

MAZDA ORIGINAL BRAKE FLUID

SDS # : 089567

previous revision date : 2024/05/20

SECTION 1: Identification of the substance/mixture and of the company/ undertaking

1.1 Product identifier

Product name : MAZDA ORIGINAL BRAKE FLUID
UFI : GQ10-S8E2-N00P-PG8G

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses
Formulation additives, lubricants and greases - Industrial General use of lubricants and greases in vehicles or machinery - Industrial General use of lubricants and greases in vehicles or machinery - Professional Brake fluids. Functional fluids

1.3 Details of the supplier of the safety data sheet

TotalEnergies Lubrifiants
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92029 Nanterre Cedex FRANCE
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rm.msds-lubs@totalenergies.com

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Horvatova 80a, 10000 Zagreb, Hrvatska.
Tel: + 385 1 6700 339
ms.logistika@totalenergies.com

Contact

H.S.E

1.4 Emergency telephone number

National advisory body/Poison Center

Telephone number : Telephone number for medical information in case of poisoning: +385 (0) 1
23-48-342

Emergency phone: 112

Supplier

Telephone number : Total Emergency phone: +44 1235 239670

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Repr. 2, H361fd

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

See Section 16 for the full text of the H statements declared above.

For more details about adverse physical, human health and environmental effects, see sections 9 to 12.

2.2 Label elements

Hazard pictograms :



Signal word : Warning

Hazard statements : H361fd - Suspected of damaging fertility. Suspected of damaging the unborn child.

Precautionary statements

Prevention : P202 - Do not handle until all safety precautions have been read and understood.
P280 - Wear protective gloves, protective clothing and eye or face protection.

Response : P308 + P313 - IF exposed or concerned: Get medical advice or attention.

Storage : P405 - Store locked up.

Disposal : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

Contains : tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate

Supplemental label elements : Not applicable.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Not applicable.

2.3 Other hazards

Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII : This mixture does not contain any substances that are assessed to be a PBT or a vPvB in a concentration $\geq 0,1$ %.
This product does not contain any substance present at a concentration equal to or greater than 0.1% by mass, included in the list drawn up in accordance with article 59, paragraph 1 of the REACH Regulation, due to its endocrine disrupting properties, or a substance known to have endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation 2018/605.

Other hazards which do not result in classification : Hazard of slipping on spilled product.

SECTION 3: Composition/information on ingredients

3.2 Mixtures : Mixture

Product/substance	Identifiers	% (w/w)	Classification	Specific Conc. Limits, M-factors and ATEs	Type
tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate	REACH #: 01-2119462824-33 EC: 250-418-4 CAS: 30989-05-0	≥50 - ≤75	Repr. 2, H361fd	-	[1]
1,1'-iminodipropyl-2-ol	REACH #: 01-2119475444-34 EC: 203-820-9 CAS: 110-97-4 Index: 603-083-00-7	<10	Eye Irrit. 2, H319	-	[1]
diethylene glycol	REACH #: 01-2119457857-21 EC: 203-872-2 CAS: 111-46-6	≤10	Acute Tox. 4, H302 See Section 16 for the full text of the H statements declared above.	ATE [Oral] = 500 mg/kg	[1] [2]

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

[1] Substance classified with a health or environmental hazard

[2] Substance with a workplace exposure limit

Occupational exposure limits, if available, are listed in Section 8.

SECTION 4: First aid measures

4.1 Description of first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.

- Ingestion** : Wash out mouth with water. Remove dentures if any. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

4.2 Most important symptoms and effects, both acute and delayed

- Eye contact** : No specific data.
- Inhalation** :
reduced fetal weight
increase in fetal deaths
skeletal malformations
- Skin contact** :
reduced fetal weight
increase in fetal deaths
skeletal malformations
- Ingestion** :
reduced fetal weight
increase in fetal deaths
skeletal malformations

4.3 Indication of any immediate medical attention and special treatment needed

- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Specific treatments** : No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

- Suitable extinguishing media** : Use dry chemical, CO₂, water spray (fog) or foam.
- Unsuitable extinguishing media** : Do not use water jet.

5.2 Special hazards arising from the substance or mixture

- Hazards from the substance or mixture** : In a fire or if heated, a pressure increase will occur and the container may burst.
- Hazardous combustion products** : carbon monoxide
carbon dioxide
nitrogen oxides

5.3 Advice for firefighters

- Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

- 6.2 Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

6.3 Methods and materials for containment and cleaning up

- Small spill** :  Stop leak if without risk. Move containers from spill area. Absorb with an inert material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** :  Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product.

- 6.4 Reference to other sections** : See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
-  See Section 10 for incompatible materials before handling or use.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities

-  Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

7.3 Specific end use(s)

Recommendations : Not available.

Industrial sector specific solutions : Not available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

Product/substance	Exposure limit values
diethylene glycol	Ordinance on the protection of workers from exposure to hazardous chemicals at work, exposure limit values (Annex I) (Croatia, 12/2023) ELV 8 hours: 101 mg/m ³ . ELV 8 hours: 23 ppm.

Biological Limit Values (BLV)

No exposure indices known.

Recommended monitoring procedures : Reference should be made to monitoring standards, such as the following:
 European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

Advisory OEL : ☒ Not available.

DNELs/DMELs

Product/substance	Result
tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate	DNEL - General population - Long term - Oral 1.5 mg/kg bw/day <u>Effects:</u> Systemic DNEL - General population - Long term - Dermal 1.5 mg/kg bw/day <u>Effects:</u> Systemic DNEL - General population - Long term - Inhalation 2.6 mg/m ³ <u>Effects:</u> Systemic DNEL - Workers - Long term - Dermal 4.2 mg/kg bw/day <u>Effects:</u> Systemic DNEL - Workers - Long term - Inhalation 14.8 mg/m ³ <u>Effects:</u> Systemic
1,1'-iminodipropyl-2-ol	DNEL - Workers - Long term - Dermal 120 µg/cm ² <u>Effects:</u> Local



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diethylene glycol

DNEL - General population - Long term - Oral

1.3 mg/kg bw/day

Effects: Systemic

DNEL - General population - Long term - Inhalation

3.9 mg/m³

Effects: Systemic

DNEL - Workers - Long term - Dermal

5 mg/kg bw/day

Effects: Systemic

DNEL - General population - Long term - Dermal

6.3 mg/kg bw/day

Effects: Systemic

DNEL - Workers - Long term - Inhalation

6.4 mg/m³

Effects: Systemic

DNEL - Workers - Long term - Inhalation

44 mg/m³

Effects: Systemic

DNEL - General population - Long term - Inhalation

12 mg/m³

Effects: Local

DNEL - General population - Long term - Inhalation

12 mg/m³

Effects: Systemic

DNEL - General population - Long term - Dermal

21 mg/kg bw/day

Effects: Systemic

DNEL - Workers - Long term - Dermal

43 mg/kg bw/day

Effects: Systemic

DNEL - Workers - Long term - Inhalation

60 mg/m³

Effects: Local

PNECs

Product/substance	Result
Tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate	Fresh water sediment 760 µg/kg dwt
	Marine water sediment 76 µg/kg dwt
	Soil 28.3 µg/kg dwt
	Sewage Treatment Plant 100 mg/l
	Fresh water 211.2 µg/l

1,1'-iminodipropyl-2-ol	Marine water 21.12 µg/l
	Fresh water 0.2777 mg/l
	Marine water 0.02777 mg/l
	Fresh water sediment 2.33 mg/kg dwt
	Marine water sediment 0.233 mg/kg dwt
	Soil 0.303 mg/kg dwt
diethylene glycol	Sewage Treatment Plant 15000 mg/l
	Fresh water 10 mg/l
	Marine water 1 mg/l
	Fresh water sediment 20.9 mg/kg dwt
	Soil 1.53 mg/kg dwt
	Sewage Treatment Plant 199.5 mg/l
	Marine water sediment 2.09 mg/kg dwt

8.2 Exposure controls

Appropriate engineering controls

: If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Individual protection measures

Hygiene measures

: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection

: Safety glasses with side-shields, EN 166.

Skin protection

Hand protection	: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. butyl rubber nitrile rubber Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. In case of prolonged contact with the product, it is recommended to wear gloves complying with ISO 21420 and EN 374 standards, protecting at least for 480 minutes and having a thickness of 0,38 mm at least. These values are indicative only. The level of protection is provided by the material of the glove, its technical characteristics, its resistance to the chemicals to be handled, the appropriateness of its use and its replacement frequency
Body protection	:  Wear work clothing with long sleeves. Non-skid safety shoes or boots
Respiratory protection	: Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use. Respirator with combination filter for vapor/particulate Warning ! filters have a limited use duration The use of breathing apparatus must comply strictly with the manufacturer's instructions and the regulations governing their choices and uses None under normal use conditions Wear a full-face respirator conforming to EN136 with type A/P2 filter or better.
Environmental exposure controls	: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

The conditions of measurement of all properties are at standard temperature (20°C / 68°F) and pressure (1013 hPa) unless otherwise indicated

9.1 Information on basic physical and chemical properties

Appearance

Physical state	: Liquid.
Color	: Yellow.
Odor	: Characteristic.
pH	: 7 to 8.5 [Conc. (% w/w): 50%]
Melting point/freezing point	:  -70°C [ISO 3016]
Initial boiling point and boiling range	:  260°C [ISO 3405]
Flash point	: Closed cup: 134°C [Closed cup]
Flammability	: Non-flammable.
Lower and upper explosion limit	: Lower: 1.5%
Vapor pressure	: <0.1 kPa
Vapor density	: Not available.

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Relative density : 1.065 to 1.085 [DIN 51757]
Density : 1.065 to 1.085 g/cm³ [20°C] [DIN 51757]
Solubility(ies) :

Media	Result
water	Soluble

Miscible with water : Yes.
Partition coefficient: n-octanol/ water : Not applicable.
Auto-ignition temperature : 200°C [DIN 51794]
Decomposition temperature : 360°C
Viscosity : Dynamic (room temperature): Not available.
Kinematic (room temperature): 15 to 17 mm²/s [ISO 3104]
Kinematic (40°C): Not available.

Particle characteristics

Median particle size : Not applicable.

9.2 Other information

No other relevant physical and chemical parameters for the safe use of the product

SECTION 10: Stability and reactivity

10.1 Reactivity : No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability : Stable under recommended storage and handling conditions (see Section 7).

10.3 Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid : No specific data.

10.5 Incompatible materials : Strong oxidizing agents

10.6 Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

Product/substance	Result
tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate	Rat - Dermal - LD50 >2000 mg/kg 402 Rat - Oral - LD50 >2000 mg/kg 401
1,1'-iminodipropan-2-ol	Rat - Oral - LD50



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diethylene glycol

4765 mg/kg

Toxic effects: Behavioral - Somnolence (general depressed activity) Gastrointestinal - Hypermotility, diarrhea Changes in Chemistry or Temperature - Body temperature decrease

Rat - Oral - LD50

6000 mg/kg

Rabbit - Dermal - LD50

8000 mg/kg

Rat - Inhalation - LC50 Vapor

20.1 mg/l [4 hours]

Rabbit - Dermal - LD50

13300 mg/kg

Rat - Oral - LD50

500 mg/kg

TEPA and OECD

Rabbit - Dermal - LD50

11890 mg/kg

Acute toxicity estimates

Product/substance	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
MAZDA ORIGINAL BRAKE FLUID	5050.5	N/A	N/A	N/A	N/A
1,1'-iminodipropyl-2-ol	4765	8000	N/A	20.1	N/A
diethylene glycol	500	11890	N/A	N/A	N/A

Based on available data, the classification criteria are not met.

Skin corrosion/irritation

Based on available data, the classification criteria are not met.

Serious eye damage/eye irritation

Based on available data, the classification criteria are not met.

Respiratory corrosion/irritation

Based on available data, the classification criteria are not met.

Respiratory or skin sensitization

Skin

Based on available data, the classification criteria are not met.

Respiratory

Based on available data, the classification criteria are not met.

Germ cell mutagenicity

Based on available data, the classification criteria are not met.

Carcinogenicity

Based on available data, the classification criteria are not met.

Reproductive toxicity

Based on available data, the classification criteria are met.

Specific target organ toxicity (single exposure)

Based on available data, the classification criteria are not met.

Specific target organ toxicity (repeated exposure)

Based on available data, the classification criteria are not met.

Aspiration hazard

Based on available data, the classification criteria are not met.

Information on the likely routes of exposure

Not available.

Potential acute health effects

Eye contact	: No known significant effects or critical hazards.
Inhalation	: No known significant effects or critical hazards.
Skin contact	: No known significant effects or critical hazards.
Ingestion	: No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact	: No specific data.
Inhalation	:  reduced fetal weight increase in fetal deaths skeletal malformations
Skin contact	:  reduced fetal weight increase in fetal deaths skeletal malformations
Ingestion	:  reduced fetal weight increase in fetal deaths skeletal malformations

Delayed and immediate effects and also chronic effects from short and long term exposure

Potential chronic health effects

Product/substance	Result
 diethylene glycol	Sub-acute - Rat - Male, Female - Oral - NOAEL OECD [Repeated Dose 28-day Oral Toxicity Study in Rodents] 936 mg/kg Sub-chronic - Rat - Male, Female - Oral - NOAEL 300 mg/kg

General	: No known significant effects or critical hazards.
Carcinogenicity	:  No known significant effects or critical hazards.
Mutagenicity	: No known significant effects or critical hazards.
Reproductive toxicity	:  Suspected of damaging fertility. Suspected of damaging the unborn child.

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties

 The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No 1272/2008.



11.2.2 Other information

Not available.

SECTION 12: Ecological information

12.1 Toxicity

Product/substance	Result
Tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate	Acute - EC50 Algae - <i>Pseudokirchneriella subcapitata</i> 201 >224 mg/l [72 hours] <u>Effect:</u> (growth rate) Acute - LC50 Fish - <i>Oncorhynchus mykiss</i> 203 >222.2 mg/l [96 hours] Acute - EC50 Crustaceans - <i>Daphnia magna</i> 202 >211 mg/l [48 hours] <u>Effect:</u> Mobility Chronic - NOEC Algae OECD >224 mg/l [72 hours] <u>Effect:</u> (growth rate)
1,1'-iminodipropan-2-ol	Acute - EC50 Algae - <i>Desmodesmus subspicatus</i> 339 mg/l [72 hours] <u>Effect:</u> (growth rate) Acute - LC50 Fish - <i>Danio rerio</i> OECD 1466 mg/l [96 hours] Acute - EC50 Crustaceans - <i>Daphnia magna</i> 278 mg/l [48 hours] <u>Effect:</u> Mobility Chronic - EC10 Algae - <i>Desmodesmus subspicatus</i> 219 mg/l [72 hours] <u>Effect:</u> (growth rate) Acute - IC50 Micro-organism - <i>Pseudomonas putida</i> 15000 mg/l [17 hours]
diethylene glycol	Acute - LC50 - Fresh water Fish - Fathead minnow - <i>Pimephales promelas</i> 75.2 g/l [96 hours] <u>Effect:</u> Mortality

Acute - EC50

Crustaceans - *Daphnia magna*
62600 mg/l [48 hours]
Effect: Mobility

Acute - EC50

Algae
>100 mg/l [72 hours]
Effect: (growth rate)

Chronic - NOEC

Algae
>100 mg/l [72 hours]
Effect: (growth rate)

12.2 Persistence and degradability

Product/substance	Result
Tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate	OECD 301A >70% [10 days] - Readily
1,1'-iminodipropyl-2-ol	OECD 301F 72% [28 days] - Readily
diethylene glycol	OECD 301B 75% [28 days] - Readily

Product/substance	Aquatic half-life	Photolysis	Biodegradability
Tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate	-	-	Readily
1,1'-iminodipropyl-2-ol	-	-	Readily
diethylene glycol	-	-	Readily

12.3 Bioaccumulative potential

Product/substance	LogK _{ow}	BCF	Potential
Tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate	1	-	Low
1,1'-iminodipropyl-2-ol	-0.79	-	Low
diethylene glycol	-1.98	100	Low

12.4 Mobility in soil

Soil/Water partition coefficient

Product/substance	logK _{oc}	K _{oc}
Tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate	3.2	1581.3
1,1'-iminodipropyl-2-ol	1.15	14.1015
diethylene glycol	0.61	4.08583

Results of PMT and vPvM assessment



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Product/substance	PMT	P	M	T	vPvM	vP	vM
Tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate 1,1'-iminodipropyl-2-ol diethylene glycol	No	No	No	Yes	No	No	No
	No	No	Yes	No	No	No	Yes
	No	No	Yes	No	No	No	Yes

Mobility : Not available.

Mobility in soil : Given its physical and chemical characteristics, the product generally shows low soil mobility Loss by evaporation is limited Soluble in water

12.5 Results of PBT and vPvB assessment

Regulation (EC) No. 1272/2008 [CLP]

Product/substance	PBT	P	B	T	vPvB	vP	vB
Tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate 1,1'-iminodipropyl-2-ol diethylene glycol	No	No	No	Yes	No	No	No
	No	No	No	No	No	No	No
	No	No	No	No	No	No	No

Conclusion/Summary : The product does not meet the criteria to be considered as a PBT or vPvB.

Regulation (EC) No. 1272/2008
[CLP]

12.6 Endocrine disrupting properties

The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No 1272/2008.

12.7 Other adverse effects

No known significant effects or critical hazards.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Methods of disposal : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Should not be released into the environment.

Hazardous waste : Yes.
According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. Waste codes should be assigned by the user based on the application for which the product was used. The following Waste Codes are only suggestions: 16 01 13*

Packaging

Methods of disposal : The generation of waste should be avoided or minimized wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Special precautions : This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

	ADR/RID	ADN	IMDG	ICAO/IATA
14.1 UN number or ID number	Not regulated.	Not regulated.	Not regulated.	Not regulated.
14.2 UN proper shipping name	-	-	-	-
14.3 Transport hazard class(es)	-	-	-	-
14.4 Packing group	-	-	-	-
14.5 Environmental hazards	No.	No.	No.	No.

14.6 Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

14.7 Maritime transport in bulk according to IMO instruments : Not available.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorization

Annex XIV

None of the components are listed.

Substances of very high concern

None of the components are listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

Labeling : Not applicable.

Other EU regulations

 Take note of Dir 92/85/EC on the protection of pregnant and breastfeeding women at work

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

Industrial emissions : Not listed

(integrated pollution prevention and control) - Air

Industrial emissions : Not listed

(integrated pollution prevention and control) - Water

Explosive precursors : Not applicable.

**Ozone depleting substances (EU 2024/590)**

Not listed.

Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

Persistent Organic Pollutants

Not listed.

Seveso Directive

This product is not controlled under the Seveso Directive.

National regulations**National regulatory information**

The Chemical act

Ordinance on limit values on hazard substances exposure during work and biological threshold values

E.g Law on hazard chemical transport

Law on health and safety

Act on Sustainable Waste Management NN no. 94/13

OG no. 73/17

Ordinance on Waste Management NN. 23/14

Official Gazette no. 15/14

OG no. 121/15

OG no. 132/15

Ordinance on packaging and packaging waste NN no. 88/15

78/16

Ordinance on the waste catalogue NN no. 90/15

International regulations**Chemical Weapon Convention List Schedules I, II & III Chemicals**

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list**Australia inventory (AIIIC)**

: All components are listed or exempted.

Canada inventory (DSL/NDSL)

: At least one component is not listed in DSL but all such components are listed in NDSL.

China inventory (IECSC)

: All components are listed or exempted.

Europe inventory (EC)

: All components are listed or exempted.



Japan inventory	: Japan inventory (CSCL): All components are listed or exempted. Japan inventory (ISHL): Not determined.
New Zealand Inventory of Chemicals (NZIoC)	: All components are listed or exempted.
Philippines inventory (PICCS)	: All components are listed or exempted.
Korea inventory (KECI)	: At least one component is not listed.
Taiwan Chemical Substances Inventory (TCSI)	: All components are listed or exempted.
Thailand inventory	: Not determined.
Turkey inventory	: Not determined.
United States inventory (TSCA 8b)	: All components are listed or exempted.
Vietnam inventory	: Not determined.

The information stated in this section relates solely to the conformity of the chemical product with the countries Inventories. The information used to confirm the inventory status of this product may be based on additional data to the chemical composition shown in Section 3. Other regulations may apply for importation or marketing authorizations.

15.2 Chemical Safety Assessment : Risk management measures and safety conditions of use are included in the relevant sections of the SDS

SECTION 16: Other information

Indicates information that has changed from previously issued version.

Abbreviations and acronyms :

- ACGIH = American Conference of Governmental Industrial Hygienists
- ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway
- ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
- ATE = Acute Toxicity Estimate
- B = Bioaccumulative
- BCF = Bioconcentration Factor
- DNEL = Derived No Effect Level
- DMEL = Derived Minimal Effect Level
- DMSO = Dimethyl Sulfoxide
- EC50 = Half maximal effective concentration
- EL50 = median Effective Loading
- EUH statement = CLP-specific Hazard statement
- HSE = Health, Safety and Environment
- IATA = International Air Transport Association
- IC50 = Half maximal inhibitory concentration
- IDHL = Immediately dangerous to life or health
- IMDG = International Maritime Dangerous Goods
- IMO = International Maritime Organization
- LC50 = Median lethal concentration
- LD50 = Median lethal dose
- LL50 = median Lethal Loading
- LogKow = logarithm of the octanol/water partition coefficient
- M = Mobile
- N/A = Not available
- NIOSH = National Institute of Occupational Safety and Health
- NOAEL = No Observed Adverse Effect Level
- NOEC = No Observed Effect Concentration
- NOEL = No Observed Effect Level
- NOELR = No observed Effect Loading Rate
- OECD = Organisation for Economic Co-operation and Development
- OEL = Occupational Exposure Limit
- P = Persistent
- PBT = Persistent, Bioaccumulative and Toxic
- PNEC = Predicted No Effect Concentration

SECTION 16: Other information

POP = Persistent Organic Pollutants
 QSAR = Quantitative Structure–Activity Relationship
 REL = Recommended Exposure Limit
 RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
 RRN = REACH Registration Number
 SGG = Segregation Group
 STEL = Short Term Exposure Limit
 T = Toxic
 TLV = Threshold Limit Value
 TWA = Time Weight Average
 vB = Very Bioaccumulative
 vM = Very Mobile
 VOC = Volatile Organic Compound
 vP = Very Persistent
 vPvB = Very Persistent and Very Bioaccumulative
 vPvM = Very Persistent and Very Mobile
 UFI = Unique Formula Identifier
 UVCB Substance of unknown or Variable composition, Complex reaction products or Biological material

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
Repr. 2, H361fd	Calculation method

Full text of abbreviated H statements

H302	Harmful if swallowed.
H319	Causes serious eye irritation.
H361fd	Suspected of damaging fertility. Suspected of damaging the unborn child.

Full text of classifications [CLP/GHS]

Acute Tox. 4	ACUTE TOXICITY - Category 4
Eye Irrit. 2	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2
Repr. 2	TOXIC TO REPRODUCTION - Category 2

Additional details on the supplier of the product



TotalEnergies

MAZDA ORIGINAL BRAKE FLUID

SDS # : 089567

SECTION 16: Other information

Date of revision : 2/27/2025

Date of previous issue : 5/20/2024

Version : 4

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 089567
Product name : MAZDA ORIGINAL BRAKE FLUID

Section 1 - Title

Short title of the exposure scenario : Formulation additives, lubricants and greases - Industrial

List of use descriptors : **Identified use name:** Formulation additives, lubricants and greases - Industrial
Process Category: PROC01, PROC02, PROC03, PROC04, PROC05, PROC08a, PROC08b, PROC09, PROC15
Sector of end use: SU03, SU10
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC02

Health Contributing scenarios : **General measures applicable to all activities**
General exposures Use in contained systems Elevated temperature - PROC02
Mixing operations Closed systems Batch processes at elevated temperatures - PROC03
Mixing operations Open systems Batch processes at elevated temperatures - PROC04, PROC05
Mixing operations (open systems) - PROC04, PROC05
Process sampling - PROC04, PROC08b
Bulk transfers Dedicated facility - PROC08b
Drum/batch transfers Dedicated facility - PROC08b
Drum/batch transfers Non-dedicated facility - PROC08a
Equipment cleaning and maintenance - PROC08a, PROC08b
Drum and small package filling - PROC09
Laboratory activities - PROC15
Storage - PROC01, PROC02

Processes and activities covered by the exposure scenario	: Industrial formulation of lubricant additives, lubricants and greases. Includes material transfers, mixing, large and small scale packing, sampling, maintenance.
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Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1:

No exposure scenario required

Contributing scenario controlling worker exposure for 2: General measures applicable to all activities

Concentration of substance in mixture or article : Covers percentage substance in the product up to 100 %. (unless stated differently)

Physical state : Liquid, vapor pressure < 0.5 kPa at Standard Temperature and Pressure

Amounts used : Not applicable.

Frequency and duration of use/exposure : Covers daily exposures up to 8 hours (unless stated differently)

Human factors not influenced by risk management : Not applicable.

Other operational conditions affecting worker exposure : Covers percentage substance in the product up to 100% (unless stated differently)

Conditions and measures related to personal protection, hygiene and health evaluation

Advice on general occupational hygiene	: Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN 374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent/minimise exposures and to report any skin problems that may develop. Avoid direct eye contact with product, also via contamination on hands.
Personal protection	: Use suitable eye protection.

Contributing scenario controlling worker exposure for 3: General exposures Use in contained systems Elevated temperature

No other specific measures identified.

Contributing scenario controlling worker exposure for 4: Mixing operations Closed systems Batch processes at elevated temperatures

Ventilation control measures : Provide extract ventilation to points where emissions occur.

Contributing scenario controlling worker exposure for 5: Mixing operations Open systems Batch processes at elevated temperatures

Frequency and duration of use/exposure : Avoid carrying out activities involving exposure for more than 4 hours.

Ventilation control measures : Provide extract ventilation to points where emissions occur.

Contributing scenario controlling worker exposure for 6: Mixing operations (open systems)

Ventilation control measures : Provide extract ventilation to points where emissions occur.

Contributing scenario controlling worker exposure for 7: Process sampling

Frequency and duration of use/exposure : Avoid carrying out activities involving exposure for more than 1 hour per day.

Conditions and measures related to personal protection, hygiene and health evaluation

Personal protection : Wear chemically resistant gloves (tested to EN374) in combination with specific activity training.

Contributing scenario controlling worker exposure for 8: Bulk transfers Dedicated facility

Frequency and duration of use/exposure : Avoid carrying out activities involving exposure for more than 4 hours.

Conditions and measures related to personal protection, hygiene and health evaluation

Personal protection : Wear chemically resistant gloves (tested to EN374) in combination with intensive management supervision controls.

Respiratory protection : Wear a respirator conforming to EN140 with type A filter or better. Effectiveness: 90%

Contributing scenario controlling worker exposure for 9: Drum/batch transfers Dedicated facility

Ventilation control measures : Provide extract ventilation to points where emissions occur.

Contributing scenario controlling worker exposure for 10: Drum/batch transfers Non-dedicated facility

Frequency and duration of use/exposure : Avoid carrying out activities involving exposure for more than 1 hour per day.

Ventilation control measures : Provide a good standard of general or controlled ventilation (10 to 15 air changes per hour).

Conditions and measures related to personal protection, hygiene and health evaluation

Personal protection : Wear chemically resistant gloves (tested to EN374) in combination with intensive management supervision controls.

Contributing scenario controlling worker exposure for 11: Equipment cleaning and maintenance

Technical conditions and measures to control dispersion from source towards the worker : Retain drain-downs in sealed storage pending disposal or for subsequent recycle.

Engineering controls : Drain down and flush system prior to equipment break-in or maintenance.

Conditions and measures related to personal protection, hygiene and health evaluation

Advice on general occupational hygiene : Clear spills immediately.

Personal protection : Wear chemically resistant gloves (tested to EN374) in combination with intensive management supervision controls.

Respiratory protection : Wear a respirator conforming to EN140 with type A filter or better. Effectiveness: 90%

Contributing scenario controlling worker exposure for 12: Drum and small package filling

Ventilation control measures : Provide a good standard of general or controlled ventilation (10 to 15 air changes per hour).

Conditions and measures related to personal protection, hygiene and health evaluation

Personal protection : Wear chemically resistant gloves (tested to EN374) in combination with specific activity training.

Respiratory protection : Wear a respirator conforming to EN140 with type A filter or better. Effectiveness: 90%

Contributing scenario controlling worker exposure for 13: Laboratory activities

Frequency and duration of use/exposure : Avoid carrying out activities involving exposure for more than 4 hours.

Conditions and measures related to personal protection, hygiene and health evaluation

Respiratory protection : Wear a respirator conforming to EN140 with type A filter or better. Effectiveness: 90%

Contributing scenario controlling worker exposure for 14: Storage

Engineering controls : Store substance within a closed system.

Section 3 - Exposure estimation and reference to its source

Website: : Not applicable.

Exposure estimation and reference to its source - Environment: 1:

Exposure assessment (environment): : Used ECETOC TRA model.

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Workers: 2: General measures applicable to all activities

Exposure assessment (human): : The risk Management Measures/Operational Conditions that are identified in the Exposure Scenario are the outcome of a quantitative and qualitative assessment that covers this product.

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Workers: 3: General exposures Use in contained systems Elevated temperature

Exposure assessment (human): : The risk Management Measures/Operational Conditions that are identified in the Exposure Scenario are the outcome of a quantitative and qualitative assessment that covers this product.

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Workers: 4: Mixing operations Closed systems Batch processes at elevated temperatures

- Exposure assessment (human):** : The risk Management Mesures/Operational Conditions that are identified in the Exposure Scenario are the outcome of a quantitative and qualitative assessment that covers this product.
- Exposure estimation and reference to its source** : Not available.

Exposure estimation and reference to its source - Workers: 5: Mixing operations Open systems Batch processes at elevated temperatures

- Exposure assessment (human):** : The risk Management Mesures/Operational Conditions that are identified in the Exposure Scenario are the outcome of a quantitative and qualitative assessment that covers this product.
- Exposure estimation and reference to its source** : Not available.

Exposure estimation and reference to its source - Workers: 6: Mixing operations (open systems)

- Exposure assessment (human):** : The risk Management Mesures/Operational Conditions that are identified in the Exposure Scenario are the outcome of a quantitative and qualitative assessment that covers this product.
- Exposure estimation and reference to its source** : Not available.

Exposure estimation and reference to its source - Workers: 7: Process sampling

- Exposure assessment (human):** : The risk Management Mesures/Operational Conditions that are identified in the Exposure Scenario are the outcome of a quantitative and qualitative assessment that covers this product.
- Exposure estimation and reference to its source** : Not available.

Exposure estimation and reference to its source - Workers: 8: Bulk transfers Dedicated facility

- Exposure assessment (human):** : The risk Management Mesures/Operational Conditions that are identified in the Exposure Scenario are the outcome of a quantitative and qualitative assessment that covers this product.
- Exposure estimation and reference to its source** : Not available.

Exposure estimation and reference to its source - Workers: 9: Drum/batch transfers Dedicated facility

- Exposure assessment (human):** : The risk Management Mesures/Operational Conditions that are identified in the Exposure Scenario are the outcome of a quantitative and qualitative assessment that covers this product.
- Exposure estimation and reference to its source** : Not available.

Exposure estimation and reference to its source - Workers: 10: Drum/batch transfers Non-dedicated facility

- Exposure assessment (human):** : The risk Management Mesures/Operational Conditions that are identified in the Exposure Scenario are the outcome of a quantitative and qualitative assessment that covers this product.
- Exposure estimation and reference to its source** : Not available.

Exposure estimation and reference to its source - Workers: 11: Equipment cleaning and maintenance

- Exposure assessment (human):** : The risk Management Mesures/Operational Conditions that are identified in the Exposure Scenario are the outcome of a quantitative and qualitative assessment that covers this product.
- Exposure estimation and reference to its source** : Not available.

Exposure estimation and reference to its source - Workers: 12: Drum and small package filling

Exposure assessment (human):	: The risk Management Measures/Operational Conditions that are identified in the Exposure Scenario are the outcome of a quantitative and qualitative assessment that covers this product.
Exposure estimation and reference to its source	: Not available.

Exposure estimation and reference to its source - Workers: 13: Laboratory activities

Exposure assessment (human):	: The risk Management Measures/Operational Conditions that are identified in the Exposure Scenario are the outcome of a quantitative and qualitative assessment that covers this product.
Exposure estimation and reference to its source	: Not available.

Exposure estimation and reference to its source - Workers: 14: Storage

Exposure assessment (human):	: The risk Management Measures/Operational Conditions that are identified in the Exposure Scenario are the outcome of a quantitative and qualitative assessment that covers this product.
Exposure estimation and reference to its source	: Not available.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment	: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Further details on scaling and control technologies are provided in SPERC factsheet. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required. For further information see www.atiel.org/reach/introduction .
Health	: Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. For further information see www.atiel.org/reach/introduction .

Additional good practice advice beyond the REACH CSA

Environment	: Not available.
Health	: Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 089567
Product name : MAZDA ORIGINAL BRAKE FLUID

Section 1 - Title

Short title of the exposure scenario : General use of lubricants and greases in vehicles or machinery - Industrial

List of use descriptors : **Identified use name:** General use of lubricants and greases in vehicles or machinery - Industrial
Process Category: PROC01, PROC02, PROC08b, PROC09
Sector of end use: SU03
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC04, ERC07

Health Contributing scenarios : **General measures applicable to all activities**
General exposures (closed systems) - PROC01
Initial factory fill of equipment Use in contained systems - PROC02, PROC09
Initial factory fill of equipment Open systems - PROC08b
Operation of equipment containing engine oils and similar Use in contained systems - PROC01
Equipment cleaning and maintenance - PROC08b
Equipment cleaning and maintenance Operation is carried out at elevated temperature (> 20°C above ambient temperature) - PROC08b
Storage - PROC01, PROC02

Processes and activities covered by the exposure scenario : Covers general use of lubricants and greases in vehicles or machinery in closed systems. Includes filling and draining of containers and operation of enclosed machinery (including engines) and associated maintenance and storage activities.

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1:

No exposure scenario required

Contributing scenario controlling worker exposure for 2: General measures applicable to all activities

Concentration of substance in mixture or article : Covers percentage substance in the product up to 100% (unless stated differently).

Physical state : Liquid, vapor pressure < 0.5 kPa at Standard Temperature and Pressure.

Frequency and duration of use/exposure : Covers daily exposures up to 8 hours (unless stated differently).

Other operational conditions affecting worker exposure : Assumes use at not more than 20°C above ambient temperature, unless stated differently. unless stated differently.
Assumes a good basic standard of occupational hygiene has been implemented.

Conditions and measures related to personal protection, hygiene and health evaluation

Advice on general occupational hygiene : Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN 374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent/minimise exposures and to report any skin problems that may develop. Avoid direct eye contact with product, also via contamination on hands.

Personal protection : Use suitable eye protection.

Contributing scenario controlling worker exposure for 3: General exposures (closed systems)

No other specific measures identified.

Contributing scenario controlling worker exposure for 4: Initial factory fill of equipment Use in contained systems**Conditions and measures related to personal protection, hygiene and health evaluation****Respiratory protection** : Wear a respirator conforming to EN140 with type A filter or better. Effectiveness: 90%**Contributing scenario controlling worker exposure for 5: Initial factory fill of equipment Open systems****Frequency and duration of use/exposure** : Avoid carrying out activities involving exposure for more than 4 hours.**Ventilation control measures** : Provide a good standard of general or controlled ventilation (10 to 15 air changes per hour)**Contributing scenario controlling worker exposure for 6: Operation of equipment containing engine oils and similar Use in contained systems**

No other specific measures identified.

Contributing scenario controlling worker exposure for 7: Equipment cleaning and maintenance**Technical conditions and measures at process level (source) to prevent release** : Retain drain-downs in sealed storage pending disposal or for subsequent recycle.**Engineering controls** : Drain down system prior to equipment break-in or maintenance.**Ventilation control measures** : Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).**Conditions and measures related to personal protection, hygiene and health evaluation****Personal protection** : Wear chemically resistant gloves (tested to EN374) in combination with specific activity training.**Respiratory protection** : Wear a respirator conforming to EN140 with type A filter or better. Effectiveness: 90%**Contributing scenario controlling worker exposure for 8: Equipment cleaning and maintenance Operation is carried out at elevated temperature (> 20°C above ambient temperature)****Technical conditions and measures to control dispersion from source towards the worker** : Retain drain-downs in sealed storage pending disposal or for subsequent recycle.**Engineering controls** : Drain down system prior to equipment break-in or maintenance.**Ventilation control measures** : Provide extract ventilation to emission points when contact with warm (>50°C) lubricant is likely.**Conditions and measures related to personal protection, hygiene and health evaluation****Personal protection** : Wear chemically resistant gloves (tested to EN374) in combination with intensive management supervision controls.**Contributing scenario controlling worker exposure for 9: Storage****Engineering controls** : Store substance within a closed system.**Section 3 - Exposure estimation and reference to its source****Website:** : Not applicable.**Exposure estimation and reference to its source - Environment: 1:****Exposure assessment (environment):** : Used ECETOC TRA model.**Exposure estimation and reference to its source** : Not available.

Exposure estimation and reference to its source - Workers: 2: General measures applicable to all activities

- Exposure assessment (human):** : The risk Management Measures/Operational Conditions that are identified in the Exposure Scenario are the outcome of a quantitative and qualitative assessment that covers this product.
- Exposure estimation and reference to its source** : Not available.

Exposure estimation and reference to its source - Workers: 3: General exposures (closed systems)

- Exposure assessment (human):** : The risk Management Measures/Operational Conditions that are identified in the Exposure Scenario are the outcome of a quantitative and qualitative assessment that covers this product.
- Exposure estimation and reference to its source** : Not available.

Exposure estimation and reference to its source - Workers: 4: Initial factory fill of equipment Use in contained systems

- Exposure assessment (human):** : The risk Management Measures/Operational Conditions that are identified in the Exposure Scenario are the outcome of a quantitative and qualitative assessment that covers this product.
- Exposure estimation and reference to its source** : Not available.

Exposure estimation and reference to its source - Workers: 5: Initial factory fill of equipment Open systems

- Exposure assessment (human):** : The risk Management Measures/Operational Conditions that are identified in the Exposure Scenario are the outcome of a quantitative and qualitative assessment that covers this product.
- Exposure estimation and reference to its source** : Not available.

Exposure estimation and reference to its source - Workers: 6: Operation of equipment containing engine oils and similar Use in contained systems

- Exposure assessment (human):** : The risk Management Measures/Operational Conditions that are identified in the Exposure Scenario are the outcome of a quantitative and qualitative assessment that covers this product.
- Exposure estimation and reference to its source** : Not available.

Exposure estimation and reference to its source - Workers: 7: Equipment cleaning and maintenance

- Exposure assessment (human):** : The risk Management Measures/Operational Conditions that are identified in the Exposure Scenario are the outcome of a quantitative and qualitative assessment that covers this product.
- Exposure estimation and reference to its source** : Not available.

Exposure estimation and reference to its source - Workers: 8: Equipment cleaning and maintenance Operation is carried out at elevated temperature (> 20°C above ambient temperature)

- Exposure assessment (human):** : The risk Management Measures/Operational Conditions that are identified in the Exposure Scenario are the outcome of a quantitative and qualitative assessment that covers this product.
- Exposure estimation and reference to its source** : Not available.

Exposure estimation and reference to its source - Workers: 9: Storage

- Exposure assessment (human):** : The risk Management Measures/Operational Conditions that are identified in the Exposure Scenario are the outcome of a quantitative and qualitative assessment that covers this product.
- Exposure estimation and reference to its source** : Not available.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment	: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Further details on scaling and control technologies are provided in SPERC factsheet. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required. For further information see www.atiel.org/reach/introduction .
Health	: Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. For further information see www.atiel.org/reach/introduction .

Additional good practice advice beyond the REACH CSA

Environment	: Not available.
Health	: Not available.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mixture
Code : 089567
Product name : MAZDA ORIGINAL BRAKE FLUID

Section 1 - Title

Short title of the exposure scenario : General use of lubricants and greases in vehicles or machinery - Professional

List of use descriptors : **Identified use name:** General use of lubricants and greases in vehicles or machinery - Professional
Process Category: PROC01, PROC02, PROC08a, PROC08b, PROC20
Sector of end use: SU22
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC09a, ERC09b

Health Contributing scenarios : **General measures applicable to all activities**
Operation of equipment containing engine oils and similar Use in contained systems - PROC01
Material transfers Non-dedicated facility - PROC08a
Equipment cleaning and maintenance Dedicated facility - PROC08b, PROC20
Storage - PROC01, PROC02

Processes and activities covered by the exposure scenario : Covers general use of lubricants and greases in vehicles or machinery in closed systems. Includes filling and draining of containers and operation of enclosed machinery (including engines) and associated maintenance and storage activities.

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1:

No exposure scenario required

Contributing scenario controlling worker exposure for 2: General measures applicable to all activities

Concentration of substance in mixture or article : Covers percentage substance in the product up to 100% (unless stated differently).

Physical state : Liquid, vapor pressure < 0.5 kPa at Standard Temperature and Pressure.

Frequency and duration of use/exposure : Covers daily exposures up to 8 hours (unless stated differently).

Other operational conditions affecting worker exposure : Assumes use at not more than 20°C above ambient temperature, unless stated differently. unless stated differently.
Assumes a good basic standard of occupational hygiene has been implemented.

Conditions and measures related to personal protection, hygiene and health evaluation

Advice on general occupational hygiene : Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN 374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent/minimise exposures and to report any skin problems that may develop. Avoid direct eye contact with product, also via contamination on hands.

Personal protection : Use suitable eye protection.

Contributing scenario controlling worker exposure for 3: Operation of equipment containing engine oils and similar Use in contained systems

No other specific measures identified.

Contributing scenario controlling worker exposure for 4: Material transfers Non-dedicated facility

Frequency and duration of use/exposure : Avoid carrying out activities involving exposure for more than 4 hours.

Conditions and measures related to personal protection, hygiene and health evaluation

Personal protection : Wear chemically resistant gloves (tested to EN374) in combination with specific activity training.

Respiratory protection : Wear a respirator conforming to EN140 with type A/P2 filter or better. Effectiveness: 95%

Contributing scenario controlling worker exposure for 5: Equipment cleaning and maintenance Dedicated facility

Technical conditions and measures at process level (source) to prevent release : Retain drain-downs in sealed storage pending disposal or for subsequent recycle.

Engineering controls : Drain down system prior to equipment break-in or maintenance.

Conditions and measures related to personal protection, hygiene and health evaluation

Respiratory protection : Wear a respirator conforming to EN140 with type A filter or better. Effectiveness: 90%

Contributing scenario controlling worker exposure for 6: Storage

Engineering controls : Store substance within a closed system.

Conditions and measures related to personal protection, hygiene and health evaluation

Respiratory protection : Wear a respirator conforming to EN140 with type A filter or better. Effectiveness: 90%

Section 3 - Exposure estimation and reference to its source

Website: : Not applicable.

Exposure estimation and reference to its source - Environment: 1:

Exposure assessment (environment): : Used ECETOC TRA model.

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Workers: 2: General measures applicable to all activities

Exposure assessment (human): : The risk Management Measures/Operational Conditions that are identified in the Exposure Scenario are the outcome of a quantitative and qualitative assessment that covers this product.

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Workers: 3: Operation of equipment containing engine oils and similar Use in contained systems

Exposure assessment (human): : The risk Management Measures/Operational Conditions that are identified in the Exposure Scenario are the outcome of a quantitative and qualitative assessment that covers this product.

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Workers: 4: Material transfers Non-dedicated facility

Exposure assessment (human): : The risk Management Measures/Operational Conditions that are identified in the Exposure Scenario are the outcome of a quantitative and qualitative assessment that covers this product.

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Workers: 5: Equipment cleaning and maintenance Dedicated facility

Exposure assessment (human):	: The risk Management Mesures/Operational Conditions that are identified in the Exposure Scenario are the outcome of a quantitative and qualitative assessment that covers this product.
Exposure estimation and reference to its source	: Not available.

Exposure estimation and reference to its source - Workers: 6: Storage

Exposure assessment (human):	: The risk Management Mesures/Operational Conditions that are identified in the Exposure Scenario are the outcome of a quantitative and qualitative assessment that covers this product.
Exposure estimation and reference to its source	: Not available.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment	: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Further details on scaling and control technologies are provided in SPERC factsheet. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required. For further information see www.atiel.org/reach/introduction .
Health	: Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. For further information see www.atiel.org/reach/introduction .

Additional good practice advice beyond the REACH CSA

Environment	: Not available.
Health	: Not available.