телефон за спешни случаи +359 2 9154 409
Croatia		Telefon za izvanredna stanja +385 1 2348 342
Czech Republic	Carechem 24 International: +420 228 882 830	Telefonní číslo pro naléhavé situace +420 224 919 293
Denmark	Carechem 24 International: +45 8988 2286	Ring til Giftlinjen på +45 82 12 12 12
Estonia		Mürgistusteabekeskuse +372 626 93 90
Finland	Carechem 24 International: +358 9 7479 0199	Hätäpuhelinnumero +358 09 471 977
France	Carechem 24 International: +33 1 72 11 00 03	Numéro d'appel d'urgence +33 (0)1 45 42 5959
Germany	Carechem 24 International: +49 69 222 25285	
Greece	Carechem 24 International: +30 21 1198 3182	
Hungary		Díjmentesen hívható zöld szám +36 80 20 11 99
Italy	Carechem 24 International: +39 02 3604 2884	Numeri telefonici dei principali CAV: FI 055 7947819, MI 02 66101029, PV 038 224444, RM 06 3054343, NA 081 7472870
Ireland		Emergency telephone number +353 1 809 2166
Latvia		Valsts Toksikoloģijas centra Saindēšanās un zāļu informācijas centrs +371 6704 2473
Lithuania		Neatidėliotina informacija apsinuodijus +370 5 236 20 52
Netherlands	Carechem 24 International: +31 10 713 8195	National Poisons Information Center (NL): +31 30 274 88 88 (NB: this service is only available to health professionals)
Norway	Carechem 24 International: +47 2103 4452	Giftinformasjon +47 22 59 13 00
Poland	Carechem 24 International: +48 22 307 3690	112
Portugal	Carechem 24 International: +351 30880 4750	Número de telefone de emergência +351 808 250 143
Romania		

		Număr de telefon care poate fi apelat în caz de urgență +021 318 36 06 (08:00-15:00)
Slovakia		Národné toxikologické informačné centrum +421 2 5477 4166
South Africa	Carechem 24 International: +27 21 300 2732	(+1) 760 476 3959 (Code 333938)
Spain	Carechem 24 International: +34 91 114 2520	Instituto Nacional de Toxicología y Ciencias Forenses +34 91 562 0420
Sweden	Carechem 24 International: +46 8 566 42573	112 – Ask for poisons information
Switzerland		145; +41 44 251 51 51 (www.toxi.ch)
Turkey	Carechem 24 International: +90 212 375 5231	

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Skin corrosion/irritation	Category 2 - (H315)
Serious eye damage/eye irritation	Category 2 - (H319)
Chronic aquatic toxicity	Category 3 - (H412)

2.2. Label Elements



Signal Word
WARNING

Hazard statements

H315 - Causes skin irritation
H319 - Causes serious eye irritation
H412 - Harmful to aquatic life with long lasting effects

Precautionary Statements - EU (§28, 1272/2008)

P280 - Wear protective gloves and eye/face protection
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P302 + P352 - IF ON SKIN: Wash with plenty of soap and water
P337 + P313 - If eye irritation persists: Get medical advice/attention
P273 - Avoid release to the environment
P501 - Dispose of contents/ container to an approved waste disposal plant

2.3. Other hazards

No information available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances / 3.2. Mixtures

This product is a mixture. Health hazard information is based on its ingredients

Chemical name	EC-No	CAS No	Weight-%	Classification according to Regulation (EC) No. 1272/2008 [CLP]	REACH Registration Number
Highly refined, low viscosity mineral oils/hydrocarbons (Viscosity >7 - <20.5 cSt @40°C)	-	-	25% - 50%	Asp. Tox. 1 (H304) (EUH066)	-
1-Aminopropan-2-ol	201-162-7	78-96-6	2.5% - 10%	Skin Corr. 1B (H314) Acute Tox. 4 (H312)	01-2119475331-43-xxx x
Neutralised 1-Aminopropan-2-ol	201-162-7	78-96-6*	2.5% - 10%	Acute Tox. 4 (H312)	01-2119475331-43-xxx x
2,2'-methyliminodiethanol	203-312-7	105-59-9	1% - 2.5%	Eye Irrit. 2 (H319)	01-2119488970-24-xxx x
Alcohols, C16-18 and C18-unsatd., ethoxylated	-	68920-66-1	1% - 2.5%	Skin Irrit. 2 (H315) Aquatic Chronic 2 (H411)	01-2119489407-26-xxx x
Neutralised Phosphoric acid, isotridecyl ester	258-261-3	52933-07-0*	0% - 1%	Aquatic Chronic 2 (H411)	no data available
2-n-Butyl-benzo[d]isothiazol-3-one	420-590-7	4299-07-4	0% - 1%	Skin Corr. 1B (H314) Skin Sens. 1 (H317) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	no data available

Product containing mineral oil with less than 3% DMSO extract as measured by IP 346. The highly refined base oil may be described by one or more of the following generic CAS identifiers: 64742-54-7, 64742-65-0, 64742-52-5, 64742-53-6, 64742-62-7, 64742-57-0, 64742-01-4, 64741-88-4, 64741-96-4, 64741-97-5, 64742-55-8, 64742-56-9, 64741-89-5, 64742-47-8, 8042-47-5. The base oils may be used interchangeably to provide a product which is equivalent from both a regulatory and technical perspective. For full information on potential descriptors for the interchangeable base oil blend, please see Section 15 of this Safety Data Sheet.

CAS Numbers marked with * indicate that the substance is neutralised during the manufacturing process. The substance is present as part of a complex mixture, usually called "ionic mixture", which is intended to facilitate the process/application of the product in use.

Full text of H- and EUH-phrases: see section 16

SECTION 4: FIRST AID MEASURES

4.1. Description of first-aid measures

General advice	Do not get in eyes, on skin, or on clothing. When symptoms persist or in all cases of doubt seek medical advice.
Inhalation	Move to fresh air.
Skin contact	Wash off immediately with plenty of water for at least 15 minutes. Remove and wash contaminated clothing before re-use. If symptoms persist, call a physician.
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist.
Ingestion	Clean mouth with water. Drink plenty of water. Do not induce vomiting without medical advice.
Protection of First-aiders	Use personal protective equipment. Avoid contact with skin, eyes and clothing.

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

Main Symptoms Redness, Itching, Rash, Eye damage/irritation

4.3. Indication of immediate medical attention and special treatment needed

Notes to physician Treat symptomatically.

SECTION 5: FIRE FIGHTING MEASURES**5.1. Extinguishing media****Suitable Extinguishing Media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment: Use CO2, dry chemical, or foam, Water spray or fog

Extinguishing media which shall not be used for safety reasons

None

5.2. Special hazards arising from the substance or mixture**Special Hazard**

Water runoff can cause environmental damage.

Hazardous decomposition products

None under normal use

5.3. Advice for firefighters**Special protective equipment for fire-fighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

SECTION 6: ACCIDENTAL RELEASE MEASURES**6.1. Personal precautions, protective equipment and emergency procedures**

Ensure adequate ventilation. Use personal protective equipment. Avoid contact with skin, eyes and clothing.

Advice for non-emergency personnel

Material can create slippery conditions.

Advice for emergency responders For personal protection see section 8.

6.2. Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not flush into surface water or sanitary sewer system. Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained.

6.3. Methods and materials for containment and cleaning up

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Dike to collect large liquid spills.

6.4. Reference to other sections

See Section 8/12/13 for additional information

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Remove and wash contaminated clothing before re-use. Ensure adequate ventilation. Do not eat, drink or smoke when using this product. Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities**Technical measures/Storage conditions**

Keep container tightly closed in a dry and well-ventilated place. Keep at temperatures between 5 and 40 °C.

Recommended Shelf Life

Shelf life 12 months.

Incompatible materials

Strong oxidizing agents, Strong acids, Strong bases

7.3. Specific end uses

Specific use(s) Metalworking fluid Emulsifiable fluid

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**8.1. Control parameters****Exposure limits***Legend*

(s) - Skin; TWA - Time-Weighted Average; STEL - Short Term Exposure Limit; Ceiling - Ceiling Value; TLV® - Threshold Limit Value; PEL (Permissible Exposure Limit)

Chemical name	European Union	United Kingdom	France	Spain
Highly refined, low viscosity mineral oils/hydrocarbons (Viscosity >7 - <20.5 cSt @40°C)				VLA-EC: 10 mg/m ³ VLA-ED: 5 mg/m ³

Spain Límites de Exposición Profesional Para Agentes Químicos en España (Ley 31/1995).

Chemical name	Germany	Italy	Portugal	Netherlands
Highly refined, low viscosity mineral oils/hydrocarbons (Viscosity >7 - <20.5 cSt @40°C)		TWA: 5 mg/m ³	TWA: 5 mg/m ³ STEL: 10 mg/m ³	
1-Aminopropan-2-ol	AGW TWA: 2 ppm AGW TWA: 5.8 mg/m ³ Überschreitungsfaktor 2			

Germany TRGS 900 - Arbeitsplatzgrenzwerte, Technische Regeln für Gefahrstoffe (TRGS).

Italy Istituto Superiore per la Prevenzione e la Sicurezza del Lavoro (ISPESL), Allegato XXXVIII e Allegato XLIII - Valori Limite di Esposizione Professionale.

Portugal Valores-limite e índices biológicos de exposição profissional a agentes químicos. Quadro 1 - Valores Limite de Exposição (Norma Portuguesa NP 1796:2014).

Chemical name	Austria	Switzerland	Poland	Ireland
Highly refined, low viscosity mineral oils/hydrocarbons (Viscosity >7 - <20.5 cSt @40°C)			TWA: 5 mg/m ³ frakcja wdychalna	STEL: 10 mg/m ³ TWA: 5 mg/m ³ (Mist)

Poland Rozporządzenie Ministra Pracy i Polityki Społecznej z dnia 6 czerwca 2014 w sprawie najwyższych dopuszczalnych stężeń i natężeń czynników szkodliwych dla zdrowia w środowisku pracy (Dz.U. 2016 Nr. 944).

Ireland 2016 Code of Practice for the Safety, Health and Welfare at Work (Chemical Agents) Regulations 2001.

Chemical name	Finland	Denmark	Norway	Sweden
Highly refined, low viscosity	TWA: 5mg/m ³ (Öljysumu)		TWA: 1 mg/m ³ (Oljetåke)	TWA: 1 mg/m ³ (Olietåge)

mineral oils/hydrocarbons (Viscosity >7 - <20.5 cSt @40°C)				
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Finland Förordningen om koncentrationer som befunnits skadliga, 268/2014 - HTP-arvot 2014.

Norway Forskrift om tiltaksverdier og grenseverdier for fysiske og kjemiske faktorer i arbeidsmiljøet samt smitterisikogrupper for biologiske faktorer (Forskrift om tiltaks- og grenseverdier), FOR-2011-12-06-1358, FOR-2016-06-21-760, FOR-2016-12-22-1860.

Sweden Arbetsmiljöverkets föreskrifter om hygieniska gränsvärden och allmänna råd om tillämpningen av föreskrifterna.

Chemical name	Czech Republic	Hungary	Bulgaria	Romania
Highly refined, low viscosity mineral oils/hydrocarbons (Viscosity >7 - <20.5 cSt @40°C)	TWA: 5 mg/m ³ Ceiling: 10 mg/m ³		TWA: 5 mg/m ³	TWA: 5 mg/m ³ STEL: 10 mg/m ³

Czech Republic Narizeni vlady 93/2012, kterym se meni narizeni vlady c.361/2007 Sb., kterym se stanoví podmínky ochrany zdraví při práci, ve znění narizeni vlady c.68/2010 Sb.

Bulgaria НАРЕДБА #13 от 30.12.2003 г. за защита на работещите от рискове, свързани с експозиция на химични агенти при работа.

Romania Valori Limit Obligatorii Nationale de expunere profesională ale agenților chimici - Anex Nr.1 Publicat în Monitorul Oficial, Partea I nr. 845.

Chemical name	Greece	Cyprus	Turkey	Malta
Highly refined, low viscosity mineral oils/hydrocarbons (Viscosity >7 - <20.5 cSt @40°C)	TWA: 5 mg/m ³			

Greece Οριακές Τιμές Επαγγελματικής Έκθεσης - Προστασία της υγείας και της ασφάλειας των εργαζομένων που εκτίθενται σε ορισμένους καρκινογόνους και μεταλλαξιογόνους παράγοντες 127/2000.

Chemical name	Belgium	Luxembourg	Iceland	Croatia
Highly refined, low viscosity mineral oils/hydrocarbons (Viscosity >7 - <20.5 cSt @40°C)	TWA: 5 mg/m ³ STEL: 10 mg/m ³			

Belgium Arrêté royal relatif à la protection de la santé et de la sécurité des travailleurs contre les risques liés à des agents chimiques sur le lieu de travail.

Chemical name	Russia	Estonia	Latvia	Lithuania
Highly refined, low viscosity mineral oils/hydrocarbons (Viscosity >7 - <20.5 cSt @40°C)			TWA: 5 mg/m ³	TWA: 1 mg/m ³ STEL: 3 mg/m ³
1-Aminopropan-2-ol	MAC: 1 mg/m ³ (s)			
2,2'-methyliminodiethanol	MAC: 5 mg/m ³ (s)			

Russia ГН 2.2.5.1313-03 "Гигиенические нормативы. Предельно допустимые концентрации (ПДК) вредных веществ в воздухе рабочей зоны".

Latvia Ministru Kabineta noteikumi Nr. 325 - Darba aizsardzības prasības, saskaroties ar ķīmiskajām vielām darba vietās.

Lithuania Del Lietuvos higienos normos HN 23:2011 "Cheminių medžiagų profesinio poveikio ribiniai dydžiai. Matavimo ir poveikio vertinimo bendrieji reikalavimai".

Chemical name	Belarus	Ukraine	Slovakia	Slovenia
Highly refined, low viscosity mineral oils/hydrocarbons (Viscosity >7 - <20.5 cSt @40°C)			TWA: 5mg/m ³	
1-Aminopropan-2-ol	(s)			
2,2'-methyliminodiethanol	(s)			

Belarus Санитарные нормы, правила и гигиенические нормативы "Перечень регламентированных в воздухе рабочей зоны вредных веществ".

Slovakia Nariadenie vlády Slovenskej republiky z 16. januára 2002 o ochrane zdravia pri práci s karcinogénymi a mutagénymi faktormi.

Hydrocarbon solvent vapor mixtures which do not have substance specific occupational exposure limits may be evaluated by the

Reciprocal Calculation Procedure (RCP) which assigns a recommended occupational exposure limit based on the mass composition and hydrocarbon group guidance values (GGVs). Applicable recommended occupational exposure limits are shown in the table below.

Chemical name	RCP OEL	Manufacturer
Distillates (petroleum), hydrotreated middle 64742-46-7	RCP: TWA 1200 mg/m ³ 143ppm	

Derived No Effect Level (DNEL)

Workers Systemic toxicity

Chemical name	Long term - Oral exposure	Long term - Dermal exposure	Long term - Inhalation exposure	Short term - Oral Exposure	Short term - Dermal exposure	Short term - Inhalation exposure
1-Aminopropan-2-ol		8.5 mg/kg				
Neutralised 1-Aminopropan-2-ol		8.5 mg/kg				
2,2'-methyliminodiethanol		19 mg/m ³	26 mg/m ³			

Workers Local effects

Not determined

Consumers Systemic toxicity

Chemical name	Long term - Oral exposure	Long term - Dermal exposure	Long term - Inhalation exposure	Short term - Oral Exposure	Short term - Dermal exposure	Short term - Inhalation exposure
1-Aminopropan-2-ol		2.1 mg/kg	0.67 mg/m ³			
Neutralised 1-Aminopropan-2-ol		2.1 mg/kg	0.67 mg/m ³			

Consumers Local effects

Not determined

Predicted No Effect Concentration (PNEC)

Chemical name	Fresh water	Sea water	Fresh water sediment	Sea sediment	Soil
1-Aminopropan-2-ol	0.0327 mg/l	0.00327 mg/l	0.177 mg/kg	0.0177 mg/kg	0.0161 mg/kg
Neutralised 1-Aminopropan-2-ol	0.0327 mg/l	0.00327 mg/l	0.177 mg/kg	0.0177 mg/kg	0.0161 mg/kg
2,2'-methyliminodiethanol	0.1 mg/l	0.0125 mg/l	0.89 mg/kg	0.111 mg/kg	0.119 mg/kg
Alcohols, C16-18 and C18-unsatd., ethoxylated	0.002 mg/l	0.002 mg/l	6.33 mg/kg	6.33 mg/kg	1.0 mg/kg

8.2. Exposure controls

Engineering Measures

Ensure adequate ventilation, especially in confined areas.

Personal protective equipment

Engineering controls should be considered as the first line of protection against adverse exposure to harmful substances. Administrative controls and PPE should be used in the absence of engineering controls or as supplemental controls where engineering controls are insufficient in reducing specific exposures to an acceptable level.

Eye Protection

Safety glasses with side-shields. Eye protection must conform to standard EN 166.

Hand Protection

The following glove type may be suitable for handling this product: Protective gloves complying with EN 374.

Nitrile rubber	Glove thickness => 0.38 mm Break through time => 480 min
Butyl rubber	Glove thickness => 0.64 mm Break through time => 480 min
Neoprene™	Glove thickness => 0.64 mm Break through time => 480 min

Glove material suitability will vary depending on specific use conditions. Consideration should be given to variables such as operational characteristics, anticipated contact time, task requirements and other factors relevant to the selection of PPE. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion. Any specific glove information provided is based on published literature and glove manufacturer data. Barrier creams may help to protect the exposed areas of skin. Barrier creams should not be applied after exposure has occurred. Gloves should be replaced regularly and if there is any sign of damage to the glove material.

Skin and body protection

Long sleeved clothing.

Respiratory protection

No special protective equipment required. In case of mist, spray or aerosol exposure wear suitable personal respiratory protection and protective suit.

This information is based on the state in which the specific product is delivered and on the intended use specified within this SDS. This information is provided based on literature reference, manufacturer specifications and recommendations and/or derived by analogy with similar substances. The level of protection and types of exposure controls will vary depending on potential exposure conditions.

Hygiene measures

Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Remove and wash contaminated clothing before re-use. Do not eat, drink or smoke when using this product. Handle in accordance with good industrial hygiene and safety practice. Regular cleaning of equipment, work area and clothing is recommended.

Environmental Exposure Controls

Do not allow material to contaminate ground water system.

Thermal hazards

None under normal use conditions

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical state	liquid	Appearance	opaque light yellow
Odor	Characteristic	Odor threshold	Not Determined
<u>Property</u>	<u>Values</u>	<u>Remarks</u>	
pH	~ 10.4		
Melting point / freezing point	Not Determined		
Boiling point / boiling range	> 100 °C / > 212 °F		
Flash point	Not applicable		
Evaporation rate	Not Determined		
Flammability (solid, gas)	Not Determined		
Flammability Limit in Air			
Upper flammability limit:	Not Determined		
Lower flammability limit:	Not Determined		
Vapor pressure	Not Determined		
Vapor density	Not Determined		
Relative density	~ 0.97	g/cm3 @20°C	
Solubility(ies)	Water solubility: Emulsifies		
Partition coefficient	Not Determined		
Autoignition temperature	Not applicable		
Decomposition temperature	Not Determined		
Kinematic viscosity	~ 93 mm2/s @ 40 °C	ASTM D 7042	
Explosive properties	Not applicable		

Oxidizing Properties Not applicable

9.2. Other information

Viscosity, kinematic (100°C) Not Determined
Pour Point Not Determined
VOC Content (ASTM E-1868-10) Not Determined
VOC content Not Determined

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

None under normal use conditions

10.2. Chemical stability

Stable under normal conditions

10.3. Possibility of hazardous reactions

None under normal use conditions

10.4. Conditions to avoid

Do not freeze

10.5. Incompatible materials

Strong oxidizing agents, Strong acids, Strong bases

10.6. Hazardous decomposition products

None under normal use conditions

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Product Information - Principle Routes of Exposure

Inhalation None known
Eye contact Irritating to eyes
Skin contact Irritating to skin
Ingestion None known

Acute toxicity - Product Information

Product does not present an acute toxicity hazard based on known or supplied information.

Acute toxicity - Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Highly refined, low viscosity mineral oils/hydrocarbons (Viscosity >7 - <20.5 cSt @40°C)	>2000 mg/kg	>2000 mg/kg	

1-Aminopropan-2-ol	2098 mg/kg (Rat)	1851 mg/kg (Rabbit)	
Neutralised 1-Aminopropan-2-ol	2098 mg/kg (Rat)	1851 mg/kg (Rabbit)	
2,2'-methyliminodiethanol	4680 mg/kg (Rat)	= 5990 mg/kg (Rabbit)	
Alcohols, C16-18 and C18-unsatd., ethoxylated	> 2000 mg/kg (Rat)	> 2000 mg/kg	
Neutralised Phosphoric acid, isotridecyl ester	>2000 mg/kg (Rat)		
2-n-Butyl-benzo[d]isothiazol-3-one	>2000 mg/kg (Rat)	>2000 mg/kg (Rabbit)	

Skin corrosion/irritation Irritating to skin.

Serious eye damage/eye irritation Irritating to eyes.

Sensitization

Respiratory Sensitization

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

Skin sensitization

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.

Specific target organ systemic toxicity (single exposure)

Based on available data, the classification criteria are not met

Specific target organ systemic toxicity (repeated exposure)

Based on available data, the classification criteria are not met

Aspiration hazard

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

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment

Chemical name	Algae/aquatic plants	Fish	Crustacea
1-Aminopropan-2-ol	32.7: 72 h Scenedesmus subspicatus mg/L EC50	2520: 96 h Pimephales promelas mg/L LC50 210: 96 h Carassius auratus mg/L LC50 215 - 464: 96 h Leuciscus idus mg/L LC50	108.82: 48 h Daphnia magna mg/L EC50
Neutralised 1-Aminopropan-2-ol	32.7: 72 h Scenedesmus subspicatus mg/L EC50	2520: 96 h Pimephales promelas mg/L LC50 210: 96 h Carassius auratus mg/L LC50 215 - 464: 96 h Leuciscus idus mg/L LC50	108.82: 48 h Daphnia magna mg/L EC50
2,2'-methyliminodiethanol	176: 72 h Scenedesmus subspicatus mg/L EC50	1466: 96 h Leuciscus idus mg/L LC50 static 1000: 96 h Pimephales promelas mg/L LC50	233: 48 h Daphnia magna mg/L EC50
Alcohols, C16-18 and C18-unsatd., ethoxylated	>100: 72 h Scenedesmus subspicatus mg/L EC50	108: 96 h Brachydanio rerio mg/L LC50	51: 48 h Daphnia magna mg/L EC50
Neutralised Phosphoric acid, isotridecyl ester		10 - 100: 96 h Leuciscus idus mg/L LC50	

2-n-Butyl-benzo[d]isothiazol-3-one	0.45: 72 h Pseudokirchneriella subcapitata mg/L EC50 0.24: 72 h Selenastrum capricornutum mg/L EC50	0.15: 96 h Oncorhynchus mykiss mg/L LC50	0.093: 48 h Daphnia magna mg/L EC50
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12.2. Persistence and degradability

No information available.

12.3. Bioaccumulative potential

Chemical name	Partition coefficient
1-Aminopropan-2-ol	-0.94
Neutralised 1-Aminopropan-2-ol	-0.94
2,2'-methyliminodiethanol	-1.08
2-n-Butyl-benzo[d]isothiazol-3-one	2.86

12.4. Mobility

No information available

12.5. Results of PBT and vPvB assessment

This preparation contains no substance considered to be persistent, bioaccumulating nor toxic (PBT). This preparation contains no substance considered to be very persistent nor very bioaccumulating (vPvB).

12.6. Other adverse effects

None known

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste from Residues / Unused Products	Dispose of as hazardous waste in compliance with local and national regulations
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Observe all label precautions until container is cleaned, reconditioned or destroyed.
Other Data	According to the European Waste Catalog, Waste Codes are not product specific, but application specific. Waste codes should be assigned by the user based on the application for which the product was used.

SECTION 14: TRANSPORT INFORMATION

14.1. UN-Number

Not Regulated

14.2. UN proper shipping name

Not Regulated

14.3. Transport hazard class

Not Regulated

14.4. Packing Group

Not Regulated

14.5. Environmental Hazards

None

14.6. Special precautions for users

None

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

Not applicable

IMDG Not Regulated**ADR** Not Regulated**IATA** Not Regulated**ADN** Not Regulated**SECTION 15: REGULATORY INFORMATION****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****EU legislation**

The Classification, Labeling and Packaging of Substances and Mixtures (CLP) Regulation (EC 1272/2008)
Registration, Evaluation, Authorization, and Restriction of Chemicals (REACH) Regulation (EC 1907/2006)
Safety Data Sheet according to Regulation EC 1907/2006 (REACH) with its amendment regulation EC 2015/830
European Agreement concerning the International Carriage of Dangerous Goods by Road/ Regulations concerning the International Carriage of Dangerous Goods by Rail
International Civil Aviation Organization / International Air Transport Association Dangerous Goods Regulation

Restrictions on use

This product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII).

National regulations**Germany****WGK Classification**

Low hazard to water/Class 1

United Kingdom

Statutory Instruments: Control of Substances Hazardous to Health Regulations 2002. Chemicals (Hazard Information and Packaging) Regulations 2009.
Acts of Parliament: The Health and Safety at Work etc. Act 1974. Environment Protection Act 1990.
Regulation on classification, labeling. of hazardous chemicals (2002 changing 2005). Appendix VI to Regulation on classification, labeling etc. of hazardous chemicals (2002 changing 2010), list of hazardous substances (as amended). Guidelines for submission and declaration of hazardous waste (2009). Transport of dangerous goods: ADR, RID, IMDG and IATA. Administrative norms for pollution of the atmosphere, 2009.
Workplace exposure limits (EH40)

International Regulations**Ozone-depleting substances (ODS)**

Not applicable

Persistent Organic Pollutants

Not applicable

Chemicals Subject to Prior Informed Consent (PIC)

Not applicable

International Inventories

Inventory information may be utilizing alternative CAS#s or exemptions beyond those stated within this document. For further information, please contact: . ProductStewardship@houghtonintl.com.

TSCA	Complies
DSL	Complies
AICS	Does not Comply
PICCS	Does not Comply
KECL	Does not Comply
IECSC	Complies
ENCS	Does not Comply
TCSI	Complies
NZIoC	Does not Comply

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List
AICS - Australian Inventory of Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
ENCS - Japan Existing and New Chemical Substances
TCSI - Taiwan National Existing Chemical Inventory
NZIoC - New Zealand Inventory of Chemicals

Other Information

The highly refined, low viscosity mineral oils/hydrocarbons (Viscosity >7 - <20.5 cSt @40°C) contains one or more substance with the following CAS/EC numbers/REACH registration numbers:

Chemical name	CAS No	EC-No	REACH Registration Number
Distillates (petroleum), straight-run middle	64741-44-2	265-044-7	
Distillates (petroleum), heavy hydrocracked	64741-76-0	265-077-7	01-2119486951-26-xxxx
Distillates (petroleum), solvent-refined heavy paraffinic	64741-88-4	265-090-8	
Distillates (petroleum), solvent-refined light paraffinic	64741-89-5	265-091-3	01-2119487067-30-xxxx
Residual oils (petroleum), solvent deasphalted	64741-95-3	265-096-0	01-2119487081-40-xxxx
Distillates (petroleum), solvent-refined heavy naphthenic	64741-96-4	265-097-6	01-2119483621-38-xxxx
Residual oils (petroleum), solvent-refined	64742-01-4	265-101-6	01-2119488707-21-xxxx
Distillates (petroleum), hydrotreated middle	64742-46-7	265-148-2	01-2119459347-30-xxxx
Distillates (petroleum), hydrotreated middle	64742-46-7	934-956-3	01-2119827000-58-xxxx
Distillates (petroleum), hydrotreated light	64742-47-8	265-149-8	01-2119456620-43-xxxx
Distillates (petroleum), hydrotreated heavy naphthenic	64742-52-5	265-155-0	01-2119467170-45-xxxx
Distillates (petroleum), hydrotreated light naphthenic	64742-53-6	265-156-6	01-2119480375-34-xxxx
Distillates (petroleum), hydrotreated heavy paraffinic	64742-54-7	265-157-1	01-2119484627-25-xxxx
Distillates (petroleum), hydrotreated light paraffinic	64742-55-8	265-158-7	01-2119487077-29-xxxx
Distillates (petroleum), hydrotreated light paraffinic	64742-55-8	265-158-7	01-2119487077-29-xxxx
Distillates, petroleum, solvent-dewaxed light paraffinic	64742-56-9	265-159-2	01-2119480132-48-xxxx

Distillates (petroleum), solvent-dewaxed light paraffinic	64742-56-9	265-159-2	01-2119480132-48-xxxx
Residual oils (petroleum), hydrotreated	64742-57-0	265-160-8	01-2119489287-22-xxxx
Lubricating oils (petroleum), hydrotreated spent	64742-58-1	265-161-3	
Residual oils (petroleum), solvent-dewaxed	64742-62-7	265-166-0	01-2119480472-38-xxxx
Distillates (petroleum), solvent-dewaxed heavy, paraffinic	64742-65-0	265-169-7	01-2119471299-27-xxxx
Paraffin oils (petroleum), catalytic dewaxed light	64742-71-8	265-176-5	
Dec-1-ene, homopolymer, hydrogenated	68037-01-4	500-183-1	01-2119486452-34-xxxx
Lubricating oils (petroleum), C>25, hydrotreated bright stock-based	72623-83-7	276-735-8	
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based, high-viscosity	72623-85-9	276-736-3	01-2119555262-43-xxxx
Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based	72623-86-0	276-737-9	01-2119474878-16-xxxx
Lubricating oils (petroleum), C20-C50, hydrotreated neutral oil-based	72623-87-1	276-738-4	01-2119474889-13-xxxx
Lubricating oils	74869-22-0	278-012-2	01-2119495601-36-xxxx
White mineral oil (petroleum)	8042-47-5	232-455-8	01-2119487078-27-xxxx
C18-C50 branched, cyclic and linear hydrocarbons – Distillates	848301-69-9	482-220-0	01-0000020163-82-xxxx
Hydrocarbons, C14-C19, isoalkanes, cyclics, <2% aromatics	NOT AVAILABLE	920-114-2	01-2119459347-30-xxxx

15.2. Chemical Safety Assessment

A chemical safety assessment according to regulation (EC) No. 1907/2006 is not required

SECTION 16: OTHER INFORMATION

Key or legend to abbreviations and acronyms used in the safety data sheet

Repr.-Reproduction toxicity
 Asp. Tox. - Aspiration Toxicity
 Acute Tox. - Acute Toxicity
 Aquatic Acute - Acute Aquatic Toxicity
 Aquatic Chronic - Chronic Aquatic Toxicity
 Eye Dam. - Eye Damage
 Eye Irrit. - Eye Irritation
 Skin Corr. - Skin Corrosion
 Skin Irrit. - Skin Irritation
 Skin Sens. - Skin Sensitizer
 Resp. Sens. - Respiratory Sensitizer
 STOT SE - Specific target organ systemic toxicity (Single exposure)
 STOT RE - Specific target organ systemic toxicity (repeated exposure)
 VOC - Volatile organic compounds

Full text of H-Statements which may be referred to under Sections 2 and 3

• H224 - Extremely flammable liquid and vapor • H225 - Highly flammable liquid and vapor • H226 - Flammable liquid and vapor • H270 - May cause or intensify fire; oxidizer • H271 - May cause fire or explosion; strong oxidizer • H272 - May intensify fire; oxidizer • H290 - May be corrosive to metals • H300 - Fatal if swallowed • H301 - Toxic if swallowed • H302 - Harmful if swallowed • H304 - May be fatal if swallowed and enters airways • H310 - Fatal in contact with skin • H311 - Toxic in contact with skin • H312 - Harmful in contact with skin • H314 - Causes severe skin burns and eye damage • H315 - Causes skin irritation • H317 - May cause an allergic skin reaction • H318 - Causes serious eye damage • H319 - Causes serious eye irritation • H330 - Fatal if inhaled • H331 - Toxic if inhaled • H332 - Harmful if inhaled • H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled • H335 - May cause respiratory irritation • H336 - May cause drowsiness or dizziness • H340 - May cause genetic defects	• H341 - Suspected of causing genetic defects • H350 - May cause cancer • H351 - Suspected of causing cancer • H360 - May damage fertility or the unborn child • H361 - Suspected of damaging fertility or the unborn child • H362 - May cause harm to breast-fed children • H370 - Causes damage to organs • H371 - May cause damage to organs • H372 - Causes damage to organs through prolonged or repeated exposure • H373 - May cause damage to organs through prolonged or repeated exposure • H400 - Very toxic to aquatic life • H410 - Very toxic to aquatic life with long lasting effects • H411 - Toxic to aquatic life with long lasting effects • H412 - Harmful to aquatic life with long lasting effects • H413 - May cause long lasting harmful effects to aquatic life • H360Df - May damage the unborn child. Suspected of damaging fertility • H360D - May damage the unborn child • H360FD - May damage fertility. May damage the unborn child • H360F - May damage fertility • H361d - Suspected of damaging the unborn child • H361fd - Suspected of damaging fertility. Suspected of damaging the unborn child • H361f - Suspected of damaging fertility • EUH066 - Repeated exposure may cause skin dryness or cracking • EUH210 - Safety data sheet available on request • EUH208 - May produce an allergic reaction
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Classification for mixtures and used evaluation method according to regulation (EC) 1207/2008 [CLP]

Physical hazards	On basis of test data
Health Hazards	Calculation Method
Environmental Hazards	Calculation Method
Serious Eye Damage/Irritation	On basis of test data; Bridging principle "Substantially similar mixtures"

Revision Date 04-10-2018

Revision Note This SDS has been revised in the following section(s), 1, 2, 4.

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.