

Safety Data Sheet

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY/UNDERTAKING

Material Name : Shell Brake and Clutch Fluid DOT 4 Super
Recommended Use / Restrictions of Use : Brake fluid
Product Code : 001B0642

Manufacturer/Supplier : **Ixom Operations Pty Ltd**
(NZBN – 9429041465226)
166 Totara Street,
Mt Maunganui South,
New Zealand

Telephone : +64 9 3682700
Fax : +64 9 3682710

Emergency Telephone Number : 0800 734 607 (ALL HOURS)

2. HAZARDS IDENTIFICATION

NON-HAZARDOUS SUBSTANCE. NON-DANGEROUS GOODS.

Not classified as hazardous according to criteria in the Hazardous Substances (Minimum Degrees of Hazard) Regulations 2001.

Not classified as Dangerous Goods for transport, according to New Zealand Standard 5433:2007 Transport of Dangerous Goods on Land.

GHS Classification : Not classified,

GHS Label Elements

Signal Words : No signal word
Hazard Statement : PHYSICAL HAZARDS:
Not classified as a physical hazard under GHS criteria.

HEALTH HAZARDS:
Not classified as a health hazard under GHS criteria.

ENVIRONMENTAL HAZARDS:
Not classified as an environmental hazard under GHS criteria.

GHS Precautionary Statements : PREVENTION:
No precautionary phrases.

RESPONSE:
No precautionary phrases.

STORAGE:
No precautionary phrases.

Safety Data Sheet

DISPOSAL:
No precautionary phrases.

Symbol(s) : No symbol
Other Hazards which do not result in classification : Not classified as flammable but will burn. Slightly irritating to respiratory system.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture Description : Contains glycol ether borate ester plus corrosion inhibitors and antioxidant.

Hazardous Components

Chemical Identity	CAS	Identification No.	Conc.
Diisopropanolamine	110-97-4	203-820-9	1.00 - 3.00 %
4,4'-isopropylidenediphenol	80-05-7	201-245-8	0.10 - 0.90 %

Additional Information : Refer to chapter 16 for full text of EC R-phrases.

4. FIRST-AID MEASURES

General Information : Not expected to be a health hazard when used under normal conditions.
Inhalation : Remove to fresh air. If rapid recovery does not occur, transport to nearest medical facility for additional treatment.
Skin Contact : Remove contaminated clothing. Flush exposed area with water and follow by washing with soap if available. If persistent irritation occurs, obtain medical attention.
Eye Contact : Immediately flush eyes with large amounts of water for at least 15 minutes while holding eyelids open. Transport to the nearest medical facility for additional treatment.
Ingestion : If swallowed, do not induce vomiting: transport to nearest medical facility for additional treatment. If vomiting occurs spontaneously, keep head below hips to prevent aspiration.
Most Important Symptoms/Effects, Acute & Delayed : Data not available
Immediate medical attention, special treatment : Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Clear fire area of all non-emergency personnel.

Suitable Extinguishing Media : Alcohol-resistant foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.

Safety Data Sheet

Unsuitable Extinguishing Media	:	Do not use water in a jet.
Specific hazards arising from Chemicals	:	Material will not burn unless preheated. Hazardous combustion products may include: A complex mixture of airborne solid and liquid particulates and gases (smoke). Carbon monoxide may be evolved if incomplete combustion occurs. Unidentified organic and inorganic compounds.
Protective Equipment & Precautions for Fire Fighters	:	Proper protective equipment including breathing apparatus must be worn when approaching a fire in a confined space.
Additional Advice	:	Keep adjacent containers cool by spraying with water.

6. ACCIDENTAL RELEASE MEASURES

Avoid contact with spilled or released material. For guidance on selection of personal protective equipment see Chapter 8 of this Material Safety Data Sheet. See Chapter 13 for information on disposal. Observe the relevant local and international regulations.

Personal Precautions, Protective Equipment and Emergency Procedures	:	Avoid contact with skin and eyes.
Environmental Precautions	:	Use appropriate containment to avoid environmental contamination. Prevent from spreading or entering drains, ditches or rivers by using sand, earth, or other appropriate barriers.
Methods and Material for Containment and Cleaning Up	:	Slippery when spilt. Avoid accidents, clean up immediately. Prevent from spreading by making a barrier with sand, earth or other containment material. Reclaim liquid directly or in an absorbent. Soak up residue with an absorbent such as clay, sand or other suitable material and dispose of properly. For small liquid spills (< 1 drum), transfer by mechanical means to a labelled, sealable container for product recovery or safe disposal. Allow residues to evaporate or soak up with an appropriate absorbent material and dispose of safely. Remove contaminated soil and dispose of safely. For large liquid spills (> 1 drum), transfer by mechanical means such as vacuum truck to a salvage tank for recovery or safe disposal. Do not flush away residues with water. Retain as contaminated waste. Allow residues to evaporate or soak up with an appropriate absorbent material and dispose of safely. Remove contaminated soil and dispose of safely. Transfer to a salvage tank for recovery or safe disposal.
Additional Advice	:	Notify authorities if any exposure to the general public or the environment occurs or is likely to occur.

7. HANDLING AND STORAGE

General Precautions	:	Use local exhaust ventilation if there is risk of inhalation of vapours, mists or aerosols. Use the information in this data sheet as input to a risk assessment of local circumstances to help determine appropriate controls for safe handling, storage and disposal of this material.
Precautions for Safe	:	Avoid prolonged or repeated contact with skin. Avoid inhaling

Safety Data Sheet

Handling	vapour and/or mists. When handling product in drums, safety footwear should be worn and proper handling equipment should be used. Properly dispose of any contaminated rags or cleaning materials in order to prevent fires.
Conditions for Safe Storage	: Tanks must be clean, dry and rust-free. Keep container tightly closed. Must be stored in a diked (bunded) well-ventilated area, away from sunlight, ignition sources and other sources of heat. Cleaning, inspection and maintenance of storage tanks is a specialist operation, which requires the implementation of strict procedures and precautions. Drums should be stacked to a maximum of 3 high. Storage Temperature: Ambient. 60 °C maximum
Product Transfer	: Keep containers closed when not in use. Do not pressurize drum containers to empty.
Recommended Materials	: For containers or container linings, use mild steel or high density polyethylene. Stainless steel. Carbon steel.
Unsuitable Materials	: PVC.
Other Advice	: Polyethylene containers should not be exposed to high temperatures because of possible risk of distortion.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

If the American Conference of Governmental Industrial Hygienists (ACGIH) value is provided on this document, it is provided for information only.

Occupational Exposure Limits**Biological Exposure Index (BEI)**

No biological limit allocated.

Appropriate Engineering Controls	: The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Select controls based on a risk assessment of local circumstances. Appropriate measures include: Adequate ventilation to control airborne concentrations. Where material is heated, sprayed or mist formed, there is greater potential for airborne concentrations to be generated. Define procedures for safe handling and maintenance of controls. Educate and train workers in the hazards and control measures relevant to normal activities associated with this product. Ensure appropriate selection, testing and maintenance of equipment used to control exposure, e.g. personal protective equipment, local exhaust ventilation. Drain down system prior to equipment break-in or maintenance. Retain drain downs in sealed storage pending disposal or for subsequent recycle. Always observe good personal hygiene measures, such as washing hands after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated
---	--

Safety Data Sheet

- clothing and footwear that cannot be cleaned. Practice good housekeeping.
- Individual Protection Measures** : Personal protective equipment (PPE) should meet recommended national standards. Check with PPE suppliers.
- Respiratory Protection** : No respiratory protection is ordinarily required under normal conditions of use. In accordance with good industrial hygiene practices, precautions should be taken to avoid breathing of material. If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, select respiratory protection equipment suitable for the specific conditions of use and meeting relevant legislation. Check with respiratory protective equipment suppliers. Where air-filtering respirators are suitable, select an appropriate combination of mask and filter. Select a filter suitable for combined particulate/organic gases and vapours [boiling point >65°C(149 °F)].
- Hand Protection** : Where hand contact with the product may occur the use of gloves approved to relevant standards (e.g. Europe: EN374, US: F739) made from the following materials may provide suitable chemical protection: PVC, neoprene or nitrile rubber gloves. Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturizer is recommended. For continuous contact we recommend gloves with breakthrough time of more than 240 minutes with preference for > 480 minutes where suitable gloves can be identified. For short-term/splash protection we recommend the same, but recognise that suitable gloves offering this level of protection may not be available and in this case a lower breakthrough time may be acceptable so long as appropriate maintenance and replacement regimes are followed. Glove thickness is not a good predictor of glove resistance to a chemical as it is dependent on the exact composition of the glove material. Glove thickness should be typically greater than 0.35 mm depending on the glove make and model.
- Eye Protection** : Chemical splash goggles (chemical monogoggles).
- Protective Clothing** : Skin protection not ordinarily required beyond standard issue work clothes.
- Thermal Hazards** : Not applicable.
- Monitoring Methods** : Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and adequacy of exposure controls. For some substances biological monitoring may also be appropriate. Validated exposure measurement methods should be applied by a competent person and samples analysed by an accredited laboratory. Examples of sources of recommended exposure measurement methods are given below or contact the supplier. Further national methods may be

Safety Data Sheet

available.

National Institute of Occupational Safety and Health (NIOSH),
USA: Manual of Analytical Methods <http://www.cdc.gov/niosh/>
Occupational Safety and Health Administration (OSHA), USA:
Sampling and Analytical Methods <http://www.osha.gov/>
Health and Safety Executive (HSE), UK: Methods for the
Determination of Hazardous Substances
<http://www.hse.gov.uk/>
Institut für Arbeitsschutz Deutschen Gesetzlichen
Unfallversicherung (IFA), Germany.
<http://www.dguv.de/inhalt/index.jsp>
L'Institut National de Recherche et de Sécurité, (INRS), France
<http://www.inrs.fr/accueil>

Environmental Exposure Controls : Take appropriate measures to fulfil the requirements of relevant environmental protection legislation. Avoid contamination of the environment by following advice given in Chapter 6. If necessary, prevent undissolved material from being discharged to waste water. Waste water should be treated in a municipal or industrial waste water treatment plant before discharge to surface water. Local guidelines on emission limits for volatile substances must be observed for the discharge of exhaust air containing vapour.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Amber or as dyed. Liquid at room temperature.
Odour : Ethereal
Odour threshold : Data not available
pH : Typical 7.2 - 7.4
Initial Boiling Point and Boiling Range : Typical 280 °C / 536 °F
: Data not available
Flash point : Typical 143 °C / 289 °F
Upper / lower : Data not available
Flammability or Explosion limits
Auto-ignition temperature : > 300 °C / 572 °F
Vapour pressure : Data not available
Relative Density : Data not available
Density : Typical 1,050 - 1,100 kg/m³ at 20 °C / 68 °F
Water solubility : Miscible.
Solubility in other solvents : Data not available
n-octanol/water partition coefficient (log Pow) : Data not available
Dynamic viscosity : Data not available
Kinematic viscosity : ca. 1,200 mm²/s at -40 °C / -40 °F 2.6 mm²/s at 100 °C / 212 °F
Vapour density (air=1) : Data not available
Electrical conductivity : This material is not expected to be a static accumulator.
Evaporation rate (nBuAc=1) : Data not available

Safety Data Sheet

Decomposition Temperature : Data not available
Flammability : Data not available

10. STABILITY AND REACTIVITY

Chemical stability : Stable.
Possibility of Hazardous Reactions : Data not available
Conditions to Avoid : Exposure to water vapour.
Incompatible Materials : Mineral oils. Water vapour.
Hazardous Decomposition Products : Hazardous decomposition products are not expected to form during normal storage.

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 product as a whole, rather than for individual component(s).
Likely Routes of Exposure : Skin and eye contact are the primary routes of exposure although exposure may occur through inhalation or following accidental ingestion.
Acute Oral Toxicity : Expected to be of low toxicity: LD50 > 5000 mg/kg , Rat
Acute Dermal Toxicity : Expected to be of low toxicity: LD50 > 5000 mg/kg , Rabbit
Acute Inhalation Toxicity :
Skin corrosion/irritation : Expected to be non-irritating to skin.
Serious eye damage/irritation : Expected to be non-irritating to eyes.
Respiratory Irritation : Inhalation of vapours or mists may cause irritation.
Respiratory or skin sensitisation : Not expected to be a skin sensitiser.
Aspiration Hazard : Not considered an aspiration hazard.
Repeated Dose Toxicity : Not expected to be a hazard.
Germ cell mutagenicity : Not expected to be mutagenic.
Carcinogenicity : Not expected to be carcinogenic.
Reproductive and Developmental Toxicity : Not expected to be a 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

Safety Data Sheet

components and the ecotoxicology of similar products. Unless indicated otherwise, the data presented is representative of the product as a whole, rather than for individual component(s).

- Acute Toxicity** : Expected to be practically non toxic:LL/EL/IL50 > 100 mg/l(to aquatic organisms)LL/EL50 expressed as the nominal amount of product required to prepare aqueous test extract.
- Microorganisms** : Practically non toxic, LC/EC/IC 50 > 100 mg/l .
- Mobility** : Liquid under most environmental conditions. If product enters soil, it will be highly mobile and may contaminate groundwater. Dissolves in water.
- Persistence/degradability** : Major constituents are expected to be inherently biodegradable, but the product contains components that may persist in the environment.
- Bioaccumulative Potential** : Not expected to bioaccumulate significantly.
- Other Adverse Effects** : Product is a mixture of non-volatile components, which are not expected to be released to air in any significant quantities. Not expected to have ozone depletion potential, photochemical ozone creation potential or global warming potential.

13. DISPOSAL CONSIDERATIONS

- Material Disposal** : Recover or recycle if possible. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste classification and disposal methods in compliance with applicable regulations. Do not dispose into the environment, in drains or in water courses.
- Container Disposal** : Dispose in accordance with prevailing regulations, preferably to a recognised collector or contractor. The competence of the collector or contractor should be established beforehand.
- Local Legislation** : Disposal should be in accordance with applicable regional, national, and local laws and regulations.

14. TRANSPORT INFORMATION

NZS 5433:2007

This material is not classified as dangerous according to NZS 5433:2007.

IMDG

This material is not classified as dangerous under IMDG regulations.

IATA (Country variations may apply)

This material is either not classified as dangerous under IATA regulations or needs to follow country specific requirements.

Safety Data Sheet

Additional Information : MARPOL Annex 1 rules apply for bulk shipments by sea.

15. REGULATORY INFORMATION

The regulatory information is not intended to be comprehensive. Other regulations may apply to this material.

Chemical Inventory Status

- EINECS : All components listed.
- TSCA : All components listed.
- Sensitiser not sufficient to classify** : Contains 4,4'- Isopropylidenediphenol. May produce an allergic reaction.
- Other Information : New Zealand Workplace Exposure Limits 2002 (WES). New Zealand Standard 5433:2007 Transport of Dangerous Goods on Land.

16. OTHER INFORMATION

- SDS Version Number** : 2.3
- SDS Effective Date** : 08.08.2013
- SDS Revisions** : A vertical bar (|) in the left margin indicates an amendment from the previous version.
- SDS Regulation** : The content and format of this MSDS is in accordance with HSNO Approved Code of Practice (No. HSNO CoP 8-1 09-06): Preparation of Safety Data Sheets.
- SDS Distribution** : The information in this document should be made available to all who may handle the product.
- Disclaimer** : This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.