



Revision: 04/26/2016

Printing date: 05/16/2016

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

· **1.1 Product identifier**

Trade name: *FP-604 TuffPatch Food Processing Patch Kit Part A*

Application of the substance/ the preparation: Modified Epoxy Resin

· **1.3 Details of the supplier of the Safety Data**

Sheet Manufacturer/Supplier:

Tuff Industrial Products, Inc.

2120 Roberts Dr.

Broadview, IL 60155 USA

Tel (800)475-0068

· **1.4 Emergency contact:** CHEMTREC® (800)424-9300

2 Hazards identification

*** EMERGENCY OVERVIEW ***: No Information

· **2.1 Classification of substance or mixture:**

In compliance with FC refulation No. 1272/2008, 29CFR1910 and GHS Rev. 3 and amendments. The substance is not classified as hazardous according to the Globally Harmonoized System (GHS).

2.2 Label elements :

None

Hazard pictograms: None

Signal word:

None

Hazard-determining components of labeling:

None

Hazard Statements:

None

Precautionary Statements:

P101 If medical advice is needed, have product container or label at hand

Additional information: None

Hazard description

Hazards Not Otherwise Classified (HNOC): None

WHMIS-symbols: None

Canadian WHMIS Classification: None

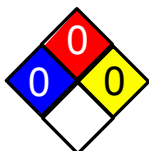
Information concerning particular hazards for humans and environment:

The product has to be lebeled due to calculation procedure of the "General Classification guideline for preparation of the EU" in the latest valid version

Classification system:

The classificaton according to EC regulation No. 1272/2008, 29CFR1910/1200 and GHS Rev. 3 and amendments, and extended by company and literature data. The classification is in accordance with the latest editions of international substances lists, and is supplemented by information from technical literature and by information provided by the company.

NFPA ratings (scale 0 - 4)



Health = 0
Fire = 0
Reactivity = 0

HMIS-ratings (scale 0 - 4)

HEALTH	0
FLAMMABILITY	0
REACTIVITY	0

Health = 0
Flammability = 0
Reactivity = 0

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3 Composition/Information on Ingredients

3.1 Chemical Characterization: None

Description: None.

Hazardous components:

Identification	Chemical Name	Classification	Percentage
CAS: Proprietary EINECS: Proprietary	Proprietary	Not Classified	100%

3.2 Additional Information:

None

4 First aid measures

4.1 Description of first aid measures

General information: None

After inhalation:

Move exposed individual to fresh air

If breathing is difficult, give oxygen

After skin contact:

Wash off with soap and plenty of water. Flush skin with water for 15 minutes

Seek medical attention if irritation persists

After eye contact:

Rinse or flush exposed eye gently using water for 15-20 minutes, if able remove contact lenses while rinsing

Protect unexposed eye

Seek medical attention if irritation persists or if concerned

After swallowing:

Rinse mouth thoroughly

Do not induce vomiting

Have exposed individual drink sips of water

Seek medical attention if irritation, discomfort or vomiting persists

4.2 Most important symptoms and effects, both acute and delayed

Irritation

Nausea

Headache

Shortness of breath

4.3 Indications of any immediate medical attention and special treatment

If seeking medical attention provide SDS document to physician

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5 Firefighting Measures

5.1 Extinguishing media Suitable extinguishing agents:

Suitable extinguishing agents:

Use appropriate fire suppression agents for adjacent combustible materials or sources of ignition.

For safety reasons, unsuitable extinguishing materials: None

5.2 Special hazards arising from the substance or mixture:

Irritating and highly toxic gases may be generated by thermal decomposition

Combustion products may include carbon oxides or other toxic vapors

5.3 Advice for firefighters:

Protective equipment:

Wear self-contained respiratory protective device, protective clothing and eye protection.

5.4 Additional information:

Use proper personal protective equipment. Avoid contact with skin, eyes and clothing. Ensure proper adequate ventilation.

Do not inhale gases, fumes, dust, mist, vapors and/or aerosols/

6 Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures:

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling

Ensure adequate ventilation

6.2 Environmental precautions:

Prevent from entering into soil, ditches, sewers, waterways and/or ground water

6.3 Steps to be taken in case material is release or spilled:

Place into properly labeled containers for recovery or disposal

6.4 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

7.1 Precautions for safe handling

Wash hands after handling. Avoid contact with skin and eyes

Avoid contact with skin eyes and clothing

Avoid ingestion or inhalation

Do not inhale gases, fumes, dust, mist, vapors and/or aerosols

Follow good hygiene procedures when handling chemical materials

Do not eat, drink or use personal products when handling chemical substances

Use only in well ventilated areas.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a cool, dry and well ventilated area

Keep container tightly sealed

Keep product and empty container away from heat sources of ignition

Store with like hazards

Store away from food

Store away from incompatible materials

7.3 Specific end use(s): No further relevant information available

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8 Exposure Controls/Personal Protection

8.1 Control parameters

Appropriate engineering controls:

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use/handling

8.2 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.

Avoid contact with the eyes and skin.

The following information on appropriate Personal Protective Equipment is provided to assist employers in complying with OSHA regulations found in 29 CFR Subpart I (beginning at 1910.132) or equivalent standard of Canada, or standards of EU member states (including EN 149 for respiratory PPE, and EN 166 for face/eye protection), and those of Japan.



Respiratory Protection:

Not required under normal conditions of use



Protective gloves

Material of gloves

Use chemical resistant gloves to prevent skin contact. If necessary, refer to U.S. OSHA 29 CFR 1910.138 or appropriate Standards of Canada

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



Tightly sealed goggles

UÛPÇGJÓR



Body Protection

Not required under normal conditions of use



Hygienic Practices:

Wash hands before breaks and at the end of work

Avoid contact with the eyes and skin

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9 Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

General Information

Appearance:

Form: Liquid
 Color: Pale yellow

Odor: Characteristic
Odor threshold: Not determined

pH value:	No data available.
Change in condition	
Freezing point/Freezing range:	Not available
Boiling point/Boiling range:	572°F (>300°C)
Flash point:	392°F (>200°C)
Ignition temperature:	Not determined.
Decomposition temperature:	Not determined.
Self-igniting:	Not determined
Danger of explosion:	Product does not present an explosive hazard
Explosion limits:	
Lower:	Non Explosive
Upper:	Non Explosive
Vapor pressure:	Not determined
Density at 20°C:	Not determined
Relative density:	Not determined
Vapour density:	Not determined
Evaporation rate:	Not determined
Solubility in / Miscibility with water:	Insoluble
Specific Gravity 20°C (Water = 1):	Not Determined
Viscosity	
Dynamic:	72cP @ 25°C
Kinematic:	Not available
Solvent content:	No data available
Organic solvents:	No data available
VOC (EC)	No data available

9.2 Other information: No further relevant information available

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10 Stability and Reactivity

- **10.1 Reactivity:** None
- **10.2 Chemical stability:**
No decomposition if used and stored according to specifications
- **10.3 Possibility of hazardous reactions:** Will not occur
- **10.4 Conditions to avoid:**
Keep product and empty container away from heat sources of ignition.
Store away from oxidizing agents, strong acids or bases
- **10.5 Incompatible materials:**
Oxidizers
- **10.6 Hazardous decomposition products:**
Carbon oxides (CO, CO₂)
- **10.7 Hazardous Polymerization:** No information

11 Toxicological Information

- **11.1 Information on toxicological effects**
 - Acute toxicity:** No additional information
 - Chronic toxicity:** No additional information
 - Skin corrosion/irritation:** No additional information
 - Respiratory or skin sensitization:** No additional information
 - Carcinogenicity:**
 - IARC:** No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC
 - IARC: (international Agency for Research on Cancer):** None of the ingredients are listed
 - NTP (National Toxicology Program):** None of the ingredients are listed
 - Germ cell mutagenicity:** No additional information
 - Reproductive toxicity:** No additional information
 - STOT - single and repeated exposure:** No additional information
 - Additional toxicological information:** No additional information

12 Ecological Information

- **12.1 Toxicity:** No additional information
- **12.2 Persistence and degradability:**
Readily degradable in the environment
- **12.3 Bioaccumulative potential:** No additional information
- **12.4 Mobility in soil:** additional information
- **12.5 Results of PBT and vPvB assessment**
 - PBT:** additional information
 - vPvB:** additional information
- **12.6 Other adverse effects:**
No further relevant information available

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13 Disposal Considerations

13.1 Waste treatment methods (consult local, regional and national authorities for prooper disposal)

Relevant information:

Consult federal, state, provincial and local regulations regarding the proper disposal of waste material that may incorporate some amount of this product. Do not allow product to reach sewage system or open water. It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 10CFR262.11). Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices.

14 Transport Information

14.1 UN/NA-Number DOT	Not regulated
14.2 UN/NA-proper shipping name DOT	Not regulated
14.3 Transportation hazard class(es) DOT - Class : Label	None
14.4 Packing group DOT	None
14.5 Environmental hazards: Marine pollutant:	None
14.6 Special precautions for user Danger code (Kemler): EMS Number:	No data available No data available
Transport/Additional Information: ADR Tunnel restriction code UN "Model Regulations"	No data available No data available

15 Regulatory Information

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

SARA:

Section 313 (specific toxic chemicals): None of the ingredients are listed

Section 302 (extremely hazardous substance): None of the ingredients are listed

CERCLA (Comprehensive Environmental Response, Clean up and Liability Act Reportability)

Spill Quantity: None of the ingredients are listed

TSCA (Toxic Substances Control Act):

Inventory: All ingredients are listed

Rules and Orders: Not applicable

Proposition 65 (California):

Chemicals known to cause cancer: None of the ingredients are listed

Chemicals known to cause reproductive toxicity for females: None of the ingredients are listed

Chemicals known to cause reproductive toxicity to males: None of the ingredients are listed

Chemicals known to developmental toxicity: None of the ingredients are listed

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Canadian	Canadian Domestic Substance List (DSL):
	All ingredients are listed
EU	REACH Article 57 (SVHC): None of the ingredients are listed
	Germany MAK: None of the ingredients are listed
Asia Pacific	
Australia	Australian Inventory of Chemical Substances (AICS): All ingredients listed
China	Inventory of Existing Substances in China (ECSC): All ingredients listed
Japan	Inventory of Existing and New Chemical Substances(ENCS): All ingredients listed
Korea	Existing Chemical List (ECL): All ingredients listed
New Zealand	New Zaland Inventory of Chemicals (NZOIC): All ingredients listed
Philippines	Philippines Inventory of Chemicals and Chemical Substances (PICCS): All ingredients listed
Taiwan	Taiwan Chemical Substance Inventory (TSCI): All ingredients 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

P101 If medical advice is needed, have product container or label at hand

Abbreviations and Acronyms

ADR: 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

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

ACGIH: American Conference of Governmental Industrial Hygienists

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

WHMIS: Workplace Hazardous Materials Information System (Canada)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

The information contained herein is based on data considered accurate. However, no warranty is expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof.

Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Additionally, vendor assumes no responsibility for injury to vendee or third persons proximately caused by abnormal use of the material even if reasonable safety procedures are followed. Furthermore, vendee assumes the risk of his use of the material for either Component A and/or B or the combination of both components

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Complies with Federal Standard No. 29 CFR 1910.1200

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

1.1 Product identifier

Trade name: **FP-604 TuffPatch Food Processing Patch Kit Part B**

Application of the substance / the preparation: Blended Epoxy Curing Agent

1.3 Details of the supplier of the Safety Data

Sheet Manufacturer/Supplier:

Tuff Industrial Products, Inc.

2120 Roberts Dr.

Broadview, IL 60155 USA

Tel (800)475-0068

1.4 Emergency contact: CHEMTREC® (800)424-9300

2 Hazards identification

*** EMERGENCY OVERVIEW ***: No Information

2.1 Classification of substance or mixture:

In compliance with FC refulation No. 1272/2008, 29CFR1910 and GHS Rev. 3 and amendments.

2.2 Label elements :

Labeling according to Regulation (EC) No 1272/2008:

The product is classified and labeled according to the CLP regulation.

GHS Label Elements

Acute toxicity (inhalation), category 4

Skin irritation, category 2

Carcinogenicity, category 2

Specific target organ toxicity-single exposure, category 3- respiratory irritation

Skin sensitization, category 1

Respiratory sensitization, category 1

Eye irritation, category 2B

Hazard determining components of labeling:

Diphenylmethane-2,4'-diisocyanate

Diphenylmethane-4,4'-diisocyanate

Isocyanic acid, polymethylenepolyph

Hazard pictograms:



GHS07



GHS08

Signal word: Danger

Hazard Statements:

H315 Causes skin irritation

H317 May cause allergic skin reaction

H319 Causes serious eye irritation

H320 Causes 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

Precautionary Statements:

P201 Obtain special instructions before use

P202 Do not handle until all safety precautions have been read and understood

P261 Avoid breathing dust/fume/gas/mist/vapors/spray

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- P264 Wash skin thoroughly after handling
- P271 Use only outdoors or in a well-ventilated area
- P272 Contaminated work clothing should not be allowed out of the work place
- P280 Wear protective glove/protective clothing/eye protection/face protection
- P285 In case of inadequate ventilation wear respiratory protection

Response Statements

- P302+P352 If on skin: Wash with soap and water
- P304+P340+P312 If inhaled: remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a poison center or doctor/physician if you feel unwell
- 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 attention/advice
- P333+P313 If skin irritation or rash occurs: Get medical attention/advice
- P362 Take off contaminated clothing and wash before reuse
- P403+P233 Store in a well ventilated place. Keep container tightly closed
- P405 Store locked up
- P501 Dispose of contents and container as instructed in section 13

Additional information: None

Hazard description

Hazards Not Otherwise Classified (HNOC): None

WHMIS-symbols: None

Canadian WHMIS Classification: None

Information concerning particular hazards for humans and environment:

The product has to be labeled due to calculation procedure of the "General Classification guideline of the EU" in the latest valid version

Classification system:

The classification according to EC regulation No. 1272/2008, 29CFR1910/1200 and GHS Rev. 3 and extended by company and literature data. The classification is in accordance with editions of international substances lists, and is supplemented by information from by information provided by the company.

NFPA ratings (scale 0 - 4)



Health = 2
Fire = 1
Reactivity = 1

HMIS-ratings (scale 0 - 4)



Health = 2
Flammability = 1
Reactivity = 1

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3 Composition/Information on Ingredients

· **3.1 Chemical Characterization:** None

Description: None.

Hazardous components:

Identification	Chemical Name	Percentage
CAS: 101-68-8 EINECS: 202-966-0	Diphenylmethane-4,4'-Diisocyanate Xn R42/43; Xi R36/37/38; Xn R20 Acute Tox. 4: H333 Resp. Sens. 1; H334 Skin Sens. 1; H317 Skin Irrit. 2; H315 Eye Irrit. 2; H319 Stot SE 3; H335 Stot RE 2; H373 Carc. 2; H351	30-60%
CAS: 9016-87-9 EINECS:	Isocyanic acid, polymethylenepolyphenylene ester Xn R20; Xi R36/37/38; Xn R42/43; T+ R26; Xn R20/21/22; T R39/23/24/25; F R11 Acute Tox. 2: H331 Resp. Sens. 1; H334 Skin Irrit. 2; H315 Eye Irrit. 2; H319 Stot SE 3; H335 Stot RE 2; H373	30-60%
CAS: 5873-54-1 EINECS: 227-534-9	Diphenylmethane-2,4'-diisocyanate Xn R42/43; Xi R36/37/38; Xn R20 Acute Tox. 4: H333 Resp. Sens. 1; H334 Skin Sens. 1; H317 Skin Irrit. 2; H315 Eye Irrit. 2; H319 Stot SE 3; H335 Stot RE 2; H373 Carc. 2; H351	7-13%

· **3.2 Additional Information:**

None

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4 First aid measures

4.1 Description of first aid measures

General information: None

After inhalation:

Move exposed individual to fresh air

Call a poison control center or seek medical attention if you feel unwell

After skin contact:

Wash off with soap and plenty of water.

Seek medical attention if symptoms develop or persists

After eye contact:

Rinse or flush exposed eye gently using water for 15-20 minutes, if able remove contact lenses while rinsing

Protect unexposed eye

Seek medical attention if irritation persists or if concerned

After swallowing:

Rinse mouth thoroughly

Do not induce vomiting

Seek medical attention if irritation, discomfort or vomiting persists

4.2 Most important symptoms and effects, both acute and delayed

Irritation

4.3 Indications of any immediate medical attention and special treatment

No additional information

5 Firefighting Measures

5.1 Extinguishing media Suitable extinguishing agents:

Suitable extinguishing agents: Foam, CO₂ or dry powder

For safety reasons, unsuitable extinguishing materials: Do not use water as an extinguisher

5.2 Special hazards arising from the substance or mixture:

Thermal decomposition can lead to release of irritating gases and vapors

Carbon monoxide, carbon dioxide, nitrogen oxides, hydrocarbons and HCN

5.3 Advice for firefighters:

Protective equipment:

Wear protective eye wear, glove, and clothing

Refer to Section 8

5.4 Additional information:

Avoid inhaling gases, fumes, dust, mist, vapor and aerosols

Avoid contact with skin, eyes and clothing

6 Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures:

Ensure adequate ventilation. Ensure air handling systems are operational

6.2 Environmental precautions:

Prevent from entering into soil, ditches, sewers, waterways and/or ground water

6.3 Steps to be taken in case material is released or spilled:

Wear protective eye wear, gloves and clothing. Place into properly labeled containers for recovery or disposal

6.4 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.

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7 Handling and Storage

7.1 Precautions for safe handling

- Wash hands after handling. Avoid contact with skin and eyes
- Avoid contact with skin eyes and clothing
- Avoid ingestion or inhalation
- Do not inhale gases, fumes, dust, mist, vapors and/or aerosols
- Follow good hygiene procedures when handling chemical materials
- Do not eat, drink or use personal products when handling chemical substances
- Use only in well ventilated areas.

7.2 Conditions for safe storage, including any incompatibilities

- Keep container tightly closed in a cool, dry and well ventilated area
- Keep container tightly sealed
- Keep product and empty container away from heat sources of ignition
- Store with like hazards
- Store away from food
- Store away from incompatible materials

7.3 Specific end use(s): No further relevant information available

8 Exposure Controls/Personal Protection

8.1 Control parameters

Appropriate engineering controls:

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use/handling

8.2 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.
- Avoid contact with the eyes and skin.

The following information on appropriate Personal Protective Equipment is provided to assist employers in complying with OSHA regulations found in 29 CFR Subpart I (beginning at 1910.132) or equivalent standard of Canada, or standards of EU member states (including EN 149 for respiratory PPE, and EN 166 for face/eye protection), and those of Japan.



Respiratory Protection:

Not required under normal conditions of use



Protective gloves

Material of gloves

Use chemical resistant gloves to prevent skin contact. If necessary, refer to U.S. OSHA 29 CFR 1910.138 or appropriate Standards of Canada

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

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Tightly sealed goggles

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UÙPÖÁJÁÖR



Body Protection

Not required under normal conditions of use



Hygienic Practices:

Wash hands before breaks and at the end of work
Avoid contact with the eyes and skin

9 Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

General Information

Appearance:

Form: Liquid
Color: Not Determined

Odor: Not determined

Odor threshold: Not determined

pH value:	No data available.
Change in condition	
Freezing point/Freezing range:	Not available
Boiling point/Boiling range:	572°F (>300°C)
Flash point:	397°F (203°C)
Ignition temperature:	Not determined.
Decomposition temperature:	Not determined.
Self-igniting:	1112°F (>600°C)
Danger of explosion:	Product does not present an explosive hazard
Explosion limits:	
Lower:	Non Explosive
Upper:	Non Explosive
Vapor pressure:	Not determined

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Density at 20°C:	Not determined
Relative density:	Not determined
Vapour density:	Not determined
Evaporation rate:	Not determined
Solubility in / Miscibility with water:	Insoluble
Specific Gravity 20°C (Water = 1):	Not Determined
Viscosity	
Dynamic:	72cP @ 25°C
Kinematic:	Not available
Solvent content:	No data available
Organic solvents:	No data available
VOC (EC)	No data available

· **9.2 Other information:** No further relevant information available

10 Stability and Reactivity

- **10.1 Reactivity:** None
- **10.2 Chemical stability:**
Stable
- **10.3 Possibility of hazardous reactions:**
Exothermic reaction with materials containing active hydrogen groups
Reaction with water (moisture) produces CO₂ gas
- **10.4 Conditions to avoid:**
Avoid high temperatures
- **10.5 Incompatible materials:**
Water, alcohols, amines, bases and acids
- **10.6 Hazardous decomposition products:**
Carbon monoxide, carbon dioxide, nitrogen oxides, hydrocarbons and HCN

11 Toxicological Information

- **11.1 Information on toxicological effects**
 - Acute toxicity:**
 - Oral:** Diphenylmethane 4,4'-diisocyanate: LD50: Rat-9.200 mg/kg
 - Inhalation:** Diphenylmethane 4,4'-diisocyanate: LD50: Rat- male and female- 1h->2.24 mg/l
 - Chronic toxicity:** No additional information
 - Skin corrosion/irritation:**
Isocyanic acid, polymethylenepolyphenylene ester: Moderate skin irritation
 - Serious eye damage/irritation:**
Diphenylmethane 4,4'-diisocyanate: Rabbit - esults: Moderate irritation
 - Respiratory or skin sensitization:**
 - Diphenylmethane 4,4'-diisocyanate: in vivo assay - Mouse. Results: May cause sensitization by contact
 - Diphenylmethane 4,4'-diisocyanate: in vivo assay - Guinea Pig. Results: May cause sensitization by inhalation
 - Isocyanic acid, polymethylenepolyphenylene ester: May cause allergic respiratory and skin reactions

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Carcinogenicity:

This product contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP or EPA classification

IARC(International Agency for Research on Cancer):

Group 3 - Not classifiable as to its carcinogenicity to humans: 4,4'-methylenediphenyl diisocyanate

NTP (National Toxicology Program):

None of the ingredients listed

Germ cell mutagenicity:

No additional information

Reproductive toxicity:

No additional information

STOT - single and repeated exposure:

Diphenylmethane 4,4'-diisocyanate: STOT SE - Inhalation - May cause respiratory irritation-Respiratory System

Isocyanic acid, polymethylenepolyphenylene ester: TOT SE - Inhalation - May cause respiratory irritation-Respiratory System

Diphenylmethane 4,4'-diisocyanate: STOT RE - Inhalation - May cause damage to organs through prolonged or repeated exposure - Respiratory System

Additional toxicological information:

No additional information

12 Ecological Information**· 12.1 Toxicity:**

Diphenylmethane 4,4'-diisocyanate: Aquatic invertebrates, EC50 - Daphnia magna (water flea) - 0.35mg/l - 24 h

· 12.2 Persistence and degradability:

No additional information

· 12.3 Bioaccumulative potential:

No additional information

· 12.4 Mobility in soil:

No additional information

· 12.5 Results of PBT and vPvB assessment

PBT: additional information

vPvB: additional information

· 12.6 Other adverse effects:

No further relevant information available

13 Disposal Considerations**· 13.1 Waste treatment methods (consult local, regional and national authorities for proper disposal)****Relevant information:**

Consult federal, state, provincial and local regulations regarding the proper disposal of waste material that may incorporate some amount of this product. Do not allow product to reach sewage system or open water. It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 10CFR262.11). Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices.


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14 Transport Information

14.1 UN/NA-Number DOT, ADR, DOT, IMDG, IATA	NA 3082
14.2 UN/NA-proper shipping name DOT, ADR, DOT, IMDG, IATA	Other Regulated Substances, Liquid, n.o.s. (Methylene Diphenyl Diisocyanate)
14.3 Transportation hazard class(es) DOT, ADR, DOT, IMDG, IATA - Class :	9
Label:	
14.4 Packing group DOT, ADR, DOT, IMDG, IATA	III
14.5 Environmental hazards: Marine pollutant:	None
14.6 Special precautions for user Danger code (Kemler): EMS Number: Segregation groups	No data available No data available No data available
Transport/Additional Information: ADR Tunnel restriction code UN "Model Regulations"	No data available No data available NA3082 Other regulated substances, liquid, n.o.s. (Methylene Diphenyl Diisocyanate) 9 PG III

15 Regulatory Information

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

SARA:

Section 313 (specific toxic chemicals): 101-68-8 Diphenylmethane 4,4'-diisocyanate 9016-87-9 Isocyanic acid, polymethylenepolyphenylene ester Section 302 (extremely hazardous substance): None of the ingredients are listed
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CERCLA (Comprehensive Environmental Response, Clean up and Liability Act Reportability)

Spill Quantity: None of the ingredients are listed

TSCA (Toxic Substances Control Act):

Inventory: All ingredients are listed
Rules and Orders: Not applicable

Proposition 65 (California):

Chemicals known to cause cancer: None of the ingredients are listed
Chemicals known to cause reproductive toxicity for females: None of the ingredients are listed
Chemicals known to cause reproductive toxicity to males: None of the ingredients are listed
Chemicals known to developmental toxicity: None of the ingredients are listed

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Canadian

Canadian Domestic Substance List (DSL):

All ingredients are listed

EU

REACH Article 57 (SVHC): None of the ingredients are listed

Germany MAK: Not Classified

Asia Pacific

Australia

Australian Inventory of Chemical Substances (AICS): All ingredients listed

China

Inventory of Existing Substances in China (ECSC): All ingredients listed

Japan

Inventory of Existing and New Chemical Substances(ENCS): All ingredients listed

Korea

Existing Chemical List (ECL): All ingredients listed

New Zealand

New Zaland Inventory of Chemicals (NZOIC): All ingredients listed

Philippines

Philippines Inventory of Chemicals and Chemical Substances (PICCS): All ingredients listed

Taiwan

Taiwan Chemical Substance Inventory (TSCI): All ingredients 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 irriation
- H317 May cause allergic ckin reaction
- H319 Causes serious eye irritation
- H320 Causes 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
- P201 Obtain special instructions before use
- P202 Do not handle until all safety precaustions have been read and understood
- P261 Avoid breathing dust/fume/gas/mist/vapors/spray
- P264 Wash skin thoroughly after handling
- P271 Use only outdoors or in a well-ventilated area
- P272 Contaminated work clothing should not be allowed out of the work place
- P280 Wear protective glove/protective clothing/eye protection/face protection
- P285 In case of inadequate ventilation wear respiratory protection
- P302+P352 If on skin: Wash with soap and water
- P304+P340+P312 If inhaled: remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a poison center or doctor/physician if you feel unwell
- 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 attention/advice
- P333+P313 If skin irritation or rash occurs: Get medical attention/advice

SafetyData Sheet

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P362 Take off contaminated clothing and wash before reuse
P403+P233 Store in a well ventilated place. Keep container tightly closed
P405 Store locked up
P501 Dispose of contents and container as instructed in section 13

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
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
ACGIH: American Conference of Governmental Industrial Hygienists
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
WHMIS: Workplace Hazardous Materials Information System (Canada)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent

Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Additionally, vendor assumes no responsibility for injury to vendee or third persons proximately caused by abnormal use of the material even if reasonable safety procedures are followed. Furthermore, vendee assumes the risk of his use of the material for either Component A and/or B or the combination of both components

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