SAFETY DATA SHEET

according to Regulation (EC) No 1907/2006 (REACH) and Regulation (EU) 2020/878

Diesel fuel

Material number D001

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

1.1 Product identifier

Trade name: Diesel fuel
REACH registration No.: 01-2119484664-27-XXXX

CAS-Number: 68334-30-5
EC-number: 269-822-7
EU index number: 649-224-00-6

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

General use: Fuel for diesel engines

Identified uses: **Industrial use:**

1 Distribution of substance Page 16
SU 3; PROC 1,2,3,4,8a,8b,9,15; ERC 1,2,3,4,5,6a,6b,6c,6d,7; SpERC 1.1bv1

1.3 Details of the supplier of the safety data sheet

Company name: Erdölbevorratungsverband
Street/POB-No.: Dammtorstr. 29-32
Postal Code, city: 20354 Hamburg
Germany
WWW: www.ebv-oil.org
Telephone: +49 (0)40-35 00 12-0
Telefax: +49 (0)40-35 00 12-149
Department responsible for information:
Telephone: +49 (0)40-35 00 12-44
E-mail: ebv-fuelsSDS@ebv-oil.org

1.4 Emergency telephone number

Giftinformationszentrum Göttingen (GIZ-Nord)
Telephone: +49 (0)551/19 24 0

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to EC regulation 1272/2008 (CLP)

Flam. Liq. 3; H226	Flammable liquid and vapour.
Acute Tox. 4; H332	Harmful if inhaled.
Skin Irrit. 2; H315	Causes skin irritation.
Carc. 2; H351	Suspected of causing cancer.
STOT RE 2; H373	May cause damage to thymus, blood, liver through prolonged or repeated exposure .
Asp. Tox. 1; H304	May be fatal if swallowed and enters airways.
Aquatic Chronic 2; H411	Toxic to aquatic life with long lasting effects.

2.2 Label elements

Labelling (CLP)

Signal word: **Danger**

Hazard statements:

H226	Flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H332	Harmful if inhaled.
H351	Suspected of causing cancer.
H373	May cause damage to thymus, blood, liver through prolonged or repeated exposure .
H411	Toxic to aquatic life with long lasting effects.

Precautionary statements:

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P260	Do not breathe vapours.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P331	Do NOT induce vomiting.
P391	Collect spillage.
P403+P235	Store in a well-ventilated place. Keep cool.

Special labelling

Text for labelling:

Contains:
C8-C26 branched and linear hydrocarbons – Distillates,
Alkanes, C10-20 -branched and linear,
Cumene
Naphthalene.

2.3 Other hazards

Potentially explosive mixtures may form if adequate ventilation is not provided.
Inhaling can lead to irritations of the respiratory tract and mucous membrane.
Higher doses may lead to a narcotic effect.
Special danger of slipping by leaking/spilling product. Vapours form potentially explosive mixtures with air. Heavier than air, they proceed at floor level and may backflash over great distances when ignited.

Endocrine disrupting properties, Results of PBT and vPvB assessment:

This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.

SECTION 3: Composition/information on ingredients

3.1 Substances

Chemical characterisation: Diesel fuel according to DIN EN 590.
Complex combination of paraffinic, cycloparaffinic, aromatic and olefinic hydrocarbons. Possibly contains up to 7 % Vol-% FAME (biodiesel).

CAS-Number: 68334-30-5
EC-number: 269-822-7
EU index number: 649-224-00-6

UVCB substance - Information on ingredients:

Identifiers	Designation Classification	Content
REACH 01-0000020119-75-xxxx EC No. 481-740-5 CAS 848301-67-7	C8-C26 branched and linear hydrocarbons – Distillates Asp. Tox. 1; H304. (EUH066).	0 - 20 %
REACH 01-2119450077-42-xxxx list no. 618-882-6 CAS 928771-01-1	Alkanes, C10-20 -branched and linear Asp. Tox. 1; H304. (EUH066).	0 - 20 %
EC No. 202-704-5 CAS 98-82-8	Cumene Flam. Liq. 3; H226. Carc. 1B; H350. STOT SE 3; H335. Asp. Tox. 1; H304. Aquatic Chronic 2; H411.	< 0.1 %
EC No. 202-049-5 CAS 91-20-3	Naphthalene Acute Tox. 4; H302. Carc. 2; H351. Aquatic Acute 1; H400. Aquatic Chronic 1; H410. M-factors: Aquatic Acute 1: M = 1. Aquatic Chronic 1: M = 1.	< 0.5 %

Full text of H- and EUH-statements: see section 16.

Additional information: Contains Alkanes, C12-26-branched and linear, CAS No. 90622-53-0: 0 up to < 20 %

SECTION 4: First aid measures

4.1 Description of first aid measures

General information: IF exposed or concerned: Get medical advice/attention.
If medical advice is needed, have product container or label at hand.
First aider: Pay attention to self-protection!
Take off immediately all contaminated clothing. Do not put any product-impregnated cleaning rags into your trouser pockets.
If victim is at risk of losing consciousness, position and transport on their side.
No mouth-to-mouth or mouth-to-nose resuscitation. Use Ambu bag or ventilator.

In case of inhalation: Move victim to fresh air, put at rest and loosen restrictive clothing. In case of breathing difficulties administer oxygen. Remove the casualty into fresh air and keep them calm. No mouth-to-mouth or mouth-to-nose resuscitation. Use Ambu bag or ventilator. Immediately get medical attention.

Following skin contact: After contact with skin, wash immediately with soap and plenty of water.
In case of skin irritation, consult a physician.

After eye contact: Immediately flush eyes with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Remove contact lenses, if present and easy to do. Continue rinsing. Subsequently consult an ophthalmologist.

After swallowing: If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label. Never give anything by mouth to an unconscious person.
Danger of aspiration! May cause lung damage if swallowed. Immediately get medical attention.

4.2 Most important symptoms and effects, both acute and delayed

Causes skin irritation. May be fatal if swallowed and enters airways.
May cause damage to organs through prolonged or repeated exposure. Harmful if inhaled.

Headache, nausea, drowsiness, dizziness, shortage of breath, unconsciousness.
Inhaling can lead to irritations of the respiratory tract and mucous membrane.
Higher doses may lead to a narcotic effect.

4.3 Indication of any immediate medical attention and special treatment needed

When swallowed and vomited immediately, aspiration into the lungs may occur resulting in chemical pneumonia or suffocation. In the event of pulmonary irritation treat initially with dexamethasone - dosing aerosol. Regulation of the blood circulation, possible shock treatment.

After ingestion: Have victim repeatedly drink large amounts of water with activated charcoal. Do not give fatty oils and milk. Accelerate intestinal transit.
Be careful with (nor-)adrenaline and its derivatives.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media:

Foam atomized water water mist.
Only in case of small fires: Extinguishing powder, carbon dioxide, sand.

Extinguishing media which must not be used for safety reasons:

Full water jet

5.2 Special hazards arising from the substance or mixture

Flammable liquid and vapour. Air combined with vapours may form potentially explosive mixtures that are heavier than air. Vapours may proceed on the ground over great distances and cause fire and backflashes.
In case of fire may be liberated: Nitrogen oxides (NOx), sulphur oxides, carbon monoxide and carbon dioxide, carbon black.

5.3 Advice for firefighters

Special protective equipment for firefighters:

Wear self-contained positive pressure breathing apparatus and fire fighter's clothing conforming to European standard EN 469.

Additional information: Heating will lead to pressure increase: Danger of bursting and explosion. Use fine water spray to cool endangered containers.
Move undamaged containers from immediate hazard area if it can be done safely.
In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.

Do not allow fire water to penetrate into surface or ground water.
Fire residuals and contaminated extinguishing water must be disposed of in accordance with the regulations of the local authorities.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Provide adequate ventilation. Avoid breathing mist/vapours/spray. Avoid contact with the substance.
Eliminate all ignition sources if safe to do so. If possible, eliminate leakage.
Wear appropriate protective equipment. Take off immediately all contaminated clothing and wash it before reuse. Do not put any product-impregnated cleaning rags into your trouser pockets.
Keep unprotected people away.
Cordon off downwind area at risk and warn inhabitants. Avoid exposure.

Larger quantities (> 1 barrel), additionally: full protection suit, boots.

6.2 Environmental precautions

Do not allow to penetrate into soil, waterbodies or drains.
In case of release, notify competent authorities.
In case of spills of large quantities: Danger to drinking water.

6.3 Methods and material for containment and cleaning up

Beware of reignition. Thoroughly clean surrounding area.
Larger quantities (> 1 barrel): Take up mechanically, placing in appropriate containers for disposal. Do not remove residual product with water and detergent.
Small quantities (< 1 barrel): Absorb with appropriate liquid-binding material (e.g. universal binding agents, sand, diatomaceous earth, sawdust). Treat the absorbed material according to Section 13 (Disposal considerations).

Additional information: Use explosion-proof equipment and non-sparking tools/utensils.

Special danger of slipping by leaking/spilling product. Vapours form potentially explosive mixtures with air. Heavier than air, they proceed at floor level and may backflash over great distances when ignited.

6.4 Reference to other sections

Refer additionally to section 8 and 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advices on safe handling: Provide adequate ventilation, and local exhaust as needed. Avoid spraying or spilling the product during use. Avoid breathing mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Wear appropriate protective equipment.
Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. Take off immediately all contaminated clothing and wash it before reuse.
Guarantee sufficient ventilation during and after use, in order to prevent vapour accumulation.
Have eye wash bottle or eye rinse ready at work place.
Larger quantities (> 1 barrel), additionally: full protection suit, boots.
Avoid exposure.

Precautions against fire and explosion:
Keep away from sources of ignition and heat.
Take precautionary measures against static discharge.
Use only explosion-protected equipment/instruments. Avoid open flames. Do not weld. Use only antistatically equipped (spark-free) tools.
In partially filled containers explosive mixtures may form.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storerooms and containers:
Keep container tightly closed and in a well-ventilated place.
Keep container dry. Keep only in the original container.
Protect from heat and direct sunlight.
Store containers in upright position. Only trained personnel may be allowed to enter storage area.
Suitable material for containers/equipment: polyvinyl chloride, polytetrafluoroethylene (PTFE), polyvinylidene fluoride, polyamide (PA-11), steel.
Use FKM (fluoro rubber), Viton (A & B) and NBR (nitrile rubber) for seals and sealants.

Hints on joint storage: Do not store together with oxidizing agents.
Do not store together with combustible or self-igniting materials or any highly flammable solids.
Keep away from food and drinks.

7.3 Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values:

CAS No.	Designation	Type	Limit value
68334-30-5	Diesel fuel	Ireland: 8 hours	100 mg/m³ (diesel fuel/KEROSENE)
98-82-8	Cumene	Europe: IOELV: STEL	250 mg/m³; 50 ppm (may be absorbed through the skin)
		Europe: IOELV: TWA	50 mg/m³; 10 ppm (may be absorbed through the skin)
		Ireland: 15 minutes	250 mg/m³; 50 ppm (may be absorbed through the skin)
		Ireland: 8 hours	50 mg/m³; 10 ppm (may be absorbed through the skin)
91-20-3	Naphthalene	Europe: IOELV: TWA Ireland: 8 hours	50 mg/m³; 10 ppm 50 mg/m³; 10 ppm

DNEL/DMEL:

Information about: CAS: 68334-30-5
DNEL workers, long-term, inhalative: 68.34 mg/m³
DNEL workers, short-term, inhalative: 4,288 mg/m³
DNEL workers, long-term, dermal: 68.34 mg/kg bw/d
DNEL consumers, long-term, inhalative: 20.22 mg/m³
DNEL consumers, short-term, inhalative: 2572.8 mg/m³
DNEL consumers, long-term, dermal: 1.25 mg/kg bw/d
DNEL consumers, long-term, dermal: 1.25 mg/kg bw/d

8.2 Exposure controls

Provide for good room ventilation, suctioning/venting.
In enclosed areas: Withdraw by suction.
Natural ventilation is adequate outside and in open halls. Explosion protection required.

Personal protection equipment

Occupational exposure controls

Respiratory protection:

If vapours form, use respiratory protection.
Use combination filter type ABEK/P according to EN 14387. The filter class must be suitable for the maximum contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. If the concentration is exceeded, self-contained breathing apparatus must be used.
In case of prolonged exposure: Wear self-contained breathing apparatus.

Hand protection:	Protective gloves according to I.S. EN ISO 374:1. Glove material: Short term effect: Chloroprene rubber or PVC (0.5 mm; max. 4h) (or equivalent). In case of prolonged exposure: Nitrile rubber (0.35 mm) or fluoro rubber (0.4 mm) (or equivalent). Breakthrough time: >= 480 min. Unsuitable materials: natural rubber, butyl caoutchouc (butyl rubber). Observe glove manufacturer's instructions concerning penetrability and breakthrough time.
Eye protection:	Tightly sealed goggles according to I.S. EN ISO 16321-1:2022. In case of increased risk, additionally Face protection shield.
Body protection:	Flame retardant, antistatic and chemical resistant protective clothing.

General protection and hygiene measures:

Avoid exposure. Avoid breathing mist/vapours/spray. Do not get in eyes, on skin, or on clothing.
When using do not eat, drink or smoke. Wash hands before breaks and after work.
Take off immediately all contaminated clothing and wash it before reuse.
Have eye wash bottle or eye rinse ready at work place.
Larger quantities (> 1 barrel), additionally: full protection suit, boots.

Environmental exposure controls

Refer to "6.2 Environmental precautions".

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state at 20 °C and 101.3 kPa	liquid
Colour:	yellow
Odour:	characteristic, like Mineral oil
Odour threshold:	No data available
Melting point/freezing point:	At approx. 1013 hPa -40 - 6 °C (ASTM 1999)
Initial boiling point and boiling range:	150 - 380 °C
Flammability:	Flammable liquid and vapour.
Upper/lower flammability or explosive limits:	LEL (Lower Explosion Limit): 1.00 Vol-% UEL (Upper Explosive Limit): 6.00 Vol-%
Flash point/flash point range:	> 55 °C
Auto-ignition temperature:	At 1013 hPa > 225 °C
Decomposition temperature:	No data available
pH:	No data available
Viscosity, kinematic:	at 40 °C: > 1.5 mm²/s
Solubility:	No data available
Partition coefficient: n-octanol/water:	No data available
Vapour pressure:	No data available
Density:	at 15 °C: 820 - 845 kg/m³
Vapour density:	No data available

Particle characteristics: Not applicable

9.2 Other information

Explosive properties: Product is not explosive. Vapours can form explosive mixtures with air.
Oxidizing characteristics: Not oxidising.

Auto-ignition temperature: No data available

Evaporation rate: No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

Flammable liquid and vapour.
Can form a highly explosive mixture with air.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

Vapours are heavier than air and will spread at floor level.
In case of warming: Risk of fire/Danger of spontaneous combustion.
Reacts with oxidizing agents. Heating will lead to pressure increase: Danger of bursting and explosion.

10.4 Conditions to avoid

Keep away from heat sources, sparks and open flames. Protect from direct sunlight.

10.5 Incompatible materials

Oxidising agent

10.6 Hazardous decomposition products

No hazardous decomposition products when regulations for storage and handling are observed.

Thermal decomposition: No data available

SECTION 11: Toxicological information

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

Acute toxicity:
LD50 Rat, oral: 17,900 mg/kg bw (OECD 401)
LC50 Rat, inhalative: 4.1 mg/L/4h (OECD 403)
LD50 Rabbit, dermal: > 4,300 mg/kg bw/d (OECD 434)

Toxicological effects:

Acute toxicity (oral): Based on available data, the classification criteria are not met.

Acute toxicity (dermal): Based on available data, the classification criteria are not met.

Acute toxicity (inhalative): Acute Tox. 4; H332 = Harmful if inhaled. May cause irritations.

Skin corrosion/irritation: Skin Irrit. 2; H315 = Causes skin irritation.
Specific symptoms in animal studies (Rabbit): irritant (OECD 404)

Serious eye damage/irritation: Based on available data, the classification criteria are not met.
Specific symptoms in animal studies (Rabbit): Not an irritant (OECD 405)

Sensitisation to the respiratory tract: Lack of data.

Skin sensitisation: Based on available data, the classification criteria are not met.
Specific symptoms in animal studies (guinea pig): not sensitising (OECD 406)

Germ cell mutagenicity/Genotoxicity: Inconclusive data. Mutagenicity: negative

Carcinogenicity: Carc. 2; H351 = Suspected of causing cancer.

Reproductive toxicity: Based on available data, the classification criteria are not met.
Reproduction toxicity:
NOAEL Rat, dermal: 750 mg/kg bw/d (read across)
Developmental toxicity:
NOAEC Rat, inhalative: 2110 mg/m³ (read across)

Effects on or via lactation: Lack of data.

Specific target organ toxicity (single exposure): Lack of data.

Specific target organ toxicity (repeated exposure): STOT RE 2; H373 = May cause damage to organs through prolonged or repeated exposure.
Organs affected: Thymus, blood, liver
NOAEC Rat, dermal: 30 mg/kg bw/d (OECD 411) (read across)
Organs affected: lung
NOAEC Rat, inhalative: 750 mg/kg bw/d (OECD 413) (read across)

Aspiration hazard: Asp. Tox. 1; H304 = May be fatal if swallowed and enters airways. Danger of lung irritation. In severe cases, pneumonia or a pulmonary edema may develop.

11.2 Information on other hazards

Endocrine disrupting properties:

No data available

Symptoms

In case of inhalation:
Prolonged inhalation leads to headache, dizziness and CNS disorders.
Other symptoms: Nausea, euphoria, agitation, cardiovascular disorders, breathing paralysis, unconsciousness.
In case of ingestion: Stimulates CNS, gastrointestinal irritation, pain.
After contact with skin:
Has degreasing effect on the skin. Repeated exposure may cause skin dryness or cracking. This may lead to irritation/dermatitis.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity: Toxic to aquatic life with long lasting effects.

Algae toxicity:
Pseudokirchneriella subcapitata (green algae): 22 mg/L/72 h (OECD 201, growth rate)

Daphnia toxicity:
EL50 Daphnia magna (Big water flea): 68 mg/L/48 h (OECD 202)
NOEL Daphnia magna (Big water flea): 0.2 mg/L/21 d

Fish toxicity:
LL50 Oncorhynchus mykiss: 21 mg/L/96 h (OECD 203)
NOEL Oncorhynchus mykiss: 0.083 mg/L/14 d (OECD 203)

Further details: Substance floats on the water surface.
Will be adsorbed by the ground and stays immobile.

12.2 Persistence and degradability

Further details: Biodegradability in Water: 60 %/28d (OECD 301 F). Product is readily biodegradable.

Effects in sewage plants: Bacterial toxicity:
EL50 Tetrahymena pyriformis: > 1,000 mg/L/40 h (read across)
NOEL Tetrahymena pyriformis: 3,217 mg/L/40 h activated sludge (read across)

12.3 Bioaccumulative potential

Partition coefficient: n-octanol/water:
No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.

12.6 Endocrine disrupting properties

No data available

12.7 Other adverse effects

General information: Do not allow to enter into ground-water, surface water or drains.
In case of spills of large quantities: Danger to drinking water.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Waste key number: 13 07 01* = fuel oil and diesel
* = Evidence for disposal must be provided.

Recommendation: Delivery to an approved waste disposal company.
Incinerate according to applicable local, state and federal regulations.
Discharge into the environment must be avoided.

Package

Recommendation: Dispose of waste according to applicable legislation. Handle contaminated packages in the same way as the substance itself.
Handle empty containers with care. Incineration may cause explosion.

Additional information

Carriage on tank-lorry./Carriage on tank wagon.
Empty carefully and completely, if possible.
Handle empty containers with care. Incineration may cause explosion.

Section 14. Transport information

14.1 UN number or ID number

ADR/RID, IMDG, IATA-DGR:
UN 1202

14.2 UN proper shipping name

ADR/RID: UN 1202, DIESEL FUEL
IMDG: UN 1202, GAS OIL (Fuels, diesel), MARINE POLLUTANT
IATA-DGR: UN 1202, GAS OIL

14.3 Transport hazard class(es)

ADR/RID: Class 3, Code: F1
IMDG: Class 3, Subrisk -
IATA-DGR: Class 3

14.4 Packing group

ADR/RID, IMDG, IATA-DGR:
III

14.5 Environmental hazards

Dangerous for the environment:
Substance/mixture is environmentally hazardous according to the criteria of the UN model regulations.
Marine pollutant: yes

14.6 Special precautions for user

Land transport (ADR/RID)

Warning board:	ADR/RID: Kemmler-number 30, UN number UN 1202
Hazard label:	3
Special Provisions:	640L ADR664
Limited quantities:	5 L
EQ:	E1
Package - Instructions:	P001 IBC03 LP01 R001
Special provisions for packing together:	MP19
Portable tanks - Instructions:	T2
Portable tanks - Special Provisions:	TP1
Tank coding:	LGBF
Tunnel restriction code:	D/E

Sea transport (IMDG)

EmS:	F-E, S-E
Special Provisions:	-
Limited quantities:	5 L
Excepted quantities:	E1
Package - Instructions:	P001, LP01
Package - Provisions:	-
IBC - Instructions:	IBC03
IBC - Provisions:	-
Tank instructions - IMO:	-
Tank instructions - UN:	T2
Tank instructions - Provisions:	TP1
Stowage and handling:	Category A.
Properties and observations:	Immiscible with water.
Segregation group:	none

Air transport (IATA)

Hazard label:	Flamm. liquid
Excepted Quantity Code:	E1
Passenger and Cargo Aircraft: Ltd.Qty.:	Pack.Instr. Y344 - Max. Net Qty/Pkg. 10 L
Passenger and Cargo Aircraft:	Pack.Instr. 355 - Max. Net Qty/Pkg. 60 L
Cargo Aircraft only:	Pack.Instr. 366 - Max. Net Qty/Pkg. 220 L
Special Provisions:	A3
Emergency Response Guide-Code (ERG):	3L

14.7 Maritime transport in bulk according to IMO instruments

No data available

SECTION 15: Regulatory information

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

National regulations - EC member states

Further regulations, limitations and legal requirements:

Directive 2012/18/EU on the control of major-accident hazards involving dangerous substances [Seveso-III-Directive]: Physical hazards: Code P5c,
Quantity threshold 5 000 000 kg / 50 000 000 kg
Environmental hazards: Code E2, Quantity threshold 200 000 kg / 500 000 kg

Use restriction according to REACH annex XVII, no.: 3, 75
Directive 2012/18/EU on the control of major-accident hazards involving dangerous substances [Seveso-III-Directive]: annex I, part 1: P5c, E2, 34c.

15.2 Chemical Safety Assessment

For this substance a chemical safety assessment has been carried out.

SECTION 16: Other information

Wording of the H-phrases under paragraph 2 and 3:

H226 = Flammable liquid and vapour.
H302 = Harmful if swallowed.
H304 = May be fatal if swallowed and enters airways.
H315 = Causes skin irritation.
H332 = Harmful if inhaled.
H335 = May cause respiratory irritation.
H350 = May cause cancer.
H351 = Suspected of causing cancer.
H373 = May cause damage to thymus, blood, liver through prolonged or repeated exposure .
H400 = Very toxic to aquatic life.
H410 = Very toxic to aquatic life with long lasting effects.
H411 = Toxic to aquatic life with long lasting effects.
EUH066 = Repeated exposure may cause skin dryness or cracking.

Literature:

CONCAWE (Chemical Safety Report Part B, Other Gas Oils 07/2010)
CONCAWE (Chemical Safety Report Part B, VHGO 07/2010)
CONCAWE (Madouplein 1, B-1030 Brussels, Belgium):
- Dossier 'Liquified Petroleum Gas', 92/102
- Report 01/53 (Classification and of Labelling of Petroleum Substances Directive)
- Report 01/54 (Environmental Classification of Petroleum Substances - Summary data and Rationale)
ICSC 1561

Reason of change: Changes in section 1: details of the supplier of the safety data sheet (address)
Date of first version: 13/5/2013

Department issuing data sheet:

see section 1: Department responsible for information

Abbreviations and acronyms:

Acute Tox.: Acute toxicity
ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
Aquatic Acute: Hazardous to the aquatic environment - acute
Aquatic Chronic: Hazardous to the aquatic environment - chronic
AS/NZS: Australian Standards/New Zealand Standards
Asp. Tox.: Aspiration toxicity
Carc.: Carcinogenicity
CAS: Chemical Abstracts Service
CFR: Code of Federal Regulations
CLP: Classification, Labelling and Packaging
CNS: Central Nervous System
DMEL: Derived minimal effect level
DNEL: Derived no-effect level
EC: European Community
EL50: Effective loading rate 50%
EN: European Standard
EQ: Excepted quantities
EU: European Union
Flam. Liq.: Flammable liquid
IATA: International Air Transport Association
IATA-DGR: International Air Transport Association – Dangerous Goods Regulations
IBC Code: International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
IBC: Intermediate Bulk Container
IMDG Code: International Maritime Dangerous Goods Code
LC50: Median lethal concentration
LD50: Lethal dose 50%
LEL: Lower Explosion Limit
MARPOL: Maritime Pollution: The International Convention for the Prevention of Pollution from Ships
M-factor: Multiplication factor
NOEL: No Observed Effect Level
OECD: Organisation for Economic Co-operation and Development
OSHA: Occupational Safety and Health Administration
PBT: Persistent, bioaccumulative and toxic
PNEC: Predicted no-effect concentration
PVC: Polyvinyl chloride
REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals
RID: Regulations Concerning the International Carriage of Dangerous Goods by Rail
RMM: Risk Management Measures
Skin Irrit.: Skin irritation
STOT RE: Specific target organ toxicity - repeated exposure
STOT SE: Specific target organ toxicity - single exposure
STP: Sewage Treatment Plant
STP: Standard temperature and pressure
TRGS: Technical Rules for Hazardous Substances
UN: United Nations
UVCB: Substance of unknown or variable composition, complex reaction products or biological materials
vPvB: Very persistent and very bioaccumulative

The information in this data sheet has been established to our best knowledge and was up-to-date at time of revision. It does not represent a guarantee for the properties of the product described in terms of the legal warranty regulations.

Exposure Scenario 1: Distribution of substance

List of use descriptors

Sectors of use [SU]: SU 3: Industrial uses

Application

Activities and processes: Loading (including marine vessel/barge, rail/road car and IBC loading) and repacking (including drums and small packs) of substance, including its sampling, storage, unloading, distribution and associated laboratory activities.

Contributing Scenarios:

Exposure Scenario 1 - Contributing exposure scenario 1

Distribution of substance (environment)

List of use descriptors

Environmental release categories [ERC]:

ERC 1: Manufacture of the substance
ERC 2: Formulation into mixture (mixtures)
ERC 3: Formulation in materials
ERC 4: Use of non-reactive processing aid at industrial site (no inclusion into or onto article)
ERC 5: Use at industrial site leading to inclusion into/onto article
ERC 6a: Use of intermediate
ERC 6b: Use of reactive processing aid at industrial site (no inclusion into or onto article)
ERC 6c: Use of monomer in polymerisation processes at industrial site (inclusion or not into/onto article)
ERC 6d: Use of reactive process regulators in polymerisation processes at industrial site (inclusion or not into/onto article)
ERC 7: Industrial use of substances in closed systems

Specific Environmental Release Categories [SPERC]:

SpERC 1.1bv1

Operational conditions

Product characteristics: Predominantly hydrophobic
Substance is complex UVCB

Duration and frequency of use:

Emission days per year: 300
Continuous release

Environment factors not influenced by risk management:

Local freshwater dilution factor: 10
Local marine water dilution factor: 100

Release rate (initial release prior to RMM):
Air: 0.001
Waste water: 1E-06
Soil: 1E-05

Other relevant operational conditions:

Fraction of EU tonnage used in region: 0.1
Regional use tonnage (tons/year): 28,000,000
Fraction of regional tonnage used locally: 0.002
Annual amount per site: 56,000 t/y
Maximum daily site tonnage (kg/day): 190,000

Risk management measures

Technical conditions and measures at process level (source) to prevent release:

Treat air emission to provide the required removal efficiency of (%): 90

Operational conditions and risk management measures:

Prevent discharge of undissolved substance to or recover from onsite wastewater. Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed.

Disposal considerations

Conditions and measures related to sewage treatment plant:

Municipal STP: yes (effectiveness water: 94.1 %)
Discharge rate: 2,000 m³/d

Conditions and measures related to external treatment of waste for disposal:

External treatment and disposal of waste should comply with applicable local and/or national regulations.

Exposure Scenario 1 - Contributing exposure scenario 2

General exposures (closed systems) (worker)

List of use descriptors

Process categories [PROC]:

PROC 1: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions

Operational conditions

Product characteristics: Liquid, vapour pressure < 0,5 kPa at STP

Concentration of the substance in a mixture:

<= 100 %

Duration and frequency of use:

Use duration: <= 8 hours

Other information: Assumes use at not more than 20 °C above ambient temperature.

Risk management measures

Technical conditions and measures at process level (source) to prevent release:

Handle substance within a closed system.

Operational conditions and risk management measures:

Assumes a good basic standard of occupational hygiene is implemented.

Control any potential exposure using measures such as contained or enclosed systems, properly designed and maintained facilities and a good standard of general ventilation. Drain down systems and clear transfer lines prior to breaking containment. Drain down and flush equipment where possible prior to maintenance. Where there is potential for exposure: Ensure relevant staff are informed of the nature of exposure and aware of basic actions to minimise exposures; Ensure suitable personal protective equipment is available; Clear up spills and dispose of waste in accordance with regulatory requirements; Monitor effectiveness of control measures; Consider the need for health surveillance; Identify and implement corrective actions

Avoid contact with skin. Identify potential areas for indirect skin contact. Wear gloves (tested to EN 374) if hand contact with substance likely. Wash off any skin contamination immediately. Clean up contamination/spills as soon as they occur. Provide basic employee training to prevent/minimise exposures and to report any skin problems that may develop.

Exposure Scenario 1 - Contributing exposure scenario 3

General exposures (closed systems) (worker)

List of use descriptors

Process categories [PROC]:

PROC 2: Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions

Operational conditions

Product characteristics: Liquid, vapour pressure < 0,5 kPa at STP

Concentration of the substance in a mixture:

<= 100 %

Duration and frequency of use:

Use duration: <= 8 hours

Other information: Assumes use at not more than 20 °C above ambient temperature.

Risk management measures

Technical conditions and measures at process level (source) to prevent release:

Handle substance within a closed system.

Operational conditions and risk management measures:

Assumes a good basic standard of occupational hygiene is implemented.

Control any potential exposure using measures such as contained or enclosed systems, properly designed and maintained facilities and a good standard of general ventilation. Drain down systems and clear transfer lines prior to breaking containment. Drain down and flush equipment where possible prior to maintenance. Where there is potential for exposure: Ensure relevant staff are informed of the nature of exposure and aware of basic actions to minimise exposures; Ensure suitable personal protective equipment is available; Clear up spills and dispose of waste in accordance with regulatory requirements; Monitor effectiveness of control measures; Consider the need for health surveillance; Identify and implement corrective actions

Avoid contact with skin. Identify potential areas for indirect skin contact. Wear gloves (tested to EN 374) if hand contact with substance likely. Wash off any skin contamination immediately. Clean up contamination/spills as soon as they occur. Provide basic employee training to prevent/minimise exposures and to report any skin problems that may develop.

Exposure Scenario 1 - Contributing exposure scenario 4

General exposures (closed systems) (worker)

List of use descriptors

Process categories [PROC]:

PROC 3: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment conditions

Operational conditions

Product characteristics: Liquid, vapour pressure < 0,5 kPa at STP

Concentration of the substance in a mixture:

<= 100 %

Duration and frequency of use:

Use duration: <= 8 hours

Other information: Assumes use at not more than 20 °C above ambient temperature.

Risk management measures

Technical conditions and measures at process level (source) to prevent release:

Handle substance within a closed system.

Operational conditions and risk management measures:

Assumes a good basic standard of occupational hygiene is implemented.

Control any potential exposure using measures such as contained or enclosed systems, properly designed and maintained facilities and a good standard of general ventilation. Drain down systems and clear transfer lines prior to breaking containment. Drain down and flush equipment where possible prior to maintenance. Where there is potential for exposure: Ensure relevant staff are informed of the nature of exposure and aware of basic actions to minimise exposures; Ensure suitable personal protective equipment is available; Clear up spills and dispose of waste in accordance with regulatory requirements; Monitor effectiveness of control measures; Consider the need for health surveillance; Identify and implement corrective actions

Avoid contact with skin. Identify potential areas for indirect skin contact. Wear gloves (tested to EN 374) if hand contact with substance likely. Wash off any skin contamination immediately. Clean up contamination/spills as soon as they occur. Provide basic employee training to prevent/minimise exposures and to report any skin problems that may develop.

Exposure Scenario 1 - Contributing exposure scenario 5

General exposures (open systems) (worker)

List of use descriptors

Process categories [PROC]:

PROC 4: Chemical production where opportunity for exposure arises

Operational conditions

Product characteristics: Liquid, vapour pressure < 0,5 kPa at STP

Concentration of the substance in a mixture:

<= 100 %

Duration and frequency of use:

Use duration: <= 8 hours

Other information: Assumes use at not more than 20 °C above ambient temperature.

Risk management measures

Operational conditions and risk management measures:

Assumes a good basic standard of occupational hygiene is implemented.

Control any potential exposure using measures such as contained or enclosed systems, properly designed and maintained facilities and a good standard of general ventilation. Drain down systems and clear transfer lines prior to breaking containment. Drain down and flush equipment where possible prior to maintenance. Where there is potential for exposure: Ensure relevant staff are informed of the nature of exposure and aware of basic actions to minimise exposures; Ensure suitable personal protective equipment is available; Clear up spills and dispose of waste in accordance with regulatory requirements; Monitor effectiveness of control measures; Consider the need for health surveillance; Identify and implement corrective actions

Avoid contact with skin. Identify potential areas for indirect skin contact. Wash off any skin contamination immediately. Clean up contamination/spills as soon as they occur. Provide basic employee training to prevent/minimise exposures and to report any skin problems that may develop.

Conditions and measures related to personal protection, hygiene and health evaluation:

Hand protection: Wear suitable gloves tested to EN 374.

Exposure Scenario 1 - Contributing exposure scenario 6

Process sampling (worker)

List of use descriptors

Process categories [PROC]:

PROC 3: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment conditions

Operational conditions

Product characteristics: Liquid, vapour pressure < 0,5 kPa at STP

Concentration of the substance in a mixture:

<= 100 %

Duration and frequency of use:

Use duration: <= 8 hours

Other information: Assumes use at not more than 20 °C above ambient temperature.

Risk management measures

Operational conditions and risk management measures:

Assumes a good basic standard of occupational hygiene is implemented.

Control any potential exposure using measures such as contained or enclosed systems, properly designed and maintained facilities and a good standard of general ventilation. Drain down systems and clear transfer lines prior to breaking containment. Drain down and flush equipment where possible prior to maintenance. Where there is potential for exposure: Ensure relevant staff are informed of the nature of exposure and aware of basic actions to minimise exposures; Ensure suitable personal protective equipment is available; Clear up spills and dispose of waste in accordance with regulatory requirements; Monitor effectiveness of control measures; Consider the need for health surveillance; Identify and implement corrective actions

Avoid contact with skin. Identify potential areas for indirect skin contact. Wear gloves (tested to EN 374) if hand contact with substance likely. Wash off any skin contamination immediately. Clean up contamination/spills as soon as they occur. Provide basic employee training to prevent/minimise exposures and to report any skin problems that may develop.

Exposure Scenario 1 - Contributing exposure scenario 7

Bulk transfers (closed systems) (worker)

List of use descriptors

Process categories [PROC]:

PROC 8b: Transfer of substance or mixture (charging and discharging) at dedicated facilities

Operational conditions

Product characteristics: Liquid, vapour pressure < 0,5 kPa at STP

Concentration of the substance in a mixture:

<= 100 %

Duration and frequency of use:

Use duration: <= 8 hours

Other information: Assumes use at not more than 20 °C above ambient temperature.

Risk management measures

Technical conditions and measures at process level (source) to prevent release:

Handle substance within a closed system.

Operational conditions and risk management measures:

Assumes a good basic standard of occupational hygiene is implemented.

Control any potential exposure using measures such as contained or enclosed systems, properly designed and maintained facilities and a good standard of general ventilation. Drain down systems and clear transfer lines prior to breaking containment. Drain down and flush equipment where possible prior to maintenance. Where there is potential for exposure: Ensure relevant staff are informed of the nature of exposure and aware of basic actions to minimise exposures; Ensure suitable personal protective equipment is available; Clear up spills and dispose of waste in accordance with regulatory requirements; Monitor effectiveness of control measures; Consider the need for health surveillance; Identify and implement corrective actions

Avoid contact with skin. Identify potential areas for indirect skin contact. Wash off any skin contamination immediately. Clean up contamination/spills as soon as they occur. Provide basic employee training to prevent/minimise exposures and to report any skin problems that may develop.

Conditions and measures related to personal protection, hygiene and health evaluation:

Hand protection: Wear suitable gloves tested to EN 374.

Exposure Scenario 1 - Contributing exposure scenario 8

Bulk transfers (open systems) (worker)

List of use descriptors

Process categories [PROC]:

PROC 8b: Transfer of substance or mixture (charging and discharging) at dedicated facilities

Operational conditions

Product characteristics: Liquid

Concentration of the substance in a mixture:

<= 100 %

Duration and frequency of use:

Use duration: <= 8 hours

Other information: Assumes use at not more than 20 °C above ambient temperature.

Risk management measures

Operational conditions and risk management measures:

Assumes a good basic standard of occupational hygiene is implemented.

Control any potential exposure using measures such as contained or enclosed systems, properly designed and maintained facilities and a good standard of general ventilation. Drain down systems and clear transfer lines prior to breaking containment. Drain down and flush equipment where possible prior to maintenance. Where there is potential for exposure: Ensure relevant staff are informed of the nature of exposure and aware of basic actions to minimise exposures; Ensure suitable personal protective equipment is available; Clear up spills and dispose of waste in accordance with regulatory requirements; Monitor effectiveness of control measures; Consider the need for health surveillance; Identify and implement corrective actions

Avoid contact with skin. Identify potential areas for indirect skin contact. Wash off any skin contamination immediately. Clean up contamination/spills as soon as they occur. Provide basic employee training to prevent/minimise exposures and to report any skin problems that may develop.

Conditions and measures related to personal protection, hygiene and health evaluation:

Hand protection: Wear suitable gloves tested to EN 374.

Exposure Scenario 1 - Contributing exposure scenario 9

Drum and small package filling (worker)

List of use descriptors

Process categories [PROC]:

PROC 9: Transfer of substance or mixture into small containers (dedicated filling line, including weighing)

Operational conditions

Product characteristics: Liquid

Concentration of the substance in a mixture:

<= 100 %

Duration and frequency of use:

Use duration: <= 8 hours

Other information: Assumes use at not more than 20 °C above ambient temperature.

Risk management measures

Operational conditions and risk management measures:

Assumes a good basic standard of occupational hygiene is implemented.

Control any potential exposure using measures such as contained or enclosed systems, properly designed and maintained facilities and a good standard of general ventilation. Drain down systems and clear transfer lines prior to breaking containment. Drain down and flush equipment where possible prior to maintenance. Where there is potential for exposure: Ensure relevant staff are informed of the nature of exposure and aware of basic actions to minimise exposures; Ensure suitable personal protective equipment is available; Clear up spills and dispose of waste in accordance with regulatory requirements; Monitor effectiveness of control measures; Consider the need for health surveillance; Identify and implement corrective actions

Avoid contact with skin. Identify potential areas for indirect skin contact. Wash off any skin contamination immediately. Clean up contamination/spills as soon as they occur. Provide basic employee training to prevent/minimise exposures and to report any skin problems that may develop.

Conditions and measures related to personal protection, hygiene and health evaluation:

Hand protection: Wear suitable gloves tested to EN 374.

Exposure Scenario 1 - Contributing exposure scenario 10

Equipment cleaning and maintenance (worker)

List of use descriptors

Process categories [PROC]:

PROC 8a: Transfer of substance or mixture (charging and discharging) at non-dedicated facilities

Operational conditions

Product characteristics: Liquid

Concentration of the substance in a mixture:

<= 100 %

Duration and frequency of use:

Use duration: <= 8 hours

Other information: Assumes use at not more than 20 °C above ambient temperature.

Risk management measures

Operational conditions and risk management measures:

Drain down system prior to equipment break-in or maintenance
Assumes a good basic standard of occupational hygiene is implemented.

Control any potential exposure using measures such as contained or enclosed systems, properly designed and maintained facilities and a good standard of general ventilation. Where there is potential for exposure: Ensure relevant staff are informed of the nature of exposure and aware of basic actions to minimise exposures; Ensure suitable personal protective equipment is available; Clear up spills and dispose of waste in accordance with regulatory requirements; Monitor effectiveness of control measures; Consider the need for health surveillance; Identify and implement corrective actions

Avoid contact with skin. Identify potential areas for indirect skin contact. Wash off any skin contamination immediately. Clean up contamination/spills as soon as they occur. Provide basic employee training to prevent/minimise exposures and to report any skin problems that may develop.

Conditions and measures related to personal protection, hygiene and health evaluation:

Hand protection: Wear chemically resistant gloves (tested to EN 374) in combination with 'basic' employee training.

Exposure Scenario 1 - Contributing exposure scenario 11

Laboratory activities (worker)

List of use descriptors

Process categories [PROC]:

PROC 15: Use as laboratory reagent

Operational conditions

Product characteristics: Liquid

Concentration of the substance in a mixture:

<= 100 %

Duration and frequency of use:

Use duration: <= 8 hours

Other information: Assumes use at not more than 20 °C above ambient temperature.

Risk management measures

Operational conditions and risk management measures:

Assumes a good basic standard of occupational hygiene is implemented.

Control any potential exposure using measures such as contained or enclosed systems, properly designed and maintained facilities and a good standard of general ventilation. Drain down systems and clear transfer lines prior to breaking containment. Drain down and flush equipment where possible prior to maintenance. Where there is potential for exposure: Ensure relevant staff are informed of the nature of exposure and aware of basic actions to minimise exposures; Ensure suitable personal protective equipment is available; Clear up spills and dispose of waste in accordance with regulatory requirements; Monitor effectiveness of control measures; Consider the need for health surveillance; Identify and implement corrective actions

Avoid contact with skin. Identify potential areas for indirect skin contact. Wear gloves (tested to EN 374) if hand contact with substance likely. Wash off any skin contamination immediately. Clean up contamination/spills as soon as they occur. Provide basic employee training to prevent/minimise exposures and to report any skin problems that may develop.

Exposure Scenario 1 - Contributing exposure scenario 12

Storage (worker)

List of use descriptors

Process categories [PROC]:

PROC 1: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions

Operational conditions

Product characteristics: Liquid

Concentration of the substance in a mixture:

<= 100 %

Duration and frequency of use:

Use duration: <= 8 hours

Other information: Assumes use at not more than 20 °C above ambient temperature.

Risk management measures

Technical conditions and measures at process level (source) to prevent release:

Handle substance within a closed system.

Operational conditions and risk management measures:

Assumes a good basic standard of occupational hygiene is implemented.

Control any potential exposure using measures such as contained or enclosed systems, properly designed and maintained facilities and a good standard of general ventilation. Drain down systems and clear transfer lines prior to breaking containment. Drain down and flush equipment where possible prior to maintenance. Where there is potential for exposure: Ensure relevant staff are informed of the nature of exposure and aware of basic actions to minimise exposures; Ensure suitable personal protective equipment is available; Clear up spills and dispose of waste in accordance with regulatory requirements; Monitor effectiveness of control measures; Consider the need for health surveillance; Identify and implement corrective actions

Avoid contact with skin. Identify potential areas for indirect skin contact. Wear gloves (tested to EN 374) if hand contact with substance likely. Wash off any skin contamination immediately. Clean up contamination/spills as soon as they occur. Provide basic employee training to prevent/minimise exposures and to report any skin problems that may develop.

Exposure Scenario 1 - Contributing exposure scenario 13

Storage (worker)

List of use descriptors

Process categories [PROC]:

PROC 2: Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions

Operational conditions

Product characteristics: Liquid

Concentration of the substance in a mixture:

<= 100 %

Duration and frequency of use:

Use duration: <= 8 hours

Other information: Assumes use at not more than 20 °C above ambient temperature.

Risk management measures

Technical conditions and measures at process level (source) to prevent release:

Handle substance within a closed system.

Operational conditions and risk management measures:

Assumes a good basic standard of occupational hygiene is implemented.

Control any potential exposure using measures such as contained or enclosed systems, properly designed and maintained facilities and a good standard of general ventilation. Drain down systems and clear transfer lines prior to breaking containment. Drain down and flush equipment where possible prior to maintenance. Where there is potential for exposure: Ensure relevant staff are informed of the nature of exposure and aware of basic actions to minimise exposures; Ensure suitable personal protective equipment is available; Clear up spills and dispose of waste in accordance with regulatory requirements; Monitor effectiveness of control measures; Consider the need for health surveillance; Identify and implement corrective actions

Avoid contact with skin. Identify potential areas for indirect skin contact. Wear gloves (tested to EN 374) if hand contact with substance likely. Wash off any skin contamination immediately. Clean up contamination/spills as soon as they occur. Provide basic employee training to prevent/minimise exposures and to report any skin problems that may develop.

Guidance for downstream users to evaluate if their use is within the boundaries of the ES

Exposure assessment (workers): ECETOC TRA
Exposure assessment (environment): Hydrocarbon Block Method (Petrorisk)
Maximum allowable site tonnage (MSafe) based on release following total wastewater treatment removal (kg/d): 2,900,000