



Safety data sheet according to 1907/2006/EC

Printing date 20.07.2012

Version number 5

Revision: 20.07.2012

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

- **1.1 Product identifier**
- **Trade name:** Struktol SB 2031
- **Article number:** 02009
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the preparation** Anti-foaming agent
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Schill+Seilacher "Struktol"
GmbH
Moorfleeter Str. 28
D-22113 Hamburg
Phone: +49 / (0)40 / 73362-0
Fax: +49 / (0)40 / 73362-194
- **Further information obtainable from:**
QW Gefahrgut / -stoffe
E-Mail: msds@struktol.de
- **1.4 Emergency telephone number:**
GLZ-Nord
Phone: +49 / (0)551 / 19240

2 Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**
The product is not classified according to the CLP regulation.
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**
Not applicable.
- **Information concerning particular hazards for human and environment:**
The product does not have to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
- **2.2 Label elements**
- **Labelling according to EU guidelines:**
Observe the general safety regulations when handling chemicals.
The product is not subject to identification regulations under EU Directives and the Ordinance on Hazardous Materials (German GefStoffV).
- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

- **3.2 Chemical characterization: Mixtures**
- **Description:** Combination of fatty acid esters and special alcohols.

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· Dangerous components:

CAS: 27458-94-2	Alkyl alcohol	2.5-10%
EINECS: 248-471-3	 Xi R36/38	
	 Skin Irrit. 2, H315; Eye Irrit. 2, H319	

· Additional information:

This information refers to the product in concentrated form only.

For the wording of the listed risk phrases refer to section 16.

4 First aid measures

· 4.1 Description of first aid measures

· General information: No special measures required.

· After inhalation: Supply fresh air; consult doctor in case of complaints.

· After skin contact:

Wash off with water and soap.

If skin irritation continues, consult a doctor.

· After eye contact:

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

· After swallowing: If symptoms persist consult doctor.

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

No further relevant information available.

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

No further relevant information available.

5 Firefighting measures

· 5.1 Extinguishing media

· Suitable extinguishing agents:

CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

· For safety reasons unsuitable extinguishing agents: Water with full jet

· 5.2 Special hazards arising from the substance or mixture

In case of fire, the following can be released:

Carbon monoxide and carbon dioxide

· 5.3 Advice for firefighters

· Protective equipment: Do not inhale explosion gases or combustion gases.

6 Accidental release measures

· 6.1 Personal precautions, protective equipment and emergency procedures

Not required.

· 6.2 Environmental precautions:

The product should not be released into the aquatic environment without preliminary treatments (purification plant).

Do not allow to enter sewers/ surface or ground water.

Do not allow to penetrate the ground/soil.

· 6.3 Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

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· 6.4 Reference to other sections

- No dangerous substances are released.
- See Section 7 for information on safe handling.
- See Section 8 for information on personal protection equipment.
- See Section 13 for disposal information.

7 Handling and storage

· 7.1 Precautions for safe handling

The usual precautionary measures are to be adhered to when handling chemicals.

· Information about fire - and explosion protection: No special measures required.

· 7.2 Conditions for safe storage, including any incompatibilities

· Storage:

· **Requirements to be met by storerooms and receptacles:** Store in a cool location.

· **Information about storage in one common storage facility:** Not required.

· **Further information about storage conditions:** Store in dry conditions.

· 7.3 Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

· Additional information about design of technical facilities:

No further data; see item 7.

· 8.1 Control parameters

· Ingredients with limit values that require monitoring at the workplace:

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

· **Additional information:** The lists valid during the making were used as basis.

· 8.2 Exposure controls

· Personal protective equipment:

· General protective and hygienic measures:

The usual precautionary measures are to be adhered to when handling chemicals.

· **Respiratory protection:** Not necessary if room is well-ventilated.

· Protection of hands:

Protective gloves or protective skin cream.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

· Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:** Goggles recommended during refilling

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· **Body protection:** Protective work clothing

9 Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· General Information

· Appearance:

Form:	Fluid
Colour:	Yellowish
Odour:	Aromatic
Odour threshold:	Not determined.

· **pH-value:** Not determined.

· Change in condition

Melting point/Melting range:	Not determined.
Boiling point/Boiling range:	Not determined.

· **Flash point:** > 130°C (DIN EN ISO 2592)· **Flammability (solid, gaseous):** Not applicable.· **Ignition temperature:** 200°C· **Decomposition temperature:** Not determined.· **Self-igniting:** Product is not selfigniting.· **Danger of explosion:** Product does not present an explosion hazard.

· Explosion limits:

Lower:	Not determined.
Upper:	Not determined.

· **Vapour pressure:** Not determined.· **Density at 20°C:** 0.86 g/cm³ (DIN 53479)· **Relative density** Not determined.· **Vapour density** Not determined.· **Evaporation rate** Not determined.

· Solubility in / Miscibility with water:

Not miscible or difficult to mix.

· **Partition coefficient (n-octanol/water):** Not determined.

· Viscosity:

Dynamic at 25°C:	20 mPas (DIN 51550)
Kinematic:	Not determined.

· **9.2 Other information** No further relevant information available.

10 Stability and reactivity

· 10.1 Reactivity

· 10.2 Chemical stability

· Thermal decomposition / conditions to be avoided:

No decomposition if used according to specifications.

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- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:**
No dangerous decomposition products known.

11 Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity:**

· LD/LC50 values relevant for classification:
--

27458-94-2 Alkyl alcohol

Oral	LD50	2830 mg/kg (rat)
------	------	------------------

- **Primary irritant effect:**
- **on the skin:** With longer skin contact irritation possible!
- **on the eye:** With longer contact eye-irritation possible!
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
The product is not subject to classification according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version. When used and handled according to specifications, the product does not have any harmful effects to our experience and the information provided to us.

12 Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
The product should not be released in concentrated form into the aquatic environment without preliminary treatments (purification plant).
Negative ecological effects are, according to the current state of knowledge, not expected.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

13 Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**
Disposal must be made according to official regulations.
Must not be disposed together with household garbage. Do not allow product to reach sewage system.

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- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- | | |
|--|--|
| · 14.6 Special precautions for user | Not applicable. |
| · 14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code | Not applicable. |
| · Transport/Additional information: | Not dangerous according to the above specifications. |

15 Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
 - **National regulations:**
 - **Breakdown regulations:**
 - **Breakdown regulations, Annex II, No.:**
- | |
|------------------------------------|
| None of the ingredients is listed. |
|------------------------------------|
- **15.2 Chemical safety assessment:**
A Chemical Safety Assessment has not been carried out.

16 Other information

*This information refers to the product in concentrated form only.
This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.*

- **Relevant phrases**
H315 Causes skin irritation.
H319 Causes serious eye irritation.
R36/38 Irritating to eyes and skin.
- **Department issuing MSDS:** QW Gefahrgut / -stoffe
- **Abbreviations and acronyms:**
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
- *** Data compared to the previous version altered.**



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Gulf Harmony 68

PRODUCT CODE
3452

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

1.1. Product identifier:

- **Product name** : Gulf Harmony 68
- **Viscosity Grade** : ISO VG 68

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

- **Relevant identified uses** : Hydraulic oil.
- **Uses advised against** : This oil should not be used for any other purpose than the intended use as an hydraulic oil without expert advice.

1.3. Details of the supplier of the Safety Data Sheet:

- **Supplier** : Gulf Oil Nederland B.V.
Ambachtsweg 31 -
1785 AJ - Den Helder - Nederland
Tel: +31 223 634567
E-mail: technicalsupport@gulf.nl
Internet: www.gulf.nl

1.4. Emergency telephone number:

- **Phone number(s)** : +31 223 634567

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture:

- **Classification according to Directive 1999/45/EC** : This product does not meet the classification requirements of the current European legislation.

2.2. Label elements:

- **Safety advices** : Do not empty into drains ; dispose of this material and its container in a safe way.

- 2.3. **Other hazards** : Injection under the skin can occur when using high pressure equipment.
Overexposure to oil mist may cause respiratory irritations.
Spillage of lubricating oils will make surfaces slippery.

SECTION 3: Composition/information on ingredients

3.2. Mixtures:

- **Description of the mixture** : Mixture of highly refined mineral oils (PCA-content < 3% - IP 346) and additives.
Product is not considered to be hazardous but contains hazardous components.

• Composition of the mixture:

Substance name	Contents	CAS No	EC No	Annex No	Ref REACH	Classification
Lubricating oils(petroleum), C20- C50, hydrotreated neutral oil-based, high-viscosity.	70 - 80 %	72623-85-9	276-736-3	649-481-00-4	-----	Not classified (DSD/DPD)
Lubricating oils (petroleum), C20- 50, hydrotreated neutral oil-based	20 - 30 %	72623-87-1	276-738-4	649-483-00-5	-----	Not classified (DSD/DPD)
Alkyl phenol	0,1 - 1 %	128-39-2	204-884-0	-----	-----	Xi; R36/37/38 N; R51-53

- 3.3. **Other information** : For full text of all R-phrases: see SECTION 16.

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SECTION 4: First aid measures

General advice : In case of accident or if you feel unwell, seek medical advice immediately (show the label when possible).

4.1. Description of first aid measures:

- **After inhalation** : Assure fresh air breathing. If you feel unwell, seek medical advice.
- **After contact with skin** : Remove contaminated clothing and shoes. Wash skin thoroughly with mild soap and water. Never use kerosine or gasoline for cleaning the skin.
- **After contact with the eyes** : Rinse immediately with plenty of water. Seek medical attention if irritation develops.
- **After ingestion** : Do not induce vomiting. Seek medical attention immediately.

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

- **After exposure** : No acute or delayed symptoms or effects are anticipated if first aid treatment is applied and is effective.

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

- **After exposure** : If injected under the skin when using high pressure equipment, send casualty immediately to a hospital, even when there are few or no symptoms.

SECTION 5: Fire-fighting measures

5.1. Extinguishing media:

- **Suitable extinguishing media** : Water fog. Carbon dioxide. Foam. Dry chemical product.
- **Unsuitable extinguishing media** : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture:

- **In the event of a fire** : Under fire conditions, hazardous fumes will be present.

5.3. Advice for firefighters:

- **Protective actions** : Avoid fire-fighting water to enter environment.
- **Special protective equipment for fire-fighters** : Do not enter fire area without proper protective equipment, including respiratory protection. Wear self-contained breathing apparatus, rubber boots and thick rubber gloves.
- **Surrounding fires** : Use water spray or fog for cooling exposed containers.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures:

- **For non-emergency personnel** : Evacuate unnecessary personnel.
- **For emergency responders** : Equip cleanup crew with proper protection. Wear suitable protective clothing, gloves and eye or face protection. Eliminate every possible source of ignition.

6.2. Environmental precautions:

- **In case of accidental spills** : Avoid release to the environment. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up:

- **Appropriate containment techniques** : Clean up any spills as soon as possible, using an absorbent material to collect it.
- **Appropriate clean-up procedures** : Clean up even minor leaks or spills and spread granular absorbent promptly. Collect spills and put it into appropriated container.

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SECTION 6: Accidental release measures (continued)

6.4. Reference to other sections : See also sections 8 & 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling:

- **Measures to prevent fire, aerosol and dust generation** : Keep away from sources of ignition. No naked lights. No smoking. Proper grounding procedures to avoid static electricity should be followed.
- **Measures to protect the environment** : Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.
- **Advice on general occupational hygiene** : When using, do not eat, drink or smoke. Wash hands and other exposed areas with soap and water before leaving work.

7.2. Conditions for safe storage, including any incompatibilities:

- **Technical protective measures** : Local exhaust and general ventilation must be adequate to meet exposure standards.
- **Conditions of storage** : Store this product in a dry location where it can be protected from the elements. Do not store near oxidizing agents or acidic material. Store at temperatures not exceeding 50°C/122°F.
- **Specific designs for storage rooms or vessels** : Store in tightly closed, properly ventilated containers away from heat, sparks, open flame, strong oxidizers, radiations, and other initiators.

7.3. Specific end use(s):

- **Recommendations** : See Product Data Sheet for detailed information.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters:

- **Occupational exposure limit values** : United Kingdom: Occupational Exposure Standard (OES) of 5 mg/m³, 8-hour time-weighted average reference period for oil mist.
The American Conference of Governmental Industrial Hygienists (ACGIH) has assigned mineral oil mist a threshold limit value (TLV) of 5 mg/m³ as a Time Weighted Average (TWA) for a normal 8-hour workday and a 40-hour workweek and a short-term exposure limit (STEL) of 10 mg/m³ for periods not to exceed 15 minutes. Exposures at the STEL concentration should not be repeated more than four times a day and should be separated by intervals of at least 60 minutes.
[ACGIH 1994, p. 28]
- **Biological limit values** : No data available.

8.2. Exposure controls:

8.2.1 Appropriate engineering controls:

- **Technical measures to prevent exposure** : Use adequate ventilation to keep oil mist below applicable standard.

8.2.2 Individual protection measures, such as personal protective equipment:

- **Eye / face protection** : Chemical goggles or safety glasses. (EN 166)
- **Skin protection** : Wear suitable protective clothing. (EN 465, EN 466 or EN 467).
- **Hand protection** : Wear suitable gloves resistant to chemical penetration. (EN 374)
Use neoprene or rubber gloves.

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SECTION 8: Exposure controls/personal protection (continued)

- **Respiratory protection** : The use of Filtertype A (EN 141) is recommended If exceeding the Occupational Exposure Limit.
- **Other** : Do not wear leather soled shoes.

8.2.3 Environmental exposure controls:

- **Measures to prevent exposure** : Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties:

• Appearance:

- **Physical state** : Oily liquid.
- **Colour (ASTM-D1500)** : <1.0
- **Odour** : Light odour of petroleum.
- **Flash point (ASTM-D92)** : >185°C
- **Density @ 15°C (ASTM-D4052)** : 884 kg/m³
- **Solubility(ies)** : Insoluble.
- **Viscosity @ 40°C (ASTM-D445)** : 61.2-74.8 cSt

9.2. Other information:

- **Pour point (ASTM-D97)** : <-15°C

SECTION 10: Stability and reactivity

- 10.1 Reactivity** : No data available.
- 10.2 Chemical stability** : Stable under normal conditions.
- 10.3 Possibility of hazardous reactions** : None under normal conditions.
- 10.4 Conditions to avoid** : Extremely high or low temperatures.
- 10.5 Incompatible materials** : Strong oxidizing agents.
- 10.6 Hazardous decomposition products** : None under normal conditions.

SECTION 11: Toxicological information

11.1. Information on toxicological effects:

- **Acute toxicity** : No specific toxicity data on this product available.
- **Irritation** : Not expected to be irritant.
- **Corrosivity** : No adverse health effects were noted.
- **Sensitisation** : No sensitization effects known.
- **Repeated dose toxicity** : Not applicable.
- **Carcinogenicity** : This product contains mineral oils which are considered to be severely refined and not considered to be carcinogenic under IARC. All of the oils in this product have been demonstrated to contain less than 3% extractables by the IP 346 test.

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SECTION 11: Toxicological information (continued)

- **Mutagenicity** : Not expected to be mutagenetic.
- **Toxicity for reproduction** : Not expected to be toxic.

11.2. Information on likely routes of exposure:

- **After ingestion** : Ingestion may cause nausea, vomiting and diarrhoea.
- **After inhalation** : Not expected to present a significant inhalation hazard under anticipated conditions of normal use.
- **After skincontact** : Not expected to present a significant skin hazard under anticipated conditions of normal use.
- **After eyecontact** : Slight eye irritant upon direct contact.

11.3. Symptoms related to the physical, chemical and toxicological characteristics:

- **General** : No adverse symptoms/effects were noted.

11.4. Delayed and immediate effects as well as chronic effects from short and long-term exposure:

- **General** : No adverse symptoms/effects were noted.

11.5. **Other toxicological information** : No data available.

SECTION 12: Ecological information

12.1. Toxicity:

- **Acute toxicity** : No specific toxicity data on this product available.
- **Chronic toxicity** : No specific toxicity data on this product available.

12.2. Persistence and degradability:

- **Biodegradation** : No data available.

12.3. Bioaccumulative potential:

- **Partition coefficient: n-octanol/water** : Not determined.
- **Bioconcentration factor (BCF)** : Not determined.
- **Bioaccumulation** : Not determined.

12.4. Mobility in soil:

- **Mobility** : It is to be expected small mobility in soil. Some or a few components may get into the soil and may cause pollution of ground water.

12.5 **Results of PBT and vPvB assessment** : Not applicable.

12.6 **Other adverse effects** : Spills may contaminate water supplies / pollute public waters.

SECTION 13: Disposal considerations

13.1. Waste treatment methods:

- **Waste disposal** : Dispose of this material and its container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation. Recover waste liquids for recycling/re-use. See Directive 2001/118/EC.
- **Waste Code European Waste List** : 13 02 05 - mineral-based non-chlorinated engine, gear and lubricating oils.
15 01 10 - packaging containing residues of or contaminated by dangerous substances.

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Gulf Harmony 68**PRODUCT CODE**
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Not regulated.

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture:****15.1.1 National regulations:**

- **Germany** : Water Hazard Class: 1 - slightly hazardous to water
- **Netherlands** : Water pollution effect indication {11}: Slightly harmful to aquatic organisms.
Abatement effort: B

15.1.2 International Regulations:

- **European Inventory of Existing Commercial Chemical Substances (EINECS)** : All components listed.
- **Australian Inventory of Chemical Substances (AICS)** : All components are in compliance with chemical notification requirements in Australia.
- **Canadian Environmental Protection Act (CEPA)** : All components are in compliance with the Canadian Environmental Protection Act and are present on the Domestic Substances List (DSL).
- **USA Toxic Substances Control Act** : All components of this material are on the US TSCA Inventory or are exempt.

(TSCA)

- 15.2. Chemical safety assessment** : Not applicable.

SECTION 16: Other information

- **Indication of changes** : Revision according to Regulation (EU) No 453/2010 amending Regulation (EC) No 1907/2006.
- **Abbreviations and acronyms** : ACGIH = American Conference of Industrial Hygienists
CLP = Classification and Labelling of Substances and Preparations
DOT = Department of Transport
EC = European Commission. EN = European Norm
IARC= International Agency for Research on Cancer
IP = Institute of Petroleum. ISO = International Organization for Standardization
NLGI = National Lubricating Grease Institute
PCA = Polycyclic Aromatics
SAE = Society of Automotive Engineers
TLV = Threshold Limit Value. TWA = Time Weighted Average
VG = Viscosity Grade
- **Key literature references and sources for data** : Concawe Report 01/53, Concawe Report 01/54, Concawe Report 05/87.
Regulations (EC) No 1907/2006, 1272/2008 & 453/2010 of the European Parliament and of the Council.
- **List of relevant R-phrases** : R36/37/38 : Irritating to eyes, respiratory system and skin.
R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- **Training advice** : See Product Data Sheet for detailed information.

The contents and format of this SDS are in accordance with COMMISSION REGULATION (EU) No 453/2010 of 20 May 2010 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

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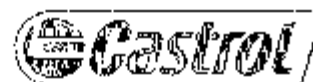
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Ambachtsweg 31 - 1785 AJ - Den Helder - Nederland

Tel: +31 223 634567

E-mail: technicalsupport@gulf.nl

Internet: www.gulf.nl



1. Identification of the substance/preparation and company/undertaking

Product name Castrol Tecton Global 15W-40
SDS no. - 464410
Use of the substance/preparation Diesel engine oil.
 For specific application advice see appropriate Technical Data Sheet or consult our company representative.
Supplier - Castrol (UK) Ltd
 Wakefield House
 Pipers Way
 Swindon
 Wiltshire SN3 1RE
EMERGENCY TELEPHONE NUMBER Carechem: +44 (0) 208 752 8322 (24 hours)
E-mail address - MSDSsdrico@bp.com

2. Hazards identification

This preparation is not classified as dangerous according to Directive 1999/45/EC as amended and adapted.

Additional hazards - USED ENGINE OILS
 Used engine oil may contain hazardous components which have the potential to cause skin cancer.
 See Toxicological Information, section 11 of this Safety Data Sheet.

See sections 11 and 12 for more detailed information on health effects and symptoms and environmental hazards.

3. Composition/information on ingredients

Highly refined base oil (IP 34E DMSO extract < 3%). Proprietary performance additives.

Chemical name	CAS no.	% -	EINECS / ELINCS	Classification
Zinc alkyl dithiophosphate	68649-42-3	1 - 5	272-028-3	Xn; R41, R38 N; R51/53 [1]

See section 16 for the full text of the R-phrases declared above

[1] Substance classified with a health or environmental hazard

[2] Substance with a workplace exposure limit

[3] PBT-substance

[4] vPvB-substance -

Occupational exposure limits, if available, are listed in section 8. -

4. First-aid measures

Eye contact - In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation occurs.
Skin contact - In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention if irritation develops.
Inhalation - If inhaled, remove to fresh air. Get medical attention if symptoms appear.
Ingestion - Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If potentially dangerous quantities of this material have been swallowed, call a physician immediately.
Notes to physician - Treatment should in general be symptomatic and directed to relieving any effects.

5. Fire-fighting measures

Extinguishing media
Suitable In case of fire, use foam, dry chemical or carbon dioxide extinguisher or spray.
Not suitable Do not use water jet.

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Hazardous decomposition products	Decomposition products may include the following materials: carbon dioxide carbon monoxide sulfur oxides phosphorus oxides metal oxides/oxides
Special fire-fighting procedures	None identified.
Protection of fire-fighters	Fire-fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.

6. Accidental release measures

Personal precautions	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spill material. Put on appropriate personal protective equipment (see section 8).
Environmental precautions	Avoid dispersal of spill material and run off and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Large spill	Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Dispose of via a licensed waste disposal contractor. Note: see section 1 for emergency contact information and section 13 for waste disposal.
Small spill	Stop leak if without risk. Move containers from spill area. Absorb with an inert material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

7. Handling and storage

Handling	Wash thoroughly after handling.
Storage	Keep container tightly closed. Keep container in a cool, well-ventilated area.
Not suitable	Prolonged exposure to elevated temperature.

8. Exposure controls/personal protection

Ingredient name - Base oil - unspecified	Occupational exposure limits EH40-OES (United Kingdom (UK)). STEL: 10 mg/m ³ 15 minute(s). Form: Oil mist, mineral TWA: 5 mg/m ³ 8 hour(s). Form: Oil mist, mineral
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ACGIH TLVs Base oil - unspecified	ACGIH (United States). STEL: 10 mg/m ³ 15 minute(s). Form: Mineral oil, mist TWA: 5 mg/m ³ 8 hour(s). Form: Mineral oil, mist
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For information and guidance, the ACGIH values are included. For further information on these please consult your supplier.

Whilst specific OELs for certain components may be shown in this section, other components may be present in any mist, vapour or dust produced. Therefore, the specific OELs may not be applicable to the product as a whole and are provided for guidance only.

Exposure controls

Occupational exposure controls	Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapours below their respective occupational exposure limits. Ensure that eyewash stations and safety showers are close to the workstation location. All chemicals should be assessed for their risks to health and appropriate control measures put in place to prevent or adequately control exposure. A hierarchy of control measures exists (e.g. elimination, substitution, general ventilation, containment, systems of work, changing the process or activity) that must be considered before use of personal protective equipment. Personal protective equipment should conform to appropriate standards, be suitable for use, be kept in good condition and properly maintained. Your supplier of personal protective equipment should be consulted for advice on selection and appropriate standards. For further information contact your national organisation for standards. The final choice of protective equipment will depend upon a risk assessment. It is important to ensure that all items of personal protective equipment are compatible.
Hygiene measures -	Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period.

Personal protective equipment

Respiratory protection -	Respiratory protective equipment is not normally required where there is adequate natural or local exhaust ventilation to control exposure. In case of insufficient ventilation, wear suitable respiratory equipment. Respiratory protective equipment must be checked to ensure it fits correctly each time it is worn. Air-filtering respirators, also called air-purifying respirators, will not be adequate under conditions of oxygen deficiency (i.e. low oxygen concentration), and would not be considered suitable where airborne concentrations of chemicals with a significant hazard are present. In these cases air-supplied breathing
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apparatus will be required.

Provided an air-filtering/air-purifying respirator is suitable, a filter for particulates can be used for mist or fume. Use filter type P or comparable standard. A combination filter for particles and organic gases and vapours (boiling point >65°C) may be required if vapour or abnormal odour is also present due to high product temperature. Use filter type AP or comparable standard.

Hand protection

Wear protective gloves if prolonged or repeated contact is likely. Wear chemical resistant gloves.

Recommended: nitrile gloves

Protective gloves will deteriorate over time due to physical and chemical damage. Inspect and replace gloves on a regular basis. The frequency of replacement will depend upon the circumstances of use.

Eye protection

Safety glasses with side shields.

Skin and body

Use of protective clothing is good industrial practice.

Cotton or polyester/cotton overalls will only provide protection against light superficial contamination that will not soak through to the skin. Overalls should be laundered on a regular basis. When the risk of skin exposure is high (e.g. when cleaning up spillages or if there is a risk of splashing) then chemical resistant aprons and/or impervious chemical suits and boots will be required.

9 . Physical and chemical properties

General information

Appearance

Physical state	Liquid.
Colour	Amber.
Odour	Oily.

Important health, safety and environmental information

Flash point	Closed cup: 224°C (435.2°F) (Pensky-Martens).
Viscosity	Kinematic: 106.4 mm ² /s (~ 06.4 cSt) at 40°C Kinematic: 14.4 mm ² /s (14.4 cSt) at 100°C
Pour point	-42 °C
Density	885 kg/m ³ (0.885 g/cm ³) at 15°C
Solubility	insoluble in water.
Partition coefficient (LogKow)	>3

10 . Stability and reactivity

Stability	The product is stable.
Possibility of hazardous reactions	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	Avoid all possible sources of ignition (spark or flame).
Materials to avoid	Reactive or incompatible with the following materials: oxidizing materials.
Hazardous decomposition products	Combustion products may include the following: carbon oxides sulfur oxides phosphorus oxides metal oxide/oxides Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11 . Toxicological information

Acute toxicity -	Unlikely to cause more than transient stinging or redness if accidental eye contact occurs. Unlikely to cause harm to the skin on brief or occasional contact but prolonged or repeated exposure may lead to dermatitis. Unlikely to cause harm if accidentally swallowed in small doses, though larger quantities may cause nausea and diarrhoea. At normal ambient temperatures this product will be unlikely to present an inhalation hazard because of its low volatility. May be harmful by inhalation if exposure to vapour, mist or fumes resulting from thermal decomposition products occurs.
Chronic toxicity	
Other chronic toxicity data-	USED ENGINE OILS Combustion products resulting from the operation of internal combustion engines contaminate engine oils during use. Used engine oil may contain hazardous components which have the potential to cause skin cancer. Frequent or prolonged contact with all types and makes of used engine oil must therefore be avoided and a high standard of personal hygiene maintained.

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Effects and symptoms

Eyes	No significant health hazards identified.
Skin	No significant health hazards identified.
Inhalation	No significant health hazards identified.
Ingestion	No significant health hazards identified.

12 . Ecological information

Persistence/degradability	Inherently biodegradable .
Mobility	Spillages may penetrate the soil causing ground water contamination. -
Bioaccumulative potential -	This product may bioaccumulate through food chains in the environment. -
Environmental hazards -	Not classified as dangerous. Based on data available for this or related materials.
Other ecological information -	Spills may form a film on water surfaces causing physical damage to organisms. Oxygen transfer could also be impaired.

13 . Disposal considerations

Disposal considerations / - Waste information -	The generation of waste should be avoided or minimised wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spill material and runoff and contact with soil, waterways, drains and sewers.
Unused product European waste catalogue (EWG)	13 02 05* mineral-based non-chlorinated engine, gear and lubricating oils However, deviation from the intended use and/or the presence of any potential contaminants may require an alternative waste disposal code to be assigned by the end user.

14 . Transport information

Not classified as hazardous for transport (ADR/RID, ADN/R, IMDG, ICAO/IATA)

15 . Regulatory information

Classification and labelling have been performed according to EU directives 1989/45/EC and 67/548/EEC as amended and adapted.

Label requirements

Risk phrases	This product is not classified according to EU legislation.
Additional warning phrases	Safety data sheet available for professional user on request.
Other regulations	
Europe inventory	At least one component is not listed in EINECS but all such components are listed in ELINCS. Please contact your supplier for information on the inventory status of this material.
United States inventory (TSCA 8b) .	All components are listed or exempted. -
Australia inventory (AICS)	All components are listed or exempted. -
Canada inventory	All components are listed or exempted. -
China inventory (IECSC)	All components are listed or exempted. -
Japan inventory (ENCS)	All components are listed or exempted. -
Korea inventory (KECI)	All components are listed or exempted. -
Philippines inventory (PICCS)	All components are listed or exempted. -

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16 . Other information

Full text of R-phrases referred to in sections 2 and 3

R41- Risk of serious damage to eyes.
R38- Irritating to skin.
R51/53- Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

History

Date of issue/ Date of revision 05/11/2009.

Date of previous issue 05/10/2009.

Prepared by Product Stewardship

Notice to reader

✓ Indicates information that has changed from previously issued version.

All reasonably practicable steps have been taken to ensure this data sheet and the health, safety and environmental information contained in it is accurate as of the date specified below. No warranty or representation, express or implied is made as to the accuracy or completeness of the data and information in this data sheet.

The data and advice given apply when the product is sold for the stated application or applications. You should not use the product other than for the stated application or applications without seeking advice from us.

It is the user's obligation to evaluate and use this product safely and to comply with all applicable laws and regulations. The BP Group shall not be responsible for any damage or injury resulting from use, other than the stated product use of the material, from any failure to adhere to recommendations, or from any hazards inherent in the nature of the material. Purchasers of the product for supply to a third party for use at work, have a duty to take all necessary steps to ensure that any person handling or using the product is provided with the information in this sheet. Employers have a duty to tell employees and others who may be affected of any hazards described in this sheet and of any precautions that should be taken.

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Gulf Coolant XLL

PRODUCT CODE
6939

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

- 1.1 Product identifier : Gulf Coolant XLL
- 1.2 Relevant identified uses of the substance or mixture and uses advised against:**
- 1.2.1 Relevant identified uses : Cooling fluid (antifreeze)
Ready to use
- 1.2.2 Uses advised against : Use only as antifreeze.
- 1.3 Details of the supplier of the safety data sheet : Gulf Oil Nederland B.V.
Ambachtsweg 31
1785 AJ - Den Helder - Nederland
Tel: +31 223 634567
E-mail: technicalsupport@gulf.nl
- 1.4 Emergency telephone number : +31 223 634567

SECTION 2: Hazards identification

- 2.1 Classification of the substance or mixture:**
- 2.1.1 Classification according to Directive 1999/45/EC : Classified as dangerous under EC criteria.
Xn; R22
- 2.1.2 Most important adverse physicochemical effects : None under normal conditions.
- 2.1.3 Most important adverse human health effects : Harmful if swallowed.
- 2.1.4 Most important adverse environmental effects : No specific risk for the environment.

2.2 Label elements:

2.2.1 Hazard symbols



- 2.2.2 Indications of danger : Xn: Harmful.
- 2.2.3 Risk phrases : R22 : Harmful if swallowed.
- 2.2.4 Safety advices : S2 : Keep out of the reach of children. - S13 : Keep away from food, drink and animal feedstuffs. - S35 : This material and its container must be disposed of in a safe way. - S46 : If swallowed seek medical advice immediately and show this container or label. - S51 : Use only in well-ventilated areas. - S56 : Dispose of this material and its container to hazardous or special waste collection point. - S59 : Refer to manufacturer/supplier for information on recovery/recycling.
- 2.3 Other hazards : None under normal conditions.

SECTION 3: Composition/information on ingredients

- 3.1 Description of the mixture : Mixture of ethylene glycol, additives and water.

3.2 Composition of the mixture:

Substance name	Contents	CAS No	EC No	Annex No	Ref REACH	Classification
Ethylene glycol	>0 - 60 %	107-21-1	203-473-2	603-027-00-1	Xn; R22

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SECTION 3: Composition/information on ingredients (continued)

Substance name	Contents	CAS No	EC No	Annex No	Ref REACH	Classification
Water	40 - 60 %	7732-18-5	231-791-2	---	---	Not classified (H201H373)
Sodium-2-ethylhexanoate	1 - 5 %	19705-05-3	843-283-8	---	---	Xn, R63

3.3 Other information : See § 10 for full text of all R- phrases.

SECTION 4: First aid measures

General Advice : In case of accident or if you feel unwell, seek medical advice immediately (show the label when possible).

4.1 Description of first aid measures:

- After inhalation : Remove the casualty to fresh air. Allow the victim to rest. In case of respiratory arrest, administer artificial respiration. If you feel unwell, seek medical advice.
 - After contact with skin : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse. Seek medical attention if ill effect or irritation develops.
 - After contact with the eyes : In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
 - After ingestion : Rinse mouth. Do not induce vomiting. Seek medical attention immediately.
- 4.2 Most important symptoms and effects, both acute and delayed : Symptoms of ingestion include drowsiness, weakness, headache, dizziness, nausea, vomiting.
- 4.3 Indication of any immediate medical attention and special treatment needed : If swallowed, seek medical advice immediately and show this container or label.

SECTION 5: Fire-fighting measures

5.1 Extinguishing media:

5.1.1 Suitable extinguishing media : Water spray. Carbon dioxide. Alcohol resistant foam. Dry chemical product.

5.1.2 Unsuitable extinguishing media : Do not use a heavy water stream.

5.2 Special hazards arising from the substance or mixture : Under fire conditions, hazardous fumes will be present.

5.3 Advice for firefighters:

5.3.1 Protective actions : Evacuate unnecessary personnel.
Avoid fire-fighting water to enter environment.

5.3.2 Special protective equipment for fire-fighters : Do not enter fire area without proper protective equipment, including respiratory protection. Wear self-contained breathing apparatus, rubber boots and thick rubber gloves.

5.3.3 Surrounding fires : Use water spray or fog for cooling exposed containers.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:

6.1.1 For non-emergency personnel : Evacuate unnecessary personnel.

6.1.2 For emergency responders : Equip cleanup crew with proper protection. Avoid contact with skin and eyes. Wear suitable protective clothing and gloves.

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SECTION 6: Accidental release measures (continued)

- 6.2 Environmental precautions** : Prevent entry to sewers and public waters. Notify authorities if product enters sewers or public waters.
- 6.3 Methods and material for containment and cleaning up:**
- 6.3.1 Appropriate containment techniques** : Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.
- 6.3.2 Appropriate clean-up procedures** : Clean up any spills as soon as possible, using an absorbent material to collect it. Collect spills and put it into appropriated container.
- 6.4 Reference to other sections** : See also headings 8 & 13 for additional information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling:

- 7.1.1 Measures to prevent fire, aerosol and dust generation** : Provide local exhaust or general room ventilation.
- 7.1.2 Measures required to protect the environment** : Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.
- 7.1.3 Advice on general occupational hygiene** : When using, do not eat, drink or smoke. Where contact with eyes or skin is likely, wear suitable protection.

7.2 Conditions for safe storage, including any incompatibilities:

- 7.2.1 Technical protective measures** : Local exhaust and general ventilation must be adequate to meet exposure standards.
- 7.2.2 Conditions of storage** : Store in tightly closed, properly ventilated areas away from heat, sparks, open flame. Keep at temperature not exceeding 50 °C. Keep away from food, drink and animal feeding stuffs.
- 7.2.3 Specific designs for storage rooms or vessels** : Store in accordance with local, regional, national or international regulation.
- 7.3 Specific end use(s)** : See Product Data Sheet for detailed information.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters:

8.1.1 Occupational exposure limit values:

- EU** : EH40 Workplace exposure limit.
Long-term exposure limit (8-hour TWA reference period)
Ethane-1,2-diol, vapour; 20 ppm - 52 mg/m³ (skin)
- USA** : The American Conference of Governmental Industrial hygienists (ACGIH) assigns ethylene glycol a ceiling limit value of 50 ppm (127 mg/m³), which should not be exceeded during any part of the working exposure. [ACGIH 1993].

8.1.2 Biological limit values

: No data available.

8.2 Exposure controls:

- 8.2.1 Appropriate engineering controls** : Provide adequate ventilation to minimize dust and/or vapour concentrations.
- 8.2.2 Individual protection measures, such as personal protective equipment:**

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SECTION 8: Exposure controls/personal protection (continued)

- Eye / face protection : Safety glasses.
- Skin protection : Wear suitable protective clothing. (EN 465, EN 466 or EN 467).
- Hand protection : Wear suitable gloves resistant to chemical penetration. (EN 374)
- Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment.
- 8.2.3 Environmental exposure controls : Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties:

- Appearance : Aqueous solution.
- Physical state : Liquid.
- Colour : Red.
- Odour : Characteristic
- pH value : 8.2 (50% in water)
- Melting point / Freezing point : -40°C@50% dilution
- Density @ 15°C : 1070 kg/m³
- Solubility in water : Miscible.

SECTION 10: Stability and reactivity

- 10.1 Reactivity : Stable under normal conditions.
- 10.2 Chemical stability : Stable under normal conditions.
- 10.3 Possibility of hazardous reactions : Reacts with: Strong oxidizing agents. Strong bases.
- 10.4 Conditions to avoid : Extremely high or low temperatures.
- 10.5 Incompatible materials : Flammable materials. Acids.
- 10.6 Hazardous decomposition products : Toxic gases.

SECTION 11: Toxicological information

11.1 Information on toxicological effects:

- Acute toxicity : No specific toxicity data on this product available.
- Irritation : Irritating to eyes and respiratory system.
- Corrosivity : No adverse health effects were noted.
- Sensitisation : No sensitization effects known.
- Carcinogenicity : This material or its emissions may cause damage to kidney and liver and/or aggravate existing disorders.
- Mutagenicity : Not expected to be mutagenetic.
- Toxicity for reproduction : Not expected to be toxic.

11.2 Information on likely routes of exposure:

- After ingestion : Ingestion may cause nausea, vomiting and diarrhoea.

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SECTION 11: Toxicological information (continued)

- After inhalation : Inhalation of vapours may cause respiratory irritation.
- After skincontact : Not expected to present a significant skin hazard under anticipated conditions of normal use.
- After eyecontact : Contact with the eyes is likely to be irritating.
- 11.3 Symptoms related to the physical, chemical and toxicological characteristics : No adverse symptoms/effects were noted.
- 11.4 Delayed and immediate effects as well as chronic effects from short and long-term exposure : Substance may have effects on the central nervous system, resulting in abnormal eye movements(nystagmus). Substance may cause effects on the kidneys and central nervous system, resulting in renal failure and brain injury. Exposure could cause lowering of consciousness.
- 11.5 Other toxicological information : No data available.

SECTION 12: Ecological information

- 12.1 Toxicity : No specific ecotoxicity data on this product available.
- 12.2 Persistence and degradability : Biodegradable.
- 12.3 Bioaccumulative potential : There are no indications for appearance of bioaccumulation.
- 12.4 Mobility in soil : Not determined.
- 12.5 Results of PBT and vPvB assessment : Not applicable.
- 12.6 Other adverse effects : No data available.

SECTION 13: Disposal considerations

- 13.1 Waste treatment methods : Dispose in a safe manner in accordance with local/national regulations. See Directive 2001/118/EC
- 13.2 Waste Code European Waste List : 16 01 14 - antifreeze fluids containing dangerous substances.
15 01 10 - packaging containing residues of or contaminated by dangerous substances.

SECTION 14: Transport information

Not classified.

SECTION 15: Regulatory information

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

National regulations:

- Germany : Water Hazard Class: 1 - slightly hazardous to water
- Netherlands : Water pollution effect indication (11): Slightly harmful to aquatic organisms.
Abatement effort: B

International Regulations:

- European Inventory of Existing Commercial Chemical Substances (EINECS) : All components listed.

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6939****SECTION 15: Regulatory information (continued)****15.2 Chemical safety assessment** : Not applicable.**SECTION 16: Other Information****16.1 Revision Indicators** : None.**16.2 Abbreviations and acronyms** : EC = European Community
EN = European Norm
TWA = Time Weighted Average**16.3 Key literature references and sources for data** : Concawe Report 01/53, Concawe Report 01/54, Concawe Report 05/87.
Regulations (EC) No 1907/2006, 1272/2008 & 453/2010 of the European Parliament and of the Council.**16.4 List of relevant R phrases** : R22 : Harmful if swallowed.
R63 : Possible risk of harm to the unborn child.**16.5 Training advice** : See Product Data Sheet for detailed information.

The contents and format of this SDS are in accordance with COMMISSION REGULATION (EU) No 453/2010 of 20 May 2010 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

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End of document

Gulf Oil Nederland B.V.

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Revised edition no : 2

Date : 21 / 6 / 2012

Supersedes : 2 / 11 / 2012

Gulf Superfleet Supreme 15W-40

PRODUCT CODE
1540

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

1.1. Product identifier:

- Product name : Gulf Superfleet Supreme 15W-40
- Viscosity Grade : SAE 15W-40

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

- Relevant identified uses : Engine oil (lubricant)
- Uses advised against : This oil should not be used for any other purpose than the intended use as an engine oil without expert advice.

1.3. Details of the supplier of the Safety Data Sheet:

- Supplier : Gulf Oil Nederland B.V.
Ambachtsweg 31
1785 AJ - Den Helder - Nederland
Tel: +31 (0)223 634567
E-mail: technicalsupport@gulf.nl
Internet: www.gulf.nl

1.4. Emergency telephone number:

- Phone number(s) : +31 (0)223 634567

SECTION 2. Hazards identification

2.1. Classification of the substance or mixture:

- Classification according to Directive 1999/45/EC : This product does not meet the classification requirements of the current European legislation.

2.2. Label elements:

- Safety advices : Contains Calcium long chain alkaryl sulphonate. May produce an allergic reaction. Do not empty into drains ; dispose of this material and its container in a safe way.

2.3. Other hazards

- Flammable liquid. Prolonged or repeated skin contact with the material will remove natural oils and could lead to a dermatitis. Spills of this product present a serious slipping hazard. Overexposure to oil mist may cause respiratory irritations. This mixture does not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex XIII.

SECTION 3. Composition/information on ingredients

3.2. Mixtures:

- Description of the mixture : Product is not considered to be hazardous but contains hazardous components. Mixture of mineral base oils (PCA-content < 3 % - IP 346) and additives.
- Composition of the mixture:

Substance name	Contents	CAS No	EC No	Annex No	Rel REACH	Classification
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based	65 - 70 %	72523-87-1	273-738-4	649-483-00-5	----	Not classified (GHS/CPD)
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based, high-viscosity.	5 - 10 %	72523-85-9	273-736-3	649-481-00-1	----	Not classified (GHS/CPD)
Polyolefine polyamine succinimide, Polyol	1 - 5 %	----	----	----	----	143

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SECTION 3. Composition/information on ingredients (continued)

Substance name	Contents	CAS No	EC No	Annex No	Ref REACH	Classification
calcium long chain alkaryl sulphonate	1 - 2 %	---	---	---	---	R53
Zinc alkyl dithiophosphate	1 - 3 %	62842-42-3	272-020-2	---	---	Xn, P4 N, F51.03
Calcium long chain alkaryl sulphonate	0,1 - 1 %	68610-84-4	271-877-7	---	---	R43 H317

SECTION 4. First aid measures

General advice : In case of accident or if you feel unwell, seek medical advice immediately (show the label when possible).

4.1. Description of first aid measures:

- After inhalation : Assure fresh air breathing. If you feel unwell, seek medical advice.
- After contact with skin : Remove contaminated clothing and shoes. Wash skin thoroughly with mild soap and water. Never use kerosine or gasoline for cleaning the skin.
- After contact with the eyes : Rinse immediately with plenty of water. Seek medical attention if irritation develops.
- After ingestion : Do not induce vomiting. Seek medical attention immediately.

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

- After exposure : No acute or delayed symptoms or effects are anticipated if first aid treatment is applied and is effective.

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

- After exposure : If injected under the skin when using high pressure equipment, send casualty immediately to a hospital, even when there are few or no symptoms.

SECTION 5. Firefighting measures

5.1. Extinguishing media:

- Suitable extinguishing media : Water fog, Carbon dioxide, Foam, Dry chemical product.
- Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture:

- In the event of a fire : Under fire conditions, hazardous fumes will be present.

5.3. Advice for firefighters:

- Protective actions : Avoid fire-fighting water to enter environment.
- Special protective equipment for fire-fighters : Do not enter fire area without proper protective equipment, including respiratory protection. Wear self-contained breathing apparatus, rubber boots and thick rubber gloves.
- Surrounding fires : Use water spray or fog for cooling exposed containers.

SECTION 6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures:

- For non-emergency personnel : Evacuate unnecessary personnel.
- For emergency responders : Equip cleanup crew with proper protection. Wear suitable protective clothing, gloves and eye or face protection. Eliminate every possible source of ignition.

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SECTION 6. Accidental release measures (continued)

6.2. Environmental precautions:

- In case of accidental spills : Avoid release to the environment. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up:

- Appropriate containment techniques : Clean up any spills as soon as possible, using an absorbent material to collect it. Take up large spills with pump or vacuum and finish with dry chemical absorbent.
- Appropriate clean-up procedures : Clean up even minor leaks or spills and spread granular absorbent promptly. Collect spills and put it into appropriated container.

- 6.4. Reference to other sections : See also sections 8 & 13.

SECTION 7. Handling and storage

7.1. Precautions for safe handling:

- Measures to prevent fire, aerosol and dust generation : Keep away from sources of ignition. No naked lights. No smoking. Proper grounding procedures to avoid static electricity should be followed.
- Measures to protect the environment : Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.
- Advice on general occupational hygiene : When using, do not eat, drink or smoke. Wash hands and other exposed areas with soap and water before leaving work.

7.2. Conditions for safe storage, including any incompatibilities:

- Technical protective measures : Local exhaust and general ventilation must be adequate to meet exposure standards.
- Conditions of storage : Store this product in a dry location where it can be protected from the elements. Do not store near oxidizing agents or acidic material. Keep at temperature not exceeding 50 °C.
- Specific designs for storage rooms or vessels : Store in tightly closed, properly ventilated containers away from heat, sparks, open flame, strong oxidizers, radiations, and other initiators.

7.3. Specific end use(s):

- Recommendations : See Product Data Sheet for detailed information.

SECTION 8. Exposure controls/personal protection

8.1. Control parameters:

- Occupational exposure limit values : United Kingdom: Occupational Exposure Standard (OES) of 5 mg/m³, 8-hour time-weighted average reference period for oil mist.
The American Conference of Governmental Industrial Hygienists (ACGIH) has assigned mineral oil mist a threshold limit value (TLV) of 5 mg/m³ as a Time Weighted Average (TWA) for a normal 8-hour workday and a 40-hour workweek and a short-term exposure limit (STEL) of 10 mg/m³ for periods not to exceed 15 minutes. Exposures at the STEL concentration should not be repeated more than four times a day and should be separated by intervals of at least 60 minutes. [ACGIH 1994, p. 28]
- Biological limit values : No data available.

8.2. Exposure controls:

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SECTION 8. Exposure controls/personal protection (continued)

8.2.1 Appropriate engineering controls:

- Technical measures to prevent exposure : Use adequate ventilation to keep oil mist below applicable standard.

8.2.2 Individual protection measures, such as personal protective equipment:

- Eye / face protection : Chemical goggles or safety glasses.(EN 166)
- Skin protection : Wear suitable protective clothing. (EN 465, EN 466 or EN 467).
- Hand protection : Wear suitable gloves resistant to chemical penetration. (EN 374)
Use neoprene or rubber gloves.
- Respiratory protection : The use of Filtertype A (EN 141) is recommended if exceeding the Occupational Exposure Limit.
- Other : Do not wear leather soled shoes.

8.2.3 Environmental exposure controls:

- Measures to prevent exposure : Avoid release to the environment. See Heading 6.

SECTION 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties:

• Appearance:

- Physical state : Oily liquid.
- Colour : Yellow-brown.
- Odour : Characteristic
- Pour point (ASTM-D97) : <-24 °C
- Flash point (ASTM-D92) : >215 °C
- Density @ 15 °C (ASTM-D4052) : 881 kg/m³
- Solubility(ies) : Insoluble.
- Viscosity @ 40 °C (ASTM-D445) : 106 mm²/s

- 9.2. Other information : See Product Data Sheet for detailed information.

SECTION 10. Stability and reactivity

- 10.1 Reactivity : No data available.
- 10.2 Chemical stability : Stable under normal conditions.
- 10.3 Possibility of hazardous reactions : None under normal conditions.
- 10.4 Conditions to avoid : Extremely high or low temperatures.
- 10.5 Incompatible materials : Strong oxidizing agents.
- 10.6 Hazardous decomposition products : None under normal conditions.

SECTION 11. Toxicological information

11.1. Information on toxicological effects:



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SECTION 11. Toxicological information (continued)

- Acute toxicity : No specific toxicity data on this product available.
- Irritation : Not expected to be irritant.
- Corrosivity : No adverse health effects were noted.
- Sensitisation : Experimental data has shown that the concentration of potentially sensitizing components present in this product does not induce skin sensitization.
- Repeated dose toxicity : Not applicable.
- Carcinogenicity : This product contains mineral oils which are considered to be severely refined and not considered to be carcinogenic under IARC. All of the oils in this product have been demonstrated to contain less than 3% extractables by the IP 346 test.
- Mutagenicity : Not expected to be mutagenetic.
- Toxicity for reproduction : Not expected to be toxic.

11.2. Information on likely routes of exposure:

- After ingestion : Ingestion may cause nausea, vomiting and diarrhoea.
- After inhalation : Not expected to present a significant inhalation hazard under anticipated conditions of normal use.
- After skincontact : Repeated or prolonged skin contact may cause irritation.
- After eyecontact : Slight eye irritant upon direct contact.

11.3. Symptoms related to the physical, chemical and toxicological characteristics:

- General : No adverse symptoms/effects were noted.

11.4. Delayed and immediate effects as well as chronic effects from short and long-term exposure:

- General : No acute or delayed symptoms or effects are anticipated if first aid treatment is applied and is effective.

- 11.5. Other toxicological information** : During use in engines, contamination of oil with low levels of cancer-causing combustion products occurs. Used motor oils have been shown to cause skin cancer in mice following repeated application and continuous exposure. Brief or intermittent skin contact with used motor oil is not expected to have serious effects in humans if the oil is thoroughly removed by washing with soap and water. Avoid prolonged contact with used motor oil.

SECTION 12. Ecological information

12.1. Toxicity:

- Acute (short-term) toxicity : No specific toxicity data on this product available.
- Chronic (long-term) toxicity : No specific toxicity data on this product available.

- 12.2. Persistence and degradability** : No data available.

- 12.3. Bioaccumulative potential** : No data available.

- 12.4. Mobility in soil** : It is to be expected small mobility in soil. Some or a few components may get into the soil and may cause pollution of ground water.

- 12.5. Results of PBT and vPvB assessment** : This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

- 12.6 Other adverse effects** : None known.

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SECTION 13. Disposal considerations

13.1. Waste treatment methods:

- **Waste disposal** : Dispose of this material and its container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation. Recover waste liquids for recycling/re-use. See Directive 2001/118/EC.
- **Waste Code European Waste List** : 13 02 05 - mineral-based non-chlorinated engine, gear and lubricating oils.
15 01 10 - packaging containing residues of or contaminated by dangerous substances.

SECTION 14. Transport information

Not regulated.

SECTION 15. Regulatory information

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

15.1.1 National regulations:

- **Germany** : Water Hazard Class: 1 - slightly hazardous to water
- **Netherlands** : Water pollution effect indication (11): Slightly harmful to aquatic organisms.
Abatement effort: B

15.1.2 International Regulations:

- **Europe** : All components listed in the European Inventory of Existing Commercial Chemical Substances (EINECS)
- **Australia** : All components are in compliance with chemical notification requirements in Australia. (AICS)
- **Canada** : All components are in compliance with the Canadian Environmental Protection Act (CEPA) and are present on the Domestic Substances List.
- **USA** : All components of this material are on the US Toxic Substances Control Act (TSCA) inventory or are exempt.

- 15.2. **Chemical safety assessment** : No chemical safety assessment has been carried out for this mixture.

SECTION 16. Other Information

- **Indication of changes** : Revision according to Regulation (EU) No 453/2010 amending Regulation (EC) No 1907/2006.
- **Abbreviations and acronyms** : ACGIH = American Conference of Industrial Hygienists
CLP = Classification and Labelling of Substances and Preparations
DOT = Department of Transport
EC = European Commission, EN = European Norm
IARC = International Agency for Research on Cancer
IP = Institute of Petroleum
ISO = International Organization for Standardization
NLGI = National Lubricating Grease Institute
PBT = Persistent Bioaccumulative and Toxic
PCA = Polycyclic Aromatics
SAE = Society of Automotive Engineers
TLV = Threshold Limit Value, TWA = Time Weighted Average
vPvB = very Persistent and very Bioaccumulative
VG = Viscosity Grade

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SECTION 16. Other information (continued)

- Key literature references and sources for data : Concawe Report 01/53, Concawe Report 01/54, Concawe Report 05/87, Regulations (EC) No 1907/2006, 1272/2008 & 453/2010 of the European Parliament and of the Council.
- List of relevant R-phrases : R41 : Risk of serious damage to eyes.
R43 : May cause sensitization by skin contact.
R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R53 : May cause long-term adverse effects in the aquatic environment.
- Training advice : See Product Data Sheet for detailed information.

The contents and format of this SDS are in accordance with COMMISSION REGULATION (EU) No 453/2010 of 20 May 2010 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

DISCLAIMER OF LIABILITY The information in this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This SDS was prepared and is to be used only for this product. If the product is used as a component in another product, this SDS information may not be applicable.

End of document

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SAFETY DATA SHEET

HYDRO TECH HVI 100

Prepared according to Annex II of EC regulation 1907/2006

1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

PRODUCT NAME HYDRO TECH HVI 100

SUPPLIER OMV PETROL OFİSİ A.Ş.
Ayazağa Eski Büyükdere Cad.
No:33-37 B Blok 34398
Maslak-Istanbul/TURKEY
Tel: +90 212 329 1500
Fax: +90 212 329 1896
www.poas.com.tr
info@poas.com.tr

PRODUCT NO. 22146

APPLICATION Industrial oil

EMERGENCY TELEPHONE POAŞ: +90 212 329 1845 (office hours)

2 HAZARDS IDENTIFICATION

Not regarded as a health or environmental hazard under current legislation.

ENVIRONMENT

The product is not expected to be hazardous to the environment.

3 COMPOSITION/INFORMATION ON INGREDIENTS

Name	EC No.	CAS-No.	Content	Classification (67/548)
Alkyl phenol			< 1%	N;R50/53.
Calcium alkaryl sulfonate			< 1%	Xi;R36/38.
Calcium long chain alkylphenate sulfide			< 1%	R53.
HYDROCARBONS, C20-50, SOLVENT DEWAXED HEAVY PARAFFINIC, HYDROTREATE (DMSO<3% by IP 346)	292-617-9	90640-95-2	85-95%	-
Phenol 4-dodecyl			< 1%	Repr. Cat. 3;R62. Xi;R38.
Zinc alkylthiophosphate	272-028-3	68649-42-3	< 1%	Xi;R38,R41. N;R51/53.

The Full Text for all R-Phrases are Displayed in Section 16

COMPOSITION COMMENTS

Some substances are not classified by legislation. They are self classified by the manufacturer. The DMSO extract by IP 346 of the oil is less than 3%

4 FIRST-AID MEASURES

INHALATION

Move the exposed person to fresh air at once. Rinse nose and mouth with water. Get medical attention if any discomfort continues.

INGESTION

NEVER MAKE AN UNCONSCIOUS PERSON VOMIT OR DRINK FLUIDS! Rinse mouth thoroughly. Get medical attention if any discomfort continues.

SKIN CONTACT

Remove affected person from source of contamination. Remove contaminated clothing. Wash the skin immediately with soap and water. Get medical attention if any discomfort continues.

HYDRO TECH HVI 100

EYE CONTACT

Make sure to remove any contact lenses from the eyes before rinsing. Promptly wash eyes with plenty of water while lifting the eye lids. Continue to rinse for at least 15 minutes. Get medical attention if any discomfort continues.

5 FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA

This product is not flammable. Use fire-extinguishing media appropriate for surrounding materials.

SPECIAL FIRE FIGHTING PROCEDURES

Avoid breathing fire vapours.

PROTECTIVE MEASURES IN FIRE

Self contained breathing apparatus and full protective clothing must be worn in case of fire.

6 ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS

Wear protective clothing as described in Section 8 of this safety data sheet.

ENVIRONMENTAL PRECAUTIONS

Avoid discharge into drains, water courses or onto the ground.

SPILL CLEAN UP METHODS

Stop leak if possible without risk. Absorb in vermiculite, dry sand or earth and place into containers. Flush with plenty of water to clean spillage area. Do not contaminate water sources or sewer.

7 HANDLING AND STORAGE

USAGE PRECAUTIONS

Avoid spilling, skin and eye contact.

STORAGE PRECAUTIONS

Store in tightly closed original container in a dry and cool place. Keep in original container.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

PROTECTIVE EQUIPMENT



ENGINEERING MEASURES

Provide adequate ventilation. Observe occupational exposure limits and minimize the risk of inhalation of vapours.

RESPIRATORY EQUIPMENT

No specific recommendation made, but respiratory protection may still be required under exceptional circumstances when excessive air contamination exists.

HAND PROTECTION

Use suitable protective gloves if risk of skin contact.

EYE PROTECTION

If risk of splashing, wear safety goggles or face shield.

OTHER PROTECTION

Wear appropriate clothing to prevent any possibility of skin contact.

HYGIENE MEASURES

DO NOT SMOKE IN WORK AREA! Wash at the end of each work shift and before eating, smoking and using the toilet. Wash promptly if skin becomes wet or contaminated. Promptly remove any clothing that becomes contaminated. Use appropriate skin cream to prevent drying of skin. When using do not eat, drink or smoke.

9 PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE	Liquid		
COLOUR	Yellow		
ODOUR	Characteristic.		
RELATIVE DENSITY	0,88 g/ml 15	VISCOSITY	90-110 cSt 40
FLASH POINT (°C)	238 OC (Open cup).		

HYDRO TECH HVI 100

10 STABILITY AND REACTIVITY

STABILITY

Stable under normal temperature conditions.

CONDITIONS TO AVOID

Avoid excessive heat for prolonged periods of time. Avoid contact with strong oxidisers.

MATERIALS TO AVOID

Strong oxidising substances.

HAZARDOUS DECOMPOSITION PRODUCTS

Fire creates: Carbon monoxide (CO). Carbon dioxide (CO₂).

11 TOXICOLOGICAL INFORMATION

INHALATION

In high concentrations, vapours may irritate throat and respiratory system and cause coughing.

INGESTION

May cause discomfort if swallowed.

SKIN CONTACT

Liquid may irritate skin.

EYE CONTACT

Spray and vapour in the eyes may cause irritation and smarting.

12 ECOLOGICAL INFORMATION

ECOTOXICITY

Not regarded as dangerous for the environment.

MOBILITY

The product is miscible with water. May spread in water systems.

13 DISPOSAL CONSIDERATIONS

DISPOSAL METHODS

Dispose of waste and residues in accordance with local authority requirements.

14 TRANSPORT INFORMATION

GENERAL

The product is not covered by international regulation on the transport of dangerous goods (IMDG, IATA, ADR/RID).

No transport warning sign required.

ROAD TRANSPORT NOTES

Not Classified

RAIL TRANSPORT NOTES

Not classified.

SEA TRANSPORT NOTES

Not classified.

AIR TRANSPORT NOTES

Not classified.

15 REGULATORY INFORMATION

RISK PHRASES

NC Not classified.

SAFETY PHRASES

NC Not classified.

STATUTORY INSTRUMENTS

Chemicals (Hazard Information and Packaging) Regulations.

APPROVED CODE OF PRACTICE

Classification and Labelling of Substances and Preparations Dangerous for Supply. Safety Data Sheets for Substances and Preparations.

GUIDANCE NOTES

Workplace Exposure Limits EH40. CHIP for everyone HSG(108).

16 OTHER INFORMATION

HYDRO TECH HVI 100

REVISION COMMENTS

Company name changed

ISSUED BY

Certificated from the Turkish Standards Institute (TSE) to prepare Safety Data Sheet (Certificate no: SDS - 0397)

REVISION DATE 17.06.2011

DATE 14.09.2010

RISK PHRASES IN FULL

NC	Not classified.
R36/38	Irritating to eyes and skin.
R38	Irritating to skin.
R41	Risk of serious damage to eyes.
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R53	May cause long-term adverse effects in the aquatic environment.
R62	Possible risk of impaired fertility.

DISCLAIMER

This 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. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.



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AUSTRALIA

Telephone: 61/3/9250-1000

FERRIC CHLORIDE SOLUTION 42%

ISSUED: OCTOBER , 1999

Hazardous according to criteria of Worksafe Australia.

IDENTIFICATION

TRADE NAME :	Ferric Chloride Solution 42%
OTHER NAMES :	Ferric Chloride Solution
U.N. NO. :	2582
DG CLASS :	8
HAZCHEM :	2Z
PACKING GROUP :	III
POISON	None Allocated
SCHEDULE :	
USES :	Water treatment. General Chemical

PHYSICAL DESCRIPTION/ PROPERTIES

Appearance, odour : Reddish liquid with faint odour of hydrogen chloride.

Melting Point : Not available.

Boiling Point : 105 -110°C

Vapour Pressure (20°C) : Not available.

Specific Gravity (20°C) : 1.45

Flash Point : >160°C

Flammability Limits (%) : Not available.

Vapour Density (air=1) : 1.5kg/m³

%Volatile by volume : 58

Solubility : Completely soluble in water.

OTHER PROPERTIES

Autoignition Temp (°C) : Not available.

pH : 1 - 2

Viscosity : 13 mPa.s

Bulk Density : 1440 kg/m³

Reactivity : Highly corrosive to most metals liberating flammable hydrogen gas. Hydrogen Chloride is produced on hydrolysis. Reactive with oxidising agents and strong bases.

INGREDIENTS

Chemical Name CAS Number Proportion

Ferric Chloride 7705-08-0 42%

Hydrogen Chloride 7647-01-0 <1%

Water 7732-18-5 to 100%

HEALTH HAZARD INFORMATION

HEALTH EFFECTS

No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label where applicable. Symptoms that may arise if the product is mishandled are:

ACUTE EFFECTS

SWALLOWED: Swallowing large amounts may cause nausea, vomiting, diarrhoea, abdominal pain, irritation of the gastrointestinal tract and circulatory collapse.

EYE: Liquid or vapour may cause severe eye irritation. Corrosive to eyes. Contamination can result in permanent injury. Contact can cause corneal burns.

SKIN: Contact with skin may cause irritation. May cause staining of the skin.

INHALED: Exposure to vapour may cause irritation to mucous membrane and respiratory tract.

CHRONIC EFFECTS

No information available.

FIRST AID

SWALLOWED: Wash out mouth with plenty of water and give water to drink. DO NOT INDUCE VOMITING. Seek immediate medical assistance.

EYE: Immediately irrigate with copious quantities of water for at least 15 minutes. Eyelids to be held open. Seek immediate medical assistance.

SKIN: Wash contaminated skin with plenty of soap and water. Remove contaminated clothing and wash before re-use. If swelling, redness, blistering or irritation occurs seek medical advice.

INHALED: Remove victim from exposure - avoid becoming a casualty. Remove contaminated clothing and loosen remaining clothing. Allow patient to assume most comfortable position and keep warm. Keep at rest until fully recovered. For all but the most minor symptoms, arrange for victim to be seen by doctor as soon as possible.

ADVICE TO DOCTOR

Treat symptomatically as for acidic material and iron salts. Can cause corneal burns and conjunctival ulceration.

PRECAUTIONS FOR USE

EXPOSURE STANDARDS

None established for this material. Exposure standard for constituents are:

Iron salts, soluble as Fe: TWA: 1mg/m³

Hydrogen Chloride, hydrolysis product: TWA : 7.5 mg/m³ (5ppm)

As published by the National Occupational Health & Safety Commission (Worksafe Australia).

ENGINEERING CONTROLS

Ensure ventilation is adequate to maintain air concentrations below recommended exposure standard. Avoid generating and inhaling mists. Use with local exhaust ventilation or while wearing acid mist respirator or air supplied mask. Keep containers closed when not in use.

PERSONAL PROTECTION

Avoid skin and eye contact and inhalation of vapour. Wear overalls, chemical goggles and impervious gloves. Use with adequate ventilation. Respiratory protection is required if concentration exceeds exposure standard. Wear acid mist respirator. Always wash hands before smoking, eating, drinking or using the toilet.

FLAMMABILITY

Non combustible material.

SAFE HANDLING INFORMATION

STORAGE AND TRANSPORT

Store in cool dry, well-ventilated place. Keep containers closed when not in use. Do not store with incompatible products such as oxidising agents, cyanides, metals, strong bases and foodstuffs. Classified as a Class 8 Dangerous Good according to the Australian Code for the Transport of Dangerous Goods by Road or Rail.

SPILLS

Increase ventilation. Wear protective equipment to prevent skin and eye contamination and inhalation of vapours. Contain using sand or soil - prevent run off into drains and waterways. Use absorbent (soil, sand, vermiculite or other inert material). Neutralise with lime or soda ash. Collect and seal in properly labelled drums for disposal. Wash down area with large quantities of water. If contamination of sewers or waterways has occurred advise the local emergency services.

DISPOSAL

Refer to State Land Waste Management Authority.

FIRE/EXPLOSION HAZARDS

Not flammable. Can liberate flammable hydrogen gas upon contact with most metals. On burning will emit toxic fumes such as hydrogen chloride. Keep containers cool with water spray. Fire fighters to wear self-contained breathing apparatus if risk of exposure to vapour or products of combustion.

EXTINGUISHING MEDIA: Water, foam, dry agent (carbon dioxide, dry chemical powder).

OTHER INFORMATION AND REFERENCES

ENVIRONMENTAL IMPACT

Product has low potential for bioaccumulation.

Harmful to fish and aquatic invertebrates.

TOXICITY

Oral LD50 (rat): 2900 mg/kg

Hazard Category: Irritant

RISK PHRASES

R41: Risk of serious damage to eyes

SAFETY PHRASES

S25: Avoid contact with eyes.

S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S28: After contact with skin, wash immediately with plenty of water.

S39: Wear eye/face protection.

PRINCIPAL REFERENCE

Safety Data Sheet - Ferric Chloride Liquor 42%

Orica Australia Pty Ltd

Issued March 98

CONTACT POINT

Phone: (03) 9250 1000

Phone: 1 800 628 724 (24hr - Emergency Contact)

This MSDS has been prepared from current technical data and summarises at the date of issue our best knowledge of the health and safety information of the product, and in particular how to safely handle and use the product in the workplace. Each user should read this MSDS and consider the information in the context of how the product will be handled and used in the workplace.

If clarification or further information is needed to ensure that an appropriate assessment can be made, the user should contact this company. Our responsibility for products sold is subject to our standard terms and conditions, a copy of which is sent to our customers and is also available upon request

END OF MSDS NO 080

Safety Data Sheet

TILLFLOCK serie 1xx-9xx / serie 5xxx-9xxx polvere cationica

Safety Data Sheet dated 24/11/2008, version 1

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Trade name: TILLFLOCK serie 1xx-9xx / serie 5xxx-9xxx polvere cationica

Trade code: 0212545

Product type and use: flocculant

Supplier:

SPA TILLMANNS Via B. Crespi 10/a 20159 MILANO

Emergency telephone number of the company and/or of an authorised advisory centre:

SPA TILLMANNS MILANO TEL +39 (0)2 6940.1

Competent person responsible for the safety data sheet:

D.ssa Daniela Marciano

D.ssa Daniela Marciano sds@tillmanns.it

2. HAZARDS IDENTIFICATION

No specific hazards are encountered under normal product use.

The product is an organic powder. Danger of explosion in presence of airborne dust and electrostatic discharge or sparks.

Warning: spilled product is slippery if wet or moistened.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Cationic polyacrylamide

CAS Number: 69418-26-4 Ethanaminium,
N,N,N-trimethyl-2-[(1-oxo-2-propen-1-yl)oxy]-, chloride (1:1),
polymer with 2-propenamide

Hazardous components within the meaning of EEC directive 67/548 and corresponding classification:

None

4. FIRST AID MEASURES

In case of skin contact:

Wash with plenty of water and soap.

In case of eyes contact:

Wash immediately with water for at least 15 minutes.

If irritation persists, obtain medical examination.

In case of Ingestion:

Drink slowly about 750 ml of water; then 250 ml every 10 minutes. Obtain medical examination immediately, showing the safety data sheet.

Do not give anything to drink if the patient is unconscious. Do not induce vomiting.

In case of Inhalation:

Ventilate the premises. The patient is to be removed immediately from the premises contaminated and made to rest in a well ventilated area. Should the patient feel unwell, consult a physician.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media:

Water.

Extinguishers not to be used:

Full spray jet: the product is very slippery when wet.

Risks arising from combustion:

Avoid inhaling the fumes.

Protective equipment:

Use protection for the respiratory tract.

Safety Data Sheet

TILLFLOCK serie 1xx-9xx / serie 5xxx-9xxx polvere cationica

6. ACCIDENTAL RELEASE MEASURES

Measures for personal safety:

Do not inhale dust.

Danger: very slippery when wet.

Use gloves and protective clothing.

Environmental measures:

Avoid airborne dust formation: danger of explosion in case of electrostatic discharges or sparks occur.

Limit leakages with earth or sand.

If the product has escaped into a water course, into the drainage system, or has contaminated the ground or vegetation, notify the competent authorities.

Cleaning methods:

Recover the product with a vacuum cleaner or a damp cloth. Do not sweep up to avoid creation of airborne dust.

Recover the product for re-use if possible, or for elimination. The product might, where appropriate, be absorbed by inert material.

After the product has been recovered, rinse the area and materials involved with water.

7. HANDLING AND STORAGE

Handling precautions:

Avoid contact and inhalation of the dust. See, too, paragraph 8 below.

Do not smoke while working.

Do not eat or drink while working.

Storage conditions:

Keep away from water or from damp surroundings.

Do not use iron, copper or aluminium containers, piping or devices because the solution can corrode them.

Instructions as regards storage premises:

Adequately ventilated premises.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Precautionary measures:

Give adequate ventilation to the premises where the product is stored and/or handled.

Respiratory protection:

Ensure a good ventilation on the working place. If the dust concentration is high anyway, use adequate protection devices (EN 149 FFP2S).

Protection for hands:

Use protective gloves, rubber or PVC.

Eye protection:

Safety goggles.

Protection for skin:

No special precaution must be adopted for normal use.

Exposure limit(s) (ACGIH):

None

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance and colour: white powder

Odour: typical

pH: n.a.

Melting point: n.a.

Boiling point: n.a.

Solid/gas flammability: n.a.

Safety Data Sheet

TILLFLOCK serie 1xx-9xx / serie 5xxx-9xxx polvere cationica

Explosive properties:	n.a.
Oxidizing properties:	N.A.
Solubility in water:	soluble
Bulk density: 600 - 900 g/L	

10. STABILITY AND REACTIVITY

Conditions to avoid:

Stable under normal conditions.

The product is an organic powder. Danger of explosion in presence of airborne dust and electrostatic discharge or sparks.

Substances to avoid:

Avoid contact with reactive chemicals.

Hazardous decomposition products:

Burning may produce carbon monoxide and/or carbon dioxide.

11. TOXICOLOGICAL INFORMATION

There is no toxicological data available on the mixture. Consider the individual concentration of each component to assess toxicological effects resulting from exposure to the mixture.

Set out below is the toxicological information relating to the main substances in the preparation.

Acute toxicity:

LD50 oral, rat > 5000 mg/Kg

12. ECOLOGICAL INFORMATION

Adopt sound working practices, so that the product is not released into the environment.

The product is strongly bonded to sludges.

Toxicity, fishes:

LC50 >100 mg/l

Daphnia magna, 48 h

13. DISPOSAL CONSIDERATIONS

Recover if possible. In so doing, comply with the local and national regulations currently in force.

Where applicable, refer to the following regulatory provisions : 91/156/EEC, 91/689/EEC, 94/62/EC and subsequent amendments.

14. TRANSPORT INFORMATION

Not regulated.

15. REGULATORY INFORMATION

Council Directive 67/548/EEC (Classification, packaging and labelling of dangerous substances) and subsequent amendments. Commission Directive 1999/45/EC (Classification, packaging and labelling of dangerous preparation) and subsequent amendments. Commission Directive 98/24/EC (Protection of the health and safety of workers from the risk related to chemical agent). Commission Directive 2000/39/EC (Occupational exposure limit values). Regulation (EC) No 1907/2006 (REACH).

The preparation should not be considered as dangerous accordingly to dir. 1999/45/EC.

Where applicable, refer to the following regulatory provisions :

Ministerial circulars 46 e 61 (Aromatic amines).

Regulation (EC) nr 648/2004 (Detergents).

Directive 2003/105/CE ('Activities linked to risks of serious accidents').

Presidential Decree D.P.R. 250/89 (Labelling of detergents).

Safety Data Sheet

TILLFLOCK serie 1xx-9xx / serie 5xxx-9xxx polvere cationica

16. OTHER INFORMATION

Paragraphs modified from the previous revision:

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING
2. HAZARDS IDENTIFICATION
3. COMPOSITION/INFORMATION ON INGREDIENTS
4. FIRST AID MEASURES
5. FIRE-FIGHTING MEASURES
6. ACCIDENTAL RELEASE MEASURES
7. HANDLING AND STORAGE
8. EXPOSURE CONTROLS/PERSONAL PROTECTION
9. PHYSICAL AND CHEMICAL PROPERTIES
10. STABILITY AND REACTIVITY
11. TOXICOLOGICAL INFORMATION
12. ECOLOGICAL INFORMATION
13. DISPOSAL CONSIDERATIONS
15. REGULATORY INFORMATION

Main bibliographic sources:

NIOSH - Registry of toxic effects of chemical substances (1983)

I.N.R.S. - Fiche Toxicologique

ACGIH - Threshold Limit Values - 2004 edition

ADR 2007 (ECE/TRANS/185, Vol I and II, and any corrigenda or amendment later published).

The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality.

It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.

This MSDS cancels and replaces any preceding release.
