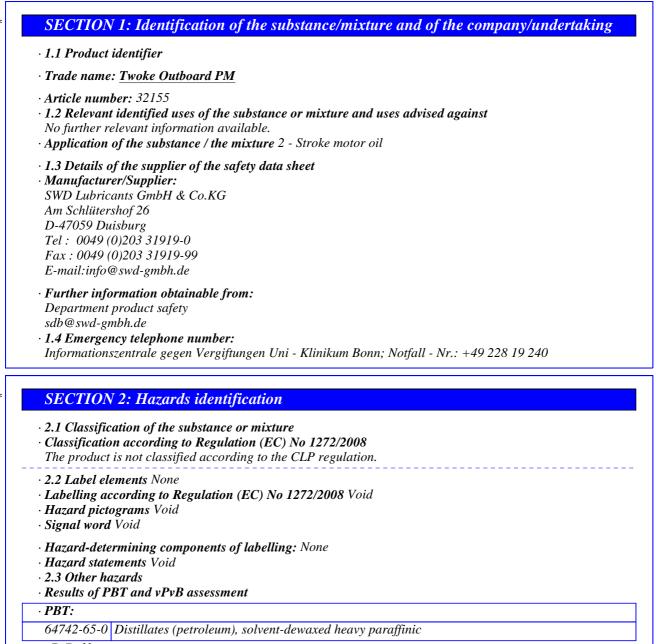


Safety data sheet according to 1907/2006/EC, Article 31

Printing date 03.06.2015

Version number 2

Revision: 03.06.2015



· vPvB: None

SECTION 3: Composition/information on ingredients

· 3.2 Chemical characterisation: Mixtures

· Description: Preparation of base oils and additives.

| · Dangerous compone | ents: | | |
|-------------------------------------|---------------------|-------------------------|--------------|
| CAS: 8008-20-6 EINECS: 232-366-4 | | 🚸 Asp. Tox. 1, H304 | 25-50% |
| CAS: 9003-29-6 | Butene, homopolymer | Aquatic Chronic 4, H413 | $\leq 2.5\%$ |

· SVHC None

• Additional information: For the wording of the listed risk phrases refer to section 16.

(Contd. on page 2)



Printing date 03.06.2015

Safety data sheet according to 1907/2006/EC, Article 31

Version number 2

Revision: 03.06.2015

Trade name: Twoke Outboard PM

(Contd. of page 1)

SECTION 4: First aid measures

- · 4.1 Description of first aid measures
- · General information: Take affected persons out of danger area and lay down.
- · After inhalation: Supply fresh air; consult doctor in case of complaints.
- After skin contact: Immediately wash with water and soap and rinse thoroughly.
- After eye contact: Rinse opened eye for several minutes under running water.
- · 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.

SECTION 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:
- Carbonmonoxide and Carbondioxide • 5.3 Advice for firefighters
- 5.5 Advice for jirejigniers
- $\cdot \textit{Protective equipment: Wear self-contained respiratory protective device.}$
- · Additional information

Collect contaminated fire fighting water separately. It must not enter the sewage system.

SECTION 6: Accidental release measures

- 6.1 Personal precautions, protective equipment and emergency procedures Keep people at a distance and stay on the windward side.
- 6.2 Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- \cdot 6.3 Methods and material for containment and cleaning up:
- Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- 6.4 Reference to other sections
 See Section 7 for information on safe handling.
 See Section 8 for information on personal protection equipment.
 See Section 13 for disposal information.

SECTION 7: Handling and storage

- 7.1 Precautions for safe handling Avoid the formation of oil haze.
- · 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:** Note Regulation on facilities for the storage, filling and handling water-polluting substances...
- Information about storage in one common storage facility: Store away from oxidising agents. Store away from foodstuffs.
- Further information about storage conditions: Store receptacle in a well ventilated area. Storage in a collecting room is required.

(Contd. on page 3)

⁻ GF

eino

Printing date 03.06.2015

Safety data sheet according to 1907/2006/EC, Article 31

Version number 2

Revision: 03.06.2015

Trade name: Twoke Outboard PM

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

SECTION 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: **Oilfog and Oilfumes**
 - TLV-8h-TWA $5mg/m^3$
 - TLV-15min-STEL $10mg/m^3$

· 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 required.
- · Protection of hands:

Prior to working with gloves the rubbing in with tanniferous skin-protecting agents for the avoidance of skin softening due to perspiration is recommended.

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 trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

- · For the permanent contact gloves made of the following materials are suitable:
- Fluorocarbon rubber (Viton)
- · For the permanent contact of a maximum of 15 minutes gloves made of the following materials are suitable:

Natural rubber, NR

- Not suitable are gloves made of the following materials: Leather gloves
- · Eye protection: Goggles recommended during refilling
- · Body protection: Protective work clothing

SECTION 9: Physical and chemical properties

| and chemical properties | |
|-------------------------|--|
| | |
| clear | |
| Fluid | |
| Green | |
| Mineral-oil-like | |
| Not determined. | |
| Not determined. | |
| | |
| Undetermined. | |
| 175 °C (DIN 51751) | |
| - 42 °C (DIN ISO 3016) | |
| - | clear Fluid Green Mineral-oil-like Not determined. Not determined. Undetermined. 175 °C (DIN 51751) |

(Contd. of page 2)

GR



Printing date 03.06.2015

Safety data sheet according to 1907/2006/EC, Article 31

Version number 2

Revision: 03.06.2015

Trade name: Twoke Outboard PM

| | (Contd. of page 3 | | |
|------------------------------------|--|--|--|
| Flash point: | 80 °C (DIN ISO 2592) | | |
| Flammability (solid, gaseous): | Not applicable. | | |
| Ignition temperature: | | | |
| Decomposition temperature: | Not determined. | | |
| Self-igniting: | Not determined. | | |
| Danger of explosion: | Product is not explosive. However, formation of explosive air/vapou mixtures are possible. | | |
| Explosion limits: | | | |
| Lower: | 0.6 Vol % (DIN EN 1839) | | |
| Upper: | 6.5 Vol % (DIN EN 1839) | | |
| Vapour pressure: | Not determined. | | |
| Density at 20 °C: | 0.872 g/cm ³ (DIN 51757) | | |
| 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/w | rater): Not determined. | | |
| Viscosity: | | | |
| Dynamic: | Not determined. | | |
| Kinematic: | Not determined. | | |
| Solvent content: | | | |
| Organic solvents: | 0.0 % | | |
| VÕC (EC) | 0.00 % | | |
| 9.2 Other information | No further relevant information available. | | |

SECTION 10: Stability and reactivity

· 10.1 Reactivity

- · 10.2 Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- 10.3 Possibility of hazardous reactions Reacts with strong oxidising agents.
- 10.4 Conditions to avoid No further relevant information available.
- $\cdot \ \textit{10.5 Incompatible materials:} No further relevant information available.$
- 10.6 Hazardous decomposition products: Danger of forming toxic pyrolysis products.

SECTION 11: Toxicological information

- · 11.1 Information on toxicological effects
- · Acute toxicity
- · LD/LC50 values relevant for classification: Rat oral : > 2000 mg/kg (Concawe Product dossier 01/54)

· Primary irritant effect:

- · Skin corrosion/irritation No irritant effect.
- · Serious eye damage/irritation No irritating effect.
- · Respiratory or skin sensitisation No sensitising effects known.

(Contd. on page 5)

GB

Safety data sheet according to 1907/2006/EC, Article 31

Printing date 03.06.2015

Version number 2

Revision: 03.06.2015

Trade name: Twoke Outboard PM

neino

(Contd. of page 4)

- 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.
- CMR effects (carcinogenity, mutagenicity and toxicity for reproduction) The product contains less than 3% DMSO extract (method IP346). A classification as a carcinogen with R45 is deleted. (Note L)
- **SECTION 12: Ecological information**
- · 12.1 Toxicity
- · Aquatic toxicity:

The product spreads out on the surface of the water. A small fraction of the constituents will be dissolved. It prevents the solution of oxygen and can cause the death of water organismn.

- · 12.2 Persistence and degradability Not easily biodegradable
- · 12.3 Bioaccumulative potential
- Due to the distribution coefficient n-octanol/water an accumulation in organisms is not expected.
- · 12.4 Mobility in soil No further relevant information available.
- · Ecotoxical effects:
- Remark: The product can easily be separated by an oil separator (skimmer) of the water surface.
- · Additional ecological information:
- · General notes:

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

· 12.5 Results of PBT and vPvB assessment

· PBT:

64742-65-0 Distillates (petroleum), solvent-dewaxed heavy paraffinic

- · vPvB: Not applicable.
- · 12.6 Other adverse effects No further relevant information available.

SECTION 13: Disposal considerations

· 13.1 Waste treatment methods

· Recommendation

When storing used mineral oil products, ensure that the categories for waste oil and mixing instructions are observed.

Delivery of waste oil to offically authorised collectors only.

· European waste catalogue

13 02 05* mineral-based non-chlorinated engine, gear and lubricating oils

- · Uncleaned packaging:
- · Recommendation:

Empty contaminated packagings thoroughly. They may be recycled after thorough and proper cleaning.

| · 14.1 UN-Number | | |
|--------------------------------|------|--|
| · ADR, ADN, IMDG, IATA | Void | |
| · 14.2 UN proper shipping name | | |
| · ADR, ADN, IMDG, IATA | Void | |



Safety data sheet according to 1907/2006/EC, Article 31

Printing date 03.06.2015

Version number 2

Revision: 03.06.2015

Trade name: Twoke Outboard PM

| | | (Contd. of page 5 |
|--|-------------------------------------|-------------------|
| · 14.3 Transport hazard class(es) | | |
| · ADR, ADN, IMDG, IATA · Class | Void | |
| · 14.4 Packing group · ADR, IMDG, IATA | Void | |
| · 14.5 Environmental hazards: · Marine pollutant: | No | |
| \cdot 14.6 Special precautions for user | Not applicable. | |
| • 14.7 Transport in bulk according to Anne MARPOL73/78 and the IBC Code | e x II of Not applicable. | |
| · UN ''Model Regulation'': | - | |

SECTION 15: Regulatory information

- · 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- · Labelling according to Regulation (EC) No 1272/2008 Void
- · Hazard pictograms Void
- · Signal word Void
- · Hazard statements Void
- · Directive 2012/18/EU
- · Named dangerous substances ANNEX I None of the ingredients is listed.
- · National regulations:

• Additional classification according to Decree on Hazardous Materials, Annex II: 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.

- · Information about limitation of use: None
- · Other regulations, limitations and prohibitive regulations
- · Substances of very high concern (SVHC) according to REACH, Article 57 None
- 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

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 H304 May be fatal if swallowed and enters airways. H413 May cause long lasting harmful effects to aquatic life.

· Department issuing MSDS: Product safety

Abbreviations and acronyms:

 ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
 IMDG: International Maritime Code for Dangerous Goods
 IATA: International Air Transport Association
 GHS: Globally Harmonised System of Classification and Labelling of Chemicals
 EINECS: European Inventory of Existing Commercial Chemical Substances
 ELINCS: European List of Notified Chemical Substances
 CAS: Chemical Abstracts Service (division of the American Chemical Society)
 VOC: Volatile Organic Compounds (USA, EU)
 LC50: Lethal concentration, 50 percent
 LD50: Lethal dose, 50 percent
 Asp. Tox. 1: Aspiration hazard, Hazard Category 1

(Contd. on page 7)



Printing date 03.06.2015

Safety data sheet according to 1907/2006/EC, Article 31

Version number 2

Revision: 03.06.2015

(Contd. of page 6)

GB

Trade name: Twoke Outboard PM

Aquatic Chronic 4: Hazardous to the aquatic environment - Chronic Hazard, Category 4

· Sources Concawe Product Dossier No.97/108. Concawe Product Dossier Nn. 01/54.

 \cdot * Data compared to the previous version altered.