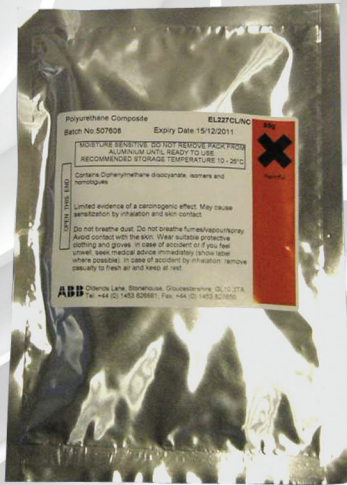


# EL227CL/NC

## Polyurethane resin/hardener composition



Resin/Hardener safety information

Measurement made easy

# 1 Resin-specific safety data

## 1.1 Identification of the substance/ preparation and the company

**Product name** RL227CL/NC  
**Company** ABB Limited  
Oldends Lane  
Stonehouse  
Gloucestershire  
GL10 3TA  
flow@gb.abb.com  
www.abb.com

**Telephone** +44 (0)1453 826 661

**Fax** +44 (0)1453 826 671

**Emergency Tel.** +44 (0)1453 826 661

## 1.2 Hazards identification

**Main hazards** No significant hazard

## 1.3 Composition/information on ingredients

**Description** Propylene oxide polymer with ethylene oxide and glycerol

## 1.4 First aid measures

### • Skin contact

- Wash off immediately with plenty of soap and water.
- Remove contaminated clothing.
- Seek medical attention if irritation or symptoms persist.

### • Eye contact

- Rinse immediately with plenty of water for 15 minutes holding the eyelids open.
- Seek medical attention if irritation or symptoms persist.

### • Inhalation

- Move the exposed person to fresh air.
- Seek medical attention.

### • Ingestion

- If swallowed, seek medical advice immediately and show this container or label.
- Drink 1 to 2 glasses of water.
- Ingest 300 ml of activated charcoal.
- DO NOT INDUCE VOMITING.
- Never give anything by mouth to an unconscious person.

### • General information

If you feel unwell, seek medical advice (show the label where possible).

## 1.5 Fire fighting measures

### • Extinguishing media

- Carbon dioxide (CO<sub>2</sub>) foam.
- Dry chemical.
- Water spray.

### • Fire hazards

Burning produces irritating, toxic and obnoxious fumes.

### • Protective equipment

Wear self-contained breathing apparatus.

## 1.6 Accidental release measures

### • Personal precautions

- Wear suitable protective equipment.
- Eliminate all sources of ignition.
- Keep personnel away from spill.
- Evacuate personnel to a safe area.
- Ensure adequate ventilation of the working area.

### • Environmental precautions

- Do not let product contaminate subsoil.
- Do not allow product to enter drains.

### • Clean up methods

- Remove mechanically.
- Cover the remainder with wet, absorbent material (for example, sawdust, chemical binder based on calcium silicate hydrate, sand).
- After approximately one hour transfer to waste container and do not seal (evolution of CO<sub>2</sub>!).

## 1.7 Handling and storage

### • Handling

- Avoid contact with eyes and skin.
- Ensure adequate ventilation of the working area.
- Do not eat, drink or smoke in areas where this product is used or stored.

### • Storage

- Keep in a cool, dry, well ventilated area.
- Keep containers tightly closed.
- Do not store with food, feedstuffs, fertilizers and other sensitive materials.

## 1.8 Exposure controls/personal protection

- **Engineering measures**  
Ensure adequate ventilation of the working area.
- **Occupational exposure controls**  
Keep away from food, drink and animal feeding stuffs.
- **Respiratory protection**
  - Wear suitable respiratory equipment when necessary.
  - Suitable half mask respirator with filter P3 (EN 143).
- **Hand protection**
  - Rubber gloves.
  - Chemical resistant gloves (PVC).
- **Eye protection**
  - Face shield.
  - Approved safety goggles.
- **Protective equipment**
  - Avoid contact with eyes and skin.
  - Wash all contaminated clothing before reuse.
  - Wear suitable protective equipment.

## 1.9 Physical and chemical properties

<b>Description</b>	Liquid.
<b>Color</b>	Colorless.
<b>Odor</b>	Mild.
<b>Relative density</b>	1.014

## 1.10 Stability and reactivity

- **Stability**  
Stable under normal conditions.
- **Conditions to avoid**  
Heat, sparks and open flames.
- **Materials to avoid**
  - Acids
  - Oxidizing agents.
- **Hazardous decomposition products**
  - Carbon oxides
  - Nitrogen oxides.

## 1.11 Toxicological information

- **Acute toxicity**  
No data is available on this product.

## 1.12 Ecological information

- **Ecotoxicity**  
No data is available on this product.

## 1.13 Disposal considerations

- **General information**
  - Can be incinerated if in compliance with local and national regulations.
  - Dispose of in compliance with all local and national regulations.

## 1.14 Transport information

The product is not classified as dangerous for carriage.

## 1.15 Regulatory information

- **Risk phrases**  
NSH – No Significant Hazard.

## 1.16 Other information

### General information

This product is intended for use with a resin/hardener designated by ABB. The corresponding safety data for that resin/hardener must be studied along with the data on this sheet prior to use. Using resins/hardeners which have not been supplied and/or recommended by ABB for use with this product is potentially hazardous and should not be contemplated.

Safety instructions and operating procedures for specified tasks must be written, communicated and enforced. These will include:

- Provision of hazard information and training of personnel based on operating procedures and safety data sheets, together with instructions on how to avoid exposure.
- Assessment of the risk of exposure and contact after all reasonable practical steps have been taken to avoid exposure, selection of suitable personal protective equipment and implementation of an appropriate program.
- Provision of facilities for washing, storage of clothing and skin care and promotion of their use.
- Close supervision to identify failure in the performance of process controls or in following operating instructions, the occurrence of irritation and inadequate use of personal protective equipment. Assessment should also be made of the need for industrial personal hygiene and medical surveillance, and provision of appropriate services.

Occupational dermatitis contracted during exposure to resin systems is a reportable disease under Schedule 3 of the RIDDOR regulations (UK). Form F2508A available from the HSE should be used for such notification.

It is a statutory requirement that Medical Supervision is carried out when using products which can cause an identifiable disease, there is reasonable likelihood that the disease may occur under the particular conditions of work and there are valid techniques for detecting indications of the disease.

This User Guide was compiled using information gathered concerning its individual components. We know no synergistic effects but we cannot exclude the existence of such effects. If this product is to be machined in any way then the toxicological information in Sections 1.11 and 2.11 and the information concerning respiratory protection in Sections 1.8 and 2.8 should be noted.

## 2 Hardener-specific safety data

### 2.1 Identification of the substance/ preparation and the company

<b>Product name</b>	HL227CL/NC
<b>Company</b>	ABB Limited Oldends Lane Stonehouse Gloucestershire GL10 3TA flow@gb.abb.com www.abb.com
<b>Telephone</b>	+44 (0)1453 826 661
<b>Fax</b>	+44 (0)1453 826 671
<b>Emergency Tel.</b>	+44 (0)1453 826 661

### 2.2 Hazards identification

- **Main hazards**
  - Harmful by inhalation. Danger of serious damage to health by prolonged exposure through inhalation
  - Irritating to eyes, respiratory system and skin.
  - Limited evidence of a carcinogenic effect.
  - May cause sensitization by inhalation and skin contact.

### 2.3 Composition/information on ingredients

#### Hazardous ingredients

Diphenylmethane diisocyanate, isomers and homologues

Conc. 30 – 40%

CAS 9016-87-9

EINECS

Symbols/Risk phrases: Xn; R20-40-42/43-48  
Xi; R36/37/38

### 2.4 First aid measures

- **Skin contact**
  - Wash off immediately with plenty of soap and water.
  - Remove contaminated clothing.
  - Seek medical attention if irritation or symptoms persist.
- **Eye contact**

Rinse immediately with plenty of water for 15 minutes holding the eyelids open.
- **Inhalation**

Seek medical attention.
- **Ingestion**
  - Rinse mouth thoroughly.
  - Drink 1 to 2 glasses of water.
  - DO NOT INDUCE VOMITING.

### 2.5 Fire fighting measures

- **Extinguishing media**
  - Alcohol resistant foam.
  - Carbon dioxide (CO<sub>2</sub>).
  - Dry chemical.
  - Water.
  - DO NOT USE WATER JET.
- **Protective equipment**

Wear self-contained breathing apparatus.

### 2.6 Accidental release measures

- **Personal precautions**
  - Wear suitable protective equipment.
  - Evacuate personnel to a safe area.
  - Eliminate all sources of ignition.
  - Ensure adequate ventilation of the working area.
- **Environmental precautions**
  - Do not let product contaminate subsoil.
  - Do not allow product to enter drains.
- **Clean up methods**

Absorb with inert, absorbent material.

### 2.7 Handling and storage

- **Handling**
  - Avoid contact with eyes and skin.
  - Do not breathe gas/fumes/vapor/spray.
  - Avoid sparks, flames, heat and sources of ignition.
  - Take precautionary measures against static discharges.
- **Storage**
  - Keep in a cool, dry, well ventilated area.
  - Keep containers tightly closed.

## 2.8 Exposure controls/personal protection

- **Exposure limits**
  - diphenylmethanediisocyanate, isomers and homologues  
WEL 8 hr limit ppm:  
WEL 8 hr limit mg/m<sup>3</sup>: 0.02  
WEL 15 min limit ppm:  
WEL 15 min limit mg/m<sup>3</sup>: 0.07
- **Engineering measures**  
Ensure adequate ventilation of the working area.
- **Occupational exposure controls**  
Keep away from food, drink and animal feeding stuffs.
- **Respiratory protection**
  - Do not breathe dust or vapor.
  - Wear suitable respiratory equipment.
- **Hand protection**  
Chemical resistant gloves (plastic)
- **Eye protection**
  - Avoid contact with eyes.
  - In case of splashing, wear approved safety goggles.
- **Protective equipment**  
Adopt best manual handling considerations when handling, carrying and dispensing.

## 2.9 Physical and chemical properties

<b>Description</b>	Liquid
<b>Color</b>	Brown
<b>Odor</b>	Characteristic
<b>Relative density</b>	1.051

## 2.10 Stability and reactivity

- **Stability**  
Stable under normal conditions.
- **Conditions to avoid**  
Heat, sparks and open flames.

## 2.11 Toxicological information

- **Corrosivity**  
Irritating to eyes.
- **Sensitization**  
May cause sensitization by skin contact.
- **Prolonged or repeated exposure**  
Prolonged or repeated exposure may cause irritation to skin and mucous membranes.

## 2.12 Ecological information

- **Degradability**  
Not readily biodegradable.

## 2.13 Disposal considerations

- **General information**
  - Dispose of in compliance with all local and national regulations.
  - Can be incinerated if in compliance with local and national regulations.

## 2.14 Transport information

- **Further information**  
The product is not classified as dangerous for carriage.

## 2.15 Regulatory information

- **Symbols**  
Xn - Harmful



### Risk phrases

- R20 – Harmful by inhalation.
- R36/37/38 – Irritating to eyes, respiratory system and skin.
- R40 – Limited evidence of a carcinogenic effect.
- R42/43 – May cause sensitization by inhalation and skin contact.
- R48/20 – Harmful: danger of serious damage to health by prolonged exposure through inhalation.

### Safety phrases

- S22 – Do not breathe dust.
- S23 – Do not breathe gas/fumes/vapor/spray.
- S24 – Avoid contact with skin.
- S36/37 – Wear suitable protective clothing and gloves.
- S45 – In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
- S63 – In case of accident by inhalation, remove casualty to fresh air and keep at rest.

## ...2 Hardener-specific safety data

### 2.16 Other information

Text of risk phrases in Section 3.

- R20 – Harmful by inhalation.
- R36/37/38 – Irritating to eyes, respiratory system and skin.
- R40 – Limited evidence of a carcinogenic effect.
- R42/43 – May cause sensitization by inhalation and skin contact.
- R48/20 – Harmful: danger of serious damage to health by prolonged exposure through inhalation.

See page 3 **General information** in Section 1.16 of the Resin-specific safety data.

## Notes

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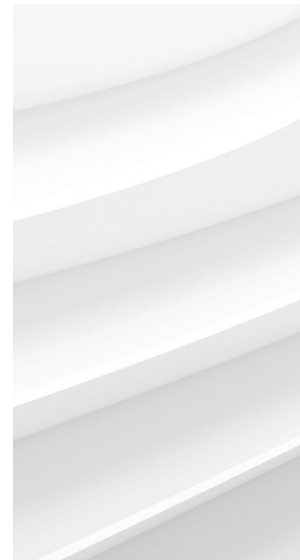
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