

**Elan-tech® EC 157**

Version 3.0 SDB\_GB

Revision Date 18.01.2016

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**SECTION 1: Identification of the substance/mixture and of the company/undertaking**

**1.1 Product identifier**

Trade name : Elan-tech® EC 157

**1.2 Relevant identified uses of the substance or mixture and uses advised against**

Use of the Substance/Mixture : Casting Resin

**1.3 Details of the supplier of the safety data sheet**

Company : ELANTAS Europe S.r.l.  
Strada Antolini 1  
43044 Collecchio  
Italy  
Telephone : +3907363081  
Telefax : +390736402746  
E-mail address : msds.elantas.europe@altana.com

**1.4 Emergency telephone number**

+39 0736 3081 (8-17 h)

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**SECTION 2: Hazards identification**

**2.1 Classification of the substance or mixture**

**Classification (REGULATION (EC) No 1272/2008)**

Skin irritation , Category 2	H315: Causes skin irritation.
Eye irritation , Category 2	H319: Causes serious eye irritation.
Skin sensitisation , Category 1	H317: May cause an allergic skin reaction.
Chronic aquatic toxicity , Category 2	H411: Toxic to aquatic life with long lasting effects.

**2.2 Label elements**

**Labelling (REGULATION (EC) No 1272/2008)**

Hazard pictograms :  

Signal word : Warning

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

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	H411	Toxic to aquatic life with long lasting effects.
Precautionary statements	<b>Prevention:</b>	
	P261	Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
	P273	Avoid release to the environment.
	P280	Wear eye protection/ face protection.
	P280	Wear protective gloves.
	<b>Response:</b>	
	P333 + P313	If skin irritation or rash occurs: Get medical advice/ attention.
	P337 + P313	If eye irritation persists: Get medical advice/ attention.

Hazardous components which must be listed on the label:

reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight =< 700)

Epichlorohydrin-formaldehyde-phenol polymer number average molecular weight =< 700

1,6-bis(2,3-epoxypropoxy)hexane

**2.3 Other hazards**

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

**SECTION 3: Composition/information on ingredients**

**3.2 Mixtures**

Chemical nature : Modified epoxy resin

**Hazardous components**

Chemical Name	CAS-No. EC-No. Registration number	Classification (REGULATION (EC) No 1272/2008)	Concentration (%)
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight =< 700)	25068-38-6 01-2119456619-26	Eye Irrit.2; H319 Skin Irrit.2; H315 Skin Sens.1; H317 Aquatic Chronic2; H411	>= 30 - < 50
Epichlorohydrin-formaldehyde-phenol polymer number average molecular weight =< 700	9003-36-5	Skin Irrit.2; H315 Eye Irrit.2; H319 Skin Sens.1; H317 Aquatic Chronic2; H411	>= 30 - < 50
1,6-bis(2,3-epoxypropoxy)hexane	16096-31-4 240-260-4 01-2119463471-41	Skin Irrit.2; H315 Eye Irrit.2; H319 Skin Sens.1; H317 Aquatic Chronic3; H412	>= 20 - < 25

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propylene carbonate	108-32-7 203-572-1 01-2119537232-48	Eye Irrit.2; H319	>= 1 - < 3
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For explanation of abbreviations see section 16.

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## SECTION 4: First aid measures

### 4.1 Description of first aid measures

- General advice : Keep warm and in a quiet place.  
Show this safety data sheet to the doctor in attendance.  
Take off all contaminated clothing immediately.
- If inhaled : Move to fresh air.  
Keep patient warm and at rest.  
If unconscious place in recovery position and seek medical advice.  
If symptoms persist, call a physician.  
If breathing is irregular or stopped, administer artificial respiration.
- In case of skin contact : Wash off immediately with soap and plenty of water.  
Do NOT use solvents or thinners.  
If on clothes, remove clothes.  
If skin irritation persists, call a physician.
- In case of eye contact : Rinse immediately with plenty of water, also under the eyelids,  
for at least 15 minutes.  
If eye irritation persists, consult a specialist.  
If easy to do, remove contact lens, if worn.
- If swallowed : Keep at rest.  
Do not induce vomiting without medical advice.  
Keep respiratory tract clear.  
If symptoms persist, call a physician.

### 4.2 Most important symptoms and effects, both acute and delayed

- Symptoms : irritant effects  
Redness  
sensitising effects

### 4.3 Indication of any immediate medical attention and special treatment needed

- Treatment : The first aid procedure should be established in consultation  
with the doctor responsible for industrial medicine.

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**SECTION 5: Firefighting measures**

**5.1 Extinguishing media**

Suitable extinguishing media : Foam  
Sand  
Carbon dioxide (CO<sub>2</sub>)  
Water mist

Unsuitable extinguishing media : Water spray jet

**5.2 Special hazards arising from the substance or mixture**

Specific hazards during firefighting : The pressure in sealed containers can increase under the influence of heat.  
Cool closed containers exposed to fire with water spray.

**5.3 Advice for firefighters**

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.  
Use personal protective equipment.

Further information : In the event of fire and/or explosion do not breathe fumes.  
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.  
Immediately evacuate personnel to safe areas.  
Prevent fire extinguishing water from contaminating surface water or the ground water system.  
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

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**SECTION 6: Accidental release measures**

**6.1 Personal precautions, protective equipment and emergency procedures**

Personal precautions : Refer to protective measures listed in sections 7 and 8.  
Evacuate personnel to safe areas.  
Use personal protective equipment.  
Ensure adequate ventilation.  
Inform the responsible authorities in case of gas leakage, or of entry into waterways, soil or drains.

**6.2 Environmental precautions**

Environmental precautions : Do not allow uncontrolled discharge of product into the environment.  
Try to prevent the material from entering drains or water courses.  
Local authorities should be advised if significant spillages cannot be contained.

**6.3 Methods and material for containment and cleaning up**

Methods for cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel,

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acid binder, universal binder, sawdust).  
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).  
Pick up and transfer to properly labelled containers.

### 6.4 Reference to other sections

For personal protection see section 8.

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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

- Advice on safe handling : Provide sufficient air exchange and/or exhaust in work rooms. Avoid inhalation, ingestion and contact with skin and eyes. Wear personal protective equipment. Persons with a history of 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.
- Advice on protection against fire and explosion : Keep away from open flames, hot surfaces and sources of ignition.
- Hygiene measures : Provide adequate ventilation. Wash hands and face before breaks and immediately after handling the product.

### 7.2 Conditions for safe storage, including any incompatibilities

- Requirements for storage areas and containers : Keep containers tightly closed in a dry, cool and well-ventilated place. Keep in properly labelled containers.
- Advice on common storage : Keep away from oxidizing agents, strongly acid or alkaline materials and amines. Keep product and empty container away from heat and sources of ignition. Keep away from food and drink.
- Other data : Stable at normal ambient temperature and pressure.

### 7.3 Specific end use(s)

- Specific use(s) : Consult the technical guidelines for the use of this substance/mixture.

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## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

Contains no substances with occupational exposure limit values.

**Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:**

reaction product: bisphenol-A- : End Use: Workers

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



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(epichlorhydrin); epoxy resin  
(number average molecular  
weight =< 700)

Exposure routes: Skin contact  
Potential health effects: Acute systemic effects, Long-term  
systemic effects  
Value: 8,33 mg/kg  
End Use: Workers

Exposure routes: Inhalation  
Potential health effects: Acute systemic effects, Long-term local  
effects  
Value: 12,25 mg/m<sup>3</sup>  
End Use: Consumers

Exposure routes: Skin contact  
Potential health effects: Acute systemic effects, Long-term  
systemic effects  
Value: 3,571 mg/kg  
End Use: Consumers

Exposure routes: Ingestion  
Potential health effects: Acute systemic effects, Long-term  
systemic effects  
Value: 0,75 mg/kg

1,6-bis(2,3-  
epoxypropoxy)hexane

: End Use: Workers  
Exposure routes: Skin contact  
Potential health effects: Long-term systemic effects  
Value: 2,8 mg/kg  
End Use: Workers

Exposure routes: Inhalation  
Potential health effects: Long-term systemic effects  
Value: 4,9 mg/m<sup>3</sup>

### Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

reaction product: bisphenol-A-  
(epichlorhydrin); epoxy resin  
(number average molecular  
weight =< 700)

: Fresh water  
Value: 0,006 mg/l

Marine water  
Value: 0,0006 mg/l  
Intermittent releases  
Value: 0,018 mg/l  
Sewage treatment plant  
Value: 10 mg/l

Fresh water sediment  
Value: 0,996 mg/kg

Marine sediment  
Value: 0,0996 mg/kg

Soil  
Value: 0,196 mg/kg

1,6-bis(2,3-  
epoxypropoxy)hexane

: Sewage treatment plant  
Value: 1 mg/l

Fresh water  
Value: 0,0115 mg/l

Fresh water sediment  
Value: 0,283 mg/kg

Marine water  
Value: 0,00115 mg/l

Marine sediment  
Value: 0,0283 mg/kg

Soil

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Value: 0,223 mg/kg

### 8.2 Exposure controls

#### Engineering measures

Effective exhaust ventilation system  
effective ventilation in all processing areas

#### Personal protective equipment

- Eye protection : Do not wear contact lenses.  
Safety glasses with side-shields conforming to EN166  
Ensure that eyewash stations and safety showers are close to the workstation location.
- Hand protection  
Material : Chemical resistant gloves made of butyl rubber or nitrile rubber category III according to EN 374.
- Skin and body protection : Protective suit
- Respiratory protection : Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines. In the case of vapour formation use a respirator with an approved filter.  
Respirator with a vapour filter (EN 141)  
Apply technical measures to comply with the occupational exposure limits.  
This should be achieved by a good general extraction and -if practically feasible- by the use of a local exhaust ventilation.
- Protective measures : Avoid contact with skin.  
Wear suitable protective equipment.

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## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

- Appearance : liquid
- Colour : light yellow
- Odour : slight
- Odour Threshold : not determined
- pH : not determined
- Melting point/freezing point : Not applicable
- Boiling point/boiling range : > 200 °C
- Flash point : 140 °C
- Evaporation rate : not determined

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Upper explosion limit	: Not applicable
Lower explosion limit	: Not applicable
Vapour pressure	: Not applicable
Relative vapour density	: not determined
Density	: 1,15 g/cm <sup>3</sup> (25 °C)
Bulk density	: not determined
Solubility(ies)	
Solubility in other solvents	: not determined
Partition coefficient: n-octanol/water	: No data available
Auto-ignition temperature	: Not applicable
Thermal decomposition	: Method: No data available
Viscosity	
Viscosity, dynamic	: 500 - 600 mPa.s (25 °C)
Viscosity, kinematic	: not determined
Explosive properties	: Not applicable
Oxidizing properties	: Not applicable

**9.2 Other information**

Surface tension	: not determined
Sublimation point	: Not applicable

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**SECTION 10: Stability and reactivity**

**10.1 Reactivity**

Stable under recommended storage conditions.

**10.2 Chemical stability**

No decomposition if stored and applied as directed.

**10.3 Possibility of hazardous reactions**

Hazardous reactions	: Reacts with the following substances: Bases Strong oxidizing agents
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Avoid amines.

**10.4 Conditions to avoid**

Conditions to avoid : No decomposition if used as directed.

**10.5 Incompatible materials**

Materials to avoid : Incompatible with oxidizing agents.

**10.6 Hazardous decomposition products**

Hazardous decomposition products : This product may release the following:  
Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke).

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**SECTION 11: Toxicological information**

**11.1 Information on toxicological effects**

**Acute toxicity**

**Product:**

Acute oral toxicity : Remarks: No data available

**Components:**

**reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight =< 700):**

Acute oral toxicity : LD50 (Rat, female): > 2.000 mg/kg  
Method: OECD Test Guideline 420  
GLP: yes

Acute dermal toxicity : LD50 (Rat, male and female): > 2.000 mg/kg  
Method: OECD Test Guideline 402  
GLP: yes

**1,6-bis(2,3-epoxypropoxy)hexane:**

Acute oral toxicity : LD50 (Rat): 2.900 mg/kg  
Method: OECD Test Guideline 401  
GLP: yes

Acute dermal toxicity : LD50 (Rabbit): > 2.000 mg/kg  
Method: OECD Test Guideline 402  
GLP: yes

**Skin corrosion/irritation**

**Product:**

Remarks: No data available

**Components:**

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**reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight =< 700):**

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

**Serious eye damage/eye irritation**

**Product:**

Remarks: No data available

**Respiratory or skin sensitisation**

**Product:**

Remarks: No data available

**Components:**

**reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight =< 700):**

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

**1,6-bis(2,3-epoxypropoxy)hexane:**

Test Type: Mouse Local Lymph Node assay (LLNA)  
Exposure routes: Dermal  
Species: Mouse  
Method: OECD Test Guideline 429  
Result: May cause sensitisation by skin contact.  
GLP: yes

**Germ cell mutagenicity**

**Carcinogenicity**

**Reproductive toxicity**

**STOT - single exposure**

**Product:**

Remarks: Not applicable

**STOT - repeated exposure**

**Repeated dose toxicity**

**Product:**

Remarks: No data available

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**Aspiration toxicity**

**Components:**

**reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight =< 700):**

No aspiration toxicity classification

**Further information**

**Product:**

Remarks: No data available

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**SECTION 12: Ecological information**

**12.1 Toxicity**

**Product:**

Toxicity to fish : Remarks: No data available

Toxicity to daphnia and other aquatic invertebrates : Remarks: No data available

**Components:**

**reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight =< 700):**

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 (Chronic toxicity) : NOEC: 0,3 mg/l  
Exposure time: 21 d  
Species: Daphnia magna (Water flea)  
Test Type: semi-static test  
Method: OECD Test Guideline 211  
GLP: yes

**1,6-bis(2,3-epoxypropoxy)hexane:**

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 30 mg/l  
Exposure time: 96 h  
Test Type: semi-static test  
Method: OECD Test Guideline 203  
GLP: yes

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 39 mg/l  
Exposure time: 48 h  
Test Type: static test  
Method: OECD Test Guideline 202  
GLP: yes

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**12.2 Persistence and degradability**

**Product:**

Biodegradability : Remarks: No data available

**Components:**

**reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight =< 700):**

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

**12.3 Bioaccumulative potential**

**Product:**

Bioaccumulation : Remarks: No data available

**Components:**

**reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight =< 700):**

Partition coefficient: n- : log Pow: 3,242 (25 °C)  
octanol/water pH: 7,1  
Method: OECD Test Guideline 117  
GLP: yes

**12.4 Mobility in soil**

No data available

**12.5 Results of PBT and vPvB assessment**

**Product:**

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher..

**12.6 Other adverse effects**

**Product:**

Additional ecological information : Remarks: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

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**SECTION 13: Disposal considerations**

**13.1 Waste treatment methods**

Product : In accordance with local and national regulations.  
Container hazardous when empty.  
Do not dispose of with domestic refuse.  
Do not mix waste streams during collection.

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Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.

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**SECTION 14: Transport information**

**14.1 UN number**

**ADR/RID/ADN** : UN 3082

**IMDG** : UN 3082

**IATA** : UN 3082

**14.2 UN proper shipping name**

**ADR/RID/ADN** : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,  
N.O.S.  
(Epoxy resin)

**IMDG** : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,  
N.O.S.  
(Epoxy resin)

**IATA** : Environmentally hazardous substance, liquid, n.o.s.  
(Epoxy resin)

**14.3 Transport hazard class(es)**

**ADR/RID/ADN** : 9

**IMDG** : 9

**IATA** : 9

**14.4 Packing group**

**ADR/RID/ADN**  
Packing group : III  
Classification Code : M6  
Hazard Identification Number : 90  
Labels : 9

**IMDG**  
Packing group : III  
Labels : 9  
EmS Code : F-A, S-F

**IATA**  
Packing instruction (cargo aircraft) : 964  
Packing instruction (passenger aircraft) : 964  
Packing group : III  
Labels : 9

**14.5 Environmental hazards**

**ADR/RID/ADN**  
Environmentally hazardous : yes

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### IMDG

Marine pollutant : yes

### 14.6 Special precautions for user

Not applicable

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

Not applicable for product as supplied.

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## SECTION 15: Regulatory information

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

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII) : Not applicable

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). : This product does not contain substances of very high concern (Regulation (EC) No 1907/2006 (REACH), Article 57).

REACH - List of substances subject to authorisation (Annex XIV) : Not applicable

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

		Quantity 1	Quantity 2
E2	ENVIRONMENTAL HAZARDS	200 t	500 t

### 15.2 Chemical Safety Assessment

Not applicable

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## SECTION 16: Other information

### Full text of H-Statements

H315 : Causes skin irritation.  
H317 : May cause an allergic skin reaction.  
H319 : Causes serious eye irritation.  
H411 : Toxic to aquatic life with long lasting effects.  
H412 : Harmful to aquatic life with long lasting effects.

### Full text of other abbreviations

Aquatic Chronic : Chronic aquatic toxicity  
Eye Irrit. : Eye irritation  
Skin Irrit. : Skin irritation  
Skin Sens. : Skin sensitisation

### Further information

Training advice : Provide adequate information, instruction and training for

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operators.

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.