

1 Identification

- **Product identifier**
- **Trade name:** COOLANT M5.0 READY TO USE
- **Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the mixture**
Only for proper handling.
Engine coolant
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**



MOTOREX AG
Bern-Zürich-Strasse 31, Postfach
CH-4901 Langenthal
Tel. +41 (0)62 919 75 75
www.motorex.com

A1 Accessory Imports
60-62 Burchill St.
Loganholme
4129 QLD
Australia
Phone : 07 3451 1300
- **Further information obtainable from:** msds@motorex.com
- **Emergency telephone number:**
In case of a medical emergency following exposure to a chemical, call Poisons Information Centre Australia 13 11 26

2 Hazard(s) Identification

- **Classification of the substance or mixture**
Serious eye damage/irritation – Category 2A H319 Causes serious eye irritation.
STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.

- **Label elements**
- **GHS label elements**
The product is classified and labelled according to the Globally Harmonised System (GHS).
- **Hazard pictograms**



 GHS07 GHS08
- **Signal word** Warning
- **Hazard-determining components of labelling:**
Ethane-1,2-diol
- **Hazard statements**
H319 Causes serious eye irritation.
H373 May cause damage to organs through prolonged or repeated exposure.
- **Precautionary statements**
P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
P103 Read label before use.
P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P264 Wash thoroughly after handling.

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P280 *Wear eye protection / face protection.*
 P305+P351+P338 *IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.*
 P337+P313 *If eye irritation persists: Get medical advice/attention.*
 P501 *Dispose of contents/container in accordance with local/regional/national/international regulations.*

- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition and Information on Ingredients

- **Chemical characterisation: Mixtures**
- **Description:** Mixture of substances listed below with nonhazardous additions.

- **Dangerous components:**

CAS: 107-21-1 EINECS: 203-473-3	Ethane-1,2-diol STOT RE 2, H373	50-70%
CAS: 3164-85-0 EINECS: 221-625-7	potassium 2-ethylhexanoate Repr. 2, H361; Eye Dam. 1, H318; Skin Irrit. 2, H315	1-2.5%
CAS: 12045-78-2 EC number: 601-707-2	potassium tetraborate Repr. 2, H361	0.25-1%
CAS: 29385-43-1 EINECS: 249-596-6	methyl-1H-benzotriazole Acute Tox. 3, H301; Repr. 2, H361	≥0.1-<0.25%

- **Additional information:** For the wording of the listed hazard phrases refer to section 16.

4 First Aid Measures

- **General information:**
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:**
Remove residues with soap and water.
Remove contaminated clothing immediately.
- **After eye contact:**
Rinse opened eye for several minutes under running water.
Consult a physician if irritation develops.
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** If symptoms persist consult doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed**
No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire Fighting Measures

- **Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.
- **Special hazards arising from the substance or mixture**
During heating or in case of fire poisonous gases are produced.

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· **Protective equipment:** Mouth respiratory protective device.

6 Accidental Release Measures

· **Personal precautions, protective equipment and emergency procedures**

Mount respiratory protective device.

· **Environmental precautions:**

Dilute with plenty of water.

Do not allow to enter sewers/ surface or ground water.

· **Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to section 13.

Ensure adequate ventilation.

· **Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and Storage

· **Handling:**

· **Precautions for safe handling**

Keep out of the reach of children.

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

· **Information about fire - and explosion protection:** Keep respiratory protective device available.

· **Storage:**

· **Requirements to be met by storerooms and receptacles:** Do not store in zinc containers.

· **Information about storage in one common storage facility:** Not required.

· **Further information about storage conditions:**

The recommended storage temperature is (deg.C): ≤50°C

Store containers closed and protect against rain, dust, heat and other atmospheric influences.

Keep container tightly sealed.

· **Storage class:** 12

· **Specific end use(s)** No further relevant information available.

8 Exposure controls and personal protection

· **Additional information about design of technical facilities:** No further data; see section 7.

· **Ingredients with limit values that require monitoring at the workplace:**

107-21-1 Ethane-1,2-diol

WES	Short-term value: 104** mg/m ³ , 40** ppm
	Long-term value: 10* 52** mg/m ³ , 20** ppm
	Sk;*particulate;**vapour

· **DNELs**

107-21-1 Ethane-1,2-diol

Dermal	DNEL / Workers / Systemic effects / Long-term	106 mg/kg/24h (worker)
	DNEL/general population/Systemic effects/Long-term	53 mg/kg/24h (consumer)
Inhalative	DNEL / Workers / Local Effects / Long-term	35 mg/m ³ (worker)
	DNEL/general population/Local effects/Long-term	7 mg/m ³ (consumer)

3164-85-0 potassium 2-ethylhexanoate

Oral	DNEL/general population/Systemic effects/Long-term	1 mg/kg/24h (consumer)
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Dermal	DNEL / Workers / Systemic effects / Long-term	2 mg/kg/24h (worker)
	DNEL/general population/Systemic effects/Long-term	1 mg/kg/24h (consumer)
Inhalative	DNEL / Workers / Systemic effects / Long-term	14 mg/m ³ (worker)
	DNEL/general population/Systemic effects/Long-term	3 mg/m ³ (consumer)
29385-43-1 methyl-1H-benzotriazole		
Oral	DNEL/general population/Systemic effects/Long-term	0.25 mg/kg/24h (consumer)
	DNEL/general pop/Systemic effects/acute-short term	0.25 mg/kg/24h (consumer)
Dermal	DNEL / Workers / Systemic effects / Long-term	0.5 mg/kg/24h (worker)
	DNEL/general population/Systemic effects/Long-term	0.25 mg/kg/24h (consumer)
Inhalative	DNEL / Workers / Systemic effects / Long-term	8.8 mg/m ³ (worker)
	DNEL/general population/Systemic effects/Long-term	4.4 mg/m ³ (consumer)

· PNECs
107-21-1 Ethane-1,2-diol

PNEC / Aquatic organisms / Freshwater	10 mg/l (aquatic organisms)
PNEC / Aquatic organisms / Marine water	1 mg/l (aquatic organisms)
PNEC/Aquatic org/intermittent releases(freshwater)	10 mg/l (aquatic organisms)
PNEC/Aquatic organisms/Sewage treatment plant/STP	199.5 mg/l (aquatic organisms)
PNEC / Aquatic organisms / Sediment (freshwater)	37 mg/kg (aquatic organisms)
PNEC / Aquatic organisms / Sediment (marine water)	3.7 mg/kg (aquatic organisms)
PNEC / Terrestrial organism / Soil	1.53 mg/kg (terrestrial organisms)

3164-85-0 potassium 2-ethylhexanoate

PNEC / Aquatic organisms / Freshwater	0.36 mg/l (aquatic organisms)
PNEC / Aquatic organisms / Marine water	0.036 mg/l (aquatic organisms)
PNEC/Aquatic organisms/Sewage treatment plant/STP	71.7 mg/l (aquatic organisms)
PNEC / Aquatic organisms / Sediment (freshwater)	6.37 mg/kg (aquatic organisms)
PNEC / Aquatic organisms / Sediment (marine water)	0.637 mg/kg (aquatic organisms)
PNEC / Terrestrial organism / Soil	1.06 mg/kg (terrestrial organisms)

29385-43-1 methyl-1H-benzotriazole

PNEC / Aquatic organisms / Freshwater	0.008 mg/l (aquatic organisms)
PNEC / Aquatic organisms / Marine water	0.008 mg/l (aquatic organisms)
PNEC/Aquatic organisms/Sewage treatment plant/STP	39.4 mg/l (aquatic organisms)
PNEC / Aquatic organisms / Sediment (freshwater)	0.0025 mg/kg (aquatic organisms)
PNEC / Aquatic organisms / Sediment (marine water)	0.0025 mg/kg (aquatic organisms)

· **Additional information:** The lists valid during the making were used as basis.

· **Personal protective equipment:**

· **General protective and hygienic measures:**

- Keep away from foodstuffs, beverages and feed.
- Immediately remove all soiled and contaminated clothing
- Wash hands before breaks and at the end of work.
- Store protective clothing separately.
- Do not inhale gases / fumes / aerosols.
- Avoid contact with the eyes.
- Avoid contact with the eyes and skin.

· **Respiratory protection:**

- In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
- Not necessary if room is well-ventilated.
- Respiratory protection if formation of aerosol or mist: use mask with filter type A2, A2/P2 or ABEK.

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· **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**



safety goggles

· **Body protection:** Protective work clothing

9 Physical and Chemical Properties

· **General Information**

· **Appearance:**

· **Form:**

Fluid

· **Colour:**

Turquoise

· **Odour:**

Characteristic

· **Odour threshold:**

Not determined.

· **pH-value at 20 °C:**

8.3 (DIN 51369)

· **Change in condition**

· **Melting point/freezing point:**

Undetermined.

· **Initial boiling point and boiling range:** 100 °C (DIN EN ISO 3405)

· **Flash point:**

Not applicable.

· **Flammability (solid, gas):**

Not applicable.

· **Decomposition temperature:**

Not determined.

· **Explosive properties:**

Product does not present an explosion hazard.

· **Explosion limits:**

· **Lower:**

Not determined.

· **Upper:**

Not determined.

· **Vapour pressure:**

Not determined.

· **Density at 20 °C:**

1.072 g/cm³ (ASTM D 4052)

· **Relative density**

Not determined.

· **Vapour density**

Not determined.

· **Evaporation rate**

Not determined.

· **Solubility in / Miscibility with**

· **water:**

Fully miscible.

· **Partition coefficient: n-octanol/water:** Not determined.

· **Viscosity:**

· **Dynamic:**

Not determined.

· **Kinematic:**

2 mm²/s @ 40 °C

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- | | |
|-----------------------------------|--|
| · Solvent separation test: | |
| · VOC (EC) | 0.00 % |
| · Other information | No further relevant information available. |

10 Stability and Reactivity

- **Reactivity** No further relevant information available.
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological Information

- **Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.

· **LD/LC50 values relevant for classification:**

107-21-1 Ethane-1,2-diol

Oral	LD50	7,712 mg/kg (rat)
	NOEL	150 mg/kg/24h (rat)
	NOAEL	200 mg/kg/24h (rat)
	NOAEL	12,500 ppm (mouse)
Dermal	LD50	3,500 mg/kg (mouse)
	NOAEL	2,200-4,400 mg/kg/24h (dog)
Inhalative	LC50 / 6h	2.5 mg/l (rat)

3164-85-0 potassium 2-ethylhexanoate

Oral	LD50	1,600-3,200 mg/kg (rat)
	NOEL	65 mg/kg/24h (rat)
	NOAEL	180-205 mg/kg/24h (mouse)
	NOAEL	61-300 mg/kg/24h (rat)
Dermal	LOAEL	303-360 mg/kg/24h (rat)
	LD50	2,000 mg/kg (rat)
Inhalative	LC0 / 8h	110 mg/m3 (rat)

29385-43-1 methyl-1H-benzotriazole

Oral	LD50	720 mg/kg (rat)
	NOAEL	150 mg/kg/24h (rat)
	LOAEL	6,700-11,700 mg/kg/24h (rat)
Dermal	LD50	2,000 mg/kg (rabbit)

- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation** Causes serious eye irritation.
- **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** May cause damage to organs through prolonged or repeated exposure.

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· **Aspiration hazard** Based on available data, the classification criteria are not met.

12 Ecological Information

· **Toxicity**

· **Aquatic toxicity:**

107-21-1 Ethane-1,2-diol

LC50	7,286 mg/l/96h (fish)
LC50	1,500 mg/l/28d (fish)
EC50	3,536-13,000 mg/l/96h (algae / cyanobacteria)
EC50	33,911 mg/l/21d (aquatic invertebrates)
EC100	100 mg/l/48h (aquatic invertebrates)
EC0	100 mg/l/48h (aquatic invertebrates)
EC50	100 mg/l/48h (aquatic invertebrates)
NOEC	7,500-15,000 mg/l/21d (aquatic invertebrates)
NOEC	100 mg/l/72h (algae / cyanobacteria)
NOEC	8,590-24,000 mg/l/7d (aquatic invertebrates)
	15,380-32,000 mg/l/7d (fish)

3164-85-0 potassium 2-ethylhexanoate

LC50	70-150 mg/l/96h (fish)
LC50	120 mg/l/48h (aquatic invertebrates)
	270-1,801 mg/l/48h (fish)
EC50	85.4 mg/l/24h (aquatic invertebrates)
EC10	32 mg/l/72h (algae / cyanobacteria)
EC50	49.3 mg/l/72h (algae / cyanobacteria)
EC50	75 mg/l/21d (aquatic invertebrates)
EC100	125 mg/l/48h (aquatic invertebrates)
EC0	62.5 mg/l/48h (aquatic invertebrates)
EC50	85.4-910 mg/l/48h (aquatic invertebrates)
NOEC	25 mg/l/21d (aquatic invertebrates)
LOEC	63 mg/kg/28d (aquatic invertebrates)

29385-43-1 methyl-1H-benzotriazole

LOEC	37.6 mg/l/21d (aquatic invertebrates)
LC50	55-180 mg/l/96h (fish)
LC0	100 mg/l/96h (fish)
LC50	55 mg/l/48h (aquatic invertebrates)
	240 mg/l/48h (fish)
LC50	180 mg/l/72h (fish)
LC50	240 mg/l/24h (fish)
EC10	0.4-0.97 mg/l/21d (aquatic invertebrates)
EC10	4.17-8.56 mg/l/48h (aquatic invertebrates)
EC50	1,060 mg/l/24h (microorganisms)
EC10	1.18-10.5 mg/l/72h (algae / cyanobacteria)
EC50	29-75 mg/l/72h (algae / cyanobacteria)
EC50	18.4-37.6 mg/l/21d (aquatic invertebrates)
EC50	8.58-15.8 mg/l/48h (aquatic invertebrates)

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NOEC	18.4 mg/l/21d (aquatic invertebrates)
NOEC	10-30 mg/l/72h (algae / cyanobacteria)
NOEC	30 mg/l/48h (aquatic invertebrates)

- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**

- **Bioaccumulative potential**

107-21-1 Ethane-1,2-diol

Partition coefficient	≤1.36 [---] (log Kow) (Bioaccumulation)
Biodegradability	>90 % (28d) (Biodegradability) (OECD 301 A)

3164-85-0 potassium 2-ethylhexanoate

Partition coefficient	≤0.851 [---] (log Kow) (Bioaccumulation)
Biodegradability	99 % (28d) (Biodegradability) (OECD 301 E)

- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (according to Appendix 1 AwSV): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
Contact waste processors for recycling information.
Return product and/or partially emptied container in original packaging to the point of sale or hand it over to a collection point for special waste.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

14 Transport information

· UN-Number	
· ADG, ADN, IMDG, IATA	Not classified as hazardous for transport
· UN proper shipping name	
· ADG, ADN, IMDG, IATA	Not classified as hazardous for transport
· Transport hazard class(es)	
· ADG, ADN, IMDG, IATA	
· Class	Not classified as hazardous for transport
· Packing group	
· ADG, IMDG, IATA	Not classified as hazardous for transport
· Environmental hazards:	
· Marine pollutant:	No

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- | | |
|---|---|
| · Special precautions for user | Not applicable. |
| · Transport in bulk according to Annex II of Marpol and the IBC Code | Not applicable. |
| · UN "Model Regulation": | Not classified as hazardous for transport |

15 Regulatory information

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

- **Australian Inventory of Industrial Chemicals**

All ingredients are listed.

- **Standard for the Uniform Scheduling of Medicines and Poisons**

107-21-1 | Ethane-1,2-diol

S5, S6, S10

- **Australia: Priority Existing Chemicals**

None of the ingredients is listed.

- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **Chemical safety assessment:** A Chemical Safety Assessment has been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

The classification of the mixture was carried out by calculation in accordance with the rules laid down in Annex I of Regulation (EC) No 1272/2008.

No special training instructions to ensure protection of human health and environment are required.

- **purity requirement**
- **Relevant phrases**
 - H301 Toxic if swallowed.
 - H315 Causes skin irritation.
 - H318 Causes serious eye damage.
 - H361 Suspected of damaging fertility or the unborn child.
 - H373 May cause damage to organs through prolonged or repeated exposure.
- **Department issuing SDS:** Abteilung Produktsicherheit
- **Contact:**
- **Abbreviations and acronyms:**
 - Acute Tox. 3: Acute toxicity – Category 3
 - Skin Irrit. 2: Skin corrosion/irritation – Category 2
 - Eye Dam. 1: Serious eye damage/eye irritation – Category 1
 - Serious eye damage/irritation – Category 2A: Serious eye damage/eye irritation – Category 2A
 - Repr. 2: Reproductive toxicity – Category 2
 - STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2
- *** Data compared to the previous version altered.**

AU