

SECTION 1 : PRODUCT AND COMPANY IDENTIFICATION

Product Identifier:

Product name BRAKE FLUID (DOT-4)

Other means of identification:

Synonyms None

Chemical family Brake fluid

CAS number NA

Recommended use of the chemical and restrictions on use

Recommended use Intended to use in hydraulic braking systems and clutches, according to recommendations of vehicle manufacturers.

Suitable for use in industrial sector Automotive

Details of the supplier/ Manufacturer information

Supplier

Company name of supplier Hitachi Astemo Bangkok Trading Ltd.

Address 12th Floor UBC II Bldg, 591, Sukhumvit Road, North Klongton, Wattana, BANGKOK 10110, Thailand

Customer Care af_thbt@hitachiastemo.com

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SECTION 2 : HAZARDS IDENTIFICATION

Main hazards : Not a dangerous preparation according to 1999/45/EC.

Adverse human health effects : None under normal conditions.

Environmental hazards : No specific risk for the environment.

Inhalation : Not expected to present a significant inhalation hazard under anticipated Conditions of normal use.

Skin contact : Not expected to present a significant skin hazard under anticipated conditions of normal use.

Eye contact : Not expected to present a significant eye contact hazard under anticipated conditions of normal use.

Ingestion : Not expected to present a significant ingestion hazard under anticipated conditions of normal use.

Emergency Overview:

Appearance	Liquid
Color	Colorless to Pale Yellow
Odor	Characteristic

Classification of the Product:

Flammable Liquids	Not classified
Acute Toxicity, Oral	Category 5
Serious eye damage/eye irritation	Category 2
Environmental Hazards	Not classified

Label Elements:



Signal Word: **WARNING**

Hazard Statement

H303	May be harmful if swallowed
H319	Causes serious eye irritation.

Precautionary Statement - Prevention

P280	Wear protective gloves/protective clothing/eye protection/face protection
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Precautionary Statement - Response

P312	Call a POISON CENTER/doctor/physician/first aider/if you feel unwell.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313	If eye irritation persists: Get medical advice/attention.

Other Hazards

There is no additional information.

SECTION 3 : COMPOSITION / INFORMATION ON INGREDIENTS

Substance:

Composition	%
2,2 -Oxy Diethanol	35-60%
Ethane-1, 2-Diol	5-20%
2,2,2- Nitrotriethanol	5-10%
2-(2-(2-Methoxyethoxy)ethoxy)ethanol	0-5%
Proprietary Content	0-5%

Mixtures:

This product does not fall in the criteria of a mixture according to United Nations' Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

SECTION 4 : FIRST AID MEASURES

Description of first aid measures

- General advice** : Take off immediately all contaminated clothing & get under the shower if spilled over body.
- Inhalation** : Move to fresh air, seek medical attention in case of discomfort.
- Skin contact** : Rinse skin with water/shower. In all cases of doubt, or when symptoms persist, seek medical advice.
- Eyes contact** : Flush eyes with water with eyelids held open and seek medical attention
- Ingestion** : Do NOT induce vomiting, rinse mouth with water and seek medical attention.

Most important symptoms and effects, both acute and delayed

Symptoms : The most important known symptoms and effects are described in the sections: 2 and 11.

Indication of any immediate medical attention and special treatment needed

Seek medical help and treat symptomatically

SECTION 5 : FIRE FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media : Dry chemical, carbon dioxide, water fog or fine spray.
Unsuitable Extinguishing Media : None known

Special Hazards Arising From the Substance or Mixture

Avoid contamination with oxidizing agents i.e. nitrates etc. as ignition may result.

Special Protective Equipment and Precautions for Firefighters

Firefighters must wear positive-pressure, self-contained breathing apparatus (SCBA) and suitable clothing.
Spray water on fire-exposed containers to reduce risk of rupture.

SECTION 6 : ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

Isolate the accidental-release area and ensure no unauthorized entry. Do not walk on the spilled area. Ensure adequate ventilation in the enclosed area. Eliminate all ignition sources around the affected area. Use adequate protective equipment, during all such measures meant to deal with accidental release.

Environmental Precautions

Prevent spillage from entering into soil, sewers, drainage and groundwater.

Methods and Materials for Containment and Clean Up

For small amounts : Collect the spillage through an appropriate absorbent material.
Dispose-off the collected spillage, in accordance with local regulations.
Clean the affected area with water.

For large amounts : Pump-off the spillage and collect it in suitable containers.
Dispose-off the collected spillage, in accordance with local regulations.
Clean the affected area with water.

SECTION 7 : HANDLING AND STORAGE

Precautions for Safe Handling

- Keep containers tightly closed when not in use.
- Do not eat, drink, or smoke in working area.
- Take measures to prevent the build-up of electrostatic charge.
- Avoid contact with eyes and skin
- Use good safety and industrial hygiene practices.
- Wash thoroughly after handling.

Conditions for Safe Storage, Including any Incompatibilities

Storage : Store materials in a cool & dry place.

Incompatibilities : Oxidizing materials, strong alkalis and acids, Peroxides, Anhydrides etc.

SECTION 8 : EXPOSURE CONTROL/PERSONAL PROTECTION

Control Parameters

Exposure Limits/Guidelines

Exposure Controls

Engineering Controls : Adequate ventilation systems as needed to control & maintain concentrations of Air-borne contaminants below applicable exposure limits must be put in place. Flame- proof devices, sensors & auto alarm systems to be installed.

Eye/Face Protection : Safety glasses with side shields, Face shields etc.to be used

Respiratory Protection : Appropriate respiratory protection should be needed.

Skin/Hand Protection : Wear suitable working clothing; chemically resistant protective gloves to be used.

Ingestion : Do not eat, drink or smoke in work area. Wash hands before eating or smoking.

General safety and hygiene measures:

Wear protective clothing & equipment as necessary to minimize contact. Handle in accordance with good industrial hygiene and safety practices. Wash contaminated clothing immediately.

SECTION 9 : PHYSICAL & CHEMICAL PROPERTIES

Appearance (Physical State , Colour etc.)	Colorless to Pale Yellow
Odour:	Characteristic
Odour threshold:	No Data Available
pH value:	7 – 11.5
Melting Point/Freezing point: (°C)	NA
Boiling point: (°C)	230 Min
Flash point: (°C)	> 110
Evaporation Rate (BuOAc = 1)	NA
Flammability	Not Applicable
Vapour Density: (Air = 1.0)	NA
Specific gravity: (29 °C) kg/ltr	NA
Solubility in water	Insoluble
Auto ignition Temperature (°C)	NA

SECTION 10 : STABILITY & REACTIVITY

Reactivity

Remains Stable under recommended Storage Conditions.

Chemical stability

Remains Stable under recommended Storage Conditions.

Possibility of hazardous reactions

Not Known

Conditions to avoid

Direct Sunlight, High Temperature. Open flame, Overheating, Heat. Sparks etc. must be avoided.

Incompatible materials

It is incompatible with Oxidizing Materials, Strong Alkalis and Acids, Peroxides, Anhydrides etc.

SECTION 11 : TOXICOLOGICAL INFORMATION

Skin Corrosion/Irritation	: Mild skin irritation found (Skin : Rabbit)
Serious Eye Damage/Irritation	: Moderate Eye Irritation - 24h (Eyes : Rabbit)
Respiratory or Skin Sensitization	: Does not cause skin sensitization.
Germ Cell Mutagenicity	: No data available
Carcinogenicity	: No data available
Reproductive Toxicity	: May cause congenital malformation in the fetus. Presumed human reproductive toxicant. May cause reproductive disorders.
Specific Target Organ Toxicity (single exposure)	: No data available
Specific Target Organ Toxicity (repeated exposure)	:No data available
Aspiration Hazard	:No data available

Potential Health Effects

Inhalation	Irritant effects, headache, vertigo, dizziness, breathing difficulties
Skin	Slightly irritant
Eye	Causes slight to moderate irritation
Ingestion	Gastrointestinal complaints, nausea, vomiting, diarrhea

SECTION 12 : ECOLOGICAL INFORMATION

Eco toxicity

Persistence and Degradability: NA
Other Adverse Effects : No data available

SECTION 13 : DISPOSAL CONSIDERATIONS

Waste Disposal Method

Product Waste

- Do not dump into any sewers, on the ground, or into any body of water.
- All disposal methods must be in compliance with Federal, State/Provincial, and local regulations.

Packaging Waste

- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

SECTION 14: TRANSPORTATION

General information

- UN No. : Not regulated.
- ADR/RID : Not regulated
- IMO-IMDG code : Not regulated.
- ICAO/IATA : Not regulated.

SECTION 15 : REGULATORY INFORMATION

International Inventories

- United States:** All components of this product are listed on the TSCA inventory.
- Australia:** All components of this product are listed on the AICS.

SECTION 15 : REGULATORY INFORMATION

- China:** All components of this product are listed on the IECSC.
- Japan:** All components of this product listed on the ENCS.

SECTION 16 : OTHER INFORMATION

Preparation Date

October 17, 2023

Disclaimer/Statement of Liability

This information is only concerns the above mentioned product as supplied and may not be valid if used with other products or in any process. It remains the user's own responsibility to make sure that the information is appropriate and complete for his special use of this product.