

Printing date 05/10/2018

Reviewed on 09/09/2015

1 Identification

- **Product identifier**
- **Trade name:** EL337 Resin
- **Article number:** 1337088
- **Application of the substance / the mixture** Epoxy resin
- **Details of the supplier of the safety data sheet** SikaAxson US - EHS Department
- **Manufacturer/Supplier:**
Company Name: Axson Technologies US, Inc.-SikaAxson

Headquarters:
31200 Stephenson Hwy
Madison Heights, MI 48071
USA

Manufacturing Site:
1611 Hults Drive
Eaton Rapids, MI 48827
USA
ehs-us@axson.com

- **Information department:** Product safety department
- **Emergency telephone number:**
During normal opening times: +1 (248) 588-2270
CHEMTREC 24-hour Emergency: +1 (800) 424-9300

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS08 Health hazard

Carc. 1B H350 May cause cancer.
Repr. 1B H360 May damage fertility or the unborn child.



GHS09 Environment

Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.
Eye Irrit. 2A H319 Causes serious eye irritation.
Skin Sens. 1 H317 May cause an allergic skin reaction.
STOT SE 3 H335 May cause respiratory irritation.
Aquatic Acute 2 H401 Toxic to aquatic life.

(Contd. on page 2)

US

Printing date 05/10/2018

Reviewed on 09/09/2015

Trade name: **EL337 Resin**

(Contd. of page 1)

- **Label elements**

- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

- **Hazard pictograms**



GHS07

GHS08

GHS09

- **Signal word** *Danger*

- **Hazard-determining components of labeling:**

Epoxy phenol novolac resin

N-methyl-2-pyrrolidone

1,3-bis(2,3-epoxypropoxy)-2,2-dimethylpropane

Epoxy Resin

- **Hazard statements**

Causes skin irritation.

Causes serious eye irritation.

May cause an allergic skin reaction.

May cause cancer.

May damage fertility or the unborn child.

May cause respiratory irritation.

Toxic to aquatic life.

Toxic to aquatic life with long lasting effects.

- **Precautionary statements**

Avoid breathing dust/fume/gas/mist/vapors/spray

Avoid breathing dust/fume/gas/mist/vapors/spray

Wear protective gloves/protective clothing/eye protection/face protection.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

Call a poison center/doctor if you feel unwell.

Specific treatment (see on this label).

Wash contaminated clothing before reuse.

Store in a well-ventilated place. Keep container tightly closed.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Classification system:**

- **NFPA ratings (scale 0 - 4)**



Health = 2

Fire = 1

Reactivity = 0

- **HMIS-ratings (scale 0 - 4)**



HEALTH 2 Health = *2

FIRE 1 Fire = 1

REACTIVITY 0 Reactivity = 0

(Contd. on page 3)

US



BUILDING TRUST



Safety Data Sheet

acc. to OSHA HCS

Printing date 05/10/2018

Reviewed on 09/09/2015

Trade name: **EL337 Resin**

(Contd. of page 2)

- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** Mixture of the substances listed below with nonhazardous additions.

- **Dangerous components:**

CAS: 28064-14-4	Epoxy phenol novolac resin	≥20-<25%
CAS: 17557-23-2 EINECS: 241-536-7	1,3-bis(2,3-epoxypropoxy)-2,2-dimethylpropane	≥5-<10%
CAS: 2530-83-8 EINECS: 219-784-2	[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	≥1-<3%
CAS: 25068-38-6 NLP: 500-033-5	Epoxy Resin	≥0.25-<1%
CAS: 872-50-4 EINECS: 212-828-1	N-methyl-2-pyrrolidone	0.1-1%

4 First-aid measures

- **Description of first aid measures**
- **After inhalation:**
Supply fresh air and to be sure call for a doctor.
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** If symptoms persist consult doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** Wear self-contained respiratory protective device.
- **Additional information**
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

US

(Contd. on page 4)

Printing date 05/10/2018

Reviewed on 09/09/2015

Trade name: **EL337 Resin**

(Contd. of page 3)

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:**
 Inform respective authorities in case of seepage into water course or sewage system.
 Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
 Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
 Dispose contaminated material as waste according to item 13.
 Ensure adequate ventilation.
- **Reference to other sections**
 See Section 7 for information on safe handling.
 See Section 8 for information on personal protection equipment.
 See Section 13 for disposal information.
- **Protective Action Criteria for Chemicals**

· PAC-1:

28064-14-4	Epoxy phenol novolac resin	30 mg/m ³
2530-83-8	[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	9.3 mg/m ³
25068-38-6	Epoxy Resin	90 mg/m ³
546-93-0	Magnesite	45 mg/m ³
13463-67-7	titanium dioxide	30 mg/m ³
67762-90-7	Silicones and siloxanes, dimethyl-, reaction products with silica	120 mg/m ³
108-83-8	2,6-dimethylheptan-4-one	75 ppm
872-50-4	N-methyl-2-pyrrolidone	30 ppm
1333-86-4	Carbon black	9 mg/m ³
14808-60-7	Quartz (SiO ₂)	0.075 mg/m ³
21645-51-2	aluminium hydroxide	8.7 mg/m ³
7631-86-9	silicon dioxide, chemically prepared	18 mg/m ³
7447-41-8	lithium chloride	2.3 mg/m ³

· PAC-2:

28064-14-4	Epoxy phenol novolac resin	330 mg/m ³
2530-83-8	[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	100 mg/m ³
25068-38-6	Epoxy Resin	990 mg/m ³
546-93-0	Magnesite	260 mg/m ³
13463-67-7	titanium dioxide	330 mg/m ³
67762-90-7	Silicones and siloxanes, dimethyl-, reaction products with silica	1,300 mg/m ³
108-83-8	2,6-dimethylheptan-4-one	330 ppm
872-50-4	N-methyl-2-pyrrolidone	32 ppm
1333-86-4	Carbon black	99 mg/m ³
14808-60-7	Quartz (SiO ₂)	33 mg/m ³
21645-51-2	aluminium hydroxide	73 mg/m ³
7631-86-9	silicon dioxide, chemically prepared	740 mg/m ³
7447-41-8	lithium chloride	25 mg/m ³

(Contd. on page 5)

Trade name: EL337 Resin

(Contd. of page 4)

· PAC-3:		
28064-14-4	Epoxy phenol novolac resin	2,000 mg/m ³
2530-83-8	[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	230 mg/m ³
25068-38-6	Epoxy Resin	5,900 mg/m ³
546-93-0	Magnesite	1,600 mg/m ³
13463-67-7	titanium dioxide	2,000 mg/m ³
67762-90-7	Silicones and siloxanes, dimethyl-, reaction products with silica	7,900 mg/m ³
108-83-8	2,6-dimethylheptan-4-one	2000* ppm
872-50-4	N-methyl-2-pyrrolidone	190 ppm
1333-86-4	Carbon black	590 mg/m ³
14808-60-7	Quartz (SiO ₂)	200 mg/m ³
21645-51-2	aluminium hydroxide	440 mg/m ³
7631-86-9	silicon dioxide, chemically prepared	4,500 mg/m ³
7447-41-8	lithium chloride	150 mg/m ³

7 Handling and storage

- **Handling:**
- **Precautions for safe handling** Ensure good ventilation/exhaustion at the workplace.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**
- **Components with limit values that require monitoring at the workplace:**
The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.
At this time, the other constituents have no known exposure limits.

872-50-4 N-methyl-2-pyrrolidone

WEEL	Long-term value: 10 ppm
	Skin

· **Ingredients with biological limit values:**

872-50-4 N-methyl-2-pyrrolidone

BEI	100 mg/L
	Medium: urine
	Time: end of shift
	Parameter: 5-Hydroxy-N-methyl-2-pyrrolidone

(Contd. on page 6)

Trade name: EL337 Resin

(Contd. of page 5)

· **Additional information:** The lists that were valid during the creation were used as basis.

· **Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Store protective clothing separately.

Avoid contact with the eyes and skin.

· **Breathing equipment:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

· **Protection of hands:**



Protective gloves

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

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

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

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**



Tightly sealed goggles

9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form: Thixotropic Paste

Color: Grey

· **Odor:** Amine-like

· **Odor threshold:** Not determined.

· **pH-value:** Not determined.

· **Change in condition**

Melting point/Melting range: Undetermined.

(Contd. on page 7)

Printing date 05/10/2018

Reviewed on 09/09/2015

Trade name: EL337 Resin

(Contd. of page 6)

Boiling point/Boiling range:	201 °C (393.8 °F)
· Flash point:	110 °C (230 °F)
· Flammability (solid, gaseous):	Not applicable.
· Decomposition temperature:	Not determined.
· Auto igniting:	Product is not selfigniting.
· Danger of explosion:	Product does not present an explosion hazard.
· Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
· Vapor pressure:	Not determined.
· Density at 20 °C (68 °F):	1.39 g/cm ³ (11.6 lbs/gal)
· Relative density	Not determined.
· Vapor density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with Water:	Not miscible or difficult to mix.
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
· Solvent content:	
Organic solvents:	0.5 %
VOC content:	0.48 %
	6.6 g/l / 0.06 lb/gl
· Solids content:	21.8 %
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:**
- ?
- Carbon monoxide and carbon dioxide

US

(Contd. on page 8)



BUILDING TRUST



Safety Data Sheet

acc. to OSHA HCS

Printing date 05/10/2018

Reviewed on 09/09/2015

Trade name: EL337 Resin

(Contd. of page 7)

11 Toxicological information

- Information on toxicological effects
- Acute toxicity:

- LD/LC50 values that are relevant for classification:

Oral	LD50	4,500 mg/kg (rat)
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- Primary irritant effect:
- on the skin: Irritant to skin and mucous membranes.
- on the eye: Irritating effect.
- Sensitization: Sensitization possible through skin contact.
- Additional toxicological information:

The product shows the following dangers according to internally approved calculation methods for preparations:
Irritant

- Carcinogenic categories

- IARC (International Agency for Research on Cancer)

14807-96-6	Talc (Mg ₃ H ₂ (SiO ₃) ₄)	3
13463-67-7	titanium dioxide	2B
1333-86-4	Carbon black	2B
14808-60-7	Quartz (SiO ₂)	1
7631-86-9	silicon dioxide, chemically prepared	3

- NTP (National Toxicology Program)

14808-60-7	Quartz (SiO ₂)	K
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- OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

12 Ecological information

- Toxicity

- Aquatic toxicity:

96 hr LC50	3.6 mg/l (Fish)
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- Persistence and degradability No further relevant information available.
- Behavior in environmental systems:
- Bioaccumulative potential No further relevant information available.
- Mobility in soil No further relevant information available.
- Ecotoxicological effects:
- Remark: Toxic for fish
- Additional ecological information:
- General notes:
Water hazard class 2 (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.
Also poisonous for fish and plankton in water bodies.
Toxic for aquatic organisms
- Results of PBT and vPvB assessment
- PBT: Not applicable.

(Contd. on page 9)

Printing date 05/10/2018

Reviewed on 09/09/2015

Trade name: **EL337 Resin**

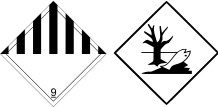
(Contd. of page 8)

- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- | | |
|---|--|
| <ul style="list-style-type: none"> · UN-Number · DOT · IMDG, IATA | <p>not regulated
UN3082</p> |
| <ul style="list-style-type: none"> · UN proper shipping name · DOT · IMDG · IATA | <p>not regulated
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Epoxy phenol novolac resin, Epoxy Resin), MARINE POLLUTANT
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Epoxy phenol novolac resin, Epoxy Resin)</p> |
| <ul style="list-style-type: none"> · Transport hazard class(es) · DOT · Class | <p>not regulated</p> |
| <ul style="list-style-type: none"> · IMDG, IATA  | <p>9 Miscellaneous dangerous substances and articles
9</p> |
| <ul style="list-style-type: none"> · Packing group · DOT · IMDG, IATA | <p>not regulated
III</p> |
| <ul style="list-style-type: none"> · Environmental hazards: · Marine pollutant: · Special marking (IATA): | <p>Product contains environmentally hazardous substances: Epoxy phenol novolac resin
Yes
Symbol (fish and tree)
Symbol (fish and tree)</p> |
| <ul style="list-style-type: none"> · Special precautions for user · Danger code (Kemler): · EMS Number: | <p>Warning: Miscellaneous dangerous substances and articles
60
F-A,S-F</p> |

(Contd. on page 10)

US



BUILDING TRUST



Safety Data Sheet

acc. to OSHA HCS

Printing date 05/10/2018

Reviewed on 09/09/2015

Trade name: EL337 Resin

(Contd. of page 9)

· Stowage Category	A
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	
· IMDG	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· UN "Model Regulation":	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCES, LIQUID, N.O.S. (EPOXY PHENOL NOVOLAC RESIN, EPOXY RESIN), 9, III

15 Regulatory information

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

- **Section 355 (extremely hazardous substances):**

None of the ingredients is listed.

- **Section 313 (Specific toxic chemical listings):**

872-50-4 | N-methyl-2-pyrrolidone

- **TSCA (Toxic Substances Control Act) (Substances not listed):**

All ingredients are listed.

- **Chemicals regulated by TSCA Section 12(b)**

None of the ingredients is listed.

- **Chemical regulated by TSCA 5(a)(2) rule:**

None of the ingredients is listed.

- **Proposition 65**

- **Chemicals known to cause cancer:**

1317-65-3 | Calcium Carbonate

13463-67-7 | titanium dioxide

1333-86-4 | Carbon black

14808-60-7 | Quartz (SiO₂)

- **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

- **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

- **Chemicals known to cause developmental toxicity:**

872-50-4 | N-methyl-2-pyrrolidone

(Contd. on page 11)

Printing date 05/10/2018

Reviewed on 09/09/2015

Trade name: **EL337 Resin**

(Contd. of page 10)

· **Carcinogenic categories**· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

· **TLV (Threshold Limit Value established by ACGIH)**

14807-96-6	Talc (Mg ₃ H ₂ (SiO ₃) ₄)	A4
13463-67-7	titanium dioxide	A4
1333-86-4	Carbon black	A4
14808-60-7	Quartz (SiO ₂)	A2

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

13463-67-7	titanium dioxide
1333-86-4	Carbon black
14808-60-7	Quartz (SiO ₂)

· **Listed in CWC Regulations**

None of the ingredients is listed.

· **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).· **Hazard pictograms**

GHS07 GHS08 GHS09

· **Signal word** *Danger*· **Hazard-determining components of labeling:**

Epoxy phenol novolac resin
 N-methyl-2-pyrrolidone
 1,3-bis(2,3-epoxypropoxy)-2,2-dimethylpropane
 Epoxy Resin

· **Hazard statements**

Causes skin irritation.
 Causes serious eye irritation.
 May cause an allergic skin reaction.
 May cause cancer.
 May damage fertility or the unborn child.
 May cause respiratory irritation.
 Toxic to aquatic life.
 Toxic to aquatic life with long lasting effects.

· **Precautionary statements**

Avoid breathing dust/fume/gas/mist/vapors/spray
 Wear protective gloves/protective clothing/eye protection/face protection.
 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
 Continue rinsing.
 Call a poison center/doctor if you feel unwell.
 Specific treatment (see on this label).
 Wash contaminated clothing before reuse.
 Store in a well-ventilated place. Keep container tightly closed.

(Contd. on page 12)



BUILDING TRUST



Safety Data Sheet

acc. to OSHA HCS

Printing date 05/10/2018

Reviewed on 09/09/2015

Trade name: EL337 Resin

(Contd. of page 11)

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· **National regulations:**

· **Additional classification according to Decree on Hazardous Materials:**

Carcinogenic hazardous material group III (dangerous).

· **Information about limitation of use:**

Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation.

Exceptions can be made by the authorities in certain cases.

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

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

· **Date of preparation / last revision** 05/10/2018 / 2

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

BEL: Biological Exposure Limit

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A

Skin Sens. 1: Skin sensitisation – Category 1

Carc. 1B: Carcinogenicity – Category 1B

Repr. 1B: Reproductive toxicity – Category 1B

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

Aquatic Acute 2: Hazardous to the aquatic environment - acute aquatic hazard – Category 2

Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2