

SAFETY DATA SHEET

Temper -10, -15, -20, -30, -40, -55, -60

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

- Date of issue 17.01.2019
- 1.1. Product identifier**
- REACH registration Temper -10, -15, -20, -30, -40, -55, -60
This substance is exempted from Registration according to the provisions of Article 2.7 b) and Annex V of REACH.
- 1.2. Relevant identified uses of the substance or mixture and uses advised against**
- Application of the substance / the preparation Coolant/heat transfer fluid in closed systems
- 1.3. Details of the supplier of the safety data sheet**
- Manufacturer Temper Technology AB
Exportgatan 49
SE-422 46 Hisings Backa
Sweden
Phone: +46 31 730 50 50
- info@temper.se
<http://www.temper.se>
- 1.4. Emergency telephone number**
- Only emergency call number: 112 or 999

SECTION 2: Hazards identification

- 2.1. Classification of the substance or mixture**
- Classification according to (EC) No.1272/2008: Not classified.
- 2.2. Label elements**
- Labeling is not required because the product is not classified as hazardous.
- 2.3. Other hazards**
- The product contains no PBT or vPvB substances.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

The product contains no substances in such concentrations that they need to be declared.

SECTION 4: First aid measures

4.1. Description of first aid measures

- General If in doubt, seek medical advice.
- Inhalation Fresh air. Consult a doctor if symptoms should occur.
- Skin contact Wash skin with soap and water. Remove contaminated clothing. Consult a doctor if symptoms should occur.
- Eye contact Immediately rinse with water for several minutes. Remove any contact lenses. Hold eyelids apart. Consult a doctor if symptoms should occur.
- Ingestion Immediately rinse mouth and drink plenty of water (200-300 ml). Get medical attention.

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

Inhalation: no symptoms are known.
Skin contact: may be degreasing after repeated contact, redness and fine cracks in the skin may occur.
Eye contact: temporary eye irritation/redness.
Ingestion: no known adverse health effects.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media Use fire-extinguishing media appropriate for surrounding materials.

5.2. Special hazards arising from the substance or mixture

Fire / explosion hazards This product is not flammable.
Hazardous combustion products can include, but are not limited to: carbon dioxide (CO₂) and carbon monoxide (CO).

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5.3. Advice for firefighters

Self-contained breathing apparatus may be required by rescue workers. In case of evacuation, use escape mask where possible.
 Extinguishing water must not be discharged into drains. 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

Ventilate well. Use protective equipment as referred to in section 8.

6.2. Environmental precautions

Do not allow to enter into sewer, water system or soil.

6.3. Methods and material for containment and cleaning up

Small quantities can be dissolved/diluted in water and flushed to drain.
 Large Spillages: Absorb spillage with suitable absorbent material. Collect in suitable containers and deliver as waste according to section 13.

6.4. Reference to other sections

See also sections 8 and 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid contact with eyes and skin. Do not mix with other chemicals.

Protective Measures

Wash hands after contact with the product. Change contaminated clothing and take off protective equipment before the meal. Do not smoke, drink or eat in the workplace.

7.2. Conditions for safe storage, including any incompatibilities

Store in tightly closed container. Store in a dark place.
 When stored outside, care should be taken to avoid environmental contamination in the event of leakage.
 Incompatible materials: galvanized steel, zinc and soft solder

7.3. Specific end use(s)

See section 1.2.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Contains no substances with occupational exposure limit values.

8.2. Exposure controls

Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment. Eye wash facilities should be available when handling this product.



Respiratory protection

Normally not required.

Hand protection

In case of repeated or prolonged contact, use resistant plastic gloves. The most suitable glove must be chosen in consultation with the gloves supplier, who can inform about the breakthrough time of the glove material.

Eye / face protection

Use safety goggles or face shield in case of splash risk.

Skin protection

Ordinary workwear.

Appropriate environmental exposure control

Do not allow to enter into sewer, water system or soil.

Other Information

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The listed protective equipment is a recommendation. A risk assessment of the actual risk may lead to other requirements.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Clear liquid.
Color	Colorless to pale yellowish.
Odour	Characteristic.
pH (as supplied)	8-9
Melting point	< 0 °C
Melting point range	Temper -10 < - 10 °C; Temper -15 < - 15 °C; Temper -20 < - 20 °C; Temper -30 < - 30 °C; Temper -40 < - 40 °C; Temper -55 < - 55 °C; Temper -60 < - 60 °C
Boiling point	~ 109 °C
Flash point	Not applicable. Not combustible.
Evaporation rate	Not determined.
Explosion limit	Not explosive.
Vapour pressure	Not determined.
Vapour density	Not determined.
Specific gravity	1086-1260 kg/m ³
Solubility description	Completely soluble in water.
Partition coefficient: n-octanol / water	Not relevant for a mixture.
Spontaneous combustability	Not applicable. Not spontaneously flammable.
Decomposition temperature	Not determined.
Viscosity, dynamic	1-5 mPas.

Physical hazards

Explosive properties	No explosive properties.
Oxidizing properties	Not determined.

9.2. Other information

Other physical and chemical properties

No further information is available.

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal temperature conditions and recommended use..

10.2. Chemical stability

Stable under normal temperature conditions and recommended use.

10.3. Possibility of hazardous reactions

No hazardous reactions known.

10.4. Conditions to avoid

No special conditions to avoid.

10.5. Incompatible materials

Galvanized steel, zinc and soft solder.

10.6. Hazardous decomposition products

None under normal conditions. See also section 5.2.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicological Information:

LD50 (oral, rat) > 5000 mg/kg

Toxicological information about the ingredients:
 Potassium acetate, CAS-nr 127-08-2:
 LD50 (oral, rat) = 3250 mg/kg
 Source: Prevent data base "Kemiska ämnen"

Potassium formate, CAS-nr 590-29-4:

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LD50 (oral, mouse) = 5500 mg/kg
 Source: Prevent data base "Kemiska ämnen"

Potential acute effects

Inhalation	No symptoms are known.
Skin contact	May be degreasing after frequent contact. Redness and fine cracks in the skin may occur.
Eye contact	May cause temporary eye irritation.
Ingestion	Low acute toxicity. No harmful effects expected in amounts likely to be ingested by accident. The bitter taste of the product makes accidental ingestion unlikely.

Delayed effects / repeated exposure

Sensitisation	Based on available data, the classification criteria are not met.
Repeated dose toxicity	Based on available data, the classification criteria are not met.

Carcinogenic, mutagenic or reprotoxic effects

Carcinogenicity	Based on available data, the classification criteria are not met.
Mutagenicity	Based on available data, the classification criteria are not met.
Teratogenic properties	Based on available data, the classification criteria are not met.
Reproductive toxicity	Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

12.1. Ecotoxicity

LC50 (fish, 96h): 13900 mg/l [species: Oncorhynchus mykiss] OECD TG203
 No data available for Temper-60.
 The product is not classified as dangerous for the environment.

12.2. Persistence and degradability

DOC 99% after 28 days (OECD 301A). No data available for Temper-60.
 The components contained in the product are readily biodegradable.

12.3. Bioaccumulative potential

Will not bio-accumulate.

12.4. Mobility in soil

Soluble in water.

12.5. Results of PBT and vPvB assessment

The mixture does not meet current criteria for PBT (Persistent, bioaccumulative and toxic) or vPvB (very persistent and very bioaccumulative).

12.6. Other adverse effects

Do not allow to enter into sewer, water system or soil. Most of the components in the product act as fertilizers.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

	Confirm disposal procedures with environmental engineer and local regulations.
Waste code (EWC)	16 05 09 discarded chemicals other than those mentioned in 16 05 06, 16 05 07 or 16 05 08
Other Information	The waste code is intended as a guide. The user must select a code if the use differs from the one mentioned above.

SECTION 14: Transport information

14.1. UN number

Not relevant.

14.2. UN proper shipping name

Not relevant.

14.3. Transport hazard class(es)

Not dangerous goods according to transport regulations.

14.4. Packing group

Not relevant.

14.5. Environmental hazards

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Not relevant.

14.6. Special precautions for user

Not relevant.

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

Not dangerous goods according to transport regulations.

SECTION 15: Regulatory information

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

CHIP Regulations. The Chemicals (Hazard Information and Packaging for Supply) Regulation.

Regulation (EC) No 1272/2008 of the European Parliament and of the Council on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Regulation (EC) No 1907/2006 (REACH) Annex II: Safety data sheets.

The Hazardous Waste (England and Wales) Regulations 2005 with amendments.

Dangerous Goods regulations

Occupational Exposure Limits. EH40/2010.

Substances in the product are not included in REACH's Restricted Substances List (RSL, EU REACH Annex XVII) or REACH Substance of Very High Concern List (SVHC)

More information

The product is considered as a preparation according to EU legislation.

15.2. Chemical safety assessment

Chemical safety assessment is not required.

Water hazard class (Germany)

WGK 1 = slightly hazardous to water.

SECTION 16: Other information

Supplier's notes

The information contained in this SDS must be made available to all those who handle the product.

Abbreviations and acronyms used

LC50: Concentration in water having 50% chance of causing death to aquatic life

LD50: Lethal dose, is the amount of a substance given to a group of test animals, which causes the death of 50%.

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Information which has been revised

New Safety Data Sheet.

Responsible for safety data sheet

Temper Technology AB