

Sterling® E 400 Resin

Version 4

Revision Date 06/03/2015

Print Date 06/03/2015

SECTION 1. IDENTIFICATION

Product name : Sterling® E 400 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 : INFOTRAC - 1-800-535-5053
number

Recommended use of the chemical and restrictions on use

Recommended use : Electrical Insulation

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

Carcinogenicity : Category 1A

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

Specific target organ toxicity : Category 2 (Lungs)
- repeated exposure
(Inhalation)

GHS Label element

Hazard pictograms :



Signal word : Danger

Hazard statements : H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.

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H350 May cause cancer.
H373 May cause damage to organs (Lungs) through prolonged or repeated exposure if inhaled.

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.
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

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Component	CAS-No.	Concentration (%)
Epoxy Resin	25068-38-6	>= 49 - < 50
Crystalline silica	14808-60-7	>= 47 - < 48
Amorphous silica gel	112945-52-5	>= 2 - < 3

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
- Further information : Standard procedure for chemical fires.
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Special protective equipment for firefighters : Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

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- 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.

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SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION
Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Crystalline silica	14808-60-7	TWA (total dust)	30 mg/m ³ / %SiO ₂ +2	OSHA Z-3
		TWA (respirable)	250 mppcf / %SiO ₂ +5	OSHA Z-3
		TWA (respirable)	10 mg/m ³ / %SiO ₂ +2	OSHA Z-3
		TWA (respirable dust fraction)	0.1 mg/m ³	OSHA P0
		TWA (Respirable fraction)	0.025 mg/m ³ (Silica)	ACGIH
Amorphous silica gel	112945-52-5	TWA	80 mg/m ³	OSHA Z-1

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.

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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: ASTM D 93

Evaporation rate : 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 : 1.6170 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

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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

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

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

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

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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

112945-52-5 Amorphous silica gel:

Species: Rabbit

Method: OECD Test Guideline 404

Result: No skin irritation

GLP: yes

Serious eye damage/eye irritation**Product:**

Remarks: May cause irreversible eye damage.

Components:**25068-38-6 Epoxy Resin:**

Species: Rabbit

Result: Eye irritation

112945-52-5 Amorphous silica gel:

Species: Rabbit

Result: No eye irritation

Method: OECD Test Guideline 405

GLP: yes

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.

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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.

Crystalline silica 14808-60-7

Group 1: Carcinogenic to humans

ACGIH

Suspected human carcinogen

Crystalline silica 14808-60-7

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

Known to be human carcinogen

Crystalline silica 14808-60-7

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 aquatic invertebrates : NOEC (Daphnia magna (Water flea)): 0.3 mg/l
 Exposure time: 21 d

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(Chronic toxicity)

 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

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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 Regulation****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****CERCLA Reportable Quantity**

Calculated RQ exceeds reasonably attainable upper limit.

SARA 304 Extremely Hazardous Substances Reportable Quantity

Calculated RQ exceeds reasonably attainable upper limit.

SARA 302 Extremely Hazardous Substances Reportable Quantity

Calculated RQ exceeds reasonably attainable upper limit.

SARA 311/312 Hazards : Acute Health Hazard

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

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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 SOCM I 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

Crystalline silica	14808-60-7
Epichlorohydrin	106-89-8

Pennsylvania Right To Know

Epoxy Resin	25068-38-6
Crystalline silica	14808-60-7
Aluminum oxide	1344-28-1
Epichlorohydrin	106-89-8

New Jersey Right To Know

Epoxy Resin	25068-38-6
Crystalline silica	14808-60-7
Amorphous silica gel	112945-52-5

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.

Crystalline silica	14808-60-7
Epichlorohydrin	106-89-8
Titanium oxide	13463-67-7
Phenyl glycidyl ether	122-60-1

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

Epichlorohydrin	106-89-8
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The components of this product are reported in the following inventories:

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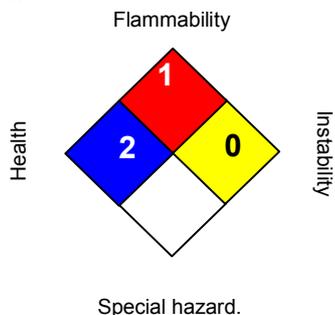
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TSCA : We certify that all of the components of this product are either listed on the TSCA Inventory or are not subject to the notification requirements per 40 CFR 720 30(h).

Section 4 / 12(b) : Not applicable

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	2
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.