SAFETY DATA SHEET

1. Identification

Product Name	**Moty's M100 5W40**
Chemical Family / Description	Mixture substances
Intended Use	Gasoline Engine Oil
Campany	TRIBO JAPAN Co., Ltd.
Address	2-25-4 Higashi-nippori Aarakawa-ku Tokyo 116-0014 Japan
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2. Hazards Identification

Classification of the substance or mixture

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

Not classified

Classification according to Directive 1999/45/EC

Not classified

Label Elements

Signal Word	Not applicable
Hazard Statement	Not applicable
Precautionary Statements	
Prevention	None.
Response	None.
Storage	None.
Disposal	Dispose of contents/container to recycling or incineration in accordance with local/national regulation.
Supplemental Information	None.
Other Hazards	Not available.

3. Composition / Information on Ingredients

Substances

Ingredient Name	CAS No.	mass%
Distillates (Petroleum), Hydrotreated Heavy Paraffinic	64742-54-7	> 75
Proprietary Engine Oil Additive	Not required	< 25

- The DMSO extract by IP 346 of this substance is less than 3% (typical 0.2% with maximum 0.5%).

4. First Aid Measures

Description of First Aid Measures

Inhalation

- Inhalation at ambient temperature is unlikely because of the low vapour pressure of the substance.

- In case of symptoms arising from inhalation of fumes, mists or vapour, remove casualty to a quiet and well ventilated place if safe to do so.
- **If the casualty is unconscious and:**
- **Not breathing:** ensure that there is no obstruction to breathing and give artificial respiration by trained personnel. If necessary, give external cardiac massage and obtain medical assistance.
- **Breathing:** place in recovery position. Administer oxygen if necessary. Obtain medical assistance if breathing remains difficult.

Skin Contact

- Remove contaminated clothing and footwear, and dispose of safely. Wash affected area with soap and water.
- Seek medical attention if skin irritation, swelling or redness develops and persists.
- When using high-pressure equipment, injection of product can occur. If high-pressure injuries occur, immediately seek professional medical attention. Do not wait for symptoms to develop.
- **For minor thermal burns:** cool the burn. Hold the burned area under cold running water for at least five minutes, or until the pain subsides. However, body hypothermia must be avoided.
- Do not put ice on the burn. Remove non-sticking garments carefully. DO NOT attempt to remove portions of clothing glued to burnt skin but cut round them.
- Seek medical attention in all cases of serious burns.

Eye Contact

- May cause burn in case of contact with product at high temperature.
- Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so. Continue rinsing.
- If irritation, blurred vision or swelling occurs and persists, obtain medical attention.
- If hot product is splashed into the eye, it should be cooled immediately to dissipate heat, under cold running water. Immediately seek specialist medical assessment and treatment for the casualty.

Ingestion

- Always assume that aspiration has occurred. Seek professional medical attention or send the casualty to a hospital. Do not wait for symptoms to develop.
- Product is as an aspiration hazard, and swallowing may lead to lung damage. Even small amounts of product aspirated into the lung require medical evaluation and treatment. Do not induce vomiting. Do not give anything to drink.

Most Important Symptoms and Effects, both Acute and Delayed

- **Inhalation:** irritation of the respiratory tract due to excess fumes, mists or vapour exposure.
- **Skin:** dry skin or irritation may arise in case of repeated or prolonged exposure. May cause burns in case of contact with product at high temperature.

- **Eye:** slight irritation (unspecific).
- **Ingestion:** for acute toxicity, few or no symptoms expected, e.g. nausea and diarrhoea. However, product is an aspiration hazard. Aspiration of low viscosity liquids into the lungs is a serious, potentially fatal, event.
- Aspiration may be recognized from the history of events, a smell of hydrocarbons on the breath, signs of vomiting or symptoms such as choking or coughing.

Indication of any Immediate Medical Attention and Special Treatment Needed

- Treat symptoms as they occur.

5. Fire Fighting Measures

Extinguishing Media

Suitable

- Foam (specifically trained personnel only).
- Water fog (specifically trained personnel only).
- Dry chemical powder.
- Carbon dioxide.
- Other inert gases (subject to regulations).
- Sand or earth.

Unsuitable

- Do not use direct water jets on the burning product as they could cause splattering and spread the fire.
- Simultaneous use of foam and water on the same surface is to be avoided as water destroys the foam.

Special Hazards Arising from the Substance or Mixture

- Not classified as flammable, but will burn if involved in a fire.
- During a fire, incomplete combustion is likely to give rise to a complex mixture of airborne solid and liquid particulates and gases, including carbon monoxide and unidentified organic and inorganic compounds.

Advice for Firefighters

- Remove containers from fire or cool them with water spray.
- In case of a large fire or in confined or poorly ventilated spaces wear full fire resistant protective clothing and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6. Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures

- Stop or contain leak at the source if safe to do so. Avoid direct contact with released material. Stay upwind.
- Keep unauthorised personnel away from the area of spillage. Alert emergency personnel.
- Except in case of small spillages, the feasibility of any actions should always be assessed and advised, if possible, by a trained, competent person in charge of managing the emergency.
- It is recommended to eliminate all ignition sources if safe to do so (e.g. electricity, sparks, fires, flares).

- If required, notify relevant authorities according to all applicable regulations.

Personal Protection Equipment for Emergency Responders:

- **Small spillages:** normal antistatic working clothes are usually adequate.
- **Large spillages:** full body suit of chemically resistant and antistatic material.
- Work gloves providing adequate chemical resistance, specifically to aromatic hydrocarbons. Note: gloves made of PVA are not waterresistant, and are not suitable for emergency use.
- Work helmet. Antistatic non-skid safety shoes or boots.
- Goggles or face shield, if splashes or contact with eyes is possible or anticipated.
- Respiratory protection will be necessary only in special cases (e.g. formation of mists). A half or full-face respirator with combined dust/organic vapour filter(s), or a self-contained breathing apparatus (SCBA) can be used according to the extent of spill and predictable amount of exposure. If the situation cannot be completely assessed, or if an oxygen deficiency is possible, only SCBAs should be used.

Envioronmental Precautions

- Prevent product from entering sewers, rivers, waterways or other bodies of water.

Methods and Material for Containment and Cleaning up

Land Spillage:

- If necessary dike the product with dry earth, sand or similar noncombustible materials.
- Large spillages may be cautiously covered with foam, if available, to limit fire risk. Do not use direct jets.
- When inside buildings or confined space, ensure adequate ventilation.
- Absorb spilled product with suitable non-combustible materials.
- Collect free product by suitable means. Transfer collected product and other contaminated materials to suitable tanks or containers for recycle, recovery or safe disposal.
- In case of soil contamination, remove contaminated soil for remediation or disposal according to local regulations.

Spillages in Water or at Sea:

- In case of small spillages in closed waters (i.e. ports), contain product with floating barriers or other equipment. Collect spilled product by absorbing with specific floating absorbents.
- If possible, large spillages in open waters should be contained with floating barriers or other mechanical means. If this not possible, control the spreading of the spillage, and collect the product by skimming or other suitable mechanical means.
- The use of dispersants should be advised by an expert, and, if required, approved by local authorities.
- Collect recovered product and other contaminated materials in suitable tanks or containers for recovery or safe disposal.

Additional Information:

- Recommended measures are based on the most likely spillage scenarios for this material; however, local conditions (wind, air temperature, wave/current direction and speed) may significantly influence the choice of appropriate actions. For this reason, local experts should be consulted when necessary. Local regulations may also prescribe or limit actions to be taken.

Reference to Other Sections

- For recommended personal protective equipment, see Section 8.
- For disposal considerations, see Section 13.

7. Handling and Storage

Precautions for Safe Handling

- Ensure that all relevant regulations regarding handling and storage facilities of combustible products are followed.
- It is recommended to keep away from sparks/open flames/hot surfaces. – No smoking. Take precautionary measures against static electricity.
- Avoid splash filling of bulk volumes when handling hot liquid product.
- Use and store only outdoors or in a well-ventilated area.
- Avoid contact with skin. Avoid breathing fume/mist.
- Use personal protective equipment as required.
- Prevent the risk of slipping.
- Avoid release to the environment.

Conditions for Safe Storage, Including any Incompatibilities

- Storage area layout, tank design, equipment and operating procedures must comply with the relevant European, national or local legislation.
- Storage installations should be designed with adequate bunds so as to prevent ground and water pollution in case of leaks or spills.
- Cleaning, inspection and maintenance of internal structure of storage tanks must be done only by properly equipped and qualified personnel as defined by national, local or company regulations.
- Store separately from oxidizing agents.
- Recommended materials: for containers, or container linings use mild steel, or stainless steel.
- **Unsuitable materials:** some synthetic materials may be unsuitable for containers or container linings, depending on the material specification and intended use. Compatibility should be checked with the manufacturer.

If the product is supplied in containers:

- Keep only in the original container or in a suitable container for this kind of product.
- Keep containers tightly closed and properly labelled.

- Empty containers may contain combustible product residues. Do not weld, solder, drill, cut or perform similar operations unless they have been properly cleaned.

Hygiene Measures:

- Ensure that proper housekeeping measures are in place.
- Contaminated materials should not be allowed to accumulate in the workplaces and should never be kept inside the pockets.
- Keep away from food and beverages.
- Do not eat, drink or smoke when using this product.
- Wash hands thoroughly after handling.
- Change contaminated clothes at the end of working shift.

Load / Unload Temperature, ℃	Ambient
Storage Temperature, ℃	Ambient
Specific end Use(s)	Not available.

8. Exposure Controls and Personal Protection

Control Parameters

EU limit values	None.
UK limit values	None.
Monitoring procedure	Not applicable.
Other: human health (DNELs, DMELs)	Not applicable.
Other: environmental (PNEC)	Distillates (petroleum), hydrotreated heavy paraffinic: PNEC: oral, 9.33 mg/kg food.

Exposure controls

Engineering controls

- Good general ventilation is recommended for handling the product.
- For processing, where mist or vapour might be formed, local exhaust ventilation or use in a closed system is recommended.
- Ventilation equipment should be explosion-resistant if explosive concentrations of material are present.

Personal protective Equipment

- The need for personal protective equipment should be based on a workplace risk assessment for the particular use.
- No special respiratory protection is normally required. Under conditions of frequent use or heavy exposure, respiratory protection may be needed.
- Normal industrial eye protection practices should be employed.
- Wear suitable gloves (nitrile gloves are recommended) to avoid direct skin contact.
- PPE should be to national standards. Consult manufacturers concerning breakthrough times.

Environmental Exposure Controls

- Not available.

9. Physical and Chemical Properties

Appearance	Brown and Clear Liquid
Color	Light Brown
Odour	Characteristic, Mineral Oil

Odour Threshold	Not established
Melting/ Freezing Point (℃)	-50.0 (Pour Point)
Initial Boiling Point/ Range (℃)	300 ～ 580
Flash Point (℃)	228
Evaporation Rate	Not established
Flammability (solid, gas)	Not applicable
Flammability or Explosion Limits	Explosion Limit (1～7%)
Vapot Pressure @20℃ (kPa)	< 0.01
Vapot Density (Air=1)	> 5
Relative Density @15℃ (g/cm^3)	0.852
Solubility	Water：Insoluble.
Partition Coefficient (Kow)	Expected to be > 7
Auto-ignition Temperature (℃)	Estimate 200～410
Decomposition Temperature (℃)	Not established
Viscosity @40℃ (mm^2/s)	89
Explosive properties	Not available
Oxidising properties	Not available

10. Stability and Reactivity

Reactivity	Not available
Chemical Stability	Stable under normal temperature and pressure.
Possibility of Hazardous Reactions	No hazardous polymerisation.
Conditions to Avoid	Extreme heat
Incompatible Materials	Strong oxidizing agents.
Hazerdous Decomposition Products	Incomplete combustion gives toxic gas mixture, including carbon monoxide.

11. Toxicological Information

Information on Toxicological Eeffects

Acute Toxicity	Based on available data, the classification criteria are not met. LD_{50} (Oral) > 5,000 mg/kg LC_{50} (Inhalation) > 5.0 mg/L LD_{50} (Dermal, rat) > 2,000 mg/kg (Practically Non-Toxic)
Skin corrosion/ Irritation	Only weakly irritating or non-irritating to the skin of rabbits and humans.
Serious Eye Damage/ Irritation	Practically non-irritating.
Respiratory or Skin Sensitisation	**Respiratory:** not expected to cause respiratory sensitization. **Skin:** based on available data, the classification criteria are not met.
Germ Cell Mutagenicity	This substance was found to be non-mutagenic.
Carcinogenicity	Based on available data, the classification criteria are not met.

Reproductive Toxicity	Based on available data, the classification criteria are not met. Reproductive toxicity dermal NOAEL (development) > 2,000 mg/kg. This substance showed no effects on reproductive parameters.
STOT-single exposure	Not classified due to lack of data.
STOT-repeated exposure	Based on available data, the classification criteria are not met. **Sub-chronic repeat dose, dermal:** NOAEL 1,000 mg/kg. **Sub-chronic repeat dose, inhalation:** NOAEL (local effects) > 220 mg/m^3 and NOAEL (systemic effects) > 980 mg/m3.
Aspiration hazard	Not meet the criteria for classification.

12. Ecological Information

Toxicity

- Product is not classified as harmful to aquatic organisms.
- Acute aquatic invertebrate EL_{50} > 10 000mg/L.
- Acute aquatic algae NOEL > 100 mg/L.
- Acute fish LL_{50} > 100 mg/L.
- Long-term invertebrate NOEL 10mg/L.
- Long-term fish NOEL 10mg/L.

Persistence and Degradability

- Not readily biodegradable, but inherently biodegradable (ca. 30% degradation in 28 d (method OECD 301 F).

Bioaccumulative Potential

- Not available

Mobility in Soil

- Not available

Results of PBT and vPvB Assessment

- Not available

Other Adverse Effects

- The product is a water-insoluble oil, and may form a sheen or film on water.

13. Disposal Considerations

Waste Treatment Methods

- Incineration or recycling is recommended for disposal of this product.
- This product is not suitable for landfill or disposal via the drains. Disposal must be in accordance with current national and local regulations. Chemical residues generally count as special waste. General EU requirements are given in Directive 2008/98/EC, including procedures for the disposal of waste oils.
- Wastes of this product are covered in the European Waste Catalogue, suggested code 13 02 05, mineral-based non-chlorinated, engine, gear and lubricating oils.

- The hazards of the waste may differ from that of the product, and it is the responsibility of the waste generator to identify hazards and dispose wastes in compliance with applicable regulations.

14. Transport Information

UN Number	Not classified as dangerous goods for transport.
UN Proper Shipping Name	Not applicable
Transport Hazard Class (es)	Not applicable
Packing Group	Not applicable
Environmental Hazards	Not classified as marine pollutant/environmentally hazardous.
Special Precautions for User	Not applicable

Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

15. Regulatory Information

Safety, Health and Environmental Regulations/ Iegislation Specific for the Substance or Mixture

- **UK:** Workplace Exposure Limits EH40/2005, with 2007 supplement, Health and Safety Executive; Control of Substances Hazardous to Health Regulations 2002 (COSHH), as amended.

Chemical Safety Assessment

- Not available.

16. Other Information

Revisions

- This SDS is the first version in EU format, using classification according to the CLP Regulation.

Abbreviations

DNEL	Derived No-Effect Level
DMEL	Derived Minimum Effect Level
EL	Effect Level
LC	Lethal Concentration
LD	Lethal Dose
NOAEL	No Observed-Adverse-Effect Level
NOEL	No-Observed-Effect Level
OECD	Organisation for Economic Co-operation and Development
PBT	Persistent, Bioaccumulative, and Toxic
vPvB	very Persistent, very Bioaccumulative

References

- Annex VI of Regulation 1272/2008 on Harmonised Classification and Labelling for Certain Hazardous Substances (CLP Regulation).
- Information on Registered Substances; Chemical Substance Search; European Chemicals Agency (ECHA), available at the ECHA website: http://echa.europa.eu.
- Supplier safety data sheet.

Basis of Classification

- The recommendations presented in this Safety Data Sheet were obtained from actual test data when available, comparison with similar products, component information from suppliers and from recognized codes of good practice.

Control No.
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