

SECTION 1: Identification

1.1. Identification

Product form : Mixture
Product name : 20-2024CTB

1.2. Recommended use and restrictions on use

Recommended use : Potting compound
Restrictions on use : Not to be used for any purpose other than the one the product was designed for

1.3. Supplier

Epoxies, Etc.
21 Starline Way
Cranston, RI 02921
USA
T 401-946-5564
www.epoxies.com

1.4. Emergency telephone number

Emergency number : VelocityEHS: +1 (800) 255-3924, +1 (813) 248-0585

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Skin corrosion/irritation Category 2	H315	Causes skin irritation
Serious eye damage/eye irritation Category 2	H319	Causes serious eye irritation
Respiratory sensitization, Category 1	H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Skin sensitization, Category 1	H317	May cause an allergic skin reaction
Carcinogenicity Category 2	H351	Suspected of causing cancer
Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation	H335	May cause respiratory irritation
Specific target organ toxicity (repeated exposure) Category 2	H373	May cause damage to organs through prolonged or repeated exposure

Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements

GHS US labeling

Hazard pictograms (GHS US) :



Signal word (GHS US) : Danger
Hazard statements (GHS US) : H315 - Causes skin irritation
H317 - May cause an allergic skin reaction
H319 - Causes serious eye irritation
H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335 - May cause respiratory irritation

20-2024CTB

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Precautionary statements (GHS US)

H351 - Suspected of causing cancer
H373 - May cause damage to organs through prolonged or repeated exposure
: P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P260 - Do not breathe dust/fume/gas/mist/vapors/spray.
P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.
P264 - Wash hands, forearms and face thoroughly after handling.
P271 - Use only outdoors or in a well-ventilated area.
P272 - Contaminated work clothing must not be allowed out of the workplace.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P284 - [In case of inadequate ventilation] wear respiratory protection.
P302+P352 - If on skin: Wash with plenty of water.
P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing.
P304+P341 - If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.
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.
P312 - Call a poison center or doctor if you feel unwell.
P314 - Get medical advice/attention if you feel unwell.
P321 - Specific treatment (see supplemental first aid instruction on this label).
P332+P313 - If skin irritation occurs: 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.
P342+P311 - If experiencing respiratory symptoms: Call a poison center or doctor.
P362+P364 - Take off contaminated clothing and wash it before reuse.
P363 - Wash contaminated clothing before reuse.
P403+P233 - Store in a well-ventilated place. Keep container tightly closed.
P405 - Store locked up.
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards which do not result in classification

Other hazards which do not result in classification : Harmful dust may be released during cutting, milling or grinding process.

2.4. Unknown acute toxicity (GHS US)

No additional information available

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS US classification
diphenylmethanediisocyanate, isomeres and homogues	CAS-No.: 9016-87-9	100	Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Resp. Sens. 1, H334 Skin Sens. 1, H317 STOT SE 3, H335 STOT RE 2, H373

20-2024CTB

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Name	Product identifier	%	GHS US classification
Diphenylmethane 4,4'-diisocyanate	CAS-No.: 101-68-8	30 – 60	Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Resp. Sens. 1, H334 Skin Sens. 1, H317 Carc. 2, H351 STOT SE 3, H335 STOT RE 2, H373

Comments : Components not listed are either non-hazardous or are below reportable limits.
*Chemical name, CAS number and/or exact concentration have been withheld as a trade secret
Full text of hazard classes and H-statements : see section 16

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general : IF exposed or concerned: Get medical advice/attention. Call a poison center/doctor/physician if you feel unwell.
First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor/physician if you feel unwell.
First-aid measures after skin contact : Wash skin with plenty of water. Take off contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention.
First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
First-aid measures after ingestion : Call a poison center/doctor/physician if you feel unwell.

4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects after inhalation : May cause respiratory irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Symptoms/effects after skin contact : Irritation. May cause an allergic skin reaction.
Symptoms/effects after eye contact : Eye irritation.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

5.2. Specific hazards arising from the chemical

Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Special protective equipment and precautions for fire-fighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

20-2024CTB

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact with skin and eyes.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.

Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear personal protective equipment. Do not breathe dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area. Avoid contact with skin and eyes.

Hygiene measures : Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store locked up. Store in a well-ventilated place. Keep container tightly closed. Keep cool.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

20-2024CTB

No additional information available

diphenylmethanediisocyanate, isomeres and homogues (9016-87-9)

No additional information available

Diphenylmethane 4,4'-diisocyanate (101-68-8)

USA - ACGIH - Occupational Exposure Limits

Local name	Methylene bisphenyl isocyanate (MDI)
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ACGIH OEL TWA [ppm]	0.005 ppm
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20-2024CTB

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Diphenylmethane 4,4'-diisocyanate (101-68-8)	
Remark (ACGIH)	TLV® Basis: Resp sens
Regulatory reference	ACGIH 2022
USA - OSHA - Occupational Exposure Limits	
Local name	Methylene bisphenyl isocyanate (MDI)
OSHA PEL C	0.2 mg/m ³
OSHA PEL C [ppm]	0.02 ppm
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.
Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Hand protection:
Wear suitable gloves resistant to chemical penetration. Neoprene or nitrile rubber gloves. Butyl-rubber protective gloves. Choosing the proper glove is a decision that depends not only on the type of material, but also on other quality features, which differ for each manufacturer. Refer to manufacturer's information. Gloves must be replaced after each use and whenever signs of wear or perforation appear
Eye protection:
Safety glasses
Skin and body protection:
Wear suitable protective clothing
Respiratory protection:
[In case of inadequate ventilation] wear respiratory protection.

Personal protective equipment symbol(s):



SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid
Color : According to product specification
Odor : musty
Odor threshold : No data available
pH : No data available
Melting point : No data available
Freezing point : No data available
Boiling point : No data available
Flash point : No data available
Relative evaporation rate (butyl acetate=1) : No data available
Flammability (solid, gas) : Not applicable.
Vapor pressure : No data available

20-2024CTB

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Relative vapor density at 20°C	: No data available
Relative density	: No data available
Solubility	: No data available
Partition coefficient n-octanol/water (Log Pow)	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

diphenylmethanediisocyanate, isomeres and homogues (9016-87-9)

LD50 oral rat	> 10000 mg/kg (Rat, Literature study, Oral)
LD50 oral	10000 mg/kg
LD50 dermal rabbit	> 5000 mg/kg (Rabbit, Literature study, Dermal)
LD50 dermal	9400 mg/kg
LC50 Inhalation - Rat (Dust/Mist)	0.49 mg/l/4h
LC50 Inhalation - Rat (Vapours)	0.49 mg/l Source: Corporate Solution From Thomson Micromedex

20-2024CTB

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

diphenylmethanediisocyanate,isomeres and homogues (9016-87-9)	
ATE US (oral)	10000 mg/kg body weight
ATE US (dermal)	9400 mg/kg body weight
ATE US (gases)	4500 ppmV/4h
ATE US (vapors)	0.49 mg/l/4h
ATE US (dust, mist)	0.49 mg/l/4h
Diphenylmethane 4,4'-diisocyanate (101-68-8)	
LD50 oral rat	> 2000 mg/kg body weight (Rat, Male / female, Read-across, Oral, 14 day(s))
LD50 oral	31600 mg/kg
LD50 dermal rabbit	> 9400 mg/kg body weight (Equivalent or similar to OECD 402, 24 h, Rabbit, Male / female, Read-across, Dermal, 14 day(s))
LC50 Inhalation - Rat (Dust/Mist)	0.369 mg/l/4h
ATE US (oral)	31600 mg/kg body weight
ATE US (gases)	4500 ppmV/4h
ATE US (vapors)	11 mg/l/4h
ATE US (dust, mist)	0.369 mg/l/4h
Skin corrosion/irritation	: Causes skin irritation.
diphenylmethanediisocyanate,isomeres and homogues (9016-87-9)	
pH	No data available in the literature
Diphenylmethane 4,4'-diisocyanate (101-68-8)	
pH	7 (6.8E-3 g/l, 25 °C)
Serious eye damage/irritation	: Causes serious eye irritation.
diphenylmethanediisocyanate,isomeres and homogues (9016-87-9)	
pH	No data available in the literature
Diphenylmethane 4,4'-diisocyanate (101-68-8)	
pH	7 (6.8E-3 g/l, 25 °C)
Respiratory or skin sensitization	: May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Suspected of causing cancer.
diphenylmethanediisocyanate,isomeres and homogues (9016-87-9)	
IARC group	3 - Not classifiable
Diphenylmethane 4,4'-diisocyanate (101-68-8)	
IARC group	3 - Not classifiable
Reproductive toxicity	: Not classified
STOT-single exposure	: May cause respiratory irritation.
diphenylmethanediisocyanate,isomeres and homogues (9016-87-9)	
STOT-single exposure	May cause respiratory irritation.

20-2024CTB

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Diphenylmethane 4,4'-diisocyanate (101-68-8)	
STOT-single exposure	May cause respiratory irritation.
STOT-repeated exposure	: May cause damage to organs through prolonged or repeated exposure.
diphenylmethanediisocyanate, isomeres and homogues (9016-87-9)	
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.
Diphenylmethane 4,4'-diisocyanate (101-68-8)	
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard	: Not classified
Viscosity, kinematic	: No data available
diphenylmethanediisocyanate, isomeres and homogues (9016-87-9)	
Viscosity, kinematic	No data available in the literature
Diphenylmethane 4,4'-diisocyanate (101-68-8)	
Viscosity, kinematic	Not applicable (solid)
Symptoms/effects after inhalation	: May cause respiratory irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Symptoms/effects after skin contact	: Irritation. May cause an allergic skin reaction.
Symptoms/effects after eye contact	: Eye irritation.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.

diphenylmethanediisocyanate, isomeres and homogues (9016-87-9)	
LC50 - Other aquatic organisms [1]	> 1000 mg/l (96 h, Literature study)
Diphenylmethane 4,4'-diisocyanate (101-68-8)	
LC50 - Fish [1]	> 1000 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Danio rerio, Static system, Fresh water, Read-across, Nominal concentration)
EC50 - Crustacea [1]	129.7 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 24 h, Daphnia magna, Static system, Fresh water, Read-across, Locomotor effect)
ErC50 algae	> 1640 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Desmodesmus subspicatus, Static system, Fresh water, Read-across, GLP)

12.2. Persistence and degradability

diphenylmethanediisocyanate, isomeres and homogues (9016-87-9)	
Not rapidly degradable	
Persistence and degradability	Not readily biodegradable in water.
Diphenylmethane 4,4'-diisocyanate (101-68-8)	
Not rapidly degradable	
Persistence and degradability	Not readily biodegradable in water.

20-2024CTB

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

12.3. Bioaccumulative potential

diphenylmethanediisocyanate, isomeres and homogues (9016-87-9)	
BCF - Fish [1]	268.1 l/kg (BCFBAF v3.01, Estimated value, Fresh weight)
Partition coefficient n-octanol/water (Log Pow)	10.46 (Calculated, KOWWIN)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
Diphenylmethane 4,4'-diisocyanate (101-68-8)	
BCF - Fish [1]	92 – 200 (OECD 305: Bioconcentration: Flow-Through Fish Test, 4 week(s), Cyprinus carpio, Flow-through system, Fresh water, Experimental value, GLP)
Partition coefficient n-octanol/water (Log Pow)	4.51 (Experimental value, OECD 117: Partition Coefficient (n-octanol/water), HPLC method, 22 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

12.4. Mobility in soil

diphenylmethanediisocyanate, isomeres and homogues (9016-87-9)	
Surface tension	No data available in the literature
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	9.078 – 10.597 (log Koc, SRC PCKOCWIN v2.0, Calculated value)
Ecology - soil	Adsorbs into the soil.
Diphenylmethane 4,4'-diisocyanate (101-68-8)	
Surface tension	No data available in the literature
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	4.53 – 5.455 (log Koc, SRC PCKOCWIN v2.0, Calculated value)
Ecology - soil	Adsorbs into the soil.

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

SECTION 14: Transport information

In accordance with DOT / TDG / IMDG / IATA

DOT	TDG	IMDG	IATA
14.1. UN number			
Not regulated for transport			
14.2. Proper Shipping Name			
Not applicable	Not applicable	Not applicable	Not applicable

20-2024CTB

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

DOT	TDG	IMDG	IATA
14.3. Transport hazard class(es)			
Not applicable	Not applicable	Not applicable	Not applicable
14.4. Packing group			
Not applicable	Not applicable	Not applicable	Not applicable
14.5. Environmental hazards			
Not applicable	Not applicable	Not applicable	Not applicable
No supplementary information available			

14.6. Special precautions for user

DOT

No data available

TDG

No data available

IMDG

No data available

IATA

No data available

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

Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

diphenylmethanediisocyanate, isomeres and homogues	CAS-No. 9016-87-9	100%
Diphenylmethane 4,4'-diisocyanate	CAS-No. 101-68-8	30 – 60%

Diphenylmethane 4,4'-diisocyanate (101-68-8)

Listed on EPA Hazardous Air Pollutant (HAPS)

CERCLA RQ 5000 lb

15.2. International regulations

CANADA

diphenylmethanediisocyanate, isomeres and homogues (9016-87-9)

Listed on the Canadian DSL (Domestic Substances List)

20-2024CTB

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Diphenylmethane 4,4'-diisocyanate (101-68-8)

Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

No additional information available

National regulations

diphenylmethanediisocyanate, isomeres and homogues (9016-87-9)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

Diphenylmethane 4,4'-diisocyanate (101-68-8)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

Component	State or local regulations
diphenylmethanediisocyanate, isomeres and homogues(9016-87-9)	U.S. - New Jersey - Right to Know Hazardous Substance List
Diphenylmethane 4,4'-diisocyanate(101-68-8)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: Other information

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Full text of H-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

Safety Data Sheet (SDS), USA

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.