SAFETY DATA SHEET

In compliance with EC Regulations No.: 1907/2006, 830/2015 and 1272/2008 (CLP).

Date last modified: 14 May 2021 - Version 4.0

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY

1.1 Product Identifier

Product Name: MARICIL
Product Code #: 672026 (20 ltrs)

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

Intended Use: Industrial applications; Cooling Water Treatment.

Uses advised against: This product is not recommended for any industrial, professional or consumer use other than the Intended Uses above and the instructions written in this Safety Data Sheet.

1.3 Details of the supplier of the safety data sheet

Company/undertaking identification

Supplier/Manufacturer:

Marichem Marigases Hellas SA
Sfaktirias 64,
185 45 Piraeus,
Greece
Tel. No.: ++30 210 4148800
Fax No.: ++30 210 4133985
http://www.marichem-marigases.com

e-mail: mail@marichem-marigases.com

1.4 Emergency telephone number

Tel. No.: ++30 210 4148800 (including working hours)

Emergency Information:
Inside U.S. and Canada: (800)-424-9300 (CHEMTREC)
Outside U.S. and Canada: 1-703-527-3887 (CHEMTREC)
National Emergency Centre (Greece): ++30 210 7793777

2. HAZARDS IDENTIFICATION

2.1 Classification of the mixture

Classification under EC 1272/2008 regulation - GHS classification.

Skin corrosion; Category 1B
Skin sensitisation; Category 1
Chronic aquatic toxicity; Category 2

SIGNAL WORD: DANGER

Hazard Statement(s):

H314: Causes severe skin burns and eye damage.
H317: May cause an allergic skin reaction.
H411: Toxic to aquatic life with long lasting effects.

2.2 Label Elements

Labelling according to Regulation (EC) No. 1272/2008.
The substance is classified and labelled according to the CLP Regulation.

Hazard Pictograms

GHS09 GHS05 GHS07

Signal Word: DANGER

Hazard Statements

H314: Causes severe skin burns and eye damage.
H317: May cause an allergic skin reaction.
H411: Toxic to aquatic life with long lasting effects.

Precautionary Statement

Prevention

P273: Avoid release to the environment.
P280: Wear protective gloves/protective clothing/eye protection/face protection.

Response

P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310: Immediately call a POISON CENTER or doctor/physician.

2.3 Other hazards

PBT Substances: None
vPvB Substances: None

Other Hazards
No other hazards.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Chemical Composition:

Ingredients	CAS Number	Proportion	Hazard Code9(s)*
5-Chloro-2-methyl-4-isothiazol-3-one and 2-Methyl-2H-isothiazol-3-one (mixture 3:1)	55965-84-9	1% - 1.5%	H301; H311; H314; H317; H331; H400; H410.
Magnesium Nitrate	10377-60-3	1% - 2.5%	H272; H319.
Ingredients that do not contribute to the classification of the product	-	96% - 98%	-

*See section 16 for the full text of the Hazard Code(s) declared above.

Occupational Exposure Limits, if available, are listed in section 8.

4. FIRST AID MEASURES

4.1. Description of first aid measures

General advice: Immediate medical attention is required.
Move out of dangerous area.
Show this safety data sheet to the doctor in attendance.

Inhalation: If breathed in, move person into fresh air.
Consult a physician after significant exposure.

Skin contact: Take off contaminated clothing and shoes immediately.
Rinse immediately with plenty of water.
Immediate medical treatment is necessary as untreated wounds from corrosion of the skin heal slowly and with difficulty.

Eye contact: Rinse with plenty of water.
Get medical attention immediately. Continue to rinse during transport.
Remove contact lenses. Protect unharmed eye. Keep eye wide open while rinsing.
Small amounts splashed into eyes can cause irreversible tissue damage and blindness.

Ingestion: Clean mouth with water and drink afterwards plenty of water.
Never give anything by mouth to an unconscious person.
Take victim immediately to hospital.
Do not induce vomiting! May cause chemical burns in mouth and throat.

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

Notes to physician
Symptoms: No information available.
Risks: No information available.
Treatment: No information available.

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

Never give anything by mouth to an unconscious person.
Take victim immediately to hospital.
Do not induce vomiting! May cause chemical burns in mouth and throat.

5. FIRE-FIGHTING MEASURES

5.1. Extinguishing media
Non flammable product. Use extinguishing media appropriate for surrounding fire (e.g. water spray, fog or mist, foam, powder, Carbon Dioxide).
5.2. Special hazards arising from the substance or mixture
No typical hazardous decomposition products known.

5.3. Advice for fire-fighters
Treat as an oil fire. Water spray may be ineffective unless used by experienced fire fighters. Wear self-contained breathing apparatus.

Further information:
Collect contaminated extinguishing water separately, do not allow to reach sewage or effluent systems.

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures
Wear protective equipment to prevent skin and eye contamination and inhalation of vapour. Use adequate general or local exhaust ventilation to keep exposure levels below the recommended exposure standard. See also Section 8.

6.2. Environmental precautions
Prevent from entering drains, sewers, streams or other bodies of water. If contamination of sewers or waterways has occurred, advise the local emergency services. Dispose of this material and its container at hazardous or special waste collection point.

6.3. Methods and material for containment and cleaning up
Recover spill if possible. Absorb with sand, earth or other absorbent material. Collect and place in suitably labelled containers for disposal according to local regulations. Cover the remainder with inert absorbent for disposal.

6.4. Reference to other sections
Information regarding exposure controls/personal protection and disposal considerations can be found in section 8 and 13.

7. HANDLING AND STORAGE

7.1. Precautions for safe handling
Avoid contact with eye, skin or clothing. Avoid breathing vapors. Do not taste or swallow. Do not eat, drink or smoke in work area. Any clothing or shoes, which become contaminated, should be removed immediately and thoroughly laundered before wearing again.

7.2. Conditions for safe storage, including any incompatibilities
Store material in labeled sealed containers in a cool, dry and well ventilated area, separated from incompatible materials (see section 10) and sources of ignition and heat.
To maintain quality, avoid elevated temperatures.

7.3. Specific end use(s)
For the relevant identified use(s) listed in Section 1 the advice mentioned in this section 7 is to be observed.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Value type (Form of exposure): MAK (Inhalable fraction)
Control parameters: 0,2 mg/m^3
Basis: DFG MAK

8.2. Exposure controls

Name of Substance: Dodecyl Dipropylenetriamine

Engineering Controls
Provide eyewash station and safety shower.

PERSONAL PROTECTION

Eye and face protection:	Wear safety glasses. Contact lenses should not be worn. Chemical goggles (tightly fitted) and face shield should be worn where splashing is a possibility.
Skin protection:	Use protective gloves made of Nitrile or butyl rubber. Use suitable protective clothing as protection against splashing or contamination. Dry clean contaminated clothes before reuse
Respiratory protection:	A self-contained breathing apparatus or air line respirator, with full face piece is required for vapour concentrations and for spills.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

9.1.1. Appearance

Physical State: Liquid

Color: Pale green

Odor: Stinging

9.1.2. Basic data

Boiling Point/Range: ca. 100^{o}C Solvent

Melting Point/Range: -3^{o}C

Solubility in water: Completely miscible

Viscosity, Dynamic: 3 mPa.s (25^{0}C)

Relative density: 1.02

Specific Gravity (gr/cm^{3}): 0.95 at 20^{o}C

Flash Point: None

pH value: 2.0 - 4.0

9.2 Other Information: No further relevant information available.

10. STABILITY AND REACTIVITY

10.1. Reactivity
No hazardous reactions if stored and handled as prescribed/indicated.

10.2. Chemical stability
The product is stable if stored and handled as prescribed/indicated.

10.3. Possibility of hazardous reactions
None known.

10.4. Conditions to avoid
Avoid elevated temperatures and direct sunlight.

10.5. Incompatible materials
Oxidizing agents, Amines, Reducing agents.

10.6. Hazardous decomposition products

Nitrogen oxides (NO_x), Hydrogen chloride gas, Sulphur oxides.

11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Acute oral toxicity: LD50: 2 mg/kg
Species: rat
Method: OECD Test Guideline 401

Acute dermal toxicity: LD50: > 2 mg/kg
Species: rabbit
Method: OECD Test Guideline 401

Skin irritation: Corrosive.
Species: rabbit
Exposure time: 4h
Method: OECD Test Guideline 404

Eye irritation: Corrosive.
Species: rabbit
Method: OECD Test Guideline 405

Sensitisation: Sensitising
Species: Guinea pig
Method: OECD Test Guideline 406

12. ECOLOGICAL INFORMATION

12.1. Toxicity

No data available.

12.2. Persistence and degradability

No data available.

12.3. Bioaccumulative potential

No data available.

12.4. Mobility in soil (and other compartments if available)

No data available.

12.5. Results of PBT and vPvB assessment

Ecotoxicology Assessment
Results of PBT 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. Additional information

No data available

The following ecotoxicological data refer to:
5-Chloro-2-methyl-4-isothiazol-3-one and 2-Methyl-2H-isothiazol-3-one (mixture 3:1)

Ecotoxicity effects
Toxicity to fish: LC50: > 0.19 mg/l
Species: Oncorhynchus mykiss (rainbow trout)
Acute Toxicity
Exposure time: 96 h

Toxicity to fish: LC50: > 0.28 mg/l
Species: Lepomis macrochirus (Bluegill sunfish)
Acute Toxicity
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates (EC50): 0.16 mg/l
Species: Daphnia magna (Water flea)
Immobilization.
Exposure time: 48 h

(NOEL): 0.035 mg/l
Species: Daphnia magna (Water flea)
Reproduction Test
Exposure time: 21d
Method: OECD Test Guideline 202

Toxicity to algae: ErC50: > 0.027 mg/l
Species: Selenastrum capricornutum (green algae)
Growth inhibition.
Exposure time: 72 h

M-Factor (Acute aquatic toxicity): 10

M-Factor (Chronic aquatic toxicity): 1

Persistence and degradability
Biodegradability: Not readily biodegradable.

13. DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Product: The product should not be allowed to enter drains, water courses or the soil.
Do not contaminate ponds, waterways or ditches with chemical or used container.

Hazardous waste: Dispose of contents/container in accordance with local regulation.

Contaminated packaging: Empty remaining contents. Dispose of as unused product.

14. TRANSPORT INFORMATION

14.1 Proper Shipping Name: Corrosive liquid, acidic, organic N.O.S. (5-Chloro-2-methyl-4-isothiazol-3-one)

14.2 LAND TRANSPORT

UN number:	3265		
ADR class:	8	RID class:	8
Packing Group:	II		

14.3 SEA TRANSPORT

UN number:	3265	EmS:	F-A, S-B
IMDG class:	8		
IMDG packing group:	II		

14.4 AIR TRANSPORT

UN number:	3265		
IATA/ICAO class:	8	Packing group:	II

15. REGULATORY INFORMATION

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

If other regulatory information applies that is not already provided elsewhere in this safety data sheet, then it is described in this subsection.

15.2 Chemical Safety Assessment

A CSA has been carried out for the raw materials in this product, from the raw materials manufacturers (when needed to be carried out).

16. OTHER INFORMATION

16.1 Full text of Hazard Code(s) referred in Section 3

H272: May intensify fire; oxidiser.
H301: Toxic if swallowed.
H311: Toxic in contact with skin.
H314: Causes severe skin burns and eye damage.
H317: May cause an allergic skin reaction.
H319: Causes serious eye irritation.
H331: Toxic if inhaled.
H400: Very toxic to aquatic life.
H410: Very toxic to aquatic life with long lasting effects.

16.2 Abbreviations and acronyms

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road).
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail).
IMDG: International Maritime Code for Dangerous Goods.
IATA: International Air Transport Association.
ICAO: International Civil Aviation Organization.
bw: Body weight.
Carc.: Carcinogenicity.
CAS number: Chemical Abstracts Service number.
CLP: Classification Labelling Packaging Regulation.
CSA: Chemical Safety Assessment.
CSR: Chemical Safety Report.
DNEL: Derived No Effect Level.
dw: Dry weight.
EC number: EINECS and ELINCS number.
EC: European Commission.
EC50: Half maximal effective concentration.
EINECS: European Inventory of Existing Commercial Chemical Substances.
ELINCS: European List of Notified Chemical Substances.
EmS: Emergency Schedule.
ERC: Environmental Release Category.
ES: Exposure scenario.
food: oral feed.
GHS: Globally Harmonized System of Classification and Labelling of Chemicals.
Irrit.: Irritation.
LC50: Lethal concentration, 50 %.
LD50: Median Lethal dose.
LOAEC: Lowest Observed Adverse Effect Concentration.
LOAEL: Lowest Observed Adverse Effect Level.
MK value: Maximum Concentration value.
NCO: An international corporation that provides customer service contracting.
NOAEC: No Observed Adverse Effect Concentration.
NOAEL: No Observed Adverse Effect Level.
NOEC: No Observed Effect Concentration.
OECD: Organisation for Economic Cooperation and Development.
PBT: Persistent, Bioaccumulative and Toxic.
PNEC: Predicted No Effect Concentration.
PROC: Process category.
REACH: The Registration, Evaluation, Authorisation and Restriction of Chemicals.
Resp.: Respiratory.
Sens.: Sensitization.
STEL value: Short Term Exposure Limit value.
STOT RE: Specific target organ toxicity — repeated exposure.
STOT SE: Specific target organ toxicity — single exposure.
STOT: Specific Target Organ Toxicity.
STP: Sewage Treatment Plant.
SU: Sector of use.
Tox.: Toxicity.
TWA value: Time Weighted Average value.
vPvB: Very Persistent and Very Bioaccumulative.

16.3 Notice to reader

All information, instructions and statements contained in this Material Safety Data Sheet are compiled in accordance with European Directives, corresponding national legislation and on the basis of information given by our suppliers.

The information disclosed in this Material Safety Data Sheet (which supersedes all previous versions) is believed to be correct, at the date of issue, to the best of our current knowledge and experience. It only relates to the specific product designated herein and it may not be valid when said product is used in combination with any other products or in any processed form, unless specified in the text. This document aims to provide the necessary health and safety information of the product and is not to be considered a warranty or quality specification. It is the responsibility of the recipient of this Material Safety Data Sheet to ensure that information given here is read and understood by all who use, handle, dispose of or in any way come in contact with the product.
Also, it is the responsibility of the user to comply with local legislation relating to safety, health, environment and waste management. Data and information provided concerning the product are informative, exclusively presented to the customer.