

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

- Product identifier
- Trade name: **MARISEAL 250**
- Relevant identified uses of the substance or mixture and uses advised against
No relevant identified uses - mixture of substances.
- Application of the substance / the preparation
Polyurethane waterproofing coating
- Details of the supplier of the safety data sheet
MARIS POLYMERS SA
Industrial Area of Inofita
Inofita, Voiotia
Tel: +30 22960 32918
Fax: +30 22960 32919
e-mail: info@marispolymers.gr
- Emergency telephone number:
Poisoning Centre in Athens, Greece
Phone: +30 2107793777

2 Hazards identification

- Classification of the substance or mixture
- Classification according to Regulation (EC) No 1272/2008



GHS02 flame

Flam. Liq. 3 H226 Flammable liquid and vapour.



GHS08 health hazard

Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Carc. 1B H350 May cause cancer.



GHS07

Acute Tox. 4 H332 Harmful if inhaled.

Skin Irrit. 2 H315 Causes skin irritation.

- Classification according to Directive 67/548/EEC or Directive 1999/45/EC




Xn; Harmful

R20/21: Harmful by inhalation and in contact with skin.

(Contd. on page 2)

Trade name: MARISEAL 250

(Contd. of page 1)

 Xn; Sensitising

R42: May cause sensitisation by inhalation.

R10: Flammable.

· Information concerning particular hazards for human and environment:

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

· Classification system:

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

· Label elements

· Labelling according to EU guidelines:

The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.

· Code letter and hazard designation of product:



Xn Harmful

· Hazard-determining components of labelling:

m-tolylidene diisocyanate
xylene

· Risk phrases:

10 Flammable.
20/21 Harmful by inhalation and in contact with skin.
42 May cause sensitisation by inhalation.

· Safety phrases:

9 Keep container in a well-ventilated place.
23 Do not breathe gas/fumes/vapour/spray (appropriate wording to be specified by the manufacturer).
25 Avoid contact with eyes.
29 Do not empty into drains.
36/37 Wear suitable protective clothing and gloves.
43 In case of fire, use sand, carbon dioxide or powdered extinguishing agent. Never use water.
45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
60 This material and its container must be disposed of as hazardous waste.

(Contd. on page 3)

Trade name: MARISEAL 250












(Contd. of page 2)

- Special labelling of certain preparations:
Contains isocyanates. See information supplied by the manufacturer
- Other hazards
- Results of PBT and vPvB assessment
- PBT: Not applicable.
- vPvB: Not applicable.

3 Composition/information on ingredients

- Chemical characterization: Mixtures
- Description: Mixture: consisting of the following components.

· Components:

CAS: 1330-20-7 EINECS: 215-535-7 Index number: 601-022-00-9	xylene  Xn R20/21  Xi R38 R10 <hr style="border-top: 1px dashed black;"/>  Flam. Liq. 3, H226  Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315	10-25%
CAS: 26471-62-5 EINECS: 247-722-4 Index number: 615-006-00-4	m-tolyldiene diisocyanate  T+ R26  Xn R40  Xn R42/43  Xi R36/37/38 R52/53 Carc. Cat. 3 <hr style="border-top: 1px dashed black;"/>  Acute Tox. 2, H330  Resp. Sens. 1, H334; Carc. 2, H351  Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335 Aquatic Chronic 3, H412	≤2.5%

4 First aid measures

- Description of first aid measures
- General information:
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
Take affected persons out into the fresh air.

(Contd. on page 4)

Trade name: MARISEAL 250

(Contd. of page 3)

- Seek immediate medical advice.
- After inhalation:
 - Supply fresh air and to be sure call for a doctor.
 - In case of unconsciousness place patient stably in side position for transportation.
 - Supply fresh air. If required, provide artificial respiration. Keep patient warm.
 - Consult doctor if symptoms persist.
- After skin contact:
 - Immediately wash with water. If symptoms persist, call a doctor.
- After eye contact:
 - Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- After swallowing: Rinse mouth. Consult a doctor for safety reasons.
- Information for doctor:
 - Most important symptoms and effects, both acute and delayed
 - No further relevant information available.
- Indication of any immediate medical attention and special treatment needed
 - No further relevant information available.

5 Firefighting measures

- Extinguishing media
- Suitable extinguishing agents: CO₂, sand, extinguishing powder
- For safety reasons unsuitable extinguishing agents: Water with full jet
- Special hazards arising from the substance or mixture
 - No further relevant information available.
- Advice for firefighters
- Protective equipment: Mouth respiratory protective device and protective clothes.
- Additional information
 - Collect contaminated fire fighting water separately. It must not enter the sewage system.

6 Accidental release measures

- Personal precautions, protective equipment and emergency procedures
 - Wear protective equipment. Keep unprotected persons away.
- Environmental precautions:
 - Do not allow to enter sewers/ surface or ground water.
- Methods and material for containment and cleaning up:
 - Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
 - Dispose contaminated material as waste according to item 13.

(Contd. on page 5)

Trade name: MARISEAL 250

(Contd. of page 4)

- Ensure adequate ventilation.
- Do not flush with water or aqueous cleansing agents
- Reference to other sections
 - See Section 7 for information on safe handling.
 - See Section 8 for information on personal protection equipment.
 - See Section 13 for disposal information.

7 Handling and storage

- Handling:
 - Precautions for safe handling
 - Ensure good ventilation/exhaustion at the workplace.
 - Information about fire - and explosion protection:



Keep ignition sources away - Do not smoke.

- Protect against electrostatic charges.
- Conditions for safe storage, including any incompatibilities
- Storage:
 - Requirements to be met by storerooms and receptacles:
 - Store in a cool location.
 - Keep in cool and well-ventilated workplace.
 - Information about storage in one common storage facility: Not required.
 - Further information about storage conditions: Keep container tightly sealed.
 - Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

- Additional information about design of technical facilities:
 - No further data; see item 7.
- Control parameters

- Ingredients with limit values that require monitoring at the workplace:

1330-20-7 xylene

WEL	Short-term value: 441 mg/m ³ , 100 ppm Long-term value: 220 mg/m ³ , 50 ppm Sk; BMGV
-----	--

(Contd. on page 6)

Trade name: MARISEAL 250

(Contd. of page 5)

26471-62-5 m-tolyldene diisocyanate

WEL Short-term value: 0.07 mg/m³Long-term value: 0.02 mg/m³

Sen; as -NCO

· Additional information: The lists valid during the making were used as basis.

· Exposure controls

· Personal protective equipment:

· General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.

Wash hands before breaks and at the end of work.

Avoid skin contact.

· Respiratory protection:



In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

· Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

· Penetration time of glove material

The determined penetration times according to EN 374 part III are not performed under practical conditions. Therefore a maximum wearing time, which corresponds to 50% of the penetration time, is recommended.

· Eye protection:



Safety glasses

(Contd. on page 7)

Trade name: MARISEAL 250

(Contd. of page 6)

· Body protection:



Protective work clothing

9 Physical and chemical properties

· Information on basic physical and chemical properties

· General Information

· Appearance:

Form:	liquid
Colour:	Different according to colouring
· Odour:	characteristic
· Odour threshold:	Not determined.

· pH-value: Not applicable

· Change in condition

Melting point/Melting range:	Not applicable.
Boiling point/Boiling range:	137°C

· Flash point: 25°C

· Flammability (solid, gaseous): Not applicable.

· Ignition temperature: 500°C

· Decomposition temperature: Not determined.

· Self-igniting: Product is not selfigniting.

· Danger of explosion: Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

· Explosion limits:

Lower:	1.1 Vol %
Upper:	7.0 Vol %

· Vapour pressure at 20°C: 6.7 hPa

· Density at 20°C:	1.39 g/cm ³
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.

(Contd. on page 8)

Trade name: MARISEAL 250

(Contd. of page 7)

· Solubility in / Miscibility with water:	Not soluble
· Segregation coefficient (n-octanol/water):	Not determined.
· Viscosity:	
Dynamic:	Not determined.
Kinematic at 20°C:	>90 s (ISO 6mm)
· Solvent content:	
VOC (EC)	251.17 g/l

10 Stability and reactivity

- Reactivity
- Chemical stability
- Thermal decomposition / conditions to be avoided:
Stable at environment temperature.
- Possibility of hazardous reactions No dangerous reactions known.
- Conditions to avoid No further relevant information available.
- Incompatible materials: No further relevant information available.
- Hazardous decomposition products:
No dangerous decomposition products known.

11 Toxicological information

- Information on toxicological effects
- Acute toxicity:

· LD/LC50 values relevant for classification:

1330-20-7 xylene

Oral LD50 4300 mg/kg (rat)

Dermal LD50 2000 mg/kg (rabbit)

- Primary irritant effect:
- on the skin: No irritant effect.
- on the eye: No irritating effect.
- Sensitization: Sensitization possible through inhalation.

(Contd. on page 9)

Trade name: MARISEAL 250

(Contd. of page 8)

- Additional toxicological information:
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version: Xn
- Sensitisation May cause sensitisation when inhaled.

12 Ecological information

- Toxicity
- Aquatic toxicity: No further relevant information available.
- Persistence and degradability No further relevant information available.
- Behaviour in environmental systems:
- Bioaccumulative potential No further relevant information available.
- Mobility in soil No further relevant information available.
- Results of PBT and vPvB assessment
- PBT: Not applicable.
- vPvB: Not applicable.
- Other adverse effects No further relevant information available.

13 Disposal considerations

- Waste treatment methods
- Recommendation



Disposal must be made according to National Legislation.



Do not allow product to reach sewage system.

Contact manufacturer for recycling information.

- Uncleaned packaging:
- Recommendation:
Disposal must be made according to official regulations.
Packaging may be reused or recycled after cleaning.

GB

(Contd. on page 10)

Trade name: MARISEAL 250

(Contd. of page 9)

14 Transport information

· Land transport ADR/RID (cross-border)
· ADR/RID class: -
· Remarks: No goods of grade 3 according to 2.2.3.1.5 ADR and 2.3.2.5 IMDG
ADR: Containers > 450 l = UN 1866 - 3 (F1) - RESIN SOLUTION, flammable
IMDG: Containers > 30 l = UN 1866 - 3 (F1) - RESIN SOLUTION, flammable
Outside ADR/IMDG = UN 1866 - 3 (F1) - RESIN SOLUTION, flammable

· Maritime transport IMDG:
· IMDG Class: -
· Remarks: No grades of grade 3 according to 2.2.3.1.5 ADR and 2.3.2.5 IMDG.
ADR: Containers > 450 l = UN 1866 - 3 (F1) - RESIN SOLUTION, flammable
IMDG: Containers > 30 l = UN 1866 - 3 (F1) - RESIN SOLUTION, flammable
Outside ADR/IMDG = UN 1866 - 3 (F1) - RESIN SOLUTION, flammable

· Air transport ICAO-TI and IATA-DGR:
· ICAO/IATA Class: 3
· UN/ID Number: 1866
· Label: 3
· Packaging group: III
· Proper shipping name: RESIN SOLUTION

· UN "Model Regulation": UN1993, FLAMMABLE LIQUID, N.O.S., 3, III
· Special precautions for user Not applicable.
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable.

GB

(Contd. on page 11)

Trade name: MARISEAL 250

(Contd. of page 10)

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- Labelling according to EU guidelines:
The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.
- Code letter and hazard designation of product:



Xn Harmful

- Hazard-determining components of labelling:
m-tolylidene diisocyanate
xylene
- Risk phrases:
10 Flammable.
20/21 Harmful by inhalation and in contact with skin.
42 May cause sensitisation by inhalation.
- Safety phrases:
9 Keep container in a well-ventilated place.
23 Do not breathe gas/fumes/vapour/spray (appropriate wording to be specified by the manufacturer).
25 Avoid contact with eyes.
29 Do not empty into drains.
36/37 Wear suitable protective clothing and gloves.
43 In case of fire, use sand, carbon dioxide or powdered extinguishing agent. Never use water.
45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
60 This material must be disposed of as hazardous waste.
- Special labelling of certain preparations:
Contains isocyanates. See information supplied by the manufacturer
- Chemical safety assessment:
A Chemical Safety Assessment has not been carried out.

GB

(Contd. on page 12)

Trade name: MARISEAL 250

(Contd. of page 11)

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Relevant phrases

- H226 Flammable liquid and vapour.
H312 Harmful in contact with skin.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H330 Fatal if inhaled.
H332 Harmful if inhaled.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335 May cause respiratory irritation.
H351 Suspected of causing cancer.
H412 Harmful to aquatic life with long lasting effects.
-
- R10 Flammable.
R20/21 Harmful by inhalation and in contact with skin.
R26 Very toxic by inhalation.
R36/37/38 Irritating to eyes, respiratory system and skin.
R38 Irritating to skin.
R40 Limited evidence of a carcinogenic effect.
R42/43 May cause sensitisation by inhalation and skin contact.
R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

· Department issuing MSDS:

SustChem Engineering LTD
144, 3rd Septemvriou, 112 51
Athens, Greece
Tel: +30 210 8252510
Fax: +30 210 8252575
e-mail: info@suschem.gr
web site: www.suschem.gr

· Contact: MARIS POLYMERS SA

· 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

(Contd. on page 13)

Printing date 24.03.2011

Revision: 24.03.2011

Trade name: MARISEAL 250

(Contd. of page 12)

IATA: International Air Transport Association

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organization

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

GB