



SAFETY DATA SHEET

Gulf Formula ULE, SAE 5W-40

01127/5W-40/1

Issuing Date 12-29-2021

Revision Date 12-29-2021

Version 3

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

1.1. Product identifier

Product Name Gulf Formula ULE, SAE 5W-40
Product Code(s) 01127/5W-40/1

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

Recommended Use Engine oil
Uses advised against Any other purpose.

1.3. Details of the supplier of the safety data sheet

Supplier Gulf Oil Supply Company Limited
B2 Industry Street, Qormi, QRM 3000, Malta
Tel: +44 207 321 6219
E-mail: products@gulfoilltd.com, sds@gulfoilltd.com

1.4. Emergency telephone number

Europe: (+) 44 808 189 0979 (Code 334276)
(+) 1 760 476 3961 (Code 334276)
(+) 32 (0) 3241 33 55

Poison Information Center telephone number (IE) +353 (0)1 809 2166 (08:00 - 22:00), (IS) +354 543 2222

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [CLP]

2.2. Label elements

Signal word
None

Hazard statements
EUH208 - Contains Maleic anhydride. May produce an allergic reaction.

Precautionary Statements - EU (§28, 1272/2008)
None

2.3. Other hazards

No information available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**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)	-	-	50% - 100%	Asp. Tox. 1 (H304) (EUH066)	-
Highly refined base oil (Viscosity >20.5 cSt @40°C)	-	-	25% - 50%	**	-
Calcium branched alkyl phenate sulphide (overbased)	-	NOT AVAILABLE	1% - 2.5%	Aquatic Chronic 4 (H413)	No data available
Reaction products of Benzeneamine, N-phenyl-with nonene (branched)	253-249-4	36878-20-3	1% - 2.5%	Aquatic Chronic 4 (H413)	01-2119488911-28-xxxx
Maleic anhydride	203-571-6	108-31-6	0% - 1%	Acute Tox. 4 (H302) Acute Tox. 4 (H332) Skin Corr. 1B (H314) Resp. Sens. 1 (H334) Skin Sens. 1 (H317) STOT RE 1 (H372) STOT RE 2 (H373) SCL H317:: C >=0.001%	01-2119472428-31-xxxx

Product containing mineral oil with less than 3% DMSO extract as measured by IP 346. See Section 15 for additional information on base oils. 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, 64742-96-4, 64741-97-5, 64742-55-8, 64742-56-9, 64741-89-5, 8042-47-5.

** Substances for which there are Community workplace exposure limits

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

SECTION 4: FIRST AID MEASURES**4.1. Description of first aid measures**

General advice	May produce an allergic reaction. If symptoms persist, call a physician.
Inhalation	Remove to fresh air.
Skin contact	Wash off immediately with soap and plenty of water for at least 15 minutes. Take off contaminated clothing and wash before reuse. May cause an allergic skin reaction. If symptoms persist, call a physician.
Eye contact	Rinse thoroughly with plenty of water, also under the eyelids. Keep eye wide open while rinsing.
Ingestion	Clean mouth with water. Drink plenty of water. Do not induce vomiting without medical advice.
Self-protection of the first aider	Use personal protective equipment as required.

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

Symptoms Prolonged contact may cause redness and irritation. Rashes. Itching.

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

Note to physicians May cause sensitization by skin contact. 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: Carbon dioxide (CO₂). Dry chemical. Foam. Water spray or fog. Cool containers with flooding quantities of water until well after fire is out.

Unsuitable extinguishing media

Do not use straight streams. Do not scatter spilled material with high pressure water streams.

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the chemical

Thermal decomposition can lead to release of irritating and toxic gases and vapors. In the event of fire and/or explosion do not breathe fumes. The product is insoluble and floats on water.

Hazardous combustion products Carbon monoxide. Carbon dioxide (CO₂).

5.3. Advice for firefighters

Special protective equipment for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Remove all sources of ignition. Ensure adequate ventilation. Use personal protective equipment as required. Avoid contact with skin, eyes or clothing. Wash thoroughly after handling. Take precautionary measures against static discharges.

For emergency responders Use personal protection recommended in 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.

6.3. Methods and material for containment and cleaning up

Methods for containment	Dike to collect large liquid spills.
Methods for cleaning up	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Take up mechanically, placing in appropriate containers for disposal.
Prevention of secondary hazards	Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

See Section 8 / 12 / 13 for more information.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Advice on safe handling	Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Use personal protection equipment.
General hygiene considerations	When using do not eat, drink or smoke. Wash hands before breaks and after work. Take off contaminated clothing and wash before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions	Keep container tightly closed in a dry and well-ventilated place. Keep cool. Protect from sunlight. Keep away from open flames, hot surfaces and sources of ignition.
Materials to Avoid	Oxidizing agent

7.3. Specific end use(s)

Engine oil

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
Highly refined base oil (Viscosity >20.5 cSt @40°C)				VLA-EC: 10 mg/m ³ VLA-ED: 5 mg/m ³
Maleic anhydride		TWA: 1 mg/m ³ STEL: 3 mg/m ³	STEL: 1 mg/m ³	VLA-ED: 0.1 ppm VLA-ED: 0.4 mg/m ³

United Kingdom Workplace exposure limits (EH40).

France Valeurs limites d'exposition professionnelle aux agents chimiques en France ED 984 (par l'INRS).

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

Chemical name	Germany	Italy	Portugal	Netherlands
Highly refined, low viscosity		TWA: 5 mg/m ³	TWA: 5 mg/m ³	TWA: 5 mg/m ³

mineral oils/hydrocarbons (Viscosity >7 - <20.5 cSt @40°C)			STEL: 10 mg/m ³	
Highly refined base oil (Viscosity >20.5 cSt @40°C)		TWA: 5 mg/m ³	TWA: 5 mg/m ³ STEL: 10 mg/m ³	TWA: 5 mg/m ³
Maleic anhydride	AGW TWA: 0.1 ppm AGW TWA: 0.41 mg/m ³ Überschreitungsfaktor 1 /2 (I)		TWA: 0.1 ppm	

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).

Netherlands Grenswaarden gezondheidsschadelijke stoffen; Arbeidsomstandighedenregeling.

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)
Highly refined base oil (Viscosity >20.5 cSt @40°C)			TWA: 5 mg/m ³ frakcja wdychalna	STEL: 10 mg/m ³ TWA: 5 mg/m ³ (Mist)
Maleic anhydride	MAK TWA: 0.1 ppm MAK TWA: 0.4 mg/m ³ MAK STEL: 0.2 ppm MAK STEL: 0.8 mg/m ³ 8 X 5 min	TWA: 0.1 ppm TWA: 0.4 mg/m ³ STEL: 0.1 ppm STEL: 0.4 mg/m ³	TWA: 0.5 mg/m ³ STEL: 1 mg/m ³	TWA: 0.01 ppm inhalable fraction and vapour STEL: 0.03 ppm

Austria Verordnung des Bundesministers für Wirtschaft und Arbeit über Grenzwerte für Arbeitsstoffe und über krebserzeugende Arbeitsstoffe ("Maximale Arbeitsplatzkonzentrationen" - MAK und "Technische Richtkonzentrationen" - TRK).

Switzerland Grenzwerte am Arbeitsplatz 2016 - SUVAPro.

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 mineral oils/hydrocarbons (Viscosity >7 - <20.5 cSt @40°C)	TWA: 5mg/m ³ (Öljysumu)	TWA: 1 mg/m ³ (Olietåge)	TWA: 1 mg/m ³ (Oljetåke)	TWA: 1 mg/m ³ STEL: 3 mg/m ³ (Oljedimma)
Highly refined base oil (Viscosity >20.5 cSt @40°C)	TWA: 5mg/m ³ (Öljysumu)	TWA: 1 mg/m ³ (Olietåge)	TWA: 1 mg/m ³ (Oljetåke)	TWA: 1 mg/m ³ STEL: 3 mg/m ³ (Oljedimma)
Maleic anhydride	TWA: 0.1 ppm TWA: 0.41 mg/m ³ STEL: 0.2 ppm STEL: 0.81 mg/m ³ Ceiling: 0.2 ppm Ceiling: 0.81 mg/m ³	TWA: 0.1 ppm TWA: 0.4 mg/m ³	TWA: 0.2 ppm TWA: 0.8 mg/m ³ STEL: 0.6 ppm STEL: 2.4 mg/m ³	LLV: 0.05 ppm LLV: 0.2 mg/m ³ STLV: 0.1 ppm (Indikativ) STLV: 0.4 mg/m ³ (Indikativ) STLV: 0.1 ppm (Bindande) STLV: 0.4 mg/m ³ (Bindande)

Finland Förordningen om koncentrationer som befunnits skadliga, 268/2014 - HTP-arvot 2014.

Denmark Bekendtgørelse om grænseværdier for stoffer og materialer. Arbejdstilsynets bekendtgørelse nr. 507 Bilag 2 Afsnit A.

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	TWA: 5 mg/m ³ STEL: 10 mg/m ³
Highly refined base oil (Viscosity >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	TWA: 5 mg/m ³ STEL: 10 mg/m ³
Maleic anhydride	TWA: 1 mg/m ³ Ceiling: 2 mg/m ³	TWA: 0.4 mg/m ³ STEL: 0.4 mg/m ³	TWA: 1.0 mg/m ³	TWA: 0.25 ppm TWA: 1 mg/m ³ STEL: 0.75 ppm STEL: 3 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 zneni narizeni vlady c.68/2010 Sb.

Hungary 25/2000. (IX. 30.) EüM-SzCsM együttes rendelet a munkahelyek kémiai biztonságáról (62/2016. (XII.29.)).

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			
Highly refined base oil (Viscosity >20.5 cSt @40°C)	TWA: 5 mg/m ³			
Maleic anhydride	TWA: 0.25 ppm TWA: 1 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			
Highly refined base oil (Viscosity >20.5 cSt @40°C)	TWA: 5 mg/m ³ STEL: 10 mg/m ³			
Maleic anhydride	TWA: 0.1 ppm TWA: 0.41 mg/m ³		TWA: 0.1 ppm TWA: 0.4 mg/m ³	TWA: 1 mg/m ³ STEL: 3 ppm

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.

Iceland Reglur og reglugerðir sem heyra undir Vinnuverndarlögin nr. 46/1980 um aðbúnað, hollustuhætti og öryggi á vinnustöðum. 390/2009 - Reglugerð um mengunarmörk og aðgerðir til að draga úr mengun á vinnustöðum.

Croatia Pravilnik o izmjenama i dopunama Pravilnika o graničnim vrijednostima izloženosti opasnim tvarima pri radu i o biološkim graničnim vrijednostima.

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
Highly refined base oil (Viscosity >20.5 cSt @40°C)			TWA: 5 mg/m ³	TWA: 1 mg/m ³ STEL: 3 mg/m ³
Maleic anhydride	MAC: 1 mg/m ³ (s)	TWA: 0.3 ppm TWA: 1.2 mg/m ³ STEL: 0.6 ppm STEL: 2.5 mg/m ³	TWA: 1 mg/m ³	TWA: 0.3 ppm TWA: 1.2 mg/m ³ STEL: 0.6 ppm STEL: 2.5 mg/m ³

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

Estonia Tookeskonna keemiliste ohutegurite piirnormid.

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	
Highly refined base oil (Viscosity >20.5 cSt @40°C)			TWA: 5mg/m ³	
Maleic anhydride	(s)		TWA: 0.1 ppm TWA: 0.41 mg/m ³	TWA: 0.1 ppm TWA: 0.41 mg/m ³ STEL: STEL ppm STEL: STEL mg/m ³

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

еществ

Slovakia Nariadenie vlády Slovenskej republiky z 16. januára 2002 o ochrane zdravia pri práci s karcinogénnymi a mutagénymi faktormi.
Slovenia Pravilnik o varovanju delavcev pred tveganji zaradi izpostavljenosti kemičnim snovem pri delu.

Chemical name	Serbia	Macedonia	Liechtenstein	South Africa
Maleic anhydride		TWA: 0.1 ppm TWA: 0.41 mg/m ³ STEL: 0.1 ppm STEL: 0.41 mg/m ³		

Macedonia Правилник минималните барања за безбедност и здравје при работа вработени од ризици поврзани со изложување на хемиски супстанции.

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
Reaction products of Benzeneamine, N-phenyl- with nonene (branched)		5 mg/kg				
Maleic anhydride		200 µg/kg	81 µg/m ³		200 µg/kg	200 µg/m ³

Workers Local effects

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
Maleic anhydride			81 µg/m ³			200 µg/m ³

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
Reaction products of Benzeneamine, N-phenyl- with nonene (branched)	0.25 mg/kg	2.5 mg/kg				
Maleic anhydride	60 µg/kg	100 µg/kg	50 µg/m ³	100 µg/kg	100 µg/kg	

Consumers Local effects

Not determined

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
Maleic anhydride			80 µg/m ³			

Predicted No Effect Concentration (PNEC)

Chemical name	Fresh water	Sea water	Fresh water sediment	Sea sediment	Soil
Reaction products of Benzeneamine, N-phenyl- with nonene (branched)	0.412 mg/l	0.041 mg/l	1 mg/kg	0.1 mg/kg	
Maleic anhydride	37.9 - 75 µg/L	3.79 - 7.5 µg/L	60 - 296 µg/kg dw	6 - 29.6 µg/kg dw	10 - 36.9 µg/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.

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

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. Gloves should be replaced regularly and if there is any sign of damage to the glove material.

Skin and body protection

Long sleeved clothing. Apron. Impervious gloves.

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. Handle in accordance with good industrial hygiene and safety practice.

Environmental Exposure Controls

No special environmental precautions required.

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
Color	amber clear
Odor	Hydrocarbon-like

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
Melting point / freezing point	Not determined	
Boiling point / boiling range	Not determined	
Flammability	Ignitable substance	
Flammability Limit in Air		
Upper flammability or explosive limits	Not determined	
Lower flammability or explosive limits	Not determined	

limits		
Flash point	234 °C / 453 °F	ASTM D 92
Autoignition temperature	No data available	
Decomposition temperature	No data available	
pH	No data available	
Kinematic viscosity	53.4 cSt @ 40 °C	ASTM D 445
Solubility	Insoluble in water	Soluble in hydrocarbons
Partition coefficient	Not determined	
Vapor pressure	Not determined	
Relative density	0.8488 @ 15 °C	
Vapor density	Not determined	
Particle characteristics	Not applicable	

9.2. Other information

Viscosity, kinematic (100°C)	9.8 cSt @ 100°C	ASTM D 445
Pour Point	-39 °C / -38 °F	ASTM D 97

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

Keep away from open flames, hot surfaces and sources of ignition. Extremes of temperature and direct sunlight.

10.5. Incompatible materials

Oxidizing agent.

10.6. Hazardous decomposition products

Thermal decomposition can lead to release of irritating and toxic gases and vapors; Carbon monoxide; Carbon dioxide (CO₂)

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008**Product Information - Principle Routes of Exposure**

Inhalation	None known
Eye contact	None known
Skin contact	Repeated or prolonged skin contact may cause allergic reactions with susceptible persons
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	>5 mg/L
Highly refined base oil (Viscosity >20.5 cSt @40°C)	>2000 mg/kg	>2000 mg/kg	>5 mg/L
Reaction products of Benzeneamine, N-phenyl- with nonene (branched)	> 5000 mg/kg (Rat)	> 2000 mg/kg (Rat)	
Maleic anhydride	235 mg/kg (Rat)	2620 mg/kg (Rabbit) 610 mg/kg (Rat)	>4.35 mg/l (1hr Rat)

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

Serious eye damage/eye irritation Based on available data, the classification criteria are not met.

Sensitization**Respiratory Sensitization
Skin sensitization**

Based on available data, the classification criteria are not met.
Repeated contact may cause allergic reactions in very susceptible persons.

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.

11.2. Information on other hazards

Endocrine Disruptor Information None known

Other information No information available

SECTION 12: ECOLOGICAL INFORMATION**12.1. Toxicity**

No special environmental measures are necessary

Chemical name	Algae/aquatic plants	Fish	Crustacea
Highly refined, low viscosity mineral oils/hydrocarbons (Viscosity >7 - <20.5 cSt @40°C)	>100: 72 h mg/L	>100: 96 h mg/L	>100: 48 h mg/L
Highly refined base oil (Viscosity >20.5 cSt @40°C)	>100: 72 h mg/L	>100: 96 h mg/L	>100: 48 h mg/L
Calcium branched alkyl phenate	>1000: 96 h Pseudokirchneriella	>1000: 96 h Pimephales promelas	>1000: 48 h Daphnia magna mg/L

sulphide (overbased)	subcapitata mg/L >1000: 96 h Selenastrum capricornutum mg/L EC50	mg/L LC50 static	EC50
Reaction products of Benzeneamine, N-phenyl- with nonene (branched)	600: 72 h Scenedesmus capricornutum mg/L EC50	>100: 96 h Danio rerio mg/L LC50 1000: 96 h Pimephales promelas mg/L LC50 semi-static	>100: 48 h Daphnia magna mg/L EC50 14 - 28: 96 h Mysidopsis bahia mg/L LC50
Maleic anhydride	29: 72 h Desmodesmus subspicatus mg/L EC50 74.35: 72 h Selenastrum capricornutum mg/L EC50	75: 96 h Oncorhynchus mykiss mg/L LC50 138: 48 h Lepomis macrochirus mg/L LC50 static	42.81: 24 h Daphnia magna mg/L EC50

12.2. Persistence and degradability

The product is not readily biodegradable, but it can be degraded by micro-organisms, it is regarded as being inherently biodegradable.

12.3. Bioaccumulative potential

Chemical name	Partition coefficient
Calcium branched alkyl phenate sulphide (overbased)	11.08
Reaction products of Benzeneamine, N-phenyl- with nonene (branched)	>7
Maleic anhydride	-0.048

12.4. Mobility in soil

The product is insoluble and floats on water. Is not likely mobile in the environment due its low water solubility.

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. Endocrine Disruptor Information

None known

12.7. Other adverse effects

None known

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods**Waste from residues/unused products**

Should not be released into the environment. Dispose of in accordance with local regulations.

Contaminated packaging

Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not reuse empty containers. Observe all label precautions until container is cleaned, reconditioned or destroyed

Waste codes / waste designations according to EWC / AVV

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. Maritime transport in bulk according to IMO instruments

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)
European Agreement concerning the International Carriage of Dangerous Goods by Road
Safety Data Sheet according to Regulation EC 1907/2006 (REACH) with its amendment regulation EU 2020/878
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

Substance(s) of Very High Concern

This product does not contain candidate substances of very high concern at a concentration $\geq 0.1\%$ (Regulation (EC) No. 1907/2006 (REACH), Article 59).

Authorizations and/or restrictions on use:

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

product does not contain substances subject to authorization (Regulation (EC) No. 1907/2006 (REACH), Annex XIV).

National regulations

Germany Water hazard class (WGK)

Hazard to water/Class 2

Product Registration number

Denmark Registration (DK)

No information available

International Regulations

Ozone-depleting substances (ODS)

Not applicable

The Stockholm Convention on Persistent Organic Pollutants

Not applicable

The Rotterdam Convention

Not applicable

International Inventories

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

All ingredients are on the inventory or exempt from listing

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

All ingredients are on the inventory or exempt from listing

AICS - Australian Inventory of Chemical Substances

All ingredients are on the inventory or exempt from listing

PICCS - Philippines Inventory of Chemicals and Chemical Substances

All ingredients are on the inventory or exempt from listing

KECL - Korean Existing and Evaluated Chemical Substances

All ingredients are on the inventory or exempt from listing

IECSC - China Inventory of Existing Chemical Substances

Contact supplier for inventory compliance status

ENCS - Japan Existing and New Chemical Substances

All ingredients are on the inventory or exempt from listing

TCSI - Taiwan National Existing Chemical Inventory

Contact supplier for inventory compliance status

NZIoC - New Zealand Inventory of Chemicals

All ingredients are on the inventory or exempt from listing

Other Information

The highly refined base oil (Viscosity >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
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Lubricating oils (petroleum), C24-50, solvent-extd., dewaxed, hydrogenated	101316-72-7	309-877-7	01-2119489969-06-xxxx
Distillates (petroleum), solvent-refined heavy paraffinic	64741-88-4	265-090-8	01-2119488706-23-xxxx
Distillates (petroleum), solvent-refined light paraffinic	64741-89-5	265-091-3	01-2119487081-40-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
Distillates (petroleum), solvent-refined light naphthenic	64741-97-5	265-098-1	01-2119480374-36-xxxx
Residual oils (petroleum), solvent-refined	64742-01-4	265-101-6	01-2119488707-21-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), 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 heavy	64742-70-7	265-174-4	01-2119487080-42-xxxx
Paraffin oils (petroleum), catalytic dewaxed light	64742-71-8	265-176-5	01-2119485040-48-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), C20-50, 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	

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), hydrotreated heavy paraffinic	63742-54-7	265-157-1	01-2119484627-25-xxxx
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	01-2119488706-23-xxxx
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
Distillates (petroleum), solvent-refined light naphthenic	64741-97-5	265-098-1	01-2119480374-36-xxxx
Residual oils (petroleum), solvent-refined	64742-01-4	265-101-6	01-2119488707-21-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), 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 heavy	64742-70-7	265-174-4	01-2119487080-42-xxxx
Paraffin oils (petroleum), catalytic dewaxed light	64742-71-8	265-176-5	01-2119485040-48-xxxx
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), C20-50, 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
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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 referred to under section 3

EUH066 - Repeated exposure may cause skin dryness or cracking
 H302 - Harmful if swallowed
 H304 - May be fatal if swallowed and enters airways
 H314 - Causes severe skin burns and eye damage
 H317 - May cause an allergic skin reaction
 H332 - Harmful if inhaled
 H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled
 H373 - May cause damage to organs through prolonged or repeated exposure
 H372 - Causes damage to organs through prolonged or repeated exposure
 H413 - May cause long lasting harmful effects to aquatic life

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)
 U.S. Environmental Protection Agency ChemView Database
 European Food Safety Authority (EFSA)
 EPA (Environmental Protection Agency)
 Acute Exposure Guideline Level(s) (AELG(s))
 U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
 U.S. Environmental Protection Agency High Production Volume Chemicals
 Food Research Journal
 Hazardous Substance Database
 International Uniform Chemical Information Database (IUCLID)
 Japan GHS Classification
 Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
 NIOSH (National Institute for Occupational Safety and Health)
 National Library of Medicine's ChemID Plus (NLM CIP)
 National Library of Medicine's PubMed database (NLM PUBMED)
 National Toxicology Program (NTP)
 New Zealand's Chemical Classification and Information Database (CCID)
 Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
 Organization for Economic Co-operation and Development High Production Volume Chemicals Program
 Organization for Economic Co-operation and Development Screening Information Data Set
 RTECS (Registry of Toxic Effects of Chemical Substances)

World Health Organization**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

Revision Date 12-29-2021**Revision Note** This SDS has been revised in the following section(s), 2, 3, 4, 8, 9, 11, 12.**Disclaimer**

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