Safety Data Sheet

according to reg. 1907/2006 / EC, Art. 31
Cooling Liquid

Safety Data Sheet dated 24/2/2020, version 2

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

1.1. Product identifier
Mixture identification:
Trade name: Cooling Liquid
1.2. Relevant identified uses of the substance or mixture and uses advised against
Recommended use:
Production of the substance
Chemical Intermediary
Substance distribution
Preparation and (re) packaging of substances and mixtures
Use in detergents
Lubricants
Functional fluids
Chemistry for laboratory
Metal processing
Antifreeze
Uses advised against:
Do not use for uses other than those indicated in the attached Exposure
Scenarios 1.3. Details of the supplier of the safety data sheet
Company:
ASTORI TECNICA S.r.l.
Via Stelle, 11
25020 Poncarale (BS)
Tel.: +39 030 2540240
Fax: +39 030 2640812
Web: www.astorioscar.com
Competent person responsible for the safety data sheet:
admin@astorioscar.com
1.4. Emergency telephone number
TORCHIANI S.r.l.
Via G.B. Cacciamali n.45
25125 Brescia
Tel.: 0303511411
Fax: 0303511444
Web: www.torchiani.com
h 8.00-12.00 14.00-18.00
Assistant National Services
https://echa.europa.eu/support/helpdesks

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture
EC regulation criteria 1272/2008 (CLP)
Acute Tox. 4, H302 Harmful if swallowed.
STOT RE 2, H373 May cause damage to organs through prolonged or repeated exposure.
Adverse physicochemical, human health and environmental effects:
No other hazards
2.2. Label elements
Hazard pictograms:

Warning

Hazard statements:

H302 Harmful if swallowed.

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

Precautionary statements:

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P264 Wash ... Thoroughly after handling.

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

P301+P312 IF SWALLOWED: Call a POISON CENTRE/doctor/... if you feel unwell.

P314 Get medical advice/attention if you feel unwell.

P330 Rinse mouth.

P501 Dispose of contents/container in accordance with applicable regulations.

Special Provisions:

None

Contains

ethanediol; ethylene glycol

Special provisions according to Annex XVII of REACH and subsequent amendments:

None

2.3. Other hazards

vPvB Substances: None - PBT Substances: None

Other Hazards:

No other hazards

SECTION 3: Composition/information on ingredients

3.1. Substances

N.A.

3.2. Mixtures

Hazardous components within the meaning of the CLP regulation and related classification:

Qty	Name	Ident. Number		Classification	Additional info
>= 90%	ethanediol; ethylene glycol	CAS: EC: REACH No.:	107-21-1 203-473-3 01-2119456816-28	3.1/4/Oral Acute Tox. 4 H302 3.9/2 STOT RE 2 H373	Note: N.A.

SECTION 4: First aid measures

4.1. Description of first aid measures

In case of skin contact:

Immediately take off all contaminated clothing.

Areas of the body that have - or are only even suspected of having - come into contact with the product must be rinsed immediately with plenty of running water and possibly with soap.

Wash thoroughly the body (shower or bath).

Remove contaminated clothing immediatley and dispose off safely.

After contact with skin, wash immediately with soap and plenty of water.

In case of eyes contact:

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

In case of Ingestion:

Give nothing to eat or drink.

In case of Inhalation:

Remove casualty to fresh air and keep warm and at rest.

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

Anionic deficiency in metabolic acidosis
Central nervous system depression
Kidney damage
Possible involvement of the cranial nerves at the last stage
Respiratory symptoms, including pulmonary edema, with delayed effect.

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

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).
Treatment:
Mechanical ventilation support with positive expiratory pressure may be required.
Maintain adequate ventilation and oxygen supply to the patient.
If gastric lavage is practiced we suggest endotracheal and / or esophageal control. Possible dangers from pulmonary aspiration must be assessed against toxicity when gastric lavage is taken into consideration
If a quantity of ethylene glycol of about 60 - 100 ml has been ingested, the rapid administration of ethanol can counteract the effects toxic (metabolic acidosis, kidney damage).
Consider hemodialysis or peritoneal dialysis and administration of thiamine 100 mg and pyridoxine 50 mg intravenously every 6 hours.
If ethanol is used, a therapeutically effective blood concentration in the range 100-150 mg / dl can be obtained with a rapid attack dose followed by continuous intravenous infusion.
4-methyl pyrazole is an effective blocker
of alcoholic dehydrogenase and is available as Fomepizole (Antizol (R))should be used in the treatment of intoxications from mono glycol, or triethylenic, methanol and ethylene glycol butylether.
Fomepizole protocol (Brent J. et al., New EngJ Med, Feb 8 2001 244: 6, p 424-9): 15 mg / kg attack dose for intravenous, followed by a maintenance dose of 10 mg / kg every 12 hours. After 48 hours increase the dose to 15 mg / kg every 12 hours. Continue administration of Fomepizolo until methanol serum,
mono, di or trietlenic glycol is no longer present.
Treat symptomatically.
Get medical attention for at least 48 hours.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:
CO_2
Dust
Water sprayed
Extinguish large fires with water spray or alcohol resistant foam.
Extinguishing media which must not be used for safety reasons:
Water jet

5.2. Special hazards arising from the substance or mixture Do not inhale explosion and combustion gases. Burning produces heavy smoke.

5.3. Advice for firefighters

Use suitable breathing apparatus .
Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Move undamaged containers from immediate hazard area if it can be done safely.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Wear personal protection equipment.
Remove persons to safety.
See protective measures under point 7 and 8.
6.2. Environmental precautions
Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.
Retain contaminated washing water and dispose it.
In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.
Suitable material for taking up: absorbing material, organic, sand 6.3. Methods and material for containment and cleaning up
For containment:
Contain the out-of-body with absorbent inert material
For cleaning up:
Collect mechanically
After removal, rinse the residues with water
Return to a container for disposal in accordance with local regulations 6.4. Reference to other sections
See also section 8 and 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Avoid contact with skin and eyes, inhaltion of vapours and mists.
Don't use empty container before they have been cleaned.
Before making transfer operations, assure that there aren't any incompatible material residuals in the containers.
See also section 8 for recommended protective equipment.
Advice on general occupational hygiene:
Contamined clothing should be changed before entering eating areas.
Do not eat or drink while working.
7.2. Conditions for safe storage, including any incompatibilities
Keep away from moisture
Avoid exposure to direct sunlight
Keep in cool and dry place.
Keep away from food, drink and feed.
Incompatible materials:
Please refer also to Section 10.
Instructions as regards storage premises:
Adequately ventilated premises.
7.3. Specific end use(s)
None in particular

SECTION 8: Exposure controls/personal protection

8.1. Control parameters
ethanediol; ethylene glycol - CAS: 107-21-1
- OEL Type: EU - TWA: 52 mg/m3, 20 ppm - STEL: 104 mg/m3, 40 ppm
DNEL Exposure Limit Values
ethanediol; ethylene glycol - CAS: 107-21-1
Consumer: 7 mg/m3 - Exposure: Human Inhalation - Frequency: Short Term, local effects
Consumer: 53 mg/kg bw/day - Exposure: Human Dermal - Frequency: Long Term, systemic effects
Worker Industry: 35 mg/m3 - Exposure: Human Inhalation - Frequency: Long Term, local effects

Worker Industry: 106 mg/kg bw/day - Exposure: Human Dermal - Frequency: Long Term, systemic effects

PNEC Exposure Limit Values

ethanediol; ethylene glycol - CAS: 107-21-1

Target: Fresh Water - Value: 10 mg/l
Target: Water, periodic release - Value: 10 mg/l
Target: Marine water - Value: 1 mg/l
Target: Fresh Water - Value: 37 mg/kg dw
Target: Marine water sediments - Value: 3.7 mg/kg dw
Target: Soil (agricultural) - Value: 1.53 mg/kg
Target: Sewage treatment plant - Value: 199.5

mg/l 8.2. Exposure controls

Eye protection:

Protective glasses with side protection (EN 166)

Protection for skin:

Thermal protection clothing
Safety shoes.
Replace contaminated clothing immediately and wash thoroughly before re-use

Protection for hands:

Chemical resistant protective gloves (EN374-1 / EN374-2 / EN374-3).
Suitable material:
Rubber
Thickness > 0.35 mm
Permeation time:> = 480 min
Gloves must be tanned and changed immediately if any degradation or passing of chemical material is observed

Respiratory protection:

Use appropriate respiratory protection (EN141)
Mask with filter "A" , brown colour

Thermal Hazards:

None

Environmental exposure controls:

None

Appropriate engineering controls:

None

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Properties	Value	Method:	Notes
Appearance and colour:	Colorless liquid	--	--
Odour:	odourless	--	--
Odour threshold:	Not available	--	--

pH:	7 - 9	--	50% at 25° C
Melting point / freezing point:	-11°C / -30° C	--	1013 hPa
Initial boiling point and boiling range:	ca. 197° C	--	1013 hPa
Flash point:	Not available	--	not inflammable
Evaporation rate:	Not available	--	--
Solid/gas flammability:	Not available	--	--
Upper/lower flammability or explosive limits:	Not available	--	--
Vapour pressure:	Not available	--	--
Vapour density:	Not available	--	--
Relative density:	1.12 g/cm3	--	at 20° C
Solubility in water:	Soluble	--	at 20° C
Solubility in oil:	No data available	--	--
Partition coefficient (n-octanol/water):	Log Pow: - 1,4	--	--
Auto-ignition temperature:	Not available	--	--
Decomposition temperature:	Not available	--	--
Viscosity:	Not available	--	--
Explosive properties:	Not available	--	--
Oxidizing properties:	Not available	--	--

9.2. Other information

Properties	Value	Method:	Notes
Miscibility:	Not available	--	--
Fat Solubility:	Not available	--	--
Conductivity:	Not available	--	--
Substance Groups relevant properties	Not available	--	--
VOC:	0 Weight %-	--	--

SECTION 10: Stability and reactivity

10.1. Reactivity
Reaction with oxidizing substances
10.2. Chemical stability
Stable under normal conditions
10.3. Possibility of hazardous reactions
It reacts with:
oxidants
10.4. Conditions to avoid
Avoid contact with
High temperatures
10.5. Incompatible materials
Oxidizing agents
Strong acids
Strong alcals
10.6. Hazardous decomposition products
Carbon oxides

SECTION 11: Toxicological information

11.1. Information on toxicological effects
Toxicological information of the product:
Cooling Liquid
a) acute toxicity
The product is classified: Acute Tox. 4 H302
b) skin corrosion/irritation
Not classified
Based on available data, the classification criteria are not met
c) serious eye damage/irritation
Not classified
Based on available data, the classification criteria are not met
d) respiratory or skin
sensitisation Not classified
Based on available data, the classification criteria are not met
e) germ cell mutagenicity
Not classified
Based on available data, the classification criteria are not met
f) carcinogenicity
Not classified
Based on available data, the classification criteria are not met
g) reproductive toxicity
Not classified
Based on available data, the classification criteria are not met
h) STOT-single exposure
Not classified
Based on available data, the classification criteria are not met
i) STOT-repeated exposure

j) aspiration hazard
Not classified
Based on available data, the classification criteria are not met

Toxicological information of the main substances found in the product:
ethanediol; ethylene glycol - CAS: 107-21-1
a) acute toxicity:
Test: LD50 - Route: Oral - Species: Rat = 7712 mg/kg dw
Test: LD50 - Route: Skin - Species: Mouse > 3500 mg/kg dw
Test: LC50 - Route: Inhalation - Species: Rat > 2.5 mg/l - Duration: 6 h
i) STOT-repeated exposure:
Target organs: kidney

SECTION 12: Ecological information

12.1. Toxicity

Adopt good working practices, so that the product is not released into the environment. Cooling Liquid

Not classified for environmental hazards

Based on available data, the classification criteria are not met ethanediol; ethylene glycol - CAS: 107-21-1

a) Aquatic acute toxicity:
Endpoint: LC50 - Species: Pimephales promelas (American Chub-Fish) = 72860 mg/l - Duration h: 96
Endpoint: EC50 - Species: Daphnia magna (Water flea) > 100 mg/l - Duration h: 48
Endpoint: EC50 - Species: Selnastrum capricornutum (green algae) > 6500 mg/l - Duration h: 96

b) Aquatic chronic toxicity:
Endpoint: NOEC - Species: Pimephales promelas (American Chub-Fish) = 15380 mg/l - Duration h: 168

12.2. Persistence and degradability

Cooling Liquid

Biodegradability: Easily biodegradable - Notes: Si ossida rapidamente in aria per reazione fotochimica

12.3. Bioaccumulative potential

Cooling Liquid

A potential for bioaccumulation is not foreseeable 12.4. Mobility in soil

Cooling Liquid

Very high mobility potential

12.5. Results of PBT and vPvB assessment

vPvB Substances: None - PBT Substances: None 12.6. Other adverse effects

None

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Recover, if possible. Send to authorised disposal plants or for incineration under controlled conditions. In so doing, comply with the local and national regulations currently in force.

Additional disposal information:

The waste codes must be assigned by the user according to the application that has been made of this product

SECTION 14: Transport information

14.1. UN number

Not classified as dangerous in the meaning of transport regulations.

14.2. UN proper shipping name

N.A.

14.3. Transport hazard class(es)

N.A.

14.4. Packing group

N.A.

14.5. Environmental hazards

ADR-Enviromental Pollutant: No

IMDG-Marine pollutant: No

14.6. Special precautions for user

N.A.

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

N.A.

SECTION 15: Regulatory information

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

Dir. 98/24/EC (Risks related to chemical agents at work)
Dir. 2000/39/EC (Occupational exposure limit values)
Regulation (EC) n. 1907/2006 (REACH)
Regulation (EC) n. 1272/2008 (CLP)
Regulation (EC) n. 790/2009 (ATP 1 CLP) and (EU) n. 758/2013 Regulation (EU) 2015/830
Regulation (EU) n. 286/2011 (ATP 2 CLP)
Regulation (EU) n. 618/2012 (ATP 3 CLP)
Regulation (EU) n. 487/2013 (ATP 4 CLP)
Regulation (EU) n. 944/2013 (ATP 5 CLP)
Regulation (EU) n. 605/2014 (ATP 6 CLP)
Regulation (EU) n. 2015/1221 (ATP 7 CLP)
Regulation (EU) n. 2016/918 (ATP 8 CLP)
Regulation (EU) n. 2016/1179 (ATP 9 CLP)
Regulation (EU) n. 2017/776 (ATP 10 CLP)
Regulation (EU) n. 2018/699 (ATP 11 CLP)

Restrictions related to the product or the substances contained according to Annex XVII Regulation (EC) 1907/2006 (REACH) and subsequent modifications:

Restrictions related to the product:

Restriction 3

Restrictions related to the substances contained:

No restriction.

Where applicable, refer to the following regulatory provisions :

Directive 2012/18/EU (Seveso III)
Reg. CE 1333/2008 e s.m.i.
Regulation (EC) nr 648/2004 (detergents).
Dir. 2004/42/EC (VOC directive)

Provisions related to directive EU 2012/18 (Seveso III):

Seveso III category according to Annex 1, part 1

None

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out for the mixture.

Substances for which a Chemical Safety Assessment has been carried out:

ethanediol; ethylene glycol

SECTION 16: Other information

Full text of phrases referred to in Section 3:

H302 Harmful if swallowed.
H373 May cause damage to organs through prolonged or repeated exposure.

Hazard class and hazard category	Code	Description
Acute Tox. 4	3.1/4/Oral	Acute toxicity (oral), Category 4
STOT RE 2	3.9/2	Specific target organ toxicity - repeated exposure, Category 2

Paragraphs modified from the previous revision:

SECTION 1: Identification of the substance/mixture and of the company/undertaking
SECTION 3: Composition/information on ingredients
SECTION 4: First aid measures
SECTION 5: Firefighting measures
SECTION 6: Accidental release measures
SECTION 7: Handling and storage
SECTION 8: Exposure controls/personal protection
SECTION 9: Physical and chemical properties
SECTION 10: Stability and reactivity
SECTION 11: Toxicological information
SECTION 12: Ecological information
SECTION 13: Disposal considerations
SECTION 15: Regulatory information

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Classification according to Regulation (EC) Nr. 1272/2008	Classification procedure
Acute Tox. 4, H302	Calculation method
STOT RE 2, H373	Calculation method

This document was prepared by a competent person who has received appropriate training.
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
Web Site ECHA Agency

The information contained herein is based on our state of knowledge at the above-specified date. It

refers solely to the product indicated and constitutes no guarantee of particular quality.
It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.
This MSDS cancels and replaces any preceding release.

ADR:	European Agreement concerning the International Carriage of Dangerous Goods by Road.
ATE:	Acute Toxicity Estimate
ATEmix:	Acute toxicity Estimate (Mixtures)
CAS:	Chemical Abstracts Service (division of the American Chemical Society).
CLP:	Classification, Labeling, Packaging.
DNEL:	Derived No Effect Level.
EINECS:	European Inventory of Existing Commercial Chemical Substances.
GefStoffVO:	Ordinance on Hazardous Substances, Germany.
GHS:	Globally Harmonized System of Classification and Labeling of Chemicals.
IATA:	International Air Transport Association.
IATA-DGR:	Dangerous Goods Regulation by the "International Air Transport Association" (IATA).
ICAO:	International Civil Aviation Organization.
ICAO-TI:	Technical Instructions by the "International Civil Aviation Organization" (ICAO).
IMDG:	International Maritime Code for Dangerous Goods.
INCI:	International Nomenclature of Cosmetic Ingredients.
KSt:	Explosion coefficient.
LC50:	Lethal concentration, for 50 percent of test population.
LD50:	Lethal dose, for 50 percent of test population.
PNEC:	Predicted No Effect Concentration.
RID:	Regulation Concerning the International Transport of Dangerous Goods by Rail.
STEL:	Short Term Exposure limit.
STOT:	Specific Target Organ Toxicity.
TLV:	Threshold Limiting Value.
TWA:	Time-weighted average
WGK:	German Water Hazard Class.