ELAN-Tron® E GRC 69 Resin

SECTION 1. IDENTIFICATION

Product name : ELAN-Tron® E GRC 69 Resin

Manufacturer or supplier's details

Company : ELANTAS PDG, INC.
5200 North 2nd Street
St. Louis MO 63147

Telephone : (314) 621-5700

Visit our web site : www.elantas.com

E-mail address : Todd.Thomas@altana.com

Emergency telephone number : INFOTRAC - 1-800-535-5053

Recommended use of the chemical and restrictions on use

Recommended use : Adhesive

Restrictions on use : Refer to Section 15 for any restrictions that may apply

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Skin irritation : Category 2

Eye irritation : Category 2A

Skin sensitisation : Category 1

Reproductive toxicity : Category 2

Specific target organ toxicity - single exposure : Category 3 (Respiratory system)

GHS label elements

Hazard pictograms :

Signal word : Warning

Hazard statements : H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.
H361 Suspected of damaging fertility or the unborn child.

Precautionary statements : **Prevention:**
P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P264 Wash skin thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P272 Contaminated work clothing should not be allowed out of the workplace.
P280 Wear eye protection/ face protection.
P280 Wear protective gloves.
P281 Use personal protective equipment as required.
Response:
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P304 + P340 + P312 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P337 + P313 If eye irritation persists: Get medical advice/ attention.
P362 Take off contaminated clothing and wash before reuse.
Storage:
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.
Disposal:
P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature : Modified epoxy resin

Hazardous components

Component	CAS-No.	Concentration (%)
Epoxy Resin	25068-38-6	>= 50 - < 51
Trimethylolpropane triacrylate	15625-89-5	>= 34 - < 35
Pentaerythritol tetraacrylate esters	4986-89-4	>= 6 - < 7
Amorphous silica gel	112945-52-5	>= 3 - < 4

Pentaerythritol triacrylate esters	3524-68-3	>= 2 - < 3
Xylene	1330-20-7	>= 0 - < 1

SECTION 4. FIRST AID MEASURES

General advice : Move out of dangerous area.
Show this safety data sheet to the doctor in attendance.
Do not leave the victim unattended.

If inhaled : If unconscious, place in recovery position and seek medical advice.
If symptoms persist, call a physician.

In case of skin contact : If skin irritation persists, call a physician.
If on skin, rinse well with water.
If on clothes, remove clothes.

In case of eye contact : Immediately flush eye(s) with plenty of water.
Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.

If swallowed : Induce vomiting immediately and call a physician.
Keep respiratory tract clear.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.
Take victim immediately to hospital.

SECTION 5. FIREFIGHTING MEASURES

Unsuitable extinguishing media : High volume water jet

Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.

Further information : Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Special protective equipment for firefighters : Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Use personal protective equipment.
Environmental precautions	:	Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.
Methods and materials for containment and cleaning up	:	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal. Absorbent paper or other organic material used for cleaning up resin is a fire hazard, as heat and spontaneous combustion can occur, particularly if the resin was catalyzed. Catalyzed resin can generate hazardous exothermic heat if allowed to polymerize in a mass. All soiled or waste materials must be water soaked, and kept in a closed bin until disposed of.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling	:	Avoid formation of aerosol. Do not breathe vapours/dust. Avoid exposure - obtain special instructions before use. Avoid contact with skin and eyes. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Provide sufficient air exchange and/or exhaust in work rooms. Dispose of rinse water in accordance with local and national regulations. Persons susceptible to skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used. The chemical reaction that cures mixed epoxy is exothermic (heat generating). If left to cure in a contained mass, such as in a mixing vessel, it can generate enough heat to melt plastic, burn skin or ignite surrounding combustible materials. The larger or thicker the epoxy mass, the more heat generated.
Conditions for safe storage	:	Store under conditions specified on the product Technical Data Sheet to maintain product quality. Keep container tightly closed in a dry and well-ventilated place. Observe label precautions. Electrical installations / working materials must comply with the technological safety standards.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Trimethylolpropane triacrylate	15625-89-5	TWA	1 mg/m3	US WEEL
Amorphous silica gel	112945-52-5	TWA	80 mg/m3	OSHA Z-1
Pentaerythritol triacrylate esters	3524-68-3	TWA	1 mg/m3	US WEEL
Xylene	1330-20-7	TWA	100 ppm 435 mg/m3	OSHA Z-1
		STEL	150 ppm 655 mg/m3	OSHA P0
		TWA	100 ppm 435 mg/m3	OSHA P0
		TWA	100 ppm	ACGIH
		STEL	150 ppm	ACGIH

Engineering measures : Use with adequate ventilation.
All application areas should be ventilated in accordance with applicable OSHA regulations. (29 CFR 1910.94)
This product contains a particulate(s) that is considered hazardous per OSHA (29 CFR 1910.1200) and is listed in Section III as a precautionary warning.
Under normal conditions of use, this product as supplied does not pose a health risk from particulate matter.
Physical degradation of the cured product (i.e. sanding, abrading, etc.) may pose a dust hazard.
Repeated inhalation of such dust may cause lung injury.

Personal protective equipment

Respiratory protection : In the case of vapour formation use a respirator with an approved filter.

Hand protection
Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Eye protection : Eye wash bottle with pure water
Tightly fitting safety goggles
Wear face-shield and protective suit for abnormal processing problems.

Skin and body protection : Impervious clothing
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures	:	When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	liquid
Odour Threshold	:	No data available
pH	:	No data available
Melting point/freezing point	:	No data available
Initial boiling point and boiling range	:	No data available
Vapour pressure	:	No data available
Flash point	:	> 201 °F (> 94 °C) Method: LIterature Value
Upper explosion limit	:	No data available
Lower explosion limit	:	No data available
Evaporation rate	:	No data available
Flammability (solid, gas)	:	No data available
Relative vapour density	:	No data available
Relative Density/Specific Gravity	:	No data available
Density	:	1.1340 g/cm3 (77 °F (25 °C))
Solubility(ies)		
Water solubility	:	No data available
Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Auto-ignition temperature	:	No data available

Thermal decomposition	:	No data available
Viscosity		
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	Greater than 22 mm2/s (104 °F (40 °C))

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	No decomposition if stored and applied as directed.
Chemical stability	:	No decomposition if stored and applied as directed.
Possibility of hazardous reactions	:	No decomposition if stored and applied as directed.
Conditions to avoid	:	No data available
Hazardous decomposition products	:	The by-products expected in incomplete pyrolysis or combustion of epoxy resins are mainly phenolics, CO and water.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Acute toxicity

Product:

Acute oral toxicity	:	Acute toxicity estimate : > 5,000 mg/kg Method: Calculation method
Acute dermal toxicity	:	Acute toxicity estimate : > 5,000 mg/kg Method: Calculation method

Components:

25068-38-6 Epoxy Resin:

Acute oral toxicity	:	LD50 (Rat): 11,400 mg/kg LD50 (Rat, female): > 2,000 mg/kg Method: OECD Test Guideline 420 GLP: yes
Acute inhalation toxicity	:	LC50 : Remarks: No data available
Acute dermal toxicity	:	LD50 (Rabbit): 23,400 mg/kg LD50 (Rat, male and female): > 2,000 mg/kg

Method: OECD Test Guideline 402
GLP: yes

15625-89-5 Trimethylolpropane triacrylate:

Acute oral toxicity	:	LD50 (Rat): > 5,000 mg/kg
Acute dermal toxicity	:	LD50 (Rabbit): > 5,000 mg/kg

112945-52-5 Amorphous silica gel:

Acute oral toxicity	:	LD50 (Rat): > 10,000 mg/kg
Acute inhalation toxicity	:	LC50 (Rat): 0.1390 mg/l
Acute dermal toxicity	:	LD50 (Rabbit): > 5,000 mg/kg

1330-20-7 Xylene:

Acute oral toxicity	:	LD50 (Rat, male): 3,523 mg/kg Method: Directive 67/548/EEC, Annex V, B.1.
Acute inhalation toxicity	:	LC50 (Rat): 5000 ppm Exposure time: 4 h
Acute dermal toxicity	:	LD50 (Rabbit): 1,700 mg/kg

Skin corrosion/irritation

Product:

Remarks: May cause skin irritation and/or dermatitis.

Components:

25068-38-6 Epoxy Resin:
Species: Rabbit
Result: Moderate skin irritation

Species: Rabbit
Exposure time: 4 h
Method: OECD Test Guideline 404
Result: Skin irritation
GLP: yes

15625-89-5 Trimethylolpropane triacrylate:
Species: Rabbit
Result: Skin irritation

112945-52-5 Amorphous silica gel:
Species: Rabbit
Method: OECD Test Guideline 404
Result: No skin irritation
GLP: yes

1330-20-7 Xylene:
Species: Rabbit
Result: Moderate skin irritation

Serious eye damage/eye irritation

Product:

Remarks: May cause irreversible eye damage.

Components:

25068-38-6 Epoxy Resin:
Species: Rabbit
Result: Eye irritation

15625-89-5 Trimethylolpropane triacrylate:
Species: Rabbit
Result: Eye irritation
Method: Draize Test

112945-52-5 Amorphous silica gel:
Species: Rabbit
Result: No eye irritation
Method: OECD Test Guideline 405
GLP: yes

1330-20-7 Xylene:
Species: Rabbit
Result: Eye irritation

Respiratory or skin sensitisation

Product:

Remarks: Causes sensitisation.

Components:

25068-38-6 Epoxy Resin:
Test Type: Mouse Local Lymph Node assay (LLNA)
Species: Mouse
Method: OECD Test Guideline 429
Result: May cause sensitisation by skin contact.
GLP: yes

15625-89-5 Trimethylolpropane triacrylate:
Test Type: Maximisation Test
Exposure routes: Dermal
Species: Guinea pig
Result: May cause sensitisation by skin contact.

Germ cell mutagenicity

Components:

15625-89-5 Trimethylolpropane triacrylate:

Germ cell mutagenicity-Assessment : In vitro tests showed mutagenic effects, In vivo tests showed mutagenic effects

Carcinogenicity

IARC No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

OSHA No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

NTP No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Aspiration toxicity

Components:

25068-38-6 Epoxy Resin:

No aspiration toxicity classification

Further information

Product:

Remarks: No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

25068-38-6 Epoxy Resin:

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia (water flea)): 1.7 mg/l
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 202
GLP: yes

Toxicity to daphnia and other : NOEC (Daphnia magna (Water flea)): 0.3 mg/l

aquatic invertebrates (Chronic toxicity)	Exposure time: 21 d Test Type: semi-static test Method: OECD Test Guideline 211 GLP: yes

Persistence and degradability

Components:

25068-38-6 Epoxy Resin:

Biodegradability	:	Result: Not readily biodegradable. Method: OECD Test Guideline 301F GLP: yes

Bioaccumulative potential

Components:

25068-38-6 Epoxy Resin:

Partition coefficient: n-octanol/water	:	log Pow: 3.242 (25 °C) pH: 7.1 Method: OECD Test Guideline 117 GLP: yes

Mobility in soil

No data available

Other adverse effects

No data available

Product:

Regulation		40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances
Remarks		This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).
Additional ecological information	:	No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

EPA Hazardous Waste Code(s)	:	none
Waste from residues	:	Do not dispose of waste into sewer. Do not contaminate ponds, waterways or ditches with chemical or used container. Send to a licensed waste management company.

Catalyzed resin can generate hazardous exothermic heat if allowed to polymerize in a mass. All soiled or waste materials must be water soaked, and kept in a closed bin until disposed of.
Dispose of the solid mass only if cure is complete and the mass has cooled. Follow federal, state or local disposal regulations.

Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
Do not re-use empty containers.

SECTION 14. TRANSPORT INFORMATION

International Regulations

IATA-DGR
Not regulated as a dangerous good

IMDG-Code
Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable for product as supplied.

National Regulations

49 CFR
Not regulated as a dangerous good

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

US. EPA CERCLA Hazardous Substances (40 CFR 302)

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
Xylene	1330-20-7	100	46,642

SARA 304 - Emergency Release Notification

Calculated RQ exceeds reasonably attainable upper limit.

US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 302 Extremely Hazardous Substance (40 CFR 355, Appendix A)

Calculated RQ exceeds reasonably attainable upper limit.

SARA 311/312 Hazards : Per the June 13, 2016 Federal Register notice, EPA harmonized the EPCRA 311/312 hazard categories with the 2012 OSHA hazard communication standard for classifying

and labeling of chemicals (i.e. GHS). Please refer to Section 2 of the SDS to identify the appropriate hazard categories for reporting purposes.

SARA 302 : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Air Act

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC's (40 CFR 60.489).

Non-volatile (Wt) : Refer to the product technical data sheet for VOC information.

Massachusetts Right To Know

Diglycidyl ether	2238-07-5
Epichlorohydrin	106-89-8

Pennsylvania Right To Know

Epoxy Resin	25068-38-6
Trimethylolpropane triacrylate	15625-89-5
Pentaerythritol tetraacrylate esters	4986-89-4
Amorphous silica gel	112945-52-5
Xylene	1330-20-7
Isobutanol	78-83-1
1,2,4-Trimethylbenzene	95-63-6
Ethylbenzene	100-41-4

New Jersey Right To Know

Epoxy Resin	25068-38-6
Trimethylolpropane triacrylate	15625-89-5
Pentaerythritol tetraacrylate esters	4986-89-4
Amorphous silica gel	112945-52-5
Pentaerythritol triacrylate esters	3524-68-3

New Jersey Trade Secret Registry Number for the product (NJ TSRN) : NOT APPLICABLE

California Prop 65

WARNING! This product contains a chemical known to the State of California to cause cancer.

Ethylbenzene	100-41-4
Epichlorohydrin	106-89-8
Phenyl glycidyl ether	122-60-1
Benzene	71-43-2

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Epichlorohydrin	106-89-8
Toluene	108-88-3
Benzene	71-43-2

The components of this product are reported in the following inventories:

TSCA : We certify that all of the components of this product are either listed on the TSCA Inventory or are not subject to the notification requirements per 40 CFR 720 30(h).

Section 4 / 12(b) : Not applicable

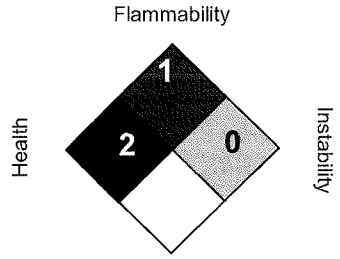
Section 5 Not applicable

DSL : We certify that all of the components of this product are listed on the DSL.

SECTION 16. OTHER INFORMATION

Further information

NFPA:



Special hazard.

HMIS III:

HEALTH	2*
FLAMMABILITY	1
PHYSICAL HAZARD	0

0 = not significant, 1 =Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

Revision Date : 08/24/2016

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

ELAN-Tron® C GRC 69 Hardener

SECTION 1. IDENTIFICATION

Product name : ELAN-Tron® C GRC 69 Hardener

Manufacturer or supplier's details

Company : ELANTAS PDG, INC.
5200 North 2nd Street
St. Louis MO 63147

Telephone : (314) 621-5700
Visit our web site : www.elantas.com
E-mail address : Todd.Thomas@altana.com
Emergency telephone number : INFOTRAC - 1-800-535-5053

Recommended use of the chemical and restrictions on use

Recommended use : Adhesive

Restrictions on use : Refer to Section 15 for any restrictions that may apply

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Acute toxicity (Oral) : Category 4

Skin corrosion : Category 1A

Serious eye damage : Category 1

Respiratory sensitisation : Category 1

Skin sensitisation : Category 1

Reproductive toxicity : Category 2

Specific target organ toxicity - single exposure : Category 1 (Skin, Eyes, Lungs)

Specific target organ toxicity - repeated exposure : Category 1 (Blood, Liver, Lungs, Kidney, Skin, Respiratory Tract)

GHS Label element

Hazard pictograms :

Signal word : Danger

Hazard statements : H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H361 Suspected of damaging fertility or the unborn child.
H370 Causes damage to organs (Skin, Eyes, Lungs).
H372 Causes damage to organs (Blood, Liver, Lungs, Kidney, Skin, Respiratory Tract) through prolonged or repeated exposure.

Precautionary statements : **Prevention:**
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P272 Contaminated work clothing should not be allowed out of the workplace.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P281 Use personal protective equipment as required.
P285 In case of inadequate ventilation wear respiratory protection.
Response:
P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Rinse mouth.
P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P304 + P340 + P310 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/ physician.
P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/ physician.
P307 + P311 IF exposed: Call a POISON CENTER or doctor/ physician.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P363 Wash contaminated clothing before reuse.
Storage:
P405 Store locked up.
Disposal:
P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature : Modified Aliphatic Amine

Hazardous components

Component	CAS-No.	Concentration (%)
Alkyl phenol	-	>= 46 - < 47
Modified amine	-	>= 23 - < 24
Alkyl polyamine	-	>= 23 - < 24
Amorphous silica gel	112945-52-5	>= 4 - < 5
Diethylenetriamine	111-40-0	>= 0 - < 1

SECTION 4. FIRST AID MEASURES

General advice : Move out of dangerous area.
Consult a physician.
Show this safety data sheet to the doctor in attendance.
Do not leave the victim unattended.

If inhaled : Call a physician or poison control centre immediately.
If unconscious place in recovery position and seek medical advice.

In case of skin contact : Immediate medical treatment is necessary as untreated wounds from corrosion of the skin heal slowly and with difficulty.
If on skin, rinse well with water.
If on clothes, remove clothes.
Speed in removing phenol and/or methyl phenol from the affected area is of primary importance.
Apply polyethylene glycol (PEG) to the affected area and rinse with large amounts of water. Repeat application of PEG and Washing of affected area until burning and odor are gone.
If PEG is not available, wash with large amounts of soap and water.
Do not use alcohol-based products to wash affected area.
Alcohol will adversely promote absorption of phenol and/or methyl phenol into skin.

In case of eye contact : Small amounts splashed into eyes can cause irreversible tissue damage and blindness.
In the case of contact with eyes, rinse immediately with plenty

of water and seek medical advice.
Continue rinsing eyes during transport to hospital.
Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.

If swallowed : Keep respiratory tract clear.
Do NOT induce vomiting.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.
Take victim immediately to hospital.

Most important symptoms and effects, both acute and delayed : Phenol poisoning can occur via the lungs and skin, or by swallowing.
Acute overexposure to phenol causes collapse, convulsions, cyanosis (blue discoloration of lips or skin) and coma.
Symptoms may be delayed up to several hours.
Widespread skin contact can result in rapid onset of symptoms and death.

SECTION 5. FIREFIGHTING MEASURES

Unsuitable extinguishing media : High volume water jet

Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.

Further information : Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Special protective equipment for firefighters : Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.
Ensure adequate ventilation.

Environmental precautions : Prevent product from entering drains.
Prevent further leakage or spillage if safe to do so.
If the product contaminates rivers and lakes or drains inform respective authorities.

Methods and materials for containment and cleaning up	:	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling	:	Avoid formation of aerosol. Do not breathe vapours/dust. Avoid exposure - obtain special instructions before use. Avoid contact with skin and eyes. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Provide sufficient air exchange and/or exhaust in work rooms. To avoid spills during handling keep bottle on a metal tray. Dispose of rinse water in accordance with local and national regulations. Persons susceptible to skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.
Conditions for safe storage	:	Store under conditions specified on the product Technical Data Sheet to maintain product quality. Keep container tightly closed in a dry and well-ventilated place. Observe label precautions. Electrical installations / working materials must comply with the technological safety standards.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Amorphous silica gel	112945-52-5	TWA	80 mg/m3	OSHA Z-1
Diethylenetriamine	111-40-0	TWA	1 ppm	ACGIH
		TWA	1 ppm 4 mg/m3	OSHA P0

Engineering measures	:	Use with adequate ventilation. All application areas should be ventilated in accordance with applicable OSHA regulations. (29 CFR 1910.94) This product contains a particulate(s) that is considered hazardous per OSHA (29 CFR 1910.1200) and is listed in Section III as a precautionary warning. Physical degradation of the cured product (i.e. sanding,

abrading, etc.) may pose a dust hazard.
Repeated inhalation of such dust may cause lung injury.

Personal protective equipment

Respiratory protection	:	In the case of vapour formation use a respirator with an approved filter.
Hand protection Remarks	:	The suitability for a specific workplace should be discussed with the producers of the protective gloves.
Eye protection	:	Eye wash bottle with pure water Tightly fitting safety goggles Wear face-shield and protective suit for abnormal processing problems.
Skin and body protection	:	Impervious clothing Choose body protection according to the amount and concentration of the dangerous substance at the work place.
Hygiene measures	:	When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	liquid
Odour Threshold	:	No data available
pH	:	No data available
Melting point/freezing point	:	No data available
Initial boiling point and boiling range	:	No data available
Flash point	:	Greater than 201 °F (94 °C) Method: No information available. Information taken from reference works and the literature.
Evaporation rate	:	No data available
Flammability (solid, gas)	:	No data available
Upper explosion limit	:	No data available
Lower explosion limit	:	No data available

Vapour pressure	:	No data available
Relative vapour density	:	No data available
Relative Density/Specific Gravity	:	No data available
Density	:	1.0015 g/cm3 (77 °F (25 °C))
Solubility(ies)		
Water solubility	:	No data available
Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Auto-ignition temperature	:	No data available
Thermal decomposition	:	No data available
Viscosity		
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	Greater than 22 mm2/s (104 °F (40 °C))

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	No decomposition if stored and applied as directed.
Chemical stability	:	No decomposition if stored and applied as directed.
Possibility of hazardous reactions	:	No decomposition if stored and applied as directed.
Conditions to avoid	:	No data available
Hazardous decomposition products	:	Carbon dioxide, carbon monoxide and toxic vapors. Nitrogen oxides (NOx) Ammonia

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure
Inhalation
Skin contact

Skin Absorption
Eyes

Acute toxicity

Product:

Acute oral toxicity	:	Acute toxicity estimate : 1,816 mg/kg Method: Calculation method
Acute dermal toxicity	:	Acute toxicity estimate : 4,278 mg/kg Method: Calculation method

Components:

- Alkyl phenol:

Acute oral toxicity	:	LD50 (Rat): 1,300 mg/kg
Acute inhalation toxicity	:	LC50 (Rat): > 2.0 mg/l
Acute dermal toxicity	:	LD50 (Rabbit): 2,000 mg/kg

- Modified amine:

Acute oral toxicity	:	LD50 (Rat): 2,500 mg/kg
Acute inhalation toxicity	:	Remarks: No data available
Acute dermal toxicity	:	LD50 (Rabbit): 880 mg/kg

- Alkyl polyamine:

Acute oral toxicity	:	LD50 (Rat): 2,500 mg/kg
Acute inhalation toxicity	:	Remarks: No data available
Acute dermal toxicity	:	LD50 (Rabbit): 805 mg/kg

112945-52-5 Amorphous silica gel:

Acute oral toxicity	:	LD50 (Rat): > 10,000 mg/kg
Acute inhalation toxicity	:	LC50 (Rat): 0.1390 mg/l
Acute dermal toxicity	:	LD50 (Rabbit): > 5,000 mg/kg

111-40-0 Diethylenetriamine:

Acute oral toxicity	:	LD50 (Rat): 1,080 mg/kg
Acute inhalation toxicity	:	LC50 : Remarks: No data available
Acute dermal toxicity	:	LD50 (Rabbit): 1,050 mg/kg

Skin corrosion/irritation

Product:

Remarks: Extremely corrosive and destructive to tissue.

Components:

112945-52-5 Amorphous silica gel:
Species: Rabbit
Method: OECD Test Guideline 404
Result: No skin irritation
GLP: yes

111-40-0 Diethylenetriamine:
Species: Rabbit
Result: Corrosive to skin

Serious eye damage/eye irritation

Product:

Remarks: May cause irreversible eye damage.

Components:

112945-52-5 Amorphous silica gel:
Species: Rabbit
Result: No eye irritation
Method: OECD Test Guideline 405
GLP: yes

111-40-0 Diethylenetriamine:
Species: Rabbit
Result: Corrosive to eyes

Respiratory or skin sensitisation

Product:

Remarks: Causes sensitisation.

Components:

111-40-0 Diethylenetriamine:
Test Type: Maximisation Test (GPMT)
Exposure routes: Dermal
Species: Guinea pig
Method: OECD Test Guideline 406
Result: May cause sensitisation by skin contact.
GLP: yes

Carcinogenicity

IARC	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
OSHA	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
NTP	No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Further information

Product:

Remarks: No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

111-40-0 Diethylenetriamine:

Toxicity to fish	:	LC50 (Poecilia reticulata (guppy)): 430 mg/l Exposure time: 96 h Test Type: semi-static test GLP: yes
Toxicity to algae	:	ErC50 (Selenastrum capricornutum (green algae)): 1,164 mg/l Exposure time: 72 h Test Type: static test Method: OECD Test Guideline 201 GLP: yes
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Daphnia magna (Water flea)): 5.6 mg/l Exposure time: 21 d End point: Reproduction Test Type: semi-static test GLP: yes

Persistence and degradability

Components:

111-40-0 Diethylenetriamine:

Biodegradability	:	aerobic Result: Readily biodegradable Method: OECD Test Guideline 301D GLP: yes

Bioaccumulative potential

No data available

Mobility in soil

No data available

Other adverse effects

No data available

Product:

Regulation	40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances
Remarks	This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).
Additional ecological information	: No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

EPA Hazardous Waste Code(s)	: D002: Corrosive
Waste from residues	: Do not dispose of waste into sewer. Do not contaminate ponds, waterways or ditches with chemical or used container. Send to a licensed waste management company.
Contaminated packaging	: Empty remaining contents. Dispose of as unused product. Do not re-use empty containers.

SECTION 14. TRANSPORT INFORMATION

International Regulation

IATA-DGR

UN/ID No.	: UN 2735
Proper shipping name	: Amines, liquid, corrosive, n.o.s. (Polyalkylamines)
Class	: 8
Packing group	: III
Labels	: Corrosive
Packing instruction (cargo aircraft)	: 856

Packing instruction (passenger aircraft)	:	852

IMDG-Code

UN number	:	UN 2735
Proper shipping name	:	AMINES, LIQUID, CORROSIVE, N.O.S. (Polyalkylamines)
Class	:	8
Packing group	:	III
Labels	:	8
EmS Code	:	F-A, S-B
Marine pollutant	:	no

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

National Regulations

49 CFR

UN/ID/NA number	:	UN 2735
Proper shipping name	:	Amines, liquid, corrosive, n.o.s. (Polyalkylamines)
Class	:	8
Packing group	:	III
Labels	:	Corrosive
Marine pollutant	:	no

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

US. EPA CERCLA Hazardous Substances (40 CFR 302)

Calculated RQ exceeds reasonably attainable upper limit.

SARA 304 - Emergency Release Notification

Calculated RQ exceeds reasonably attainable upper limit.

US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 302 Extremely Hazardous Substance (40 CFR 355, Appendix A)

Calculated RQ exceeds reasonably attainable upper limit.

SARA 311/312 Hazards	:	Acute Health Hazard Chronic Health Hazard
SARA 302	:	No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Air Act

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 12 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC's (40 CFR 60.489).

Non-volatile (Wt) : Refer to the product technical data sheet for VOC information.

US State Regulations

Massachusetts Right To Know

Alkyl phenol	Not Assigned
Modified amine	Not Assigned
Alkyl polyamine	Not Assigned
Phenol	108-95-2

Pennsylvania Right To Know

Alkyl phenol	Not Assigned
Modified amine	Not Assigned
Alkyl polyamine	Not Assigned
Amorphous silica gel	112945-52-5
Phenol	108-95-2

New Jersey Right To Know

Alkyl phenol	Not Assigned
Modified amine	Not Assigned
Alkyl polyamine	Not Assigned
Amorphous silica gel	112945-52-5

New Jersey Trade Secret Registry Number for the product (NJ TSRN) : NOT APPLICABLE

California Prop 65 This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

The components of this product are reported in the following inventories:

TSCA : We certify that all of the components of this product are either

listed on the TSCA Inventory or are not subject to the notification requirements per 40 CFR 720 30(h).

Section 4 / 12(b) : Not applicable

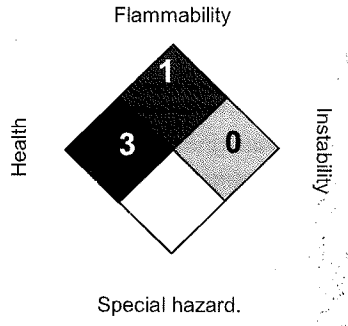
Section 5 Not applicable

DSL : We certify that all of the components of this product are listed on the DSL.

SECTION 16. OTHER INFORMATION

Further information

NFPA:



HMIS III:

HEALTH	3*
FLAMMABILITY	1
PHYSICAL HAZARD	0

0 = not significant, 1 =Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

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The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.