

SAFETY DATA SHEET

Shell Tellus S2 M 22, 32, 46, 68

Hydraulic Oil | SDS Code: 463030 | Effective Date: November 1, 2017

Transcribed for reference from the manufacturer safety data sheet published by Shell Lubricants Japan K.K. Reproduced as text; refer to the original PDF for the authoritative, formatted document.

1. Identification

Material Name: SHELL TELLUS S2 M 22,32,46,68

Recommended Use: Hydraulic oil

Manufacturer: Shell Lubricants Japan K.K., Tokyo, Japan

SDS Code: 463030

Effective Date: November 1, 2017

2. Hazard(s) Identification

GHS Classification: NOT HAZARDOUS

Symbols: None required

Signal Word: None

Hazard Statements: Not classified under GHS criteria

Precautionary Statements: None for Prevention, Response, Storage, or Disposal

Note: Used oil may contain harmful impurities.

3. Composition / Information on Ingredients

Substance Type: Mixture

Description: Lubricating oil

Components

- Lubricant base oil $\geq 97\%$
- Additives $\leq 3\%$

Regulatory Information

The highly refined mineral oil contains <3% DMSO-extract per IP346. The Industrial Safety and Health Law requires labeling showing "Mineral oil 90–100%."

4. First-Aid Measures

Inhalation: Remove casualty to fresh air and keep at rest in a position comfortable for breathing.

Skin Contact: Wash skin with large amount of water using soap.

Eye Contact: Rinse cautiously with clean water for several minutes (minimum 15 minutes), then seek medical attention.

Ingestion: Without inducing vomiting, call a doctor for treatment.

Most Important Symptoms: If swallowed, may irritate mucous membrane of stomach and induce vomiting.

5. Fire-Fighting Measures

Suitable Extinguishing Media: Concentrated strong liquid in mist and powder forms, carbon dioxide and foam.

Unsuitable Media: Do not use water in a jet.

Hazardous Combustion Products: May include a complex mixture of airborne solid and liquid particulates and gases (smoke), and carbon monoxide.

Instructions: Water the surrounding equipment to cool them down.

Protective Equipment: Ensure to wear protective equipment and approach from windward.

6. Accidental Release Measures

Personal Precautions: Avoid contact with skin and eyes.

Environmental Protection: Use appropriate containment to avoid environmental contamination. Prevent from spreading or entering drains.

Containment Methods

- Small leaks: absorb and recover by use of soil, sand, sawdust and waste clothes.
- Large spills: cordon off the danger zone and recover liquid into containers.

7. Handling and Storage

Handling – Technical Measures: Keep away from heat, sparks, open flames, hot objects. No smoking. NEVER suck up (siphoning) this material by mouth.

Storage Conditions: Keep containers tightly closed and in a cool, well-ventilated place away from direct sunlight.

Recommended Materials: Storage in original containers. Do not pressurize empty containers.

Precautions: Avoid contact with halogens, strong acids, alkali and oxidizing materials.

8. Exposure Controls / Personal Protection

Engineering Controls: Seal or install ventilation where mist occurs. Install eye shower and body shower.

Exposure Limits

OSHA PEL	5 mg/m ³ (Oil mist, mineral)
Japan Society for Occupational Health	3 mg/m ³

Skin Protection: Not ordinarily required beyond standard-issue work clothes.

Hand Protection: Use oil-proof protective hand gloves under prolonged or repeated skin contact.

Eye Protection: Wear safety glasses or full face shield if splashes are likely.

Sanitary Measures: Remove immediately all contaminated clothing.

9. Physical and Chemical Properties

Physical State	Liquid at room temperature
Colour	Light yellow
Odour	Characteristic mineral oil
Odour Threshold	Data not available
pH	Not applicable
Pour Point	< -20 °C
Initial Boiling Point	Expected > 250 °C
Flash Point	≥ 200 °C (COC)
Evaporation Rate	Data not available
Flammability (solid, gas)	Not applicable
Upper / Lower Flammability or Explosion Limits	Typical 1–7 %(V) (based on mineral oil)
Vapour Pressure	Data not available

Vapour Density	Data not available; expected > 1
Density	Approx. 0.87 g/cm ³ (15 °C)
Solubility (Water)	Negligible
n-Octanol/Water Partition Coefficient (log Pow)	Data not available
Auto-Ignition Temperature	Data not available; expected > 320 °C
Decomposition Temperature	Data not available

10. Stability and Reactivity

Chemical Stability: Stable under normal conditions.

Hazardous Reactivity: Avoid contact with strong oxidizing agents.

Conditions to Avoid: Avoid contact with halogens, strong acids, alkalis, and oxidizing materials.

Incompatible Materials: Data not available.

Hazardous Decomposition Products: Not expected to form during normal storage. Generates smoke, carbon monoxide, sulfurous acid gas, etc. during combustion.

11. Toxicological Information

Basis for Assessment: Information given is based on data on the components and the toxicology of similar products. Unless indicated otherwise, the data presented is representative of the main component of a whole product, rather than for individual component(s). Individual components contained above cut-off value are described in Section 3.

Acute Toxicity

- Oral: Expected to be of low toxicity – LD50 > 5000 mg/kg, Rat
- Dermal: Expected to be of low toxicity – LD50 > 5000 mg/kg, Rabbit
- Inhalation (Vapour): Data not available
- Inhalation (Mist): Low toxicity – LC50 > 5 mg/l, 4h, Rat

Skin Corrosion/Irritation: Not classified as a skin irritant (rabbit test). Prolonged/repeated contact may cause defatting of the skin which can lead to dermatitis.

Serious Eye Damage/Irritation: Not classified as an eye irritant (rabbit test).

Respiratory or Skin Sensitisation: No data available concerning respiratory sensitisation. Not classified as a skin sensitizer (Buehler test; guinea pig).

Germ Cell Mutagenicity: The mutagenic potential of the product category 'other lubricant base oils' has been extensively studied in a range of in vivo and in vitro assays. The majority of the studies showed no evidence of mutagenic activity.

Carcinogenicity: Product contains mineral oils of types shown to be non-carcinogenic in animal skin painting studies. Highly refined mineral oils are not classified as carcinogenic by IARC (Group 3), ACGIH, and EU Directives.

Reproductive and Developmental Toxicity: Results of developmental and reproductive toxicity studies showed no evidence of developmental or reproductive toxicity in rats.

Specific Target Organ Toxicity – Single Exposure: Acute studies do not indicate any specific organ toxicity following single exposure.

Specific Target Organ Toxicity – Repeated Exposure: Repeat-dose toxicity has been investigated by dermal and inhalation routes for periods between 4 weeks and up to 2 years. No systemic effects were shown.

Aspiration Hazard: Not classified – kinematic viscosity > 20.5 mm²/s measured at 40 °C. Not considered an aspiration hazard.

12. Ecological Information

Basis for Assessment: Ecotoxicological data have not been determined specifically for this product. Information given is based on a knowledge of the components and the ecotoxicology of similar products. Unless indicated otherwise, the data

presented is representative of the main component of a whole product, rather than for individual component(s). Individual components contained above cut-off value are described in Section 3.

Caution: Poorly soluble mixture. May cause physical fouling of aquatic organisms. The Water Accommodated Fraction (WAF) is applied following tests.

Toxicity

- Fish (Fathead minnow, 96h): LL50 > 100 mg/L
- Fish (Fathead minnow, 14d): NOEL > 100 mg/L
- Crustacea (Daphnia magna, 48h): EL50/NOEL > 10,000 mg/L
- Crustacea (Daphnia magna, 21d): NOEL > 10 mg/L
- Algae (Pseudokirchneriella subcapitata): NOEL > 100 mg/L
- In a static 4-day microorganism luminescence inhibition study, no significant luminescence inhibition was observed.

Acute Aquatic Toxicity: Not expected to be a hazard.

Chronic Aquatic Toxicity: Not expected to be a hazard.

Mobility: Generally floats on water. Lubricating oil components have estimated log K_{oc} > 3, indicating these components are likely to be adsorbed onto soil and sediment and are not likely to leach to ground water.

Persistence/Degradability: Another lubricant base oil was determined to be inherently biodegradable but not readily biodegradable, with a mean degradation of 31% by day 28.

Bioaccumulative Potential: Not available as highly refined base oil.

Hazardous to Ozone Layer: Not classified – this product does not contain substances listed under the Montreal Protocol and Ozone Layer Protection Law.

13. Disposal Considerations

Material Disposal

- Dispose of yourself or entrust the industrial waste treatment company who has obtained the prefectural governor's permission, or a municipal corporation. Disposal should be in accordance with applicable regional, national, and local laws and regulations.
- Do not dispose into the environment, in drains or in water courses.
- For landfill disposal, destroy by fire and confirm cinders are compliant with the Waste Disposal Law.
- If burning this material, ensure work is carried out in a safe place with guards in position, and select a method that would not cause harm or damage to others during combustion or explosion.

Container Disposal: Purify and recycle, or dispose of in accordance with the standards of related laws and regulations. Remove content completely before disposal.

14. Transport Information

International Restriction

UN Class, Shipping Name: Not Dangerous Goods

UN Number: Not applicable

Marine Pollutant: Yes

Domestic Restriction (Japan)

Since domestic laws and regulations shown below are applicable, containers and transportation methods shall be required to follow each and every regulation.

Land – Fire Service Law: Dangerous goods. Group 4 (flammable liquid), Class 4 petroleum, Danger grade III.

Container: If classified as dangerous goods, containers (other than tanker, tank car and tank truck) used for transportation shall meet Clause 2, Notice Attachment 3, concerning dangerous materials.

Sea – Ship Safety Law: Not Dangerous Goods

Air – Civil Aeronautics Act: Not Dangerous Goods

Specific Safety Measures and Conditions for Transportation

- Caution: Flammable.
- Transport carefully – containers may not be subjected to friction or agitation.
- Display signage on vehicle and provide fire-fighting equipment where required to transport more than the specified quantity. Total piled height on vehicle shall be less than 3 meters.
- Consolidation of this material with dangerous goods belonging to the 1st and 6th Classification is prohibited.
- Abide by other applicable laws and regulations.

15. Regulatory Information

International Information

EINECS/ELINCS (EC): All components listed or polymer exempt.

TSCA (USA): All components listed or in compliance.

METI (Japan): All components listed or in compliance.

Domestic Information (Japan)

Fire Service Law: Dangerous goods. Group 4 (flammable liquid), Class 4 petroleum, Danger grade III.

PRTR Law: Not applicable.

Industrial Safety and Health Law: Labeling (Delivery of Documents): Mineral oil 90–100%.

Poisonous and Deleterious Substance Control Law: Not applicable.

Marine Pollution Protection Law: Waste Oil Regulation.

Sewage Control Law: Mineral Oil Disposal Regulation (5 mg/L).

Water Pollution Prevention Law: Oil Disposal Regulation (5 mg/L).

Waste Disposal and Public Cleaning Law: Industrial Waste Regulation.

16. Other Information

The symbol “%” in this document means weight percentage.

Sources Cited

- Recommendation of Occupational Exposure Limits (2012), Japanese Society of Occupational Health
- Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices, ACGIH (2012)
- ECHA (European Chemicals Agency), “ECHA CHEM,” Information on Registered Substances (2011); SDS of EU suppliers (2011)
- IARC Monographs Programme on the Evaluation of Carcinogenic Risk to Humans (2006)
- ACGIH documentation (2006)
- EC Directive 67/548/EEC Annex I; EU CLP Regulation (EC) No. 1272/2008 Annex VI Table 3.1, Table 3.2

References

- Globally Harmonized System of Classification and Labelling of Chemicals (GHS), 4th revised edition, United Nations (2011)
- Japanese Standards Association (JSA), JIS Z 7253:2012, JIS Z 7252:2014
- National Institute of Technology and Evaluation (NITE), “GHS Information”
- Ministry of Economy, Trade and Industry, Chemical Management site
- Ministry of Health, Labour and Welfare, “Label and SDS information for GHS model”

This Safety Data Sheet (SDS) for a hazardous chemical is provided for the entrepreneur as reference information for safe handling. Refer to this document and perform suitable handling. Nothing in this document shall reduce the user's responsibility to satisfy itself as to the suitability, accuracy, reliability, and completeness of such information for its particular

use. There is no warranty against intellectual property infringement. The information contained in this document is based upon data believed to be reliable through our supply chain at the time; we cannot guarantee all of the contents. This document is based on JIS Z7253:2012 and is not a guarantee of safety.

Contents of the SDS are updated periodically. SDS compliance is required as a rule of all business enterprises engaged in the transaction of chemicals (including products containing them) with other businesses. The retailer/wholesaler must provide the newest SDS to customers.

Contacts

Technical Contact: Shell Lubricants Japan K.K. / Lubricant Customer Service Center – TEL. 0120-064-315 (Japan domestic only) / csc@shell-lubes.co.jp

SDS Author: Shell Lubricants Japan K.K. / Quality Assurance Division – TEL. +81-3-5531-5770, FAX +81-3-5531-5757

SDS Request: As a rule, the direct delivery entrepreneur must provide the newest SDS to the customer. Please contact your supply chain company rather than the manufacturer directly.

Source: Shell Tellus S2 M 22, 32, 46, 68 Safety Data Sheet, SDS Code 463030, effective November 1, 2017, Shell Lubricants Japan K.K. Transcribed from the manufacturer PDF hosted at makino.com. For official use, cross-check against the original document.