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MATERIAL SAFETY DATASHEET PLASTIC STEEL A

1. Identification of Substance/ Preparation and Company

Product Name: MULAX PLASTIC STEEL PASTE ACTIVATOR
Product Code: MUL10112
Company: Riga 3, 2993 LW, Barendrecht, The Netherlands
Chemical Name & Synonyms: Aliphatic polyamine hardener blend with inert fillers
For Information: Call on +31 (0)88-6641777 (9am to 5pm)
In an Emergency: As Above

2. Hazards Identification

Classification of the substance or mixture

Classification in accordance with the dangerous preparations directive 1999/45/EC:

Xn; R20/21/22 Harmful by inhalation, in contact with skin and if swallowed
C; R34 Causes burn
R43 May cause sensitization by skin contact
Muta. 3; R68 Possible risk of irreversible effects
Repr. 2;62 Possible risk of impaired fertility
R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Classification in accordance with the classification labelling and packaging regulation EC (no) 1272/2008:

Acute toxicity category 4 H302 Harmful if swallowed
Acute toxicity category 4 H312 Harmful in contact with skin
Acute toxicity category 4 H332 Harmful if inhaled
Skin corrosive category 1B H314 causes severe skin burns and eye damage
Eye damage category 1 H318 causes serious eye damage
Skin sensitizer category 1 H317 may cause an allergic skin reaction
Mutagen category 2 H341 suspected of causing genetic defects
Reproduction Toxicity category 2 H361f suspected of damaging fertility
Aquatic chronic category 3 H412 harmful to aquatic life with long lasting effects

Label elements

Labelling in accordance with the classification labelling and packaging regulation EC (no) 1272/2008.

Pictograms:



Signal word: DANGER
Hazard statements: H302 + H312 + H332: Harmful if swallowed, in contact with skin or if inhaled.

H314: Causes severe skin burns and eye damage.
H317: May cause an allergic skin reaction.
H341: Suspected of causing genetic defects.
H361f: Suspected of damaging fertility.
H412: Harmful to aquatic life with long lasting effects.

Precautionary statements: P202: Do not handle until all safety precautions have been read and understood.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
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 doctor.
P501: Dispose of contents/container as hazardous waste.

Other hazards

May cause chemical burns to the eyes and skin, and if ingested, to the gastrointestinal tract. May cause allergic skin reaction. Prolonged or repeated exposure may result in adverse effects on fertility.

If released into watercourses in sufficient quantities may be harmful to aquatic life. None of the components are considered to be Persistent, Bioaccumulative and Toxic (PBT) or very Persistent, very Bioaccumulative (vPvB).

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3. Composition/ Information on Ingredients

Substances: Not applicable, product is a mixture
Mixtures: Contains the following hazardous components above thresholds of concern

Hazardous Components	Cas Number	%	Classification according to Regulation (EC) No 1272/2008	Classification according to Directive 67/548/EEC
Formaldehyde polymer with Phenol and Triethylenetetramine	32610-77-8	10-30%	Acute Tox. 4 H302 Acute Tox.4 H312, Skin Corr. 1B, skin Sens. 1 H317Aquatic Chronic 3 H412	Xn; R21/22, R43 C; R34 R52/53
Triethylenetetramine	112-24-3	<10%	Acute Tox. 4 H312, Skin Corr. 1B H314, Skin Sens. 1 H317, Aquatic Chronic 3 H412	Xn; R21, R43 C; R34 R52/53
2,2 iminodiethylamine	111-40-0	<10%	Acute Tox. 4 H302, Acute Tox. 4 H312, Acute Tox. 2 H330, Skin Corr. 1B H314, Skin Sens. 1 H317, Eye Dam. 1 H318 , STOT SE 3 H335,	T+; R26 Xn; R21/22 C; R34 Xi; R37, R43
Bisphenol A	80-05-7	<10%	Skin Sens. 1 H317, Eye Dam. 1 H318, STOT SE 3 H335, Repr. 2 H361f, Aquatic Chronic 2 H411	Repr. Cat. 3; R62 Xi; R37-41, R43 R52

See section 16 for full description of R phrases and H statements.

4. First Aid Measures

Summon immediate medical assistance after contact with skin, eyes, inhalation or ingestion

Eye: Flush eyes with plenty of running water for 15 minutes, whilst gently holding the eyelids open. Seek immediate medical attention.
Skin: Remove product and contaminated clothing and wash area with water, seek medical advice. Except in most minor, superficial or localized burns, cover the affected area with a sterile dressing or clean sheeting. DO NOT APPLY GREASES OR OINTMENTS. Wash contaminated clothing before re-use.
Ingestion: Drink plenty of water, DO NOT INDUCE VOMITING. Seek medical attention immediately.
Inhalation: Remove patient to fresh air. If breathing has stopped give assisted respiration. Prevent aspiration of vomit. Turn victims head to one side. Seek medical advice.

Most important symptoms and effects, both acute and delayed

Eye Contact: Sign/ Symptoms may include cloudy appearance of the cornea, chemical burns, severe pain, tearing, ulcerations, significantly impaired vision or complete loss of vision.
Skin Contact: Sign/ Symptoms may include localised redness, swelling, itching, intense pain, blistering, ulceration and tissue destruction. Maybe absorbed through skin and cause target organ effects. Persons previously sensitized to amines may develop a cross sensitization reaction to certain other amines
Inhalation: Sign/ Symptoms may include cough, sneezing, nasal discharge, tightness of chest, headache, hoarseness and nose and throat pain.
Ingestion: Signs/ Symptoms may include severe mouth, throat and abdominal pain, nausea, vomiting and diarrhea, blood in the faeces.

Indication of any immediate medical attention and special treatments needed

Symptomatic treatment as required

5. Fire Fighting Measures

Extinguishing Media: Ignition will give rise to class B Fire, in case of fire use Water sprays, Dry chemical, CO2 or Alcohol foam
Special hazards: May generate toxic, irritating or flammable combustion products, including nitrogen oxides. Combustion in an oxygen starved environment produces toxic products including nitriles and amides. Sudden reaction and fire may result if mixed with an oxidizing agent.
Advice for fire fighters: Wear Self-contained breathing apparatus, rubber boots, gloves and body suit

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Remove all unnecessary personnel from the area. Ventilate the area if possible. Wear suitable protective clothing including chemical resistant gloves and coveralls. If vapour concentrations are high, respiratory protective equipment may be required.

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See section 8 for more information.

Environmental precautions

Prevent entry into sewers and watercourses. If product enters sewers or watercourses, inform the appropriate environmental authorities.

Methods and materials for containment and clearing up

Scrape up and transfer into a suitable container. Wash area with water.

References to other sections

Refer to section 5, 8 and 13 for protective Measures and Disposal.

7. Handling and Storage

Precautions for safe handling

Avoid contact with skin, eyes and clothing. Handle in well ventilated area. Avoid breathing vapours. Wash hands after contact.

Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a cool, well ventilated area. Keep away from oxidizers, heat or flames.

Specific end uses(s)

No industrial or sector specific guidance available.

8. Exposure Controls/ Personal Protection

Control parameters:

Substance Name	8 hour exposure limit	15 min exposure limit	Notes, Source
2,2'-Iminodi(ethylamine)	1 ppm, 4,3 mg/m ³	—	Sk, EH40, 2011
Bisphenol A inhalable dust	10 mg/m ³	—	EH40, 2011

Engineering controls:

Adequate ventilation should be provided so that exposure limits are not exceeded.

Respiratory:

Avoid breathing vapours, mist or sprays; select and use respiratory protection.

Hand protection:

Wear suitable chemical resistant gloves recommended for use with corrosive amines. Nitrile or neoprene gloves may be suitable, but glove manufacturers' specifications should always be checked first. Change gloves in accordance with manufacturer recommendations. If gloves are damaged during use, remove immediately and wash hands before replacing with new gloves.

Skin protection:

Avoid skin contact; use disposable coveralls.

Eye protection:

Avoid eye contact; use safety goggles meeting the requirements of BS EN166 3, when handling this product.

Environmental exposure control: Take suitable measures to prevent entry into drains, sewers and watercourses.

9. Physical/ Chemical Properties

Information on basic physical and chemical properties:

Appearance:	White Paste
Odour:	Ammoniacal, Fishy
Odour threshold:	No data
PH:	Alkaline
Melting Point:	>180C
Boiling Point/ Range:	>200C
Flash Point;	>100C
Evaporation Rate:	No data
Flammability:	Not applicable
Upper/lower flammability limits:	No data
Vapour Pressure:	No data
Vapour density:	No data
Relative density:	1.7g/cm ³ at 20C
Solubility in water:	Insoluble in water
Solubility in other solvents:	No data
Partition Coefficient:	No data
Auto ignition temperature:	No data

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Decomposition temperature: No data
Viscosity: No data
Explosive properties: Not classified as explosive
Oxidising properties: Not classified as oxidising

10. Stability and Reactivity

Reactivity: Not considered to be a reactive product
Chemical stability: Stable
Possibility of hazardous reactions: Hazardous Polymerisation is not likely to occur
Conditions to avoid: Excessive heat
Incompatible materials: Oxidising agents – cleaning solutions. Acids – reaction accompanied by large heat release occurs when the product is mixed with acids.
Hazardous decomposition products: Ammonia when heated. Nitrogen oxides in a fire. Combustion in an oxygen starved environment produces toxic products including nitriles and amides.

11. Toxicological Information

Information on toxicological effects

This product has not been tested. Judgements on the expected toxicity of this product have been made based upon consideration of its major components.

(a) acute toxicity	Based on consideration of the components, the mixture is expected to be harmful by inhalation, ingestion or in contact with skin.
(b) skin corrosion/irritation	Based on consideration of the components, the mixture is expected to be corrosive to skin.
(c) serious eye damage/irritation	Based on consideration of the components, the mixture is expected to be corrosive to eyes.
(d) respiratory/skin sensitisation	The product contains the following known sensitizers. Formaldehyde polymer with Phenol and Triethylenetetramine, Triethylenetetramine, 2,2 iminodiethylamine (diethylenetetramine), bisphenol A, Persons previously sensitized to amines may develop a cross sensitization reaction to certain other amines.
(e) germ cell mutagenicity	The product contains phenol, which is classified as a suspected mutagen.
(f) carcinogenicity	Contains no substances identified as carcinogens.
(g) reproductive toxicity	The product contains bisphenol A which is suspected of damaging fertility.
(h) STOT-single exposure	This product is corrosive, and is expected to irritate the respiratory tract if inhaled.
(i) STOT-repeated exposure	The product contains phenol, which may cause adverse effects to the liver and kidneys if exposed to significant amounts over a prolonged period of time, at a concentration below the classification threshold for this effect.
(j) aspiration hazard	Not applicable.

12. Ecological Information

This product has not been tested. Judgements on the expected toxicity of this product have been made based upon consideration of its major components.

Toxicity

This product contains components which are considered to be harmful to aquatic organisms and may cause long-term adverse effects in the aquatic environment. Once cured the toxicity of the product is expected to decrease.

Persistence and degradability

This product is not expected to be readily biodegradable.

Bioaccumulative potential

This product is expected to have a low bioaccumulation potential.

Mobility in soil

Cured product is expected to be immobile.

Results of PBT and vPvB assessment

None of the components are known to be PBT or vPvB.

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Other adverse effects

None known.

13. Disposal Considerations

Waste treatment methods

In uncured state, dispose as chemical waste in accordance with local regulations. Waste from this product may present long term environmental hazards. Thus landfill sites must be considered less acceptable than incineration.

In cured state when mixed correctly with the base component, dispose as solid waste

Empty containers should be disposed of as chemical waste.

14. Transport Information

General

Transport and labelling requirements will alter depending on the size of the packaging. Please refer to local transport regulations.

	ADR	IMDG	ICAO
14.1 UN Number	1759	1759	1759
14.2 UN Proper shipping name	Polyamines, solid, corrosive, N.O.S. (Contains Triethylene tetramine, Diethylenetriamine)	Polyamines, solid, corrosive, N.O.S. (Contains Triethylene tetramine, Diethylenetriamine)	Polyamines, solid, corrosive, N.O.S. (Contains Triethylene tetramine, Diethylenetriamine)
14.3 Transport hazard class(es)	8	8	8
14.4 Packing group	III	III	III
14.5 Environmental hazards	Not EHS	Not EHS	Not EHS
14.6 Special precautions for user	HIN 80 Tunnel Code E	EmS F-A, S-B	None
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable	Not applicable	Not applicable

15. Regulatory Information

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

All components are listed as existing substances in Europe.

All components are listed, or are exempt from listing on the TCSA Inventory

Chemical Safety Assessment

A Chemical Safety Assessment has not been carried out for this product.

16. Other Information

Revision information:

Reformatted in accordance with Regulation 453/2010 and Regulation 1272/2008.

List of Abbreviations used in this SDS:

CAS Chemical Abstracts Service
CLP Classification, Labelling and Packaging Regulation (EC) no 1272/2008
DSD Dangerous Substances Directive 67/548/EEC
DPD Dangerous Preparations Directive 1999/45/EC
EC European Community/Commission
PBT Persistent, Bioaccumulative and Toxic
REACH Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) no 1907/2006
vPvB very Persistent, very Bioaccumulative

References:

ECHA Classification and Labelling inventory

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ECHA database of disseminated registration dossiers
Supplier's Safety Data Sheets

Method used for classification of mixtures:

Ingredient based approaches

R Phrases and H Statements used in Section 3

- H315** Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H411 Toxic to aquatic life with long lasting effects.
- R36/38** Irritating to eyes and skin.
R38 May be irritating to skin
R43 May cause sensitization by skin contact.
R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Training requirements for workers

No special training requirements.