SAFETY DATA SHEET

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

Date last modified: 22 January 2019 - version 5.0

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

1.1 Product Identifier

Product Name: SOOT CLEANER LIQUID
Product Code #: 563005 (30 lt)

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

Intended Use: Industrial applications; Combustion catalyst for removing soot and ash deposits.

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/Irritation: Skin Corr. 2
Acute aquatic toxicity, Category 2
Chronic aquatic toxicity, Category 2

SIGNAL WORD: DANGER

Hazard Statement(s):

H315: Causes skin irritation.
H401: Toxic to aquatic life.
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

GHS05 GHS09

Signal Word: DANGER

Hazard Statement(s):

H315: Causes skin irritation.
H401: Toxic to aquatic life.
H411: Toxic to aquatic life with long lasting effects.

Precautionary Statements

Prevention:

P260: Do not breathe gas/mist/vapours/spray.
P270: Do not eat, drink or smoke when using this product.
P273: Avoid release to the environment.
P280: Wear protective gloves and eye/face protection.

Response:

P303+P361+P353: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P305+P351+P358: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P363: Wash contaminated clothing before reuse.

Storage:

P405: Store locked up.

Disposal:

P501: Dispose of contents/container to hazardous or special waste collection point.

2.3 Other hazards

PBT Substances: None
vPvB Substances: None

Other Hazards
No other hazards.

Product classification and labelling according to Directive 67/548/EEC, European Dangerous Preparations Directive (1999/45/EC), European Regulation 648/2004 and their amendments.

Symbol: Not required

R-phrases: R52/53: Harmful to aquatic organisms may cause long-term adverse effects in the aquatic environment.

S-phrases: S1: Keep out of the reach of children.
S60: This material and its packaging must be disposed of as hazardous waste.
S61: Avoid release to the environment. Refer to special instructions/safety data sheets.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Chemical Composition:

Ingredients	CAS Number	Proportion	Hazard Code(s)*
Zinc Chloride	7646-85-7	1% - 10%	H302; H314; H335; H400; H410.
Ingredients that do not contribute to the classification of the product	-	90% - 100%	-

*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

First-aid measures after inhalation: If inhaled, remove to fresh air and keep at rest in a position comfortable for breathing.
First-aid measures after skin contact: For even minor contact, immediately remove contaminated clothing. Wash skin thoroughly with mild soap and water.
First-aid measures after eye contact: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
First-aid measures after ingestion: Immediately call a POISON CENTER or doctor/physician. Rinse mouth. Do not induce vomiting.

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

Symptoms/injuries after inhalation: May cause respiratory tract irritation.
Symptoms/injuries after skin contact: Causes skin irritation.
Symptoms/injuries after eye contact: Causes eye irritation.
Symptoms/injuries after ingestion: May be harmful if swallowed.

4.3 Indication of any immediate medical attention and special treatment needed

No additional information available.

5. FIRE-FIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media: In a remote area, use water fog. Carbon dioxide (CO_2). Powder. Foam.

Unsuitable extinguishing media: None.

5.2. Special hazards arising from the substance or mixture

Fire hazard: None known.
Explosion hazard: None known.

5.3. Advice for fire-fighters

Protection during fire fighting: Fire-fighters should wear full protective gear.

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel
No additional information available

6.1.2. For emergency responders
No additional information available

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment: Stop the flow of material, if this is without risk.

Methods for cleaning up: Sweep spilled substance into containers; if appropriate, moisten first to prevent dusting. Avoid raising powdered materials into airborne dust. To clean the floor and all objects contaminated by this material, use water.

6.4. Reference to other sections

Please refer to sections 8 and 13 for more information.

7. HANDLING AND STORAGE

7.1. Precautions for safe handling

Precautions for safe handling: Avoid contact with eyes, skin and clothing. Use personal protective equipment as required. Wash thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions: Do not expose to temperatures exceeding 50°C/122°F. Keep only in original container. Store in dry protected location to prevent any moisture contact.
Storage area: Store at ambient temperature. Store in tightly closed containers. Store under dry conditions. Store in a place accessible by authorized persons only. Store away from heat/moisture.

7.3. Specific end use(s)

Manufacturing.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Name of Substance: Zinc Chloride

USA ACGIH	ACGIH TWA (mg/m³)	1 mg/m^3
USA ACGIH	ACGIH STEL (mg/m³)	2 mg/m^3
USA OSHA	OSHA PEL (TWA) (mg/m³)	1 mg/m^3

8.2 Exposure Controls

Appropriate engineering controls: Local exhaust and general ventilation must be adequate to meet exposure standards.

Hand protection: Wear impervious gloves to minimize skin contact.

Eye protection: Protective goggles.

Skin and body protection: Wear suitable protective clothing.

Respiratory protection: If airborne concentrations are above the applicable exposure limits, use NIOSH approved respiratory protection.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

9.1.1. Appearance

Physical State: Liquid

Color: Yellow to amber

Odor: Odorless

9.1.2. Basic data

pH value (concentrated product): 6.0 - 7.0

Freezing Point (^{0}C): -20

Flash Point (Pensky/Martens) (^{0}C): Not Applicable

Solubility in water (% weight): Completely Soluble

Evaporation Rate (ether = 1): >1

Viscosity (mPas): >1

Relative vapor density (air = 1): >1

Specific Gravity (gr/cm^3): 1.14 – 1.18 at 20^{o}C

9.2 Other Information: No further relevant information available.

10. STABILITY AND REACTIVITY

10.1. Reactivity
No additional information available.

10.2. Chemical stability
The product is stable at normal handling and storage conditions.

10.3. Possibility of hazardous reactions
Will not occur.

10.4. Conditions to avoid
None.

10.5. Incompatible materials
Cyanides, strong alkalis.

10.6. Hazardous decomposition products
Hydrochloric acid fumes. Zinc Oxide (ZnO).

11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Name of Substance: Zinc Chloride

Acute toxicity: Harmful if swallowed.

ATE (oral): 500.000 mg/kg bodyweight

LD50 oral rat: 350 mg/kg. Investigated as a tumorigen, mutagen, reproductive effector.

CANCER LISTS

NTP Carcinogen			
Ingredient	Known	Anticipated	IARC Category
Zinc Chloride (CAS N^0: 7646-85-7)	No	No	None

Skin corrosion/irritation:	Causes severe skin burns and eye damage.
Serious eye damage/irritation:	Not classified
Respiratory or skin sensitisation:	Not classified
Germ cell mutagenicity	Not classified
Carcinogenicity:	Not classified

12. ECOLOGICAL INFORMATION

Name of Substance: Zinc Chloride

12.1 Toxicity

Ecology - general: Very toxic to aquatic life with long lasting effects.

12.2 Persistence and degradability

No additional information available.

12.3 Bioaccumulative potential

BCF fish 1: 16000.

12.4 Mobility in soil (and other compartments if available)

No additional information available.

12.5 Results of PBT and vPvB assessment

Not applicable for inorganic substances.

12.6 Additional information

No additional information available.

13. DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

This product and its packaging must be disposed of as hazardous waste.
Do not touch or walk through spilled material. Stop leak if you can do it without risk. Prevent dust cloud.
Dispose of contents/container must be done in accordance with local/regional/national/international regulations.
Waste characterization and compliance with disposals regulations are the responsibilities of waste generator.

13.2 Disposal of packaging

Packaging must be disposed of as hazardous waste.
Disposal of packaging must be done in accordance with local/regional/national/international regulations.

14. TRANSPORT INFORMATION

14.1 Proper Shipping Name: Corrosive Liquid N.O.S. (Zinc Chloride Solution < 3%)

14.2 LAND TRANSPORT

UN number: 1760
ADR class: 8
RID-class: 8

14.3 SEA TRANSPORT

UN number: 1760
IMDG class: 8
IMDG packing group: III
EmS: F-A, S-B
Subsidiary Risk Label: None

14.4 AIR TRANSPORT

UN number: 1760
IATA/ICAO class: 8
Packing group: III

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

H302: Harmful if swallowed
H314: Causes severe skin burns and eye damage
H335: May cause respiratory irritation
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.