SECTION 1. IDENTIFICATION

Product name : Sterling® E 610

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 : Electrical Insulation

Restrictions on use : This product is for industrial use only. It is not intended for consumer use or retail sale.
Refer to Section 15 for any restrictions that may apply

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Flammable liquids : Category 4

Skin irritation : Category 2

Eye irritation : Category 2A

Skin sensitisation : Category 1

Germ cell mutagenicity : Category 2

Carcinogenicity : Category 2

Reproductive toxicity : Category 2

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

Specific target organ toxicity - repeated exposure : Category 1

GHS label elements

Hazard pictograms :

Signal word : Danger

Hazard statements : H227 Combustible liquid.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.
H341 Suspected of causing genetic defects.
H351 Suspected of causing cancer.
H361 Suspected of damaging fertility or the unborn child.
H372 Causes damage to organs 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.
P210 Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking.
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.
P271 Use only outdoors or in a well-ventilated area.
P272 Contaminated work clothing should not be allowed out of the workplace.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
Response:
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor 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.
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.
Storage:
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

P403 + P235 Store in a well-ventilated place. Keep cool.
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 Solution

Hazardous components

Component	CAS-No.	Concentration (%)
Epoxy Resin	25068-38-6	>= 60 - < 80
Furfuryl alcohol	98-00-0	>= 5 - < 10
Epoxy Resin	28064-14-4	>= 5 - < 10
2,3-epoxypropyl neodecanoate	26761-45-5	>= 1 - < 5
Epoxy diluent	17557-23-2	>= 1 - < 5
Lewis Acid Accelerator	34762-90-8	>= 1 - < 5

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

Suitable extinguishing media	:	Carbon dioxide (CO2)
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. For safety reasons in case of fire, cans should be stored separately in closed containments. Use a water spray to cool fully closed containers.
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	:	Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). 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. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth,

vermiculite) and place in container for disposal according to local / national regulations (see section 13).
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.
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.
No smoking.
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
Furfuryl alcohol	98-00-0	TWA	10 ppm	ACGIH
Furfuryl alcohol		STEL	15 ppm	ACGIH
Furfuryl alcohol		TWA	50 ppm 200 mg/m3	OSHA Z-1
Furfuryl alcohol		TWA	10 ppm 40 mg/m3	OSHA P0
Furfuryl alcohol		STEL	15 ppm	OSHA P0

			60 mg/m3	

Hazardous components without workplace control parameters

Engineering measures : Use with adequate ventilation.
All application areas should be ventilated in accordance with applicable OSHA regulations. (e.g. 29 CFR 1910.94)

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 : 167 °F (75 °C)
Method: No information available.
Information taken from reference works and the literature.

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	:	1.1431 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
Ignition temperature	:	No data available
Thermal decomposition	:	No data available
Viscosity		
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	> 21 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. Vapours may form explosive mixture with air.
Conditions to avoid	:	Heat, flames and sparks.
Hazardous decomposition products	:	The by-products expected in incomplete pyrolysis or combustion of epoxy resins are mainly phenolics, CO and water. chlorinated compounds

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure
Inhalation
Eyes
Skin Absorption
Skin contact

Acute toxicity

Product:

Acute oral toxicity	:	Acute toxicity estimate : 2,201 mg/kg Method: Calculation method
Acute inhalation toxicity	:	Acute toxicity estimate : 38.93 mg/l Exposure time: 4 h Test atmosphere: vapour Method: Calculation method
Acute dermal toxicity	:	Acute toxicity estimate : 2,623 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

98-00-0 Furfuryl alcohol:

Acute oral toxicity	:	LD50 (Mouse): 160 mg/kg
Acute inhalation toxicity	:	LC50 (Rat): 233 ppm Exposure time: 4 h
Acute dermal toxicity	:	LD50 (Rabbit): 400 mg/kg

26761-45-5 2,3-epoxypropyl neodecanoate:

Acute inhalation toxicity	:	LC50 : Remarks: No data available

17557-23-2 Epoxy diluent:

Acute oral toxicity	:	LD50 (Rat): 4,500 mg/kg

Acute dermal toxicity : LD50 (Rabbit): 2,150 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

98-00-0 Furfuryl alcohol:
Remarks: No data available

26761-45-5 2,3-epoxypropyl neodecanoate:
Species: Rabbit
Method: OECD Test Guideline 404
Result: No skin irritation
GLP: yes

17557-23-2 Epoxy diluent:
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

98-00-0 Furfuryl alcohol:
Species: Rabbit
Result: Moderate eye irritation
Method: Draize Test

26761-45-5 2,3-epoxypropyl neodecanoate:
Species: Rabbit
Result: No eye irritation
Method: OECD Test Guideline 405

GLP: yes

17557-23-2 Epoxy diluent:
Result: Mild 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

98-00-0 Furfuryl alcohol:
Result: No data available

26761-45-5 2,3-epoxypropyl neodecanoate:
Test Type: Maximisation Test
Exposure routes: Dermal
Species: Guinea pig
Method: OECD Test Guideline 406
Result: May cause sensitisation by skin contact.
GLP: yes

Carcinogenicity

IARC	Group 2B: Possibly carcinogenic to humans	
	Furfuryl alcohol	98-00-0
OSHA	No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.	
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

No data available

Persistence and degradability

No data available

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

	:	WC: SE
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.
Do not burn, or use a cutting torch on, the empty drum.

SECTION 14. TRANSPORT INFORMATION

International Regulations

IATA-DGR

UN/ID No.	:	UN 3082
Proper shipping name	:	Environmentally hazardous substance, liquid, n.o.s. (Epoxy resin)
Class	:	9
Packing group	:	III
Labels	:	Miscellaneous
Packing instruction (cargo aircraft)	:	964
Packing instruction (passenger aircraft)	:	964

IMDG-Code

UN number	:	UN 3082
Proper shipping name	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Class	:	9
Packing group	:	III
Labels	:	9
EmS Code	:	F-A, S-F
Marine pollutant	:	yes

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 3082
Proper shipping name	:	Environmentally hazardous substance, liquid, n.o.s. (Epoxy resin)
Class	:	9
Packing group	:	III
Labels	:	CLASS 9
ERG Code	:	171
Marine pollutant	:	yes (Epoxy resin)
Remarks	:	IMDG: Marine pollutants packaged in single or combination packagings containing a net quantity per single or inner

packaging of 5 l or less for liquids or having a net mass per single or inner packaging of 5 kg or less for solids are not subject to any other provisions of this Code relevant to marine pollutants provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8. In thecase of marine pollutants also meeting the criteria for inclusion in another hazard class all provisions of this Code relevant to any additional hazards continue to apply.

Tested and Passed Sustained Combustibility per 49 CFR 173 Appendix H, IATA 3.3.1.3a, IMDG 2.3.1.3.1.

SECTION 15. REGULATORY INFORMATION

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

US. EPA CERCLA Hazardous Substances (40 CFR 302)

This material does not contain any components with a CERCLA RQ.

SARA 304 - Emergency Release Notification

This material does not contain any components with a section 304 EHS RQ.

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

This material does not contain any components with a SARA 302 RQ.

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

Furfuryl alcohol	98-00-0

Pennsylvania Right To Know

Epoxy Resin	25068-38-6
Furfuryl alcohol	98-00-0
Epoxy Resin	28064-14-4
2,3-epoxypropyl neodecanoate	26761-45-5
Epoxy diluent	17557-23-2
Lewis Acid Accelerator	34762-90-8

New Jersey Right To Know

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

California Prop. 65

⚠ WARNING: This product can expose you to chemicals including Furfuryl alcohol, Phenyl glycidyl ether, which is/are known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

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

TSCA : All components of this product are listed active and/or are exempt

Section 4 / 12(b) : Not applicable

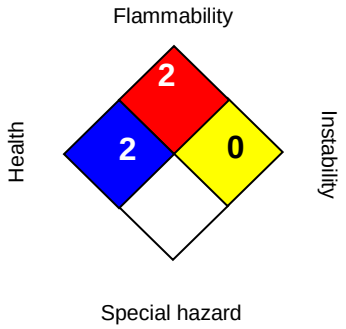
Section 5a : Not applicable

Section 6 : Not applicable

SECTION 16. OTHER INFORMATION

Further information

NFPA:



HMIS III:

HEALTH	2*
FLAMMABILITY	2
PHYSICAL HAZARD	0

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

Revision Date : 07/24/2024

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.