SAFETY DATA SHEET

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

Date last modified: 01 November 2019 - version 6.0

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

1.1 Product Identifier

Product Name: ELECTROCLEAN ENVIRO
Product Code #: 832516 (25 lt)

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

Intended Use: Industrial applications; Cleaning agent for machinery & equipment.

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.

Aspiration Hazard, Category 1

SIGNAL WORD: DANGER

Hazard Statement(s):

H304: May be fatal if swallowed and enters airways.
EUH066: Repeated exposure may cause skin dryness or cracking.

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

GHS 08

SIGNAL WORD: DANGER

Hazard Statements

H304: May be fatal if swallowed and enters airways.
EUH066: Repeated exposure may cause skin dryness or cracking.

Precautionary Statements

Prevention

P261: Avoid breathing mist/vapours/spray.
P262: Do not get in eyes, on skin or on clothing.
P264: Wash face, hands and any exposed skin thoroughly after handling.
P270: Do not eat, drink or smoke when using this product.
P271: Use only outdoors or in a well-ventilated area.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P281: Use personal protective equipment as required.

Response

P301+P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P331: Do NOT induce vomiting.

Storage

P405: Store locked up.

Disposal

P501: Dispose of contents and container to appropriate waste site or reclaimer in accordance with local and national regulations.

2.3 Other Hazards

Repeated exposure may cause skin dryness or cracking. Does not meet the criteria for PBT or vPvB.
Ingestion may cause irritation to mucous membranes.
Material can accumulate static charges which may cause an ignition.
May be irritating to the eyes, nose, throat and lungs.
Combustible liquid. In use, may form flammable/explosive vapour-air mixture. Vapours are heavier than air. Vapours may travel across the ground and reach remote ignition sources causing a flashback fire danger. Electrostatic charges may be generated during pumping. Electrostatic discharge may cause fire.

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: Xn

Harmful (Xn)

R-phrases:	R65	Harmful: may cause lung damage if swallowed.
	R66	Repeated exposure may cause skin dryness or cracking.
S-phrases:	S2	Keep out of the reach of children.
	S9	Keep in a well ventilated environment.
	S23	Do not breathe vapour.
	S24	Avoid contact with skin.
	S62	If swallowed do not induce vomiting: seek medical advice immediately and show this container or label.
	S 36/37/39	Wear suitable protective clothing, gloves and eye/face protection.
	S38	In case of insufficient ventilation, wear suitable respiratory equipment.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Chemical Composition:

Ingredients	CAS Number	Proportion	Hazard Code(s)*
Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics	64742-48-9	60% - 95%	H304; EUH066
Ingredients that do not contribute in the classification of the product	-	5% - 40%	-

*See section 16 for the full text of the classifications and the R-phrases declared above.

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

4. FIRST AID MEASURES

4.1 Description of first aid measures

Inhalation
Remove from further exposure. For those providing assistance, avoid exposure to yourself or others. Use adequate respiratory protection. If respiratory irritation, dizziness, nausea, or unconsciousness occurs, seek immediate medical assistance. If breathing has stopped, assist ventilation with a mechanical device, or use mouth-to-mouth resuscitation.

Skin contact
Wash contact areas with soap and water. Remove contaminated clothing. If this chemical penetrates the clothing promptly remove the clothing and wash. Launder contaminated clothing before reuse.

Eye contact
Flush thoroughly with water. If irritation occurs, get medical assistance.

Ingestion
Seek immediate medical attention. Do not induce vomiting. Never give anything to an unconscious person.

4.2 Most important symptoms and effects, both acute and delayed
Acute health effects: drowsiness, dizziness, nausea, skin irritation.
Delayed effects: N/A.

4.3 Indication of any immediate medical attention and special treatment needed
Note to physician: If ingested, material may be aspirated into the lungs and cause chemical pneumonitis. Treat appropriately.

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Appropriate extinguishing media: Use water fog, foam, dry chemical or carbon dioxide (CO2) to extinguish flames.
Inappropriate extinguishing media: Straight streams of water.

5.2 Unusual fire hazards arising from the substance or mixture

Hazardous material. Fire-fighters should consider protective equipment.
Hazardous combustion products: Smoke, Fume, Incomplete combustion products, Oxides of Carbon.
Possible formation of toxic Carbon Monoxide when combustion takes place in lack of oxygen.

5.3 Fire Fighting Instructions

Evacuate area. Prevent run-off from fire control or dilution from entering streams, sewers or drinking water supply.
Fire-fighters should use standard protective equipment and in enclosed spaces, self-contained breathing apparatus (SCBA). Use water spray to cool fire exposed surfaces and to protect personnel.

6. ACCIDENTAL RELEASE MEASURES

6.1 Notification Procedure

In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

6.2 Protective Measures

Avoid contact with spilled material. Warn or evacuate occupants in surrounding and downwind areas if required, due to toxicity or flammability of the material

6.3 Spill Management

Land Spill: Stop leak if you can do so without risk. Do not touch or walk through spilled material. Large Spills: Water spray may reduce vapour, but may not prevent ignition in enclosed spaces. Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Recover by pumping or with a suitable absorbent

Water Spill: Stop leak if you can do so without risk. Confine the spill immediately with booms. Warn other shipping. Remove from the surface by skimming or with suitable absorbents. Seek the advice of a specialist before using dispersants.
Water spill and land spill recommendations are based on the most likely spill scenario for this material; however, geographic conditions, wind, temperature, (and in the case of a water spill) wave and current direction and speed may greatly influence the appropriate action to be taken. For this reason, local experts should be consulted. Note: Local regulations may prescribe or limit action to be taken .

6.4 Environmental Precautions

Large Spills: Dyke far ahead of liquid spill for later recovery and disposal. Prevent entry into waterways, sewers, basements or confined areas.

6.5 Reference to other sections

See Section 1 for emergency contact information.

See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Prevention of user exposure: Avoid breathing mists or vapours. Avoid contact with skin. Potentially toxic/irritating fumes/vapour may be evolved from heated or agitated material. Use only with adequate ventilation. Prevent small spills and leakage to avoid slip hazard.

Prevention of fire and explosion: Material can accumulate static charges which may cause an electrical spark (ignition source). When the material is handled in bulk, an electrical spark could ignite any flammable vapors from liquids or residues that may be present (e.g., during switch-loading operations). Use proper bonding and/or earthing procedures. However, bonding and earthing may not eliminate the hazard from static accumulation. Consult local applicable standards for guidance. Additional references include American Petroleum Institute 2003 (Protection against Ignitions Arising out of Static, Lightning and Stray Currents) or National Fire Protection Agency 77 (Recommended Practice on Static Electricity) or CENELEC CLC/TR 50404 (Electrostatics - Code of practice for the avoidance of hazards due to static electricity).

Static Accumulator: This material is a static accumulator. A liquid is typically considered a non-conductive, static accumulator if its conductivity is below 100 pS/m (100x10E-12 Siemens per meter), and is considered a semi-conductive, static accumulator, if its conductivity is below 10,000 pS/m. Whether a liquid is non-conductive or semi-conductive, the precautions are the same. A number of factors, for example: liquid temperature, presence of contaminants, anti-static additives and filtration, can greatly influence the conductivity of a liquid.

Precautions while moving the product:
Loading/Unloading Temperature: [Ambient]
Transport Temperature: [Ambient]
Transport Pressure: N/D

7.2 Conditions for safe storage, including any incompatibilities

Technical measures: The container choice, for example storage vessel, may effect static accumulation and dissipation. Keep container tightly closed and in a well ventilated place. Handle containers with care. Open slowly in order to control possible pressure release. Store in a cool, well-ventilated area. Storage containers should be earthed and bonded. Fixed storage containers, transfer containers and associated equipment should be grounded and bonded to prevent accumulation of static discharge. Keep away from direct sunlight and other sources of ignition. Do not smoke in storage areas.

7.3. Specific end use(s):

Cleaning product for industrial use only.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components with workplace control parameters

Name of Substance: Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics

Occupational exposure limit values:

UK Workplace Exposure Limits
In the absence of occupational exposure standards for this product, it is recommended that the following are adopted.

Material	Source	Type	ppm	mg/m3	Notation
RCP Dearom. Mineral spirits 175 - 220	UK SIA	TWA (8 h)	150 ppm	1,000 mg/m3	

Biological Exposure Index (BEI)
Biological Limit Values (BLV) have not been established for this material.

Derived No Effect Levels
(DNEL/DMEL) Table: No DNEL value has been established.

PNEC related information: Substance is a hydrocarbon with a complex, unknown or variable composition. Conventional methods of deriving PNECs are not appropriate and it is not possible to identify a single representative PNEC for such substances.

8.2 Exposure controls

PERSONAL PROTECTION

Eye and face protection: Wear safety glasses. Contact lenses should not be worn. Chemical goggles and face shield should be worn where splashing is a possibility.

Skin protection: Wear solvent resistant gloves such as Viton, polyvinyl alcohol or equivalent and solvent resistant boots, safety shower and eyewash station should be available.

Respiratory protection: If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, select respiratory protection equipment suitable for the specific conditions of use and meeting relevant legislation. Where air-filtering respirators are suitable, select an appropriate combination of mask and filter. Select a filter suitable for organic gases and vapours [boiling point >65 °C (149 °F)] meeting EN141. Where air-filtering respirators are unsuitable (e.g., airborne concentrations are high, risk of oxygen deficiency, confined space) use appropriate positive pressure breathing apparatus.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

9.1.1. Appearance

Physical State: Liquid

Color: Clear

Odor: Aromatic

9.1.2. Basic data

Initial Boiling Point: <240^{o}C

Final Boiling Point: >262^{o}C

Flash Point: 85^{o}C

Autoignition Temperature: >220^{o}C

Lower Explosion Limit (vol %): <0.6% (v/v)

Upper Explosion Limit (vol %): >5.5% (v/v)

Vapour Pressure: <0.0003 kPa at 20^{o}C

Relative vapor density (air= 1) : <0.01

Aromatics: <0.4%

Specific Gravity (gr/cm^{3}): 0.78 - 0.82 at 20^{0}C

Solubility: Soluble

pH (in 1% dispersion): 7

Pour point (at 0îC): - 30

Viscosity (at 0îC) (cSt): 3

Stability: Stable under normal conditions

9.2 Other Information: No further relevant information available.

10. STABILITY AND REACTIVITY

10.1 Chemical stability
Material is stable under normal conditions of use and storage.

10.2 Conditions to avoid
Avoid open flames, sparks, heating and high energy ignition sources.

10.3 Materials to avoid
Keep it away from strong oxidizing materials.

10.4 Hazardous Decomposition products
Material does not decompose at ambient temperatures.
Possible the formation of toxic Carbon monoxide when no proper combustion takes place.

10.5 Hazardous polymerization
Will not occur.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

EXPOSURE LIMITS

Name of Substance: Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics

Basis for Assessment
Information given is based on product testing, and/or similar products, and/or components.

Routes of Exposure
Exposure may occur via inhalation, ingestion, skin absorption, skin or eye contact, and accidental ingestion.

Acute Oral Toxicity
Low toxicity: LD50 >5000 mg/kg.

Acute Dermal Toxicity
Low toxicity: LD50 >5000 mg/kg.

Acute Inhalation Toxicity
Low toxicity: LC50 greater than near-saturated vapour concentration. / 4 hours, rat.

Skin Irritation
Causes mild skin irritation. Prolonged/repeated contact may cause defatting of the skin which can lead to dermatitis.

Eye Irritation
Expected to be non-irritating to eyes.

Respiratory Irritation
Not expected to be a respiratory irritant.

Sensitisation
Not a skin sensitiser.

HEALTH EFFECTS

Inhalation: Exposure to high concentrations of vapour or mist can cause dizziness, headache, drowsiness, nausea, cough and unconsciousness.

Skin contact: Prolonged or repeated contact of liquid can cause dry skin and defats of skin.

Eye contact: Liquid in eyes produces pain and irritation with mild temporary damage, vapour slightly irritating to eyes.

Ingestion: It can be aspired into lungs, which can cause Cough, Diarrhoea, Sore throat and vomiting.

12. ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL DATA

12.1 Toxicity

Name of Substance: Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics

Acute Toxicity

Fish: Practically non toxic: LL/EL/IL50 > 100 mg/l
Aquatic crustacea: Practically non toxic: LL/EL/IL50 > 100 mg/l
Algae/aquatic plants: Practically non toxic: LL/EL/IL50 > 100 mg/l
Microorganisms: Practically non toxic: LL/EL/IL50 > 100 mg/l

Chronic Toxicity

Fish: NOEC/NOEL expected to be > 0.1 - <= 1.0 mg/l (based on modeled data).
Aquatic crustacea: NOEC/NOEL expected to be > 0.1 - <= 1.0 mg/l (based on modeled data).

12.2 Persistence and Degradability

Name of Substance: Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics

The substance is readily biodegradable. Oxidises rapidly by photo-chemical reactions in air.

12.3 Bioaccumulative potential

Name of Substance: Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics

Has the potential to bioaccumulate.

12.4 Mobility in soil

Name of Substance: Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics

Floats on water. Adsorbs to soil and has low mobility.

12.5 Results of PBT and vPvB assessment

Name of Substance: Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics

The substance does not fulfil all screening criteria for persistence, bioaccumulation and toxicity and hence is not considered to be PBT or vPvB.

12.6 Other adverse effects

Name of Substance: Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics

No data available.

DEGRADATION
Product readily biodegradable. Oxidizes rapidly by photochemical reaction in air.

BIOACCUMULATION
Product has the potential to bioaccumulate.

The product is not harmful to the marine environment as per paragraphs 1.7.4 and 1.7.5. of Resolution MEPC. 219 (63) /Annex 24 - 2012 adoption of IMO's MARPOL Annex V.

13. DISPOSAL CONSIDERATIONS

13.1 Waste disposal

Disposal recommendations are based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal .
Disposal recommendation: Product is suitable for burning in an enclosed controlled burner for fuel value or disposal by supervised incineration at very high temperatures to prevent formation of undesirable combustion products .
Regulatory Disposal Information: European Waste Code: 08 XX XX

NOTE: These codes are assigned based upon the most common uses for this material and may not reflect contaminants resulting from actual use. Waste producers need to assess the actual process used when generating the waste and its contaminants in order to assign the proper waste disposal code(s).

13.2 Disposal of contaminated packaging

Disposal recommendation: Empty containers may contain residue and can be dangerous. Do not attempt to refill or clean containers without proper instructions. Empty drums should be completely drained and safely stored until appropriately reconditioned or disposed. Empty containers should be taken for recycling, recovery, or disposal through suitably qualified or licensed contractor and in accordance with governmental regulations.

DO NOT PRESSURISE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION. THEY MAY EXPLODE AND CAUSE INJURY OR DEATH.

14. TRANSPORT INFORMATION

14.1 Not classified as dangerous for the transportation according to IMO, ADR/RID, US DOT and IATA/ICAO codes.

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

H304: May be fatal if swallowed and enters airways.
EUH066: Repeated exposure may cause skin dryness or cracking.

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.