



Issued on 13/13/2011-Rev No. 2 of 13/11/2017

SAFETY DATA SHEET KATOIMER SMART COOLANT

Compliant with regulation (EU) 2015/830 CC

SECTION 1. IDENTIFICATION OF THE SUBSTANCE OR MIXTURE AND OF THE COMPANY/BUSINESS

1.1. Product identifier

Trade name: KATOIMER Smart Coolant
 Commercial code: 4013001723
 Tax payer's code: supplier's code = 01077810529 - product code = PF4013001723

1.2. Identified pertinent uses of the substance or mixture and improper uses

Anti-freeze for radiators and heating and cooling circuits
 Sectors of use:
 Industrial uses[SU3], Consumer uses[SU21], Professional uses[SU22]
 Product categories:

Anti-freeze products and products for defrosting
 Improper uses

This material must not be used for other purposes, outside of those stated herein, without the advice of an expert.

1.3. Information on the supplier of the safety data sheet

KATO IMER S.p.A
 Registered offices and operational headquarters:
 53037 San Gimignano (SI) Loc. Cusona - Italy
 Telephone: +39 0577 951 21 // Fax: +39 0577 982 400
 info@katoimer.com // www.katoimer.com

1.4. Emergency phone number

Niguarda Hospital Poison Centre (Centro Antiveleni Ospedale Niguarda) (MI): Tel. 0266101029 - 24/7

SECTION 2. IDENTIFICATION OF HAZARDS

2.1. Classification of the substance or mixture

2.1.1 Classification pursuant to Regulation (EC) No. 1272/2008:

Pictograms:
 GHS07, GHS08
 Danger class and category codes:
 Acute Tox. 4, STOT RE 2
 Hazard statements:

H302 - Harmful if swallowed.
 H373 - May cause damage to the organs of the digestive system through prolonged or repeated exposure.
 Harmful Product: do not swallow
 Attention: the product can cause serious irreversible damage to human health in case of prolonged or repeated exposure

2.2. Elements of the label

Labelling compliant with regulation (EC) No. 1272/2008:
 Pictograms, warning codes:
 GHS07, GHS08 - Warning
 Hazard statements:





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H302 - Harmful if swallowed.

H373 - May cause damage to the organs of the digestive system through prolonged or repeated exposure.

Additional hazard statements:

not applicable

Precautionary tips:

General

P101 - If medical advice is needed, have product container or label at hand.

P102 - Keep out of reach of children.

Prevention

P270 - Do not eat, drink or smoke when using this product.

Reaction

P314 - Get medical attention if you feel unwell.

Disposal

P501 - Dispose of contents/container with authorised collectors (PRD No. 691 of 23/08/82 and Part IV of the Environmental Code Lgs. D. No. 152 of 03/04/2006 and relative standard).

Contains:

Ethylenglycols

2.3. Other hazards

The substance/mixture does NOT contain PBT/vPvB substances, as per Regulation (EC) 1907/2006, annex XIII

No information on other hazards

Packaging that must have a warning that is recognisable to the touch

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Not pertinent

3.2 Mixtures

Refer to point 16 for the complete text of the hazard statements

SUBSTANCE	CONCENTRATION	CLASSIFICATION	INDEX	CAS	EINECS	REACH
Ethylenglycols	> 50 <= 100%	Acute Tox. 4, H302; STOT RE 2, H373	603-027-00-1	107-21-1	203-473-3	01-2119456 816-28

SECTION 4. FIRST AID MEASURES

4.1. Description of the first aid measures

Inhalation:

Ventilate the room. Immediately remove the patient from the contaminated area and allow him/her to rest in a well-ventilated area.

CALL A DOCTOR.

Ventilate the room. Immediately remove the patient from the contaminated area and allow him/her to rest in a well-ventilated area.

Get medical attention if you feel unwell.

If breathing has stopped, begin artificial respiration.

Direct contact with skin (pure product):

Wash with plenty of water and soap.



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Direct contact with eyes (pure product):

Wash immediately with plenty of water for at least 10 minutes.

Swallowing:

The product is harmful and can cause irreversible damage also following single exposure through swallowing.

Absolutely do not induce vomiting or emesis. Seek medical attention immediately.

4.2. Main symptoms and effects, both acute and delayed

No data available.

4.3. Statement of any need to immediately seek medical attention and special treatments

If swallowed, seek medical attention immediately.

Get medical attention if you feel unwell.

If medical advice is needed, have product container or label at hand.

SECTION 5. FIRE PREVENTION MEASURES

5.1. Extinguishing measures

Recommended extinguishing measures:

Nebulised water, CO₂, foam, chemical powder depending on the materials involved in the fire.

Extinguishing measures to avoid:

Water spray. Only use water spray to cool the surfaces of containers exposed to the fire.

5.2. Special hazards deriving from the substance or mixture

Gases can develop, such as: carbon monoxide (CO) and carbon dioxide (CO₂), unidentified organic and inorganic compounds.

5.3. Recommendations for fire extinguishing staff

Use protection for the respiratory tract.

Safety helmet and full protective garments.

Nebulised water can be used to protect people involved in extinguishing.

It is also advisable to use breathing apparatuses, especially when working in closed and poorly-ventilated areas and, in any case, always when using halogenated extinguishing agents (fluobrene, solkane 123, naf, etc.).

Cool the containers with water spray

SECTION 6. MEASURES IN CASE OF ACCIDENTAL SPILLAGE

6.1 Personal precautions, protective devices and procedures in case of emergency

6.1.1 For those who are not directly involved:

Wear protective gloves and garments.

6.1.2 For those who are directly involved:

Wear protective gloves and garments.

Eliminate all open flames and possible sources of ignition. Do not smoke.

Set up suitable ventilation.

Evacuate the hazardous area and, if necessary consult an expert.

6.2. Environmental precautions

Contain the spillage with soil or sand.

If the product has been released into a watercourse, the sewer system or has contaminated the soil or vegetation, warn the competent authorities.



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Dispose of the residual product in observance of the regulations in force.

6.3. Methods and materials for containment and cleaning

6.3.1 For containment

Collect the product for reuse, if possible, or for elimination. Possibly reabsorb it with inert material.
Stop it from getting into the sewer system.

6.3.2 For cleaning

Following collection, wash the zone and other affected materials with water.

6.3.3 Other information:

None in particular.

6.4. Reference to other sections

Refer to points 8 and 13 for further information

SECTION 7. HANDLING AND STORAGE

7.1. Precautions for safe handling

Avoid contact and inhaling the vapours.

Do not eat or drink during work.

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

Also see the following paragraph 8.

7.2. Conditions for safe storage, including any incompatibility

Keep in the original container, well-sealed. Do not stock in open or unlabelled containers.

Keep the containers in a vertical and safe position avoiding the possibility of falling or impact.

Store in a cool location, away from any source of heat and from direct sunlight.

Keep the containers carefully closed and correctly labelled.

The storage systems must be equipped with specific systems to prevent contamination of the soil and water in case of leakage or spillage.

The structure of the storage area, the characteristics of the tanks, the equipment and the operational procedures must comply with the pertaining European, national or local legislation.

If the product is supplied in containers, exclusively preserve it in the original container or in a container that is suitable for the type of product.

Keep the product in its original containers stored in environments and conditions that ensure the control and containment of leakage. Store in a cool location, away from any source of heat or possible ignition and protected against direct sunlight.

Avoid the accumulation of electrostatic charges. Keep the containers well-sealed. Guarantee up suitable ventilation of the rooms.

Keep food, beverages and animal feed away.

Incompatible materials: Also see the following Section 10.

Requirement for the rooms: Suitably aerated rooms.

7.3 Special final uses

Consumer uses:

handle with care, observe the precautions for use provided on the label; keep in a safe place away from the reach of children.

Industrial uses:



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use protective gloves, glasses and garments; store in an indoor and well-ventilated environment
Professional uses:

use protective gloves, glasses and garments; store in an indoor and well-ventilated.

SECTION 8. CONTROLLING EXPOSURE/PERSONAL PROTECTION

8.1. Control parameters

Relative to the contained substances:

Ethylenglycols:

TLV: 100 mg/m³ (Ceiling value) A4 (not classifiable as cancerous for man); (ACGIH 2004).

MAK: 10 ppm 26 mg/m³ Peak limitation category: I(2); skin absorption (H); Risk group for pregnancy: C; (DFG 2004)

Components with limit value to be observed at the workplace.

TLV TWA/8h: 52 (20) mg/m³ (ppm)

TLV STEL/15min: 104 (40) mg/m³ (ppm)

DNEL / DMEL (Workers)

Local long-term (inhalation) = 35 mg/m³

Local long-term (dermal) = VND

Systemic long-term (Inhalation) = VND

Systemic long-term (dermal) = 106 mg/kg/d

DNEL / DMEL (general population)

Local long-term (inhalation) = 7 mg/m³

Local long-term (dermal) = VND

Systemic long-term (Inhalation) = VND

Systemic long-term (dermal) = 53 mg/kg/d

Predicted no effect concentration on the environment - PNEC

Reference value for terrestrial compartment 1.53 mg/kg

Reference value in fresh water 10 mg/l

Reference value for water, intermittent release 10 mg/l

Reference value in sea water 1 mg/l

Reference value for sediments in fresh water 20.9 mg/kg

Reference value for STP micro-organisms 199.5 mg/l

8.2. Controls of exposure

Suitable technical controls:

Consumer uses:

none

Industrial uses:

none

Professional uses:

none

Personal protective measures:

a) Protection for eyes / face

Not necessary for normal use.

b) Protection of the skin



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i) Protection of the hands

Gloves that are resistant to chemical products (EN 374). Materials that are also suitable for direct and extended contact
 Recommendations:

protection factor 6, equal to > 480 minutes of permeation time according to EN 374): nitrile rubber (NBR) -
 0.4 mm thickness. Due to the great multitude of types, it is good practice to observe the manufacturers' instructions for use.

Protection of the eyes: Safety glasses with side protection (cage goggles) (for ex. EN 166).

ii) Other

Wear normal work garments.

c) Respiratory protection

Not necessary for normal use.

d) Thermal hazards

No hazard to report.

Controls of the environmental exposure:

Use according to good work practices without releasing the product into the environment.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on the fundamental physical and chemical properties

PHYSICAL AND CHEMICAL PROPERTIES	VALUE	METHOD OF DETERMINATION
Appearance	Blue-Green clear liquid	Visual exam
Odour	Almost odourless - Typical of glycols	Organoleptic exam
Olfactive threshold	Not defined	
pH	9 +- 0.5	ASTM D 1287
Melting point/freezing point	-18 °C +- 1	ASTM D 1177
Initial boiling point and boiling interval	168 °C	ASTM D 1160
Flash point	> 124°C	ASTM D 92
Evaporation rate	Not defined	
Flammability (solids, gas)	Not available	
Top/Bottom flammability or explosion limits	14.6 %v/v / 4.9 %v/v	
Vapour pressure	0.2 hPa at 20° C	ASTM D 5191
Vapour density	Not defined	
Relative density	1.125 +- 0.02 gr/ml at 15°C	ASTM D 1122
Solubility	In water	
Water solubility	Complete	
Partition coefficient: n-octanol/water	-1.93	
Self-ignition temperature	> 400 °C	DIN 51794
Decomposition temperature	Not defined	
Viscosity	25 mm2/s at 20°C	ASTM D 445
Explosive properties	Not explosive	
Oxidising properties	Non oxidising	



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9.2. Other information

- VOC (Directive 2010/75/EC): 90.00 % - 1,012.50 g/litre.
- VOC (volatile carbon): 37.80 % - 425.25 g/litre.
- pH in aqueous sol. at 50%: 8 (ASTM D 1287)
- Alkaline reserve 10% vol. ml HClO,1N: 21.7 (ASTM D 1121)
- Hard water resistance: Pass (NC956-14)

SECTION 10. STABILITY AND REACTIVITY

10.1. Reactivity

ETHYLENE GLYCOL: it can absorb atmospheric humidity up to two times its own weight. It decomposes at temperatures of more than 200°C/392°F.

10.2. Chemical stability

No dangerous reaction if handled and stored according to the regulations.

10.3. Possibility of dangerous reactions

In normal use and storage conditions, dangerous reactions are not predictable.

ETHYLENE GLYCOL: risk of explosion due to contact with: perchloric acid. It can react dangerously with: chlorosulfuric acid, sodium hydroxide, sulfuric acid, phosphorus pentasulfide, chromium oxide (III), chromyl chloride, potassium perchlorate, potassium dichromate, sodium peroxide, aluminium. It forms explosive mixtures with the air.

10.4. Conditions to avoid

Avoid exposure to sources of heat and open flames.

Avoid contact with strong oxidants.

10.5. Incompatible materials

Avoid zinc-plated containers.

10.6. Hazardous products of decomposition

It does not decompose when used for its intended uses.

Gases and vapours that are potentially harmful to health can be released through thermal decomposition or in case of fire.

ETHYLENE GLYCOL: hydroxyacetaldehyde, glyoxal, acetaldehyde, methane, formaldehyde, carbon monoxide, hydrogen.

SECTION 11. TOXICOLOGICAL INFORMATION

11.1. Information on the toxicological effects

ATE(mix) oral = 255.1 mg/kg

ATE(mix) dermal = ∞

ATE(mix) inhal = ∞

(a) acute toxicity: Harmful Product: do not swallow

(b) corrosion / irritation of the skin: based on the available data the classification criteria is not fulfilled.

(c) serious damage / irritation of the eye: based on the available data the classification criteria is not fulfilled.

(d) sensitisation of the respiratory tract or skin: based on the available data the classification criteria is not fulfilled.

(e) mutagenicity of germinal cells: based on the available data the classification criteria is not fulfilled.

(f) carcinogenicity: based on the available data the classification criteria is not fulfilled.

(g) reproductive toxicity: based on the available data the classification criteria is not fulfilled.

(h) specific target organ toxicity (STOT) single exposure: based on the available data the classification criteria is not fulfilled.



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(i) specific target organ toxicity (STOT) repeated exposure: Attention: the product can cause serious irreversible damage to human health in case of prolonged or repeated exposure

(j) inhalation hazard: based on the available data the classification criteria is not fulfilled.

KATOIMER Smart Coolant:

LD50 Oral (rat) (mg/kg of body weight) = 5840

LD50 Cutaneous (rat or rabbit) (mg/kg of body weight) = 2000

CL50 Inhalation (rat) of vapour/powder/aerosol/smoke (mg/1/4h) or gas (ppmV/4h) = 100

Relative to the contained substances:

Ethylenglycols:

CHANNELS OF EXPOSURE: The substance can be absorbed into the body through inhalation and through the skin.

RISKS FOR INHALATION: A harmful contamination of the air will be reached quite slowly through evaporation of the substance at 20°C.

EFFECTS OF SHORT-TERM EXPOSURE: the substance is irritating for the eyes and the airways. The substance can cause effects on the kidneys and the central nervous system, causing kidney failure and brain injury. Exposure could lower one's level of vigilance.

EFFECTS OF REPEATED OR LONG-TERM EXPOSURE: the substance can affect the central nervous system, causing abnormal eye movements (nystagmus).

ACUTE RISKS /SYMPTOMS

INHALATION Cough Dizziness. Headache.

SKIN Dry skin.

EYES Redness. Pain.

SWALLOWING Abdominal pain. Mental torpor. Nausea. Unconsciousness. Vomit.

NOTE The exposure limit value must not be exceeded at any time of the work exposure.

SECTION 12. ECOLOGICAL INFORMATION

12.1. Toxicity

KATOIMER Smart Coolant:

C(E)L50 (mg/l) = 100

Use according to good work practices without releasing the product into the environment.

ETHYLENE GLYCOL

LC50 - Fish. 72860 mg/l/96h Pimepales promelas

EC50 - Shellfish. > 100 mg/l/48h Daphnia magna

NOEC Chronic Fish. 15380 mg/l Pimepales promelas

NOEC Chronic Shellfish. 8590 mg/l Ceriodaphnia sp.

12.2. Persistence and degradability

ETHYLENE GLYCOL

Solubility in water. mg/l 1000 - 10000

Quickly Biodegradable.

12.3. Potential of bioaccumulation

ETHYLENE GLYCOL

Partition coefficient: n-octanol/water. -1.36

12.4. Mobility in the soil



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ETHYLENE GLYCOL: highly mobile in the soil

12.5. Results of the PBT and vPvB assessment

The substance/mixture does NOT contain PBT/vPvB substances, as per Regulation (EC) 1907/2006, annex XIII

12.6. Other adverse effects

No adverse effect found

SECTION 13. CONSIDERATIONS ON DISPOSAL**13.1. Waste treatment methods**

-For the material / the mixture / the residual quantities:

EC key code: The codes indicating the type of waste must be considered as recommendations based on the intended use of this product. Different codes can be assigned according to the user's particular use and disposal characteristics. (2014/955/EU)

*16 01 14 - 16 03 05

Note: Disposal into waste water is inadvisable. Observe local regulations: F.ex. suitable incineration system. F.ex. depositing in a suitable landfill. Observe the technical ordinance on waste.

Observe the ordinance on waste traffic.

- For contaminated containers:

Observe local regulations: Completely empty the container. Uncontaminated packaging can be reused. Packaging that cannot be cleaned must be disposed of as material.

Empty containers must be transported to an authorised site for recycling or elimination.

*15 01 10 -Packaging containing residues of hazardous substances or that are contaminated by these substances.

*15 01 04 -Metal packaging containing residues of hazardous substances or that are contaminated by these substances.

*15 01 02 -Plastic packaging containing residues of hazardous substances or that are contaminated by these substances.

SECTION 14. INFORMATION ON TRANSPORT**14.1. UN number**

Not included in the field of application of the regulations on the transportation of hazardous goods: on road (ADR); on rail (RID); by air (ICAO / IATA); by sea (IMDG).

14.2. UN shipping name

None.

14.3. Hazard class relative to transport

None.

14.4. Packaging group

None.

14.5. Dangers for the environment

None.

14.6. Special precautions for users

No data available.

14.7. Transportation of bulk materials according to annex II of MARPOL 73/78 and the IBC code

There is no transport for bulk materials.

SECTION 15. INFORMATION ON REGULATIONS**15.1. Legislative and regulatory provisions on health, safety and environment, specific for the substance or mixture**



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Lgs. D. 3/2/1997 No. 52 (Classification, packaging and labelling of hazardous substances)
Lgs D. 14/3/2003 No. 65 (Classification, packaging and labelling of hazardous preparations)
Lgs. D. 2/2/2002 No. 25 (Risks deriving from chemical agents during work)
Directive 67/548 29° Adaptation
Directive 1999/45/EC
Directive 2001/60/EC
Lgs. D. 9/4/2008 No.81
M.D. Work 26/02/2004 (Professional exposure limits)
Regulation (EC) No. 1907/2006 (REACH)
Regulation (EC) No. 1272/2008 (CLP)
Regulation (EC) No. 790/2009 (ATP 1 CLP) and (EU) No. 758/2013
Regulation (EU) No. 286/2011 (ATP 2 CLP)
Regulation (EU) No. 529/2012 as amended.
Regulation (EU) No. 618/2012 (ATP 3 CLP)
Regulation (EU) No. 487/2013 (ATP 4 CLP)
Regulation (EU) No. 944/2013 (ATP 5 CLP)
Regulation (EU) No. 605/2014 (ATP 6 CLP)
Regulation (EU) No. 2015/830

Where applicable, refer to the following regulations:

Ministerial memorandums 46 and 61 (Aromatic amines)
Lgs. D. 21 September 2005 No. 238 (Directive Seveso Ter)
Regulation 648/2004/EC (Detergents)
L.D. 3/4/2006 No. 152 Environmental regulations.
Regulations relative to directives 82/501/EC (Seveso), 96/82/EC (Seveso II).
ADR - IMDG - IATA updated Regulation ADR 2015 as amended

Seveso category:

H2 - ACUTE TOXICITY

Health Checks.

Workers exposed to this chemical agent that is harmful to health must be subject to health surveillance conducted in accordance with the provisions of art. 41 of Leg. Decree 81 of 9 April 2008 unless the risk to the safety and health of the worker has been assessed as negligible, according to art. 224 paragraph 2.

Emissions according to Part V Annex I:

TAB. D

Class 3

90.00%

15.2. Chemical safety assessment

The supplier has not assessed the chemical safety

SECTION 16. OTHER INFORMATION

16.1. Other information

Description of the hazard statements set forth in point 3

H302 = Harmful if swallowed.



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H373 = May cause damage to organs through prolonged or repeated exposure.

Classification conducted based on the data of all of the components of the mixture

Do not use the product for uses other than its intended ones. In this case the user may be subject to risks that were not taken into account.

This document was prepared by a technician who is competent in SDS and who has received suitable training.

The main bibliographic sources:

ECDIN - Environmental Chemicals Data and Information Network - Joint Research Centre, Commission of the European Communities.

SAX's DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS - Eight Edition - Van Nostrand Reinold
CCNL - Annex 1.

Higher health Institute - National Inventory of Chemical Substances.

The information contained herein is based on our knowledge at the above date. It refers only to the product in question and is not a guarantee of particular qualities.

The user is required to ensure the suitability and completeness of this information in relation to its specific use.

ADR: European agreement referring to the international road transport of hazardous goods.

CAS: Chemical Abstract Service (division of the American Chemical Society).

CLP: Classification, Labelling, Packaging.

DNEL: Derived no effect level.

EINECS: European inventory of existing commercial chemical substances.

GefStoffVO: Ordinance on Hazardous Substances, Germany.

GHS: General harmonised system of classification and labelling of chemical products.

IATA: International association for air transport.

IATA-DGR: The "International air transport association" (IATA) regulation on hazardous goods.

ICAO: International civil aviation organisation.

ICAO-TI: Technical instructions of the "International civil aviation organisation" (ICAO).

IMDG: International maritime dangerous goods code.

INCI: International nomenclature of cosmetic ingredients.

KSt: Explosion coefficient.

LC50: Lethal concentration for 50 percent of the tested population.

LD50: Lethal dose for 50 percent of the tested population.

LTE: Long-term exposure.

PNEC: Predicted no effect concentration.

RID: Regulation on the international rail transport of dangerous goods.

STE: Short-term exposure.

STEL: Short-term exposure limit.

STOT: Specific target organ toxicity.

TLV: Limit threshold value.

TWATLV: Limit threshold value for an average weighted exposure of 8 hours a day (ACGIH standard).

WGK: German danger class for water.

*** This sheet voids and replaces all previous editions.