



SAFETY DATA SHEET

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Revised edition no : 05

P-132 BRAKE FLUID DOT 3

Effective Date: 20.10.2020

1 Identification of the Product and the company

Chemical Name : Brake Fluid Dot 3
Type of product chemical family : Lather Dressing
Use : transfer force into pressure, and to amplify braking force
Producer : TLC-KOYA CHEMICALS MANUFACTURING SDN BHD
No.22 & 23, Jalan Maju 1,
Cemerlang Industrial Estate,
81800 Ulu Tiram, Johor, Malaysia.
Tel: 607-8675798 Fax: 607-8675799
Website: www.koyachemicals.com Email: admin@koyachemicals.com

Emergency phone nr : See producer

2 Hazard Identification

Specific target organ toxicity-repeated exposure category 2 (kidney)

Hazard Pictograms:



Signal Word: Warning

Hazard Statements:

H373 May cause damage to organs (kidney) through prolonged or repeated exposure.
Boleh menyebabkan kerosakan kepada organ-organ (buah pinggang) melalui pendedahan yang berpanjangan atau berulang-ulang.

Precautionary statement prevention

P260 Do not breathe dust/fumes/gas/mist/vapours/spray
Jangan sedut habuk / wasap / gas / kabut / wap / semburan

Precautionary statement response

P314 Get medical advice/attention if you feel unwell.
Dapatkan nasihat / rawatan perubatan jika anda rasa tidak sihat.

Precautionary statement disposal

P501 Dispose of contents/container in accordance with local/regional/national/international regulation.
Menguruskan bahan / bekal menurut peraturan antarabangsa / tempatan / kawasan / negara

3 Composition / Information on Ingredients

Hazardous ingredients : 2.2 Dihydroxydiethyl ether
Monoethylene glycol
Triethylene glycol
Anti-oxidant
Corrosion inhibitor

4 First Aid Measures

Inhalation Move to fresh air. If unconscious, place in recovery position and seek medical advice. If symptoms persist, call a medical doctor.

Skin Contact Wash off with soap and water.

Eye Contact Flush eyes with water as a precaution. Remove contact lenses. Seek medical advice. Protect unharmed eye. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist

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Ingestion

Get immediate medical attention. If medical advice is delayed, and if the person has swallowed a moderate volume of material (a few ounces), then give three to four ounces of hard liquor, such as whiskey. For children, give proportionally less liquor, according to weight. Keep respiratory tract clear. Take victim immediately to hospital. If symptoms persist, call a medical doctor.

5 Fire-Fighting Measures

Extinguishing Media	Extinguish fires with water spray or apply alcohol-type or allpurpose type foam by manufacturer's recommended techniques for large fires. Use carbon dioxide or dry chemical media for small fires.
Unsuitable extinguishing media	High volume water jet.
Specific hazards during firefighting	Spontaneous combustion in porous insulation: leaks into porous insulation material may ignite at temperatures far below published autoignition or ignition temperatures, potentially even below the normal flash point
Hazardous combustion products	Burning can produce the following combustion products: Carbon monoxide and/or carbon dioxide. Carbon monoxide is highly toxic if inhaled; carbon dioxide in sufficient concentrations can act as an asphyxiant. If the fluid is heated above the temperature of the onset of initial decomposition, 287 C, thermal degradation may result in the formation of volatile organic compounds such as aldehydes including formaldehyde and acetaldehyde, and other potentially harmful decomposition products. Respiratory protection may be required.
Special protective equipment and precautions for fire-fighters	
Special protective equipment for firefighters	Wear self-contained breathing apparatus for firefighting if necessary. Use personal protective equipment.
Specific extinguishing methods	Do not direct a solid stream of water or foam into hot, burning pools. This may cause frothing and increase fire intensity. Standard procedure for chemical fires. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

6 Accidental Release measures

Personal precautions, protective equipment and emergency procedures	Wear suitable protective equipment.
Environmental precautions :	Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. If the product contaminates rivers and lakes or drains inform respective authorities.
Methods and materials for containment and cleaning up	Keep in suitable, closed containers for disposal. Small spills can be flushed with large amounts of water; larger spills should be collected for disposal. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).

7 Handling and Storage

Handling Precautions for safe handling

Advice on protection against fire and explosion	Normal measures for preventive fire protection.
Advice on safe handling	Do not swallow. Avoid contact with eyes. Do not breathe vapours/dust. Use with adequate ventilation. Wash thoroughly after handling. Keep container closed. For industry use only. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Dispose of rinse water in accordance with local and national regulations.

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DISPOSAL - This product is resistant to rapid biodegradation, but it does degrade slowly. It should be feasible to dispose of small amounts by flushing to a wastewater treatment plant. For large amounts, incineration is the preferred method of disposal.

Storage Conditions for safe storage, including any incompatibilities

Conditions for safe storage :

General (mechanical) room ventilation is expected to be satisfactory. Keep container tightly closed in a dry and well-ventilated place. Electrical installations / working materials must comply with the technological safety standards. Store in accordance with good industrial practices.

8 Exposure controls / personal protection

Individual protection measures, such as personal protective equipment

Eye/face protection

Mono-goggles

Eye bath and safety shower.

Eye wash fountain should be located in immediate work area.

Skin protection

Impervious clothing.

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hand protection

The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier. Wear gloves made of :

Butyl, Natural rubber, Neoprene

Nitrile rubber

PVC-coated or Polyethylene

Hygiene measures

Wash hands before breaks and at the end of workday.

When using do not eat or drink.

When using do not smoke.

9 Physical and chemical properties

Boiling Point : Minimum 220°C (428°F)

Vapor Pressure (mm hg) : N/A

PH of concentrate : 10.5 +/- 0.5

Appearance : Colourless or Red

Specific Gravity (H₂O=1) : 1.11

Percent Volatile by weight : N/A

Evaporation Rate (Water=1) : N/A

Viscosity at 28-30°C(cst) : 31.5 +/- 0.5

10 Stability and reactivity

Reactivity : Hazardous polymerisation does not occur.

Chemical stability : Stable under normal conditions.

Possibility of hazardous reactions : No dangerous reaction known under conditions of normal use.

Incompatible materials : Explosive decomposition may occur if combined with strong acids or strong bases and subjected to elevated temperatures. Therefore, avoid strong acids and strong bases at elevated temperatures. Avoid contamination with strong oxidizing agents and materials reactive with hydroxyl compounds.

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Hazardous decomposition products

: If the fluid is heated above the temperature of the onset of initial decomposition, 240°C, thermal degradation may result in the formulation of potentially harmful volatile organic decomposition products.
Respiratory protection may be required.

11 Toxicological information

Components:**Acute toxicity**

Acute oral toxicity

Acute inhalation toxicity

Acute dermal toxicity

Skin corrosion/irritation

Species

Result

Serious eye damage/eye irritation

Species

Result

Respiratory or skin sensitisation

Exposure routes

Remarks

Exposure routes

Species

Result

Germ cell mutagenicity

Germ cell mutagenicity - Assessment

Carcinogenicity

Carcinogenicity - Assessment

Reproductive toxicity

Reproductive toxicity - Assessment

STOT - single exposure

Remarks

STOT - repeated exposure

Target Organs

Assessment

Aspiration toxicity

Statement on Aspiration Tox.

Diethylene Glycol:

: Remarks: No data available

: Remarks: No data available

: Remarks: No data available

: Rabbit

: No skin irritation

: Rabbit

: No eye irritation

: Inhalation

: No data available

: Skin contact

: Guinea pig

: Not sensitising

: Not mutagenic in vivo and in vitro

: Animal testing did not show any carcinogenic effects.

: No toxicity to reproduction

: No data available

: Kidney

: May cause damage to organs through prolonged or repeated exposure

: No data available

12 Ecological information

Components:**Ecotoxicity**

Toxicity to fish

Toxicity to daphnia and other aquatic invertebrates

Toxicity to algae

Toxicity to fish (Chronic toxicity)

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)

Diethylene Glycol:

: LC50 (Pimephales promelas (fathead minnow)): 75,200 mg/l

Exposure time: 96 h

: EC50 (Daphnia magna (Water flea)): > 10,000 mg/l

Exposure time: 24 h

: ErC50 (Pseudokirchneriella subcapitata (green algae)): 6,500 - 13,000 mg/l

Exposure time: 96 h

: NOEC (Pimephales promelas (fathead minnow)): 15,380 mg/l

Exposure time: 7 d

: Chronic Toxicity Value (Daphnia sp. (water flea)): 1,891 mg/l

Exposure time: 16 d

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Toxicity to microorganisms : EC20 (Activated sludge): > 1,995 mg/l
Exposure time: 0.5 h

Persistence and degradability

Biodegradability : Result: Readily biodegradable.

Bioaccumulative potential

Bioaccumulation : Bioconcentration factor (BCF): 100

Partition coefficient: noctanol/water : log Pow: -1.98

Mobility in soil

Mobility : Medium: Soil
Remarks: Very high mobility.

Other adverse effects

Additional ecological information : No data available

13 Disposal Considerations

Disposal methods

Waste from residues : Do not dispose of waste into sewer.
Do not contaminate ponds, waterways or ditches with chemical or used container. Send to a licensed waste management company.

Contaminated packaging : Incinerate in a furnace where permitted under national and local regulations. Dispose in accordance with all national and local environmental regulations. Empty containers should be recycled or disposed of through an approved waste management facility. This product is resistant to rapid biodegradation, but it does degrade slowly. It should be feasible to dispose of small amounts by flushing to a wastewater treatment plant. For large amounts, incineration is the preferred method of disposal. Disposal methods identified are for the product as sold. For proper disposal of used materials, an assessment must be completed to determine the proper and permissible waste management options permissible under applicable rules regulations and/or laws governing your location. Do not re-use empty containers. Empty remaining contents.

14 Transport information

International Regulations

UNRTDG : Not regulated as a dangerous good
IATA-DGR : Not regulated as a dangerous good
IMDG-Code : Not regulated as a dangerous good
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Pollution category : Z
Ship type : 3

15 Regulatory Information

Classification and labeling : Classification /symbol - not regulated
Governing directive : Occupational Safety and Health (Classification, Labelling and Safety Data Sheet of Hazardous Chemicals) Regulations 2013.
Occupational Safety and Health (Use and Standards of Exposure of Chemicals Hazardous to Health) Regulations 2000.

Safety advice : (May contain information in excess of requirements under applicable laws.
S23 Do not breathe gas/fumes/vapor/spray
S24 Avoid contact with skin
S33 Take precautionary measures against static discharges
S62 If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

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16 Other information

Further information : None
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N/A - Not Applicable N/D - Not Determined

All recommendations for the use of our products, whether given by us in writing, orally, or to be implied from data or test results obtained by us, are based on the current state of our knowledge at the time such recommendations are made. When additional information is obtained, these recommendations may be updated. They may also be influenced by circumstances outside our control. Notwithstanding such recommendations, the user is responsible to determine that the product as supplied by us, is suitable for the process or purpose he intends to use it. The user of the product is solely for compliance with all laws and regulation applying to the use of the product. Since we cannot control the application, use or processing of the products, we do not accept responsibility therefore. The user shall ensure that the intended use of the products will not infringe in any party's intellectual property rights.

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