



Silicone Brake Fluid DOT5

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830
Issue date: 4/23/2015 Revision date: 10/5/2018 Supersedes version of: 12/16/2015 Version: 2.4

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

1.1. Product identifier

Product form : Mixture
Name : Silicone Brake Fluid DOT5
Product code : 532
Article number : 53200

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

1.2.1. Relevant identified uses

Industrial/Professional use spec : Professional use.
Function or use category : Brake fluids

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

BARDAHL NL - OCD NEDERLAND BV
Maxwellstraat 41
3316 GP Dordrecht
Nederland
T 0031 78 651 2322 - F 0031 78 617 4848
mjkooijman@bardahl.nl - www.bardahl.nl

1.4. Emergency telephone number

Emergency number : +31 (0) 6 54924171
During office hours: 8.30 t/m 17:00 h

Country	Official advisory body	Address	Emergency number	Comment
	Guy's & St Thomas' Poisons Unit Medical Toxicology Unit, Guy's & St Thomas' Hospital Trust	Avonley Road SE14 5ER London	0870 243 2241	
Ireland	National Poisons Information Centre Beaumont Hospital	PO Box 1297 Beaumont Road 9 Dublin	+353 1 809 2566 (Healthcare professionals- 24/7) +353 1 809 2166 (public, 8am - 10pm, 7/7)	
Israel	Israel Poison Information Center Rambam Health Care Campus	6 Ha'Aliya Street 31096 Haifa	+972 4 854 1900	
Malta	Medicines & Poisons Info Office	Mater Dei Hospital MSD Msida	+356 2545 6504	
United Kingdom	National Poisons Information Service (Birmingham Centre) City Hospital	Dudley Road B18 7QH Birmingham	0344 892 0111	
United Kingdom	National Poisons Information Service (Belfast Centre) Royal Victoria Hospital	Grosvenor Road BT12 6BA Belfast	0344 892 0111	

Silicone Brake Fluid DOT5

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Not classified

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

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

EUH-statements : EUH210 - Safety data sheet available on request.

2.3. Other hazards

PBT: not relevant – no registration required

vPvB: not relevant – no registration required

Contains no PBT/vPvB substances $\geq 0.1\%$ assessed in accordance with REACH Annex XIII

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
tributyl phosphate	CAS-No.: 126-73-8 EC-No.: 204-800-2 EC Index-No.: 015-014-00-2 REACH-no: 01-2119492859-14	< 1	Carc. 2, H351 Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315

Full text of H- and EUH-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: Take off immediately all contaminated clothing. In any case of doubt or if symptoms can be observed, get medical attention.
First-aid measures after inhalation	: Allow affected person to breathe fresh air. If you feel unwell, seek medical advice. When unconsciousness transport in a recovery position.
First-aid measures after skin contact	: Wash skin thoroughly with mild soap and water. Immediately call a POISON CENTER/doctor.
First-aid measures after eye contact	: Irrigate copiously with clean, fresh water for at least 15 minutes, holding the eyelids apart. Seek medical advice. Remove contact lenses, if present and easy to do. Continue rinsing.
First-aid measures after ingestion	: Obtain emergency medical attention.

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

Symptoms/effects : Limited evidence of a carcinogenic effect.

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

Treat symptomatically. Call a POISON CENTER/doctor.

Silicone Brake Fluid DOT5

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Carbon dioxide. Powder. Alcohol resistant foam. Water haze.
Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire : At high temperature may liberate toxic gases.

5.3. Advice for firefighters

Firefighting instructions : Use water spray or fog for cooling exposed containers.
Protection during firefighting : Use self-contained breathing apparatus. Wear suitable protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Wear proper protective equipment. See Heading 8.

6.1.1. For non-emergency personnel

No additional information available

6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

Prevent entry to sewers and public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Soak up with inert absorbent material (for example sand, sawdust, a universal binder, silica gel).
Other information : May be dangerously slippery if spilled. Stop leak without risks if possible.

6.4. Reference to other sections

See Headings 7 and 8. See Heading 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : Good ventilation of the workplace required. Avoid aerosolbuilding. Caution! Substance is absorbed through the skin.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in dry, cool, well-ventilated area. Keep container tightly closed. Hygroscopic product.
Storage temperature : -30 – 60 °C

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

No additional information available

Silicone Brake Fluid DOT5

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

No additional information available

8.2.2. Personal protection equipment

Personal protective equipment:

Protective goggles. Dust formation: dust mask. Combined gas/dust mask with filter type A/P2.

Personal protective equipment symbol(s):



8.2.2.1. Eye and face protection

Eye protection:

Use eye protection according to EN 166, designed to protect against liquid splashes.

8.2.2.2. Skin protection

Skin and body protection:

Wear suitable protective clothing. EN ISO 13688

Hand protection:

Wear suitable gloves resistant to chemical penetration. Selection of the glove material on consideration of the penetration times, permeability and degradation. Wear suitable gloves tested to EN374. Penetration time of glove material: ≥ 480 min. Nitrile rubber gloves. PVC gloves. Butyl rubber gloves. Refer to manufacturer's information.

8.2.2.3. Respiratory protection

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment. Extra personal protection: A/P2 filter respirator for organic vapour and harmful dust

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Other information:

The usual precautionary measures are to be adhered to when handling chemicals. Keep away from food, drink and animal feedingstuffs. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Remove contaminated clothing immediately. Do not eat, drink or smoke when using this product.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Violet.
Odour	: characteristic.
Odour threshold	: No data available
pH	: No data available

Silicone Brake Fluid DOT5

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: > 35 °C
Flash point	: > 100 °C (Closed cup)
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Solubility	: Soluble in water.
Partition coefficient n-octanol/water (Log Pow)	: No data available
Viscosity, kinematic	: 20 mm²/s
Viscosity, dynamic	: No data available
Explosive properties	: Product is not explosive. Not self-igniting.
Oxidising properties	: No data available
Explosive limits	: No data available

9.2. Other information

Additional information : Material is hygroscopic

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

No decomposition if used according to specifications.

10.3. Possibility of hazardous reactions

No dangerous reactions known.

10.4. Conditions to avoid

No additional information available

10.5. Incompatible materials

Bases. Strong acids. Strong oxidizers.

10.6. Hazardous decomposition products

Carbon dioxide. Carbon monoxide. Silicate.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

Silicone Brake Fluid DOT5

LD50 oral rat	> 5000 mg/kg
LD50 dermal rat	> 5000 mg/kg

tributyl phosphate (126-73-8)

LD50 oral rat	3000 mg/kg
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Silicone Brake Fluid DOT5

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

tributyl phosphate (126-73-8)	
LD50 dermal rat	> 3100 (Toxicol.Appl.Pharmacol. 41, 291-304)
LC50 Inhalation - Rat	4.424 mg/l/4h (OECD 403)
Skin corrosion/irritation	: Prolonged or repeated contact may cause skin to become dry or cracked.
Serious eye damage/irritation	: Irritating to eyes
Respiratory or 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
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
Silicone Brake Fluid DOT5	
Viscosity, kinematic	20 mm²/s

SECTION 12: Ecological information

12.1. Toxicity

Hazardous to the aquatic environment, short-term (acute)	: Not classified
Hazardous to the aquatic environment, long-term (chronic)	: Not classified

Silicone Brake Fluid DOT5	
LC50 - Other aquatic organisms [1]	250 – 350 mg/l (Leuciscus Idus) (DIN 38412 T.15; analogy) 96h
EC50 - Other aquatic organisms [1]	> 5000 mg/l (Bacteriën) (OECD 2091; analogy)
tributyl phosphate (126-73-8)	
LC50 - Fish [1]	8.2 mg/l (Forel)
EC50 - Crustacea [1]	3.65 mg/l
EC50 72h - Algae [1]	100 mg/l (Activated sludge) (OECD 209)
EC50 72h - Algae [2]	2.8 mg/l (Desmodesmus Subspicaus) (DIN 38412 part 9)

12.2. Persistence and degradability

Silicone Brake Fluid DOT5	
Biodegradation	97 % (static; analogy)
tributyl phosphate (126-73-8)	
Biodegradation	92 % (28d; OECD 301D)

12.3. Bioaccumulative potential

tributyl phosphate (126-73-8)	
BCF - Fish [1]	6 – 49
Partition coefficient n-octanol/water (Log Pow)	2.5

12.4. Mobility in soil

Silicone Brake Fluid DOT5	
Ecology - soil	Prevent entry to sewers and public waters.

Silicone Brake Fluid DOT5

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

12.5. Results of PBT and vPvB assessment

Silicone Brake Fluid DOT5

PBT: not relevant – no registration required

vPvB: not relevant – no registration required

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.

SECTION 14: Transport information

In accordance with / / / ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
14.1. UN number				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.2. UN proper shipping name				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.3. Transport hazard class(es)				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.4. Packing group				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.5. Environmental hazards				
Dangerous for the environment: No	Dangerous for the environment: No Marine pollutant: No	Dangerous for the environment: No	Dangerous for the environment: No	Dangerous for the environment: No
No supplementary information available				

14.6. Special precautions for user

Overland transport

No data available

Transport by sea

No data available

Air transport

No data available

Inland waterway transport

No data available

Rail transport

No data available

Silicone Brake Fluid DOT5

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

EU restriction list (REACH Annex XVII)	
Reference code	Applicable on
3.	Silicone Brake Fluid DOT5 ; tributyl phosphate
28.	Silicone Brake Fluid DOT5
29.	Silicone Brake Fluid DOT5
3(b)	tributyl phosphate
30.	Silicone Brake Fluid DOT5

Contains no REACH Annex XIV substances

Contains no substance subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

Contains no substance subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

Contains no substance subject to REGULATION (EU) No 1005/2009 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 September 2009 on substances that deplete the ozone layer.

Contains no substance subject to Regulation (EU) 2019/1148 of the European Parliament and of the Council of 20 June 2019 on the marketing and use of explosives precursors.

Contains no substance subject to Regulation (EC) 273/2004 of the European Parliament and of the Council of 11 February 2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances.

15.1.2. National regulations

Germany

Water hazard class (WGK) : WGK 1, Slightly hazardous to water (Classification according to AwSV, Annex 1)
Hazardous Incident Ordinance (12. BImSchV) : Is not subject of the Hazardous Incident Ordinance (12. BImSchV)

Netherlands

ABM category : B(4) - low hazard for aquatic organisms
SZW-lijst van kankerverwekkende stoffen : None of the components are listed
SZW-lijst van mutagene stoffen : None of the components are listed
SZW-lijst van reprotoxische stoffen – Borstvoeding : None of the components are listed
SZW-lijst van reprotoxische stoffen – Vruchtbaarheid : None of the components are listed
SZW-lijst van reprotoxische stoffen – Ontwikkeling : None of the components are listed

Switzerland

Storage class (LK) : LK 10/12 - Liquids

15.2. Chemical safety assessment

No

SECTION 16: Other information

Indication of changes			
Section	Changed item	Change	Comments
15.2	Chemical safety assessment	Modified	

Silicone Brake Fluid DOT5

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Abbreviations and acronyms:

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RID: Regulations Concerning the International Transport of Dangerous Goods by Rail

ICAO: International Civil Aviation Organization

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

Full text of H- and EUH-statements:

Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Carc. 2	Carcinogenicity, Category 2
EUH210	Safety data sheet available on request.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H351	Suspected of causing cancer.
Skin Irrit. 2	Skin corrosion/irritation, Category 2

Safety Data Sheet (SDS), EU

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.