

SAFETY DATA SHEET

1 : Identification**1.1 Product identifier**

Product Name: HYDRAULIC MINERAL OIL
SM-DB-OIL

UFI: HK0C-JSWY-KR15-2MPV

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

Recommended Uses: Bearing & Circulating Oil

Restrictions: When using for purposes other than the recommended uses,
consult a chemical specialist or other experts.

1.3 Details of the supplier of the safety data sheet

SHIMANO EUROPE B.V.
High Tech Campus 92
5656 AG Eindhoven
The Netherlands
T +31-88-5475005
shimano.eu.sds@shimano-eu.com

1.4 Emergency phone number

+31-88-5475005
Only available during office hours.

2 : Hazards identification**2.1 Classification of the substance or mixture**

Classification according to Regulation (EC) No.1272/2008 [CLP]

Health Hazards

Aspiration hazard

Category 1

Environment Hazards

Hazardous to the aquatic environment, long-term (chronic)

Category 2

2.2 Label elements

Hazard pictograms (pictogram) :



Signal word: Danger

Hazard statements: H304 May be fatal if swallowed and enters airways
H411 Toxic to aquatic life with long lasting effects.

Precautionary Statement

【Prevention】

P273 Avoid release to the environment.

【Response】

P331 Do NOT induce vomiting.

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER /doctor
/physician.

P391 Collect spillage.

【Storage】

P405 Store locked up.

【Disposal】

P501 Dispose of contents/container in accordance with local/national regulation.

2.3 Other hazards

The product does not contain any ingredient designated as PBT and/or vPvB.

The product does not contain any ingredients designated as Endocrine disrupting
properties.**3: Composition / Information on ingredients****3.1 Substances**

Not applicable.

3.2 Mixtures

Chemical Substance or Mixture: Mixture

Chemical Name or Common Name

Ingredient name	Content (%)	EC No.	CAS No.	Classification according to REGULATION (EC) No.1272/2008 [CLP]
Interchangeable low viscosity base oil (<20,5 cSt @40°C) *	90 - 99	Not Assigned	Not Assigned	[SCL's, M-Factors, ATE, Component notes] note:[L]
Phenol, isopropylated, phosphate (3:1) [Triphenyl phosphate>5%]	0.25 - 0.9	273-066-3	68937-41-7	—
Butylated hydroxytoluene	0.1 - 0.24	204-881-4	128-37-0	—

Chemical nature :

Highly refined mineral oils and additives.

The highly refined mineral oil contains < 3% (w/w) DMSO.Extract, according to IP346.

Classification based on DMSO extract content < 3%

(Regulation (E C) 1272/2008, Annex VI, Part 3, Note L).

* contains one or more of the following CAS-numbers:

64742-53-6, 64742-54-7, 64742-55-8, 64742-56-9, 64742-65-0, 68037-01-4, 72623-86-0,
72623-87-1, 8042-47-5, 848301-69-9, 68649-12-7, 151006-60-9, 163149-28-8, 64741-88-4,
64741-89-5.

Note : The figures shown above are not the specifications of the product.

Components contributing to the hazard

The product does not contain any ingredients listed in REACH SVHC candidate list.

4: First-aid measures

4.1 Description of first aid measures

IF ON SKIN (or hair)

Take off immediately all contaminated clothing.

If you observe unusual symptom, have irritation/pain and/or feel unwell, seek medical advice.

IF SWALLOWED

Do NOT induce vomiting.

Immediately call a POISON CENTER/doctor/physician.

4.2 Most important symptoms and effects, both acute and delayed

The onset of respiratory symptoms may be delayed for several hours after exposure.

Ingestion may result in nausea, vomiting and/or diarrhoea.

Symptoms when inhalation or ingestion

If material enters lungs, signs and symptoms may include coughing, choking, wheezing, difficulty in breathing, chest congestion, shortness of breath, and/or fever.

Symptoms when skin and/or eye contact

Defatting dermatitis signs and symptoms may include a burning sensation and/or a dried/cracked appearance.

Protective measures for first aid

When administering first aid, ensure that you are wearing the appropriate personal protective equipment according to the incident, injury and surroundings.

4.3 Indication of any immediate medical attention and special treatment needed

Potential for chemical pneumonitis.

Call a doctor or poison control center for guidance.

5 : Fire-fighting measures

5.1 Extinguishing Media

Suitable extinguishing media

In case of fire, use foam, dry powder, CO2 to extinguish.

Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.

Unsuitable extinguishing media

Do not use direct water jet.

5.2 Specific hazards arising from the substance or mixture

Will form toxic carbon oxides upon combustion.

5.3 Advice for firefighters

Specific fire-fighting measures

Evacuate non-essential personnel to safe area.

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Special protective equipment and precautions for fire-fighters

Firefighters should wear self-contained breathing apparatus with a full facepiece operated in the positive pressure mode.

Proper protective equipment including chemical resistant gloves are to be worn; chemical resistant suit is indicated if large contact with spilled product is expected.

Self-Contained Breathing Apparatus must be worn when approaching a fire in a confined space. Select fire fighter's clothing approved to relevant Standards (e.g. Europe: EN469).

6 : Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Be careful not to slip on spilled area.

6.2 Environmental precautions

Local authorities should be advised if significant spillages cannot be contained.

6.3 Methods and material for containment and cleaning up

Absorb spill with inert material (dry sand, earth, et al), then place in a chemical waste container.

For large spill, dike for later disposal.

6.4 Reference to other sections

Refer to section 8

Refer to section 13

7 : Handling and storage

7.1 Precautions for safe handling

Preventive measures

Exposure Control for handling personnel

Do not breathe vapors/fume.

Exhaust/ventilator

Exhaust/ventilator should be available.

Safety Measures

Wash hands et al thoroughly after handling.

When using do not eat, drink or smoke.

Avoid prolonged or repeated contact with skin.

When handling product in drums, safety footwear should be worn and proper handling equipment should be used.

If material is handled such that it could be splashed into eyes, protective eyewear is recommended.

Any incompatibilities

Strong acids should not be mixed with the chemicals.

7.2 Conditions for safe storage, including any incompatibilities

Conditions for safe storage

Store locked up.

Keep container tightly closed and in a cool, well-ventilated place.

Use properly labeled and closable containers.

Must be stored in a diked (bunded) area. Store at ambient temperature.

Container and packaging materials for safe handling

Suitable material: For containers or container linings, use mild steel or high density polyethylene. Unsuitable material: PVC.

7.3 Specific end use(s)

Lubricant. Note: This product contains low levels of respirable particles.

8 : Exposure controls / personal protection**8.1 Control parameters**

Chemical name	Controlled Concentration	Permissible concentration
Butylated hydroxytoluene	—	TLV-TWA: 2mg/m ³ (IFV) (URT irr)

EU Occupational exposure limit values (Workplace Exposure limits) compliant to relevant EU

Directive through 91/332/EEC to 2019/1831/EU

Not established

Derived No-Effect Level (DNEL)

No DNELs available.

Predicted No-Effect Concentrations (PNEC)

No PNECs available.

8.2 Exposure controls

Appropriate engineering controls

Do not use in areas without adequate ventilation.

Educate and train workers in the hazards and control measures relevant to normal activities associated with this product.

Individual protection measures

Respiratory protection

No respiratory protection is ordinarily required under normal conditions of use.

Hand protection

Chemical protective gloves Recommended material(s): neoprene, nitrile, PVC

Contact the glove manufacturer for specific advice on glove selection and breakthrough times for your use conditions.

Eye protection

If material is handled such that it could be splashed into eyes, protective eyewear is recommended.

Skin and body protection

Skin protection is not ordinarily required beyond standard work clothes.
It is good practice to wear chemical resistant gloves.

9 : Physical and chemical properties**9.1 Information on basic physical and chemical properties**

Physical state	Liquid
Color	amber
Odor	Slight hydrocarbon
Odor threshold	data is not available.
Melting point/Freezing point	data is not available.
Boiling point or initial boiling point	> 280°C(536°F)
Boiling range	data is not available.
Flammability (gases, liquids and solids)	Not classified as flammable but will burn.
Lower and upper explosion limit/flammability limit	Lower explosion limit: 1vol % Upper explosion limit: 10vol %
Flash point	153°C(307°F)(Cleveland open cup method)
Auto-ignition temperature	> 320°C(608°F)
Decomposition temperature	data is not available.
pH	Not applicable
Kinematic viscosity	8 mm ² /s (40.0 °C / 104.0 °F) 2.3 mm ² /s (100 °C / 212 °F) Method: JIS K 2283 (equivalent to ISO 3104) Kinematic viscosity ≤ 20.5 mm ² /s
Solubility	Solubility in water: Slightly soluble Solubility in solvent data is not available.
n-Octanol/water partition coefficient	log Pow > 6
Vapor pressure	< 0.5 Pa(20 °C / 68 °F)
Density and/or relative density	824 kg/m ³ (15.0 °C / 59.0 °F) Method: ASTM D1298
Relative vapor density (Air=1)	> 1 estimated value(s)
Particle characteristics	data is not available.
pour point	-27.5 °C / -17.5 °F Method: JIS K 2269

9.2 Other information

Data is not available.

10 : Stability and Reactivity**10.1 Reactivity**

The product does not pose any further reactivity hazards in addition to those listed in the following sub-paragraph.

10.2 Chemical stability

Stable under normal ambient conditions./Chemically stable when stored and handled as recommended.

10.3 Possibility of hazardous reactions

Reacts with strong oxidising agents.

10.4 Conditions to avoid

Avoid excessive heat, open flames and ignition sources.

10.5 Incompatible materials

Strong oxidising agents.

10.6 Hazardous decomposition products

No hazardous decomposition products are expected under normal conditions.

1 1 : Toxicological information**11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**

Acute toxicity (oral)

Cannot be classified

Acute toxicity (dermal)

Cannot be classified

Acute toxicity (inhalation: gas)

Cannot be classified

Acute toxicity (inhalation: vapor)

Cannot be classified

Acute toxicity (inhalation: dust, mist)

Cannot be classified

Skin corrosion/irritation

Cannot be classified

Serious eye damage/eye irritation

Cannot be classified

Respiratory sensitization/ Skin sensitization

Cannot be classified

Reproductive cell mutagenicity

Cannot be classified

Carcinogenic

Product

Classification not possible

(Insufficient data available or no data available).

Data for components of the product

IARC

Butylated hydroxytoluene

Group 3 : Not classifiable as to its carcinogenicity to humans

ACGIH

Butylated hydroxytoluene

A4: Not Classifiable as a Human Carcinogen

Reproductive toxicity

Cannot be classified

Specific target organ toxicity (single exposure)

Cannot be classified

Specific target organ toxicity (repeated exposure)

Cannot be classified

Aspiration hazard

Product

Category 1, May be fatal if swallowed and enters airways

Data for components of the product

On basis of test data.

As reported in Section 9, the kinematic viscosity is 8 mm²/s at 40 °C(test method: JIS K 2283 (equivalent to ISO 3104) ; for reference, 2.3 mm²/s at 100 °C).This is ≤ 20.5 mm²/s at 40 °C, therefore the mixture is classified as Category 1 under CLP.**11.2 Information on other hazards**

Data is not available.

12 : Ecological information**12.1 Toxicity**

Aquatic toxicity

Product

Hazardous to the aquatic environment, short-term (acute)

Classification not possible

(Insufficient data available or no data available).

Hazardous to the aquatic environment, long-term (chronic)

Category 2, Toxic to aquatic life with long lasting effects.

Product data

Toxicity to fish (Acute toxicity)

LL/EL/IL50 1-10 mg/l Toxic

Toxicity to crustacean (Acute toxicity)

LL/EL/IL50 1-10 mg/l Toxic

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Toxicity to algae/aquatic plants (Acute toxicity)

Data not available

Toxicity to fish (Chronic toxicity)

Data not available

Toxicity to crustacean (Chronic toxicity)

Data not available

Toxicity to microorganisms (Acute toxicity)

Data not available

Data for components of the product

Hazardous to the aquatic environment, short-term (acute)

Company proprietary data

Phenol, isopropylated, phosphate (3:1) [Triphenyl phosphate > 5%]

Toxicity to fish (Acute toxicity)

LC50 (Pimephales promelas (fathead minnow)): 10.8 mg/l

Exposure time: 96 h

Method: Test(s) equivalent or similar to OECD Guideline 203

Toxicity to crustacean (Acute toxicity)

EC50 (Daphnia magna (Water flea)): 1.5 mg/l

Exposure time: 48 h

Method: Test(s) equivalent or similar to OECD Guideline 202

Toxicity to algae/aquatic plants (Acute toxicity)

EC50 (Raphidocelis subcapitata (freshwater green alga)): > 2.5 mg/l

Exposure time: 96 h

Method: Test(s) equivalent or similar to OECD Test Guideline 201

Toxicity to microorganisms (Acute toxicity)

EC50 : > 1,000 mg/l

Exposure time: 3 h

Method: Test(s) equivalent or similar to OECD Guideline 209

Butylated hydroxytoluene

Toxicity to fish (Acute toxicity)

LL50 (Oryzias latipes (Orange-red killifish)): 1.1 mg/l

Exposure time: 96 h

Method: Regulation (EC) No. 440/2008, Annex, C.1

Toxicity to crustacean (Acute toxicity)

EC50 (Daphnia magna (Water flea)): 0.48 mg/l

Exposure time: 48 h

Method: Test(s) equivalent or similar to OECD Guideline 202

M-Factor (Short-term (acute) aquatic hazard) : 1

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Hazardous to the aquatic environment, long-term (chronic)

Company proprietary data

Phenol, isopropylated, phosphate (3:1) [Triphenyl phosphate > 5%]

Toxicity to fish (Chronic toxicity)

NOEC: 3.1 µg/l

Exposure time: 33 d

Species: Pimephales promelas (fathead minnow)

Method: Test(s) equivalent or similar to OECD Guideline 210

Toxicity to crustacean(Chronic toxicity)

NOEC: 41.5 µg/l

Exposure time: 21 d

Species: Daphnia magna (Water flea)

Method: Test(s) equivalent or similar to OECD Guideline 211

M-Factor (Long-term (chronic) aquatic hazard) Butylated hydroxytoluene : 10

Butylated hydroxytoluene

Toxicity to fish (Chronic toxicity)

NOEC: 0.53 mg/l

Exposure time: 30 d

Species: Oryzias latipes (Orange-red killifish)

Method: Test(s) equivalent or similar to OECD Guideline 210

Toxicity to crustacean(Chronic toxicity)

NOEC: 0.069 mg/l

Exposure time: 21 d

Species: Daphnia magna (Water flea)

Method: Test(s) equivalent or similar to OECD Guideline 211

M-Factor (Long-term (chronic) aquatic hazard) : 1

Water solubility

Butylated hydroxytoluene

0.00006 g/100 mL (25°C) (source: ICSC, 1999)

12.2 Persistence and degradability

Data for components of the product

Butylated hydroxytoluene

Not rapidly degradable (Degradation rate: 4.5% (by BOD)) (source: NITE)

Company proprietary data

Phenol, isopropylated, phosphate (3:1) [Triphenyl phosphate > 5%]

Biodegradability

Exposure time: 28 d

Method: Test(s) equivalent or similar to OECD Guideline 301D

Remarks: Not readily biodegradable.

Butylated hydroxytoluene

Biodegradability

Exposure time: 62 d

Method: OECD Test Guideline 309

Remarks: Degradation half life 5.65 days

12.3 Bioaccumulative potential

Data for components of the product

Butylated hydroxytoluene

log Pow: 5.1 (source: ICSC, 1999)

Company proprietary data

log Pow: > 6

Remarks: based on information on similar products

Phenol, isopropylated, phosphate (3:1) [Triphenyl phosphate > 5%]

Biodegradability

Species: Lepomis macrochirus (Bluegill sunfish)

Bioconcentration factor (BCF): 634

Method: Test(s) equivalent or similar to OECD Test Guideline 305

Remarks: Does not bioaccumulate.

12.4 Mobility in soil

Company proprietary data

Liquid under most environmental conditions.

If it enters soil, it will adsorb to soil particles and will not be mobile.

Floats on water.

12.5 Results of PBT and vPvB assessment

Classification not possible

12.6 Endocrine disrupting properties

Classification not possible

12.7 Other adverse effects

Results of PMT and vPvM assessment

Product

Classification not possible

(Insufficient data available or no data available).

Data for components of the product

No data available.

PMT and/or vPvM assessment data is not available.

Ozone depleting chemical data is not available.

1 3 : Disposal considerations**13.1 Waste treatment methods**

Dispose of contents/container in accordance with local/national regulation.

13.2 Contaminated packing

Dispose of container after using the contents completely.

1 4 : Transport information

UN No., UN CLASS

UN number or ID number

3082

UN Proper Shipping Name

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

Class or division

9

Packing group

III

ERG GUIDE No.

171

Special provisions No.

274; 331; 335; 375

ADR (European Agreement concerning the International Carriage of Dangerous Goods by Road)

UN number or ID number

3082

UN Proper Shipping Name

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

Class or division

9

Label

9

Packing group

III

Special provisions No.

274; 335; 375; 601

ADN (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)

UN number or ID number

3082

SAFETY DATA SHEET

UN Proper Shipping Name

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

Class or division

9

Label

9

Packing group

III

Special provisions No.

274; 335; 375; 601; 650

RID (Regulation concerning the International Carriage of Dangerous goods by Rail)

UN number or ID number

3082

UN Proper Shipping Name

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

Class or division

9

Label

9

Packing group

III

Special provisions No.

274; 335; 375; 601; 650

IMDG Code (International Maritime Dangerous Goods Regulations)

UN number or ID number

3082

UN Proper Shipping Name

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

Class or division

(Transport hazard class) 9

Packing group

III

Special provisions No.

274; 335; 375; 969

IATA (Dangerous Goods Regulations)

UN Number or ID Number

3082

UN Proper Shipping Name

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

Class or division

9

Hazard labels

Miscellaneous & Environmentally hazardous

Packing group

III

Special provisions No.

A97; A158; A197; A215

Environmental hazards

Marine pollutants (yes/no)

yes

Special precautions for users

Not applicable

Maritime transport in bulk according to IMO instruments

MARPOL Annex II - Noxious Liquid Substances

Noxious Liquid Substances ; Cat. X

Phenol, isopropylated, phosphate (3:1) [Triphenyl phosphate>5%]

MARPOL Annex V - HME (Harmful to the Marine Environment)

Not applicable to Maritime transport in bulk according to IMO instruments.

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

The product does not contain any ingredients listed in REACH SVHC candidate list.

Other information is not available.

Other regulatory information

Ensure this material in compliance with federal requirements and ensure conformity to local regulations.

15.2 Chemical safety assessment

Advice on safe handling for this product can be found in sections 7 and 8 of this SDS.

1 6 : Other information

Indication of changes

Revised sections: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15

GHS classification and labelling

Aspiration hazard, Category 1 (On basis of test data)

H304 May be fatal if swallowed and enters airways

Long-term (chronic) aquatic hazard, Category 2 (Calculation method)

H411 Toxic to aquatic life with long lasting effects.

Abbreviations and acronyms

(IFV) : Inhalable Fraction and Vapor

irr : irritation

URT : upper respiratory tract

Training advice

Training staff on good practice.

Manipulations are to be done only by qualified and authorized persons.

References

- 1) Globally Harmonized System of classification and labelling of chemicals, UN
- 2) Recommendations on the TRANSPORT OF DANGEROUS GOODS 23rd edit., 2023 UN
- 3) IMDG Code, 2024 Edition (Incorporating Amendment 42-24)
- 4) IATA Dangerous Goods Regulations (66th Edition) 2025
- 5) ADR (2025), ADN (2025), RID (2025)
- 6) EU REGULATION (EC) No. 1272/2008 (CLP),
amended by COMMISSION DELEGATED REGULATION (EU) 2023/1434
- 7) 2020 EMERGENCY RESPONSE GUIDEBOOK (US DOT)
- 8) 2025 TLVs and BEIs. (ACGIH)

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