

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Additive Lubrizol 6178

Version 1.0

Revision Date 11.11.2014 Print Date 13.11.2014

GB / EN

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

1.1 Product identifier

Commercial Product Name : Additive Lubrizol 6178
Part number : 83 29 0 434 684

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

Use of the Substance/Mixture : Additive

1.3 Details of the supplier of the safety data sheet

Company : **BMW AG**
80788 München
Germany
Telephone : +49 (0)89 / 382-0
Telefax : +49 (0)89 / 382-25858
E-mail address : hazmat@bmw.com

1.4 Emergency telephone number

+49 (0)89 / 382-78333

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Chronic aquatic toxicity, Category 3 H412: Harmful to aquatic life with long lasting effects.

Classification (67/548/EEC, 1999/45/EC)

Dangerous for the environment R52/53: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard statements : H412 Harmful to aquatic life with long lasting effects.

Precautionary statements : **Prevention:**
P273 Avoid release to the environment.

Disposal:
P501 Dispose of contents/ container to an approved waste disposal plant.

Limited labelling (<= 125 ml)

Hazard statements : H412 Harmful to aquatic life with long lasting effects.

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

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SECTION 3: Composition/information on ingredients**3.2 Mixtures****Hazardous components**

Chemical Name	CAS-No.	Classification (67/548/EEC)	Classification (1272/2008/EC)	Concentration [%]
	EC-No.			
	Registration number			
Reaction Products of alcohols, C14-18, C18 unsaturat,esterified with phosphorus pentoxide and salted with amines, C12- 14,-tert-alkyl	939-591-3	R52/53	Aquatic Chronic 3; H412	>= 25 - < 35
	01- 2119978530- 33			
methanol	67-56-1	F; R11 T; R23/24/25- R39/23/24/25	Flam. Liq. 2; H225 Acute Tox. 3; H301 Acute Tox. 3; H331 Acute Tox. 3; H311 STOT SE 1; H370	>= 0,75 - < 1
	200-659-6			
	01- 2119433307- 44			

For the full text of the R-phrases mentioned in this Section, see Section 16.

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures**4.1 Description of first aid measures**

- General advice : If you feel unwell, seek medical advice (show the label where possible). First aider needs to protect himself. Move out of dangerous area. Never give anything by mouth to an unconscious person. Take off contaminated clothing and shoes immediately.
- If inhaled : If breathed in, move person into fresh air. If symptoms persist, call a physician. Keep patient warm and at rest. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.
- In case of skin contact : In case of contact, immediately flush skin with soap and plenty of water. Do NOT use solvents or thinners. If skin irritation persists, call a physician. Wash off with polyethylene glycol and afterwards with plenty of water.
- In case of eye contact : Protect unharmed eye. If easy to do, remove contact lens, if worn. In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- If swallowed : If swallowed, seek medical advice immediately and show this container or label. If swallowed, DO NOT induce vomiting. If a person vomits when lying on his back, place him in the recovery position.

4.2 Most important symptoms and effects, both acute and delayed

No data available

4.3 Indication of any immediate medical attention and special treatment needed

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No data available

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Carbon dioxide (CO₂), Dry chemical, Foam, Water spray jet, Water mist

Unsuitable extinguishing media : High volume water jet

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire-fighting : Do not use a solid water stream as it may scatter and spread fire. Hazardous decomposition products may be formed under fire conditions (see section 10). Exposure to decomposition products may be a hazard to health.

5.3 Advice for firefighters

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.

Further information : Standard procedure for chemical fires. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. In the event of fire and/or explosion do not breathe fumes. Use water spray to cool unopened containers. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Refer to protective measures listed in sections 7 and 8. Use personal protective equipment. Avoid contact with skin and eyes. Ensure adequate ventilation, especially in confined areas. Avoid inhalation of vapour or mist.

6.2 Environmental precautions

Do not flush into surface water or sanitary sewer system. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities. Avoid release to the environment. Refer to special instructions/ Safety data sheets.

6.3 Methods and materials for containment and cleaning up

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal. Clean contaminated surface thoroughly.

6.4 Reference to other sections

see chapter: 7, 8, 11, 12 and 13

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SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling : For personal protection see section 8. Do not breathe vapours or spray mist. Avoid contact with skin and eyes.

Advice on protection against fire and explosion : Normal measures for preventive fire protection.

Dust explosion class : Not applicable

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Store in original container. Keep containers tightly closed in a cool, well-ventilated place.

Advice on common storage : Incompatible with oxidizing agents. Incompatible with acids.
Keep away from food, drink and animal feedingstuffs.

Storage temperature : ≤ 45 °C

Other data : No decomposition if stored and applied as directed.

7.3 Specific end use(s)

No data available

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Components	CAS-No.	Control parameters	Basis	Update
methanol	67-56-1	TWA: 266 mg/m ³ , 200 ppm Sk, STEL: 333 mg/m ³ , 250 ppm Sk,	GB EH40	2005-04-06
methanol	67-56-1	TWA: 260 mg/m ³ , 200 ppm skin,	2006/15/EC	2009-12-19

Other information on limit values: see chapter 16

8.2 Exposure controls

Engineering measures

Provide sufficient air exchange and/or exhaust in work rooms.

Personal protective equipment

Respiratory protection : In the case of vapour formation use a respirator with an approved filter.

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Hand protection

Remarks : Choose gloves to protect hands against chemicals depending on the concentration and quantity of the hazardous substance and specific to place of work. For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer.

Eye protection

: In case of splash hazard, please wear protective goggles.

Skin and body protection

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

Hygiene measures

: Handle in accordance with good industrial hygiene and safety practice.
General industrial hygiene practice.
Avoid breathing vapours, mist or gas.
Avoid contact with skin, eyes and clothing.
When using do not eat, drink or smoke.
Wash hands before breaks and at the end of workday.
Follow the skin protection plan.
Wash contaminated clothing before re-use.

Environmental exposure controls

General advice : Do not flush into surface water or sanitary sewer system.
Prevent further leakage or spillage if safe to do so.
If the product contaminates rivers and lakes or drains inform respective authorities.
Avoid release to the environment. Refer to special instructions/ Safety data sheets.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance : liquid
Colour : amber
Odour : mild hydrocarbon-like
Odour Threshold : No data available
Flash point : 154 °C
Method: Pensky-Martens closed cup

Ignition temperature : No data available
Thermal decomposition : No data available

Lower explosion limit : No data available
Upper explosion limit : No data available
Explosive properties : Not explosive

Flammability : No data available
Oxidizing properties : No oxidising effect.

Auto-ignition temperature : No data available
Burning number : No data available

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Molecular weight	: No data available
pH	: No data available
setting point	: -14,99 °C
Vapour pressure	: No data available
Density	: 0,92 g/cm ³ at 15,6 °C
Bulk density	: No data available
Water solubility	: insoluble
Partition coefficient: n-octanol/water	: No data available
Solubility in other solvents	: No data available
Viscosity, dynamic	: No data available
Viscosity, kinematic	: 35 mm ² /s at 40 °C
	6,3 mm ² /s at 100 °C
Flow time	: No data available
Impact sensitivity	: No data available
Relative vapour density	: No data available
Surface tension	: No data available
Evaporation rate	: No data available
Minimum ignition energy	: No data available
Acid number	: No data available
Refraction index	: No data available
Miscibility in water	: No data available
Solvent separation test	: No data available

9.2 Other information

None known.

SECTION 10: Stability and reactivity

10.1 Reactivity

No data available

10.2 Chemical stability

The product is chemically stable.

10.3 Possibility of hazardous reactions

Stability : No decomposition if stored and applied as directed.

10.4 Conditions to avoid

No data available

10.5 Incompatible materials

Materials to avoid : Acids, Oxidizing agents

10.6 Hazardous decomposition products

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Hazardous decomposition products : Oxides of phosphorus, Aldehydes, Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke).

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Acute oral toxicity : Acute toxicity estimate : > 2.000 mg/kg
Method: Calculation method

Acute inhalation toxicity : Acute toxicity estimate : > 20 mg/l
Test atmosphere: vapour
Exposure time: 4 h
Method: Calculation method

Acute dermal toxicity : Acute toxicity estimate : > 2.000 mg/kg
Method: Calculation method

Acute toxicity (other routes of administration):

No data available

Skin corrosion/irritation

Reaction Products of alcohols, C14-18, C18 unsaturat,esterified with phosphorus pentoxide and salted with amines, C12-14,-tert-alkyl : Species: Rabbit
No skin irritation
Method: OECD Test Guideline 404

methanol : Species: Rabbit
No skin irritation

Serious eye damage/eye irritation

Reaction Products of alcohols, C14-18, C18 unsaturat,esterified with phosphorus pentoxide and salted with amines, C12-14,-tert-alkyl : Species: Rabbit
No eye irritation
Method: OECD Test Guideline 405

methanol : Species: Rabbit
No eye irritation

Respiratory or skin sensitisation

Sensitisation:

Reaction Products of alcohols, C14-18, C18 unsaturat,esterified with phosphorus pentoxide and salted with amines, C12-14,-tert-alkyl : Test Method: Buehler Test
Species: Guinea pig
Result: Does not cause skin sensitisation.
Method: OECD Test Guideline 406

methanol : Test Method: Maximisation Test (GPMT)
Species: Guinea pig

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Result: Does not cause skin sensitisation.
Method: OECD Test Guideline 406

Germ cell mutagenicity

Genotoxicity in vitro:

Reaction Products of alcohols, C14-18, C18 unsaturat, esterified with phosphorus pentoxide and salted with amines, C12-14, -tert-alkyl : Type: Ames test
Test species: Salmonella typhimurium with and without metabolic activation
Result: negative
Method: OECD Test Guideline 471

Genotoxicity in vivo:

No data available

Carcinogenicity

No data available

Reproductive toxicity

No data available

Teratogenicity

No data available

STOT - single exposure

methanol : Causes damage to organs.

STOT - repeated exposure

No data available

Aspiration hazard

Aspiration toxicity

No data available

Neurological effects

No data available

Toxicology Assessment

Toxicology, Metabolism, Distribution

No data available

Acute effects

No data available

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SECTION 12: Ecological information

12.1 Toxicity

Toxicity to fish

Reaction Products of alcohols, C14-18, C18 unsaturat, esterified with phosphorus pentoxide and salted with amines, C12-14, -tert-alkyl : LL50 (Oncorhynchus mykiss (rainbow trout)): > 1.000 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

methanol : LC50 (Lepomis macrochirus (Bluegill sunfish)): 15.400 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates

Reaction Products of alcohols, C14-18, C18 unsaturat, esterified with phosphorus pentoxide and salted with amines, C12-14, -tert-alkyl : EL50 (Daphnia magna (Water flea)): 91 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202

methanol : EC50 (Daphnia magna (Water flea)): > 10.000 mg/l
Exposure time: 48 h
Method: DIN 38412

Toxicity to algae

Reaction Products of alcohols, C14-18, C18 unsaturat, esterified with phosphorus pentoxide and salted with amines, C12-14, -tert-alkyl : NOELR (Pseudokirchneriella subcapitata (green algae)): 1 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

EL50 (Pseudokirchneriella subcapitata (green algae)): > 10 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

methanol : EC50 (Pseudokirchneriella subcapitata (microalgae)): ca. 22.000 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 201

Toxicity to bacteria

Reaction Products of alcohols, C14-18, C18 unsaturat, esterified with phosphorus pentoxide and salted with amines, C12-14, -tert-alkyl : 320 mg/l
Exposure time: 3 h
Test Method: Respiration inhibition of activated sludge
Method: OECD Test Guideline 209

methanol : IC50 : > 1.000 mg/l
Exposure time: 3 h
Test Method: Respiration inhibition of activated sludge
Method: OECD Test Guideline 209

Toxicity to fish (Chronic toxicity)

methanol : NOEC: 7.900 mg/l
Exposure time: 200 h

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Species: *Oryzias latipes* (Orange-red killifish)

Ecotoxicology Assessment

Chronic aquatic toxicity

Reaction Products of alcohols, C14-18, C18 unsaturat, esterified with phosphorus pentoxide and salted with amines, C12-14, -tert-alkyl : Harmful to aquatic life with long lasting effects.

12.2 Persistence and degradability

Biodegradability

Reaction Products of alcohols, C14-18, C18 unsaturat, esterified with phosphorus pentoxide and salted with amines, C12-14, -tert-alkyl : Result: Not biodegradable
Exposure time: 28 d
Method: OECD Test Guideline 301B

methanol : Result: Readily biodegradable

12.3 Bioaccumulative potential

Bioaccumulation

methanol : Species: *Cyprinus carpio* (Carp)
Concentration: 5 mg/l
Bioconcentration factor (BCF): 1 - 4,5

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects

Additional ecological information : The product should not be allowed to enter drains, water courses or the soil.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

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Advice on disposal and packaging

: Disposal:

In accordance with local and national regulations. Do not dispose of waste into sewer. This material and its container must be disposed of as hazardous waste. Do not dispose of together with household waste.

Waste codes should be assigned by the user based on the application for which the product was used.

SECTION 14: Transport information

14.1 UN number

ADN

Not dangerous goods

ADR

Not dangerous goods

RID

Not dangerous goods

IMDG

Not dangerous goods

IATA

Not dangerous goods

14.2 Proper shipping name

ADN

Not dangerous goods

ADR

Not dangerous goods

RID

Not dangerous goods

IMDG

Not dangerous goods

IATA

Not dangerous goods

14.3 Transport hazard class(es)

ADN

Not dangerous goods

ADR

Not dangerous goods

RID

Not dangerous goods

IMDG

Not dangerous goods

IATA

Not dangerous goods

14.4 Packing group

ADN

Not dangerous goods

ADR

Not dangerous goods

RID

Not dangerous goods

IMDG

Not dangerous goods

IATA

Not dangerous goods

14.5 Environmental hazards

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ADN

Not dangerous goods

ADR

Not dangerous goods

RID

Not dangerous goods

IMDG

Not dangerous goods

IATA

Not dangerous goods

14.6 Special precautions for user

see chapter: 6, 7 and 8

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

SECTION 15: Regulatory information

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

VOC : Not applicable

Seveso II - Directive
2003/105/EC amending Council
Directive 96/82/EC on the control
of major-accident hazards
involving dangerous substances : Update:
Not applicable

Seveso III: Directive 2012/18/EU
of the European Parliament and
of the Council on the control of
major-accident hazards involving
dangerous substances. Update:
Not applicable

Further information : Reserved for industrial and professional use.

National legislation

Other regulations : Take note of Dir 94/33/EC on the protection of young people at work.

15.2 Chemical Safety Assessment

No data available

SECTION 16: Other information

Full text of R-phrases referred to under sections 2 and 3

R11	Highly flammable.
R23/24/25	Toxic by inhalation, in contact with skin and if swallowed.
R39/23/24/25	Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.
R52/53	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Full text of H-Statements referred to under sections 2 and 3.

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H225	Highly flammable liquid and vapour.
H301	Toxic if swallowed.
H311	Toxic in contact with skin.
H331	Toxic if inhaled.
H370	Causes damage to organs.
H412	Harmful to aquatic life with long lasting effects.

Other information

Sk	Can be absorbed through skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.
skin	Identifies the possibility of significant uptake through the skin

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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