




















## 1 Identification of the substance/mixture and of the company/undertaking

- Product identifier
- Trade name: Epoxy.com #6910Additive
- Details of the supplier of the safety data sheet
- Supplier:  
Epoxy Systems, Inc.  
20774W  
PennsylvaniaAve  
Dunnellon, FL 34431  
Tel.: 352-489-1666  
Fax: 352-489-1625
- Technical Support:  
Norm Lambert Tel.: 352-533-2167  
email: [info@epoxy.com](mailto:info@epoxy.com)
- Emergency telephone number: PERS 1-800-633-8253

## 2 Composition/information on ingredients

- Chemical characterization: Mixtures
- Description: Polyisocyanate based on diphenylmethane-diisocyanate

· Dangerous components:		
CAS: 9016-87-9	diphenylmethanediisocyanate, isomers and homologues  Xn R20-40-48/20;  Xi R36/37/38-42/43 Carc. Cat. 3  H334;  H351;  H373;  H332;  H315;  H319;  H317;  H335	50-100%
CAS: 32055-14-4 NLP: 500-079-6	Formaldehyd, oligomere Reaktionsprodukte mit Anilin und Phosgen (oligomeres MDI)  Xn R20-40-48;  Xi R36/37/38-42/43  H334;  H351;  H332;  H315;  H319;  H317;  H335	25-50%

- Additional information For the wording of the listed risk phrases refer to section 16.

## 3 Hazards identification

- Classification of the substance or mixture



GHS08 Health hazard

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled. H351 Suspected of causing cancer.

H373 May cause damage to organs through prolonged or repeated exposure.



GHS07

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H317 May cause an allergic skin

reaction. H335 May cause respiratory irritation.

H333 May be harmful if inhaled.

- Classification according to Directive 67/548/EEC or Directive 1999/45/EC



Xn; Harmful

R20-40-48/20: Harmful by inhalation. Limited evidence of a carcinogenic effect. Harmful: danger of serious damage to health by prolonged exposure through inhalation.



Xi; Irritant

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R36/37/38-42/43: Irritating to eyes, respiratory system and skin. May cause sensitization by inhalation and skin contact.

- Information concerning particular hazards for human and environment:  
The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

· Label elements

· Labelling according to EU guidelines:

The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials

· Code letter and hazard designation of product:



Xn Harmful

· Hazard-determining components of labelling:

diphenylmethanediisocyanate, isomeres and homologues

Formaldehyd, oligomere Reaktionsprodukte mit Anilin und Phosgen (oligomeres MDI)

· Risk phrases:

20 Harmful by inhalation.

36/37/38 Irritating to eyes, respiratory system and skin.

40 Limited evidence of a carcinogenic effect.

42/43 May cause sensitization by inhalation and skin contact.

48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation.

· Safety phrases:

23 Do not breathe gas/fumes/vapour/spray.

24 Avoid contact with skin.

26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

37 Wear suitable gloves.

45 In case of accident or if you feel unwell, seek medical advice immediately.

60 This material and its container must be disposed of as hazardous waste.

· Special labelling of certain preparations:

Contains isocyanates. See information supplied by the manufacturer.

· Classification system

· NFPA ratings (scale 0-4)



Health = 2

Fire = 1

Reactivity = 0

#### 4 First aid measures

· General information

Immediately remove any clothing soiled by the product.

Take affected persons out into the fresh air.

· After inhalation

Take affected persons into fresh air and keep quiet.

Seek medical treatment in case of complaints.

· After skin contact

Immediately wash with water and soap and rinse thoroughly.

If skin irritation continues, consult a doctor.

· After eye contact Rinse opened eye for several minutes under running water. Then consult a doctor.

· After swallowing Do not induce vomiting; immediately call for medical help.

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- Information for doctor No particular measures are known - treat according to symptoms.

## 5 Firefighting measures

- Suitable extinguishing agents  
CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- For safety reasons unsuitable extinguishing agents Water with full jet.
- Special hazards arising from the substance or mixture  
In case of fire, the following can be released:  
Carbon monoxide (CO)  
Carbon dioxide (CO<sub>2</sub>)  
Nitrogen oxides (NO<sub>x</sub>)  
Hydrogen cyanide (HCN)  
(Traces)  
Isocyanate vapours
- Protective equipment:  
Wear self-contained respiratory protective device.  
Wear fully protective suit.
- Additional information  
Collect contaminated fire fighting water separately. It must not enter the sewage system.  
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

## 6 Accidental release measures

- Personal precautions, protective equipment and emergency procedures  
Ensure adequate ventilation  
Wear protective equipment. Keep unprotected persons away.
- Environmental precautions: Do not allow product to reach sewage system or any water course.
- Methods and material for containment and cleaning up:  
Pick up mechanically.  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
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.

## 7 Handling and storage

- Handling
- Precautions for safe handling  
Keep receptacles tightly sealed.  
Ensure good ventilation/exhaustion at the workplace.  
Prevent formation of aerosols.  
The usual precautionary measures for handling chemicals must be observed.
- Information about protection against explosions and fires: No special measures required.
- Storage
- Requirements to be met by storerooms and receptacles:  
Store only in the original receptacle.  
Store containers closely closed and dry  
Keep containers securely closed and dry, store at 10 - 50°C.
- Information about storage in one common storage facility:  
Store away from foodstuffs.  
Do not store together with acids.  
Do not store together with alkalis (caustic solutions).
- Further information about storage conditions: Keep receptacle tightly sealed.

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- 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.
- Components with limit values that require monitoring at the workplace:  
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- Additional information: The lists that were valid during the creation were used as basis.
- Personal protective equipment
- General protective and hygienic measures  
Keep away from foodstuffs, beverages and feed.  
Wash hands before breaks and at the end of work.  
Avoid contact with the eyes and skin.  
Immediately remove all soiled and contaminated clothing
- 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.
- Recommended filter device for short term use:



Combination filter A-P2

- Protection of hands:  
Protective gloves.  
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
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.  
Butyl rubber, BR  
Fluorocarbon rubber (Viton)  
Nitrile rubber, NBR  
Recommended thickness of the material:  $\geq 0.5$  mm  
Breakthrough time:  $\geq 480$  min
- 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.
- Not suitable are gloves made of the following materials:  
Strong gloves  
Leather gloves
- Eye protection:



Safety glasses

- Body protection: Protective work clothing.

USA

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### 9 Physical and chemical properties

- General Information

- Appearance:

Form:	Fluid
Color:	Brown
· Odor:	earthy, musty
· Odour threshold:	Not determined.

- pH-value: Not determined.

- Change in condition

Melting point/Melting range:	-30°C (-22 °F) (ISO 3016)
Boiling point/Boiling range:	>300°C (>572 °F) (DIN 53171)

- Flash point: 229°C (444 °F) (DIN EN 22719)

- Ignition temperature: > 500°C (> 932 °F)

- 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 at 20°C (68 °F): 11 hPa (8 mm Hg)

- Density at 20°C (68 °F): 1.23 g/cm<sup>3</sup> (10.264 lbs/gal) (DIN 51757)

- Relative density: Not determined.

- Vapour density: Not determined.

- Evaporation rate: Not determined.

- Solubility in / Miscibility with

- Water: Not miscible or difficult to mix

- Segregation coefficient (n-octanol/water): Not determined.

- Viscosity:

dynamic at 20°C (68 °F):	100 mPas (DIN 53019)
kinematic:	Not determined.

- Solvent content:

- Organic solvents: 0.0 %

- Other information

please refer to our technical specification  
No further relevant information available.

### 10 Stability and reactivity

- Thermal decomposition / conditions to be avoided:

- No decomposition if used and stored according to specifications.

- Incompatible materials: No further relevant information available.

- Hazardous decomposition products: No dangerous decomposition products known

### 11 Toxicological information

- Acute toxicity:

- LD/LC50 values that are relevant for classification:

9016-87-9 diphenylmethanediisocyanate, isomeres and homologues

Inhalative	LC50/4 h	490 mg/l (rat)
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Trade name: Epoxy.com #6910Additive

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32055-14-4 Formaldehyd, oligomere Reaktionsprodukte mit Anilin und Phosgen (oligomeres MDI)

Oral	LD50	> 2000 mg/kg (rat)
Inhalative	LC50	490 (4h) mg/m <sup>3</sup> (rat)

- Primary irritant effect:
  - on the skin: Irritant to skin and mucous membranes.
  - on the eye: Irritating effect.
- Sensitization:
  - Sensitization possible through inhalation.
  - Sensitization possible through skin contact.
  - (trouble in breathing, cough, asthma)
  - Hypersensitive persons may react at very low concentrations of isocyanate.
- Additional toxicological information:
  - The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
    - Harmful
    - Irritant

## 12 Ecological information

- Aquatic toxicity:

9016-87-9 diphenylmethanediisocyanate, isomeres and homologues

EC50 (3h) > 100 mg/l (Belebtschlamm Bakterien)  
(24h) > 1.000 mg/l (Daphnia magna)

LC0 (96h) > 1.000 mg/l (Brachydanio rerio)

32055-14-4 Formaldehyd, oligomere Reaktionsprodukte mit Anilin und Phosgen (oligomeres MDI)

Bakterientoxizität > 100 mg/l (Belebtschlamm Bakterien) (EC50 (3h); OECD 209)

Daphnientoxizität > 1000 mg/l (Daphnia magna) (EC50 (24h); OECD 202)

Fischttoxizität > 1000 mg/l (Danio rerio (Zebrabärbling)) (LC0 (96h); OECD 203)

- Persistence and degradability biodegradability: 0%
- Behavior in environmental systems:
- Bioaccumulative potential No further relevant information available.
- Additional ecological information:
- General notes:
  - Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water.
  - Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
  - The product reacts with water releasing CO<sub>2</sub>, to form a solid, insoluble polycarbamide with a high melting point which, according to present knowledge, is inert and not degradable.

## 13 Disposal considerations

- Waste treatment methods
- Recommendation Must be specially treated adhering to official regulations.
- Uncleaned packagings:
- Recommendation: Disposal must be made according to official regulations.

## 14 Transport information

- UN-Number
- DOT, ADR, ADN, IMDG, IATA
- Void

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· UN proper shipping name · DOT, ADN, IMDG, IATA · ADR	Void Void
· Transport hazard class(es) · DOT, ADR, ADN, IMDG, IATA · Class	Void
· Packing group · DOT, ADR, IMDG, IATA	Void
· Special precautions for user	Not applicable.
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	Not dangerous according to the above specifications. Protect from dampness.
· UN "Model Regulation":	-

## 15 Regulatory information

### · Cancerogenity categories

· EPA (Environmental Protection Agency)		
9016-87-9	diphenylmethanediisocyanate, isomeres and homologues	CBD
· IARC (International Agency for Research on Cancer)		
9016-87-9	diphenylmethanediisocyanate, isomeres and homologues	3
· NTP (National Toxicology Program)		
None of the ingredients is listed.		
· TLV (Threshold Limit Value established by ACGIH)		
None of the ingredients is listed.		
· MAK (German Maximum Workplace Concentration)		
9016-87-9	diphenylmethanediisocyanate, isomeres and homologues	4
· NIOSH-Ca (National Institute for Occupational Safety and Health)		
None of the ingredients is listed.		
· OSHA-Ca (Occupational Safety & Health Administration)		
None of the ingredients is listed.		

### · Markings according to EU guidelines:

The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials

### · Code letter and hazard designation of product:



Xn Harmful

### · Hazard-determining components of labelling:

diphenylmethanediisocyanate, isomeres and homologues  
Formaldehyd, oligomere Reaktionsprodukte mit Anilin und Phosgen (oligomeres MDI)

### · Risk phrases:

20 Harmful by inhalation.  
36/37/38 Irritating to eyes, respiratory system and skin.

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(Contd. of page 7)

- 40 Limited evidence of a carcinogenic effect.  
42/43 May cause sensitization by inhalation and skin contact.  
48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation.

· Safety phrases:

- 23 Do not breathe gas/fumes/vapour/spray.  
24 Avoid contact with skin.  
26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
37 Wear suitable gloves.  
45 In case of accident or if you feel unwell, seek medical advice immediately.  
60 This material and its container must be disposed of as hazardous waste.

· Special labeling of certain preparations:

Contains isocyanates. See information supplied by the manufacturer.

· National regulations

· Water hazard class: Water hazard class 1 (Self-assessment): slightly hazardous for water.

· Sara

· Section 355 (Extremely hazardous substances):

None of the ingredients is listed.

· Section 313 (Specific toxic chemical listings):

9016-87-9 diphenylmethanediisocyanate, isomeres and homologues

· TSCA (Toxic Substances Control Act):

9016-87-9 diphenylmethanediisocyanate, isomeres and homologues

· Chemicals known to cause cancer:

None of the ingredients is listed.

## 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.

· Relevant phrases

- H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.  
H319 Causes serious eye irritation.  
H332 Harmful if inhaled.  
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
H335 May cause respiratory irritation.  
H351 Suspected of causing cancer.  
H373 May cause damage to organs through prolonged or repeated exposure.  
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 Danger of serious damage to health by prolonged exposure.  
R48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation.

· Department issuing MSDS:

IGG-AD Ingenieurbüro für Gefahrstoff- und Gefahrgutberatung  
Bismarckstraße 10  
D-68623 Lampertheim  
Fax: 0049-(0)6206-58422 <http://www.igg-ad.de> [info@igg-ad.de](mailto:info@igg-ad.de)

· Contact:

Dr. U. Prinz ([u.prinz@igg-ad.de](mailto:u.prinz@igg-ad.de))  
Dipl.-Chem. H. Hinse ([heidrun.hinse@igg-ad.de](mailto:heidrun.hinse@igg-ad.de))

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· 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)

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

ICAO: International Civil Aviation Organization

ACGIH: American Conference of Governmental Industrial Hygienists

NFPA: National Fire Protection Association (USA)

MAL-Code: Måleteknisk Arbejdshygiejnisk Luftbehov (Regulation for the labeling concerning inhalation hazards, Denmark)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

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