

SAFETY DATA SHEET

MSDS 02 Brake Fluid DOT 5 -Silicone Base

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

1.1. Product identifier

Trade name

MSDS 02 Brake Fluid DOT 5 -Silicone Base

Product no.

22

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

Relevant identified uses of the substance or mixture

Hydraulic fluid

▼ Uses advised against

None known.

1.3. Details of the supplier of the safety data sheet

Company and address

Orthene Chemicals .Ltd

Brember Road

HA2 8UJ Harrow

United Kingdom

+44 (0)20 8864 4414

E-mail

technical@orthene.co.uk

Revision

24/01/2023

SDS Version

3.0

Date of previous version

28/02/2022 (2.0)

1.4. Emergency telephone number

Contact The National Poisons Information Service (dial 111, 24 h service).

See section 4 "First aid measures".

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Not classified according to Regulation (EC) No. 1272/2008 (CLP) as retained and amended in UK law.

2.2. Label elements

▼ Hazard pictogram(s)

Not applicable.

▼ Signal word

Not applicable.

▼ Hazard statement(s)

Not applicable.

Safety statement(s)

General

-

Prevention

-

Response

-

Storage

-

According to EC-Regulation 1907/2006 (REACH), annex II, including changes implemented by EC-Regulation 2020/878

Disposal

-

▼ Hazardous substances

None known.

▼ Additional labelling

EUH210, Safety data sheet available on request.

2.3. Other hazards

▼ Additional warnings

This mixture/product does not contain any substances considered to meet the criteria classifying them as PBT and/or vPvB.

This product does not contain any substances considered to be endocrine disruptors in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

SECTION 3: Composition/information on ingredients

3.1. ▼ Substances

Not applicable. This product is a mixture.

3.2. ▼ Mixtures

Product/substance	Identifiers	% w/w	Classification	Note
tributyl phosphate	CAS No.: 126-73-8 EC No.: 204-800-2 UK-REACH: Index No.: 015-014-00-2	<1%	Acute Tox. 4, H302 Skin Irrit. 2, H315 Carc. 2, H351	

See full text of H-phrases in section 16. Occupational exposure limits are listed in section 8, if these are available.

▼ Other information

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SECTION 4: First aid measures

4.1. Description of first aid measures

General information

In the case of accident: Contact a doctor or casualty department – take the label or this safety data sheet.

Contact a doctor if in doubt about the injured person's condition or if the symptoms persist. Never give an unconscious person water or other drink.

Inhalation

Upon breathing difficulties or irritation of the respiratory tract: Bring the person into fresh air and stay with him/her.

If recovery is not rapid, seek medical attention.

Skin contact

Upon irritation: rinse with water. In the event of continued irritation, seek medical assistance.

Eye contact

Remove contact lenses and open eyes widely. Flush eyes with water or saline water(20-30°C) for at least 5 minutes.

If any irritation persists, seek medical assistance and continue flushing during transport.

Ingestion

Provide plenty of water for the person to drink and stay with him/her. Seek medical advice immediately and bring the safety data sheet or label from the product. Do not induce vomiting, unless recommended by the doctor. Have the victim lean forward with head down to avoid inhalation of- or choking on vomited material.

▼ Burns

Not applicable.

4.2. Most important symptoms and effects, both acute and delayed

The most important symptoms are described in sections 2 and 11.

4.3. ▼ Indication of any immediate medical attention and special treatment needed

None known.

Information to medics

Bring this safety data sheet or the label from this product.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Recommended: alcohol-resistant foam, carbon dioxide, powder, water mist. Waterjets should not be used, since they can spread the fire. However they may be used to cool adjacent containers.

5.2. Special hazards arising from the substance or mixture

Fire will result in dense smoke. Exposure to combustion products may harm your health. Closed containers, which are exposed to fire, should be cooled with water. Do not allow fire-extinguishing water to enter the sewage system and nearby surface waters.

5.3. Advice for firefighters

Fire fighters should wear appropriate personal protective equipment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Prevent unnecessary personnel entering area of a spill. When cleaning up large spills appropriate protective clothing should be worn - see section 8.

6.2. Environmental precautions

Avoid discharge to lakes, streams, sewers, etc.

6.3. Methods and material for containment and cleaning up

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.

Wherever possible cleaning should be performed with normal cleaning agents. Avoid use of solvents.

6.4. ▼ Reference to other sections

See section 13 "Disposal considerations" on handling of waste.

See section 8 "Exposure controls/personal protection" for protective measures.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid any method of handling that generates mists or aerosols.

Do not eat, drink or smoke when handling this product.

See section 8 "Exposure controls/personal protection" for information on personal protection.

7.2. Conditions for safe storage, including any incompatibilities

Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

Recommended storage material

Always store in containers of the same material as the original container.

Storage temperature

Room temperature 15 to 30°C

Incompatible materials

Strong acids, strong bases, strong oxidizing agents, and strong reducing agents.

7.3. ▼ Specific end use(s)

This product should only be used for applications quoted in section 1.2.

Users are referred to the specification SAE J1707 "Service maintenance of brake fluids".

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

tributyl phosphate

Long term exposure limit (8 hours) (mg/m³): 5

Short term exposure limit (15 minutes) (mg/m³): 5

The Control of Substances Hazardous to Health Regulations 2002. SI 2002/2677 The Stationery Office 2002. EH40/2005 Workplace exposure limits (Fourth Edition 2020).

DNEL

tributyl phosphate

According to EC-Regulation 1907/2006 (REACH), annex II, including changes implemented by EC-Regulation 2020/878

Duration	Route of exposure	DNEL
Long term – Systemic effects - Workers	Dermal	0.44 mg/kgBW / day
Long term – Systemic effects - Workers	Inhalation	3.13 mg/m3

PNEC

tributyl phosphate

Route of exposure	Duration of Exposure	PNEC
Sewage treatment plant	Continuous	1 mg/l
Water	Continuous	0.082 mg/l

8.2. Exposure controls

Compliance with the given occupational exposure limits values should be controlled on a regular basis.

General recommendations

Do not eat, drink or smoke when handling this product.

Exposure scenarios

There are no exposure scenarios implemented for this product.

Exposure limits

Professional users are subjected to the legally set maximum concentrations for occupational exposure. See occupational hygiene limit values above.

Appropriate technical measures

The formation of vapours must be kept at a minimum and below current limit values (see above). Installation of a local exhaust system if normal air flow in the work room is not sufficient is recommended. Ensure eyewash and emergency showers are clearly marked.

Hygiene measures

In between use of the product and at the end of the working day all exposed areas of the body must be washed thoroughly. Always wash hands, forearms and face.

Measures to avoid environmental exposure

No specific requirements.

8.3. Individual protection measures, such as personal protective equipment

Generally

Use only UKCA marked protective equipment.

Respiratory Equipment

No specific requirements

Skin protection

No specific requirements.

Hand protection

Material	Glove thickness (mm)	Breakthrough time (min.)	Standards
Butyl	0,3	> 480	EN374-2, EN374-3, EN388
Nitrile	0,2	> 480	EN374-2, EN374-3, EN388



Eye protection

No specific requirements.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state

Liquid

Colour

Purple

Odour / Odour threshold

Mild

According to EC-Regulation 1907/2006 (REACH), annex II, including changes implemented by EC-Regulation 2020/878

▼ pH

Testing not relevant or not possible due to the nature of the product.

Density (g/cm³)

0.955 - 0.975 (20 °C)

Kinematic viscosity

15 - 25 centistokes (20 °C)

▼ Particle characteristics

Does not apply to liquids.

Phase changes

▼ Melting point/Freezing point (°C)

< -50

▼ Softening point/range (waxes and pastes) (°C)

Does not apply to liquids.

Boiling point (°C)

>300

Vapour pressure

0.01 mmHg (20 °C)

▼ Relative vapour density

Testing not relevant or not possible due to the nature of the product.

Decomposition temperature (°C)

>350

Data on fire and explosion hazards

Flash point (°C)

>120

Auto-Ignition (°C)

>400

▼ Flammability (°C)

Testing not relevant or not possible due to the nature of the product.

▼ Lower and upper explosion limit (% v/v)

Testing not relevant or not possible due to the nature of the product.

Solubility

Solubility in water

Insoluble

n-octanol/water coefficient

3.5

▼ Solubility in fat (g/L)

Testing not relevant or not possible due to the nature of the product.

9.2. Other information

▼ Evaporation rate (n-butylacetate = 100)

0.01

▼ Other physical and chemical parameters

No data available.

SECTION 10: Stability and reactivity

10.1. ▼ Reactivity

No data available.

10.2. Chemical stability

The product is stable under the conditions, noted in section 7 "Handling and storage".

10.3. ▼ Possibility of hazardous reactions

None known.

10.4. ▼ Conditions to avoid

None known.

10.5. Incompatible materials

Strong acids, strong bases, strong oxidizing agents, and strong reducing agents.

10.6. Hazardous decomposition products

The product is not degraded when used as specified in section 1.

SECTION 11: Toxicological information

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

Acute toxicity

Oral -Based on read across data toxicity is very low (LD 50 Rat >10,000 mg/kg).

Inhalation - Not applicable due to low vapour pressure of product.

Dermal - Based on read across data toxicity is low (LD 50 Rabbit >3000 mg/kg).

Skin corrosion/irritation

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

However, repeated contact may de-fat the skin and cause dermatitis.

Serious eye damage/irritation

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

However, may cause slight temporary eye irritation.

Respiratory sensitisation

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

Skin sensitisation

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.

One minor ingredient is a possible carcinogen but this is below the threshold for classification.

Reproductive toxicity

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

STOT-single exposure

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

STOT-repeated exposure

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

Aspiration hazard

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

11.2. Information on other hazards

▼ Long term effects

None known.

▼ Endocrine disrupting properties

None known.

▼ Other information

None known.

SECTION 12: Ecological information

12.1. Toxicity

Product is predicted to be of low ecotoxicity. However due to its insolubility it can cover areas of water.

12.2. Persistence and degradability

Product is inherently biodegradable (OECD 302B).

If admitted into adapted biological water treatment plants in small quantities no adverse effects of the degrading action of the live sludge are expected.

12.3. Bioaccumulative potential

Product is not expected to bioaccumulate.

12.4. Mobility in soil

Potential for mobility in soil is relatively low as water insoluble.

12.5. Results of PBT and vPvB assessment

This mixture/product does not contain any substances considered to meet the criteria classifying them as PBT and/or vPvB.

12.6. ▼ Endocrine disrupting properties

None known.

12.7. ▼ Other adverse effects

None known.

According to EC-Regulation 1907/2006 (REACH), annex II, including changes implemented by EC-Regulation 2020/878

SECTION 13: Disposal considerations

▼ Waste treatment methods

Dispose of in accord with local and national regulations. Recycling or incineration with energy recovery are recommended.

Product is not covered by regulations on dangerous waste.

Regulation (EU) No 1357/2014 of 18 December 2014 on waste as retained and amended in UK law.

EWC code

16 01 13* Brake fluids

▼ Specific labelling

Not applicable.

Contaminated packing

Packaging containing residues of the product must be disposed of similarly to the product.

SECTION 14: Transport information

	14.1 UN / ID	14.2 UN proper shipping name	14.3 Hazard class(es)	14.4 PG*	14.5 Env**	Other information
ADR	-	-	-	-	-	-
IMDG	-	-	-	-	-	-
IATA	-	-	-	-	-	-

* Packing group

** Environmental hazards

▼ Additional information

Not dangerous goods according to ADR, IATA and IMDG.

14.6. ▼ Special precautions for user

Not applicable.

14.7. ▼ Maritime transport in bulk according to IMO instruments

No data available.

SECTION 15: Regulatory information

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

Restrictions for application

Pregnant women and women breastfeeding must not be exposed to this product. The risk, and possible technical precautions or design of the workplace needed to eliminate exposure, must be considered.

▼ Demands for specific education

No specific requirements.

▼ SEVESO - Categories / dangerous substances

Not applicable.

▼ Additional information

Not applicable.

▼ Sources

Regulation (EU) No 1357/2014 of 18 December 2014 on waste as retained and amended in UK law.

Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures (CLP) as retained and amended in UK law.

Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) as retained and amended in UK law.

15.2. Chemical safety assessment

No

SECTION 16: Other information

Full text of H-phrases as mentioned in section 3

H302, Harmful if swallowed.

H315, Causes skin irritation.
H351, Suspected of causing cancer.

Abbreviations and acronyms

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
BCF = Bioconcentration Factor
CAS = Chemical Abstracts Service
CE = Conformité Européenne
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
CSA = Chemical Safety Assessment
CSR = Chemical Safety Report
DMEL = Derived Minimal Effect Level
DNEL = Derived No Effect Level
EINECS = European Inventory of Existing Commercial chemical Substances
ES = Exposure Scenario
EUH statement = CLP-specific Hazard statement
EWC = European Waste Catalogue
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IARC = International Agency for Research on Cancer (IARC)
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
OECD = Organisation for Economic Co-operation and Development
PBT = Persistent, Bioaccumulative and Toxic
PNEC = Predicted No Effect Concentration
RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
RRN = REACH Registration Number
SCL = A specific concentration limit
SVHC = Substances of Very High Concern
STOT-RE = Specific Target Organ Toxicity - Repeated Exposure
STOT-SE = Specific Target Organ Toxicity - Single Exposure
TWA = Time weighted average
UN = United Nations
UVBC = Unknown or variable composition, complex reaction products or of biological materials
VOC = Volatile Organic Compound
vPvB = Very Persistent and Very Bioaccumulative

▼ Additional information

Not applicable.

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▼ The safety data sheet is validated by

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Other

A change (in proportion to the last essential change (first cipher in SDS version, see section 1)) is marked with a blue triangle.

The information in this safety data sheet applies only to this specific product (mentioned in section 1) and is not necessarily correct for use with other chemicals/products.

It is recommended to hand over this safety data sheet to the actual user of the product. Information in this safety data sheet cannot be used as a product specification.

Country-language: GB-en