

# Safety Data Sheet

Acc. To OSHA HCS Rev. 1/19/16

Trade Name: RS MaxPatch Part B

## Section 1: IDENTIFICATION OF THE MATERIAL AND SUPPLIER

**Trade Name:** RS MaxPatch® Part B

**Other Name(s):** Silicate Resin, Diphenylmethanediisocyanate

**Recommended use of the chemical and restrictions on use:**

Component in the mixture of silicate reaction resin for use in pipe repairs.

**Details of the supplier:**

RS Lining Systems, LLC

P.O. Box 3745

Cary, NC 27519

919-481-1977

www.rstechnik.us

**Emergency Telephone Number:**

CHEMTREC: 800-424-9300 24 hours

## Section 2: HAZARD(S) IDENTIFICATION

Classification of the substance or mixture



GHS08 Health Hazard

Resp. Sens. 1	H334 May cause allergy or asthma symptoms or breathing difficulties
Carc. 2	H351 Suspected of causing cancer
STOT RE 2	H373 May cause damage to organs through prolonged or repeated exposure



GHS07

Acute Tox. 4	H332 Harmful if inhaled
Skin Irrit. 2	H315 Causes skin irritation
Skin Sens. 1	H317 May cause an allergic skin reaction
Eye Irrit. 2A	H319 Causes serious eye irritation
STOT SE 3	H335 May cause respiratory irritation

### Label Elements

Hazard pictograms



GHS07



GHS08

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Signal word Danger

## Hazard-determining components of labeling:

Diphenylmethanediisocyanate, isomers and homologues

## Hazard Statements

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

## Precautionary statements

- P284 In case of inadequate ventilation wear respiratory protection.  
P261 Avoid breathing mist/vapors/spray.  
P281 Use personal protective equipment as required.  
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER/doctor.  
P501 Dispose of contents/container in accordance with local/regional/national/ international regulations.

## Classification System:

NFPA ratings (scale 0-4)



Health = 1  
Fire = 1  
Reactivity = 0

HMIS ratings (0-4)



Health = 1  
Fire = 1  
Reactivity = 0

## Other Hazards

Results of PBT and vPvB assessment

PBT: Not Applicable.

vPvB: Not Applicable.

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## Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

**Chemical Characterization:** Mixtures

**Description:** Mixture of the substances listed below with nonhazardous additions

### Dangerous Components:

9016-87-9 Diphenylmethanediisocyanate, isomers and homologues 50-100%

**Additional Information:** For the wording of the listed risk phrases refer to section 16.

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## Section 4: FIRST AID MEASURES

### Description of first aid measures

**General information:** Symptoms of poisoning may even occur after several hours; medical observation for at least 48 hours after the accident.

**After inhalation:** Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist. In case of unconsciousness: place patient stably in side position for transportation.

**After skin contact:** Immediately wash with water and soap and rinse thoroughly.

**After eye contact:** Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

**After swallowing:** If symptoms persist consult doctor.

**Information for doctor:** Symptomatic treatment, no specific antidote known. For pulmonary edema prophylaxis: dexamethasone aerosol.

**Most important symptoms and effects, both acute and delayed:** No further relevant information available.

**Indication of any immediate medical attention and special treatment needed:** No further relevant information available.

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## Section 5: FIRE FIGHTING MEASURES

### Extinguishing media

#### Suitable extinguishing agents:

Use firefighting measures that suit the environment.

**Suitable extinguishing agents:** dry extinguishing agents, foam, carbon dioxide (CO<sub>2</sub>), and/or water sprays. The following may be released in a fire: carbon monoxide, carbon dioxide, nitrogen oxide, hydrocyanic acid, diphenylmethane-4, 4'-diisocyanate.

**Special equipment required:** always wear gas mask and breathing equipment and protective overalls. Do not inhale gases or vapors.

**Further information:** Cool endangered containers with water. If the material overheats, danger of gaseous decomposition products being released; decomposition, danger of explosion.

Dispose of fire residues and contaminated water in accordance with local statutory regulations. Collect contaminated water used for fire fighting separately, must not be allowed to enter sewage system or ground water.

**Special hazards arising from the substance or mixture:** No further relevant information available.

### Advice for firefighters

**Protective equipment:** Do not inhale explosion gases or combustion gases.

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## Section 6: ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures:** Ensure adequate ventilation

**Environmental precautions:** Prevent seepage into sewage system, work pits and cellars.

#### Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to item 13.

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.

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## Section 7: HANDLING AND STORAGE

### Handling:

#### Precautions for safe handling

- When handling, make sure the working area is adequately ventilated.
- When pumping, check pipes for tightness.
- Aerosol formation must be avoided. Do not inhale vapors or aerosols.
- If aerosols occur, always wear breathing equipment.

**Information about protection against explosions and fires:** No special measures required.

### Storage:

#### Requirements to be met by storerooms and receptacles:

- Store in a tightly closed, dry, well-ventilated place. If material becomes damp, CO<sub>2</sub> generated, pressure increase, danger of explosion.
- Do not store together with: acids, amines or products containing amines.
- Store away from foodstuffs, animal feed, alcohol and tobacco.
- Do not store below + 10 °C

**Information about storage in one common storage facility:** Not required.

**Further information about storage conditions:** Keep receptacle tightly sealed.

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

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## Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

**Additional information about design of technical systems:** No further data; see item 7.

### Control parameters

#### 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.

### 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.

#### 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.

#### Protection of hands:



Protective gloves

#### Material of gloves

- Nitrile rubber, NBR
- Fluorocarbon rubber (Viton)

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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 cannot be calculated in advance and has therefore to be checked prior to the application.

### 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.

### Eye protection:



Tightly sealed goggles

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## Section 9: PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

#### General Information

#### Appearance:

**Form:** Fluid

**Color:** Brown

**Odor:** Weak, characteristic

#### Change in condition

**Boiling point/Boiling range:** > 200 °C (> 392 °F)

**Flash point:** > 100 °C (> 212 °F)

**Ignition temperature:** >600 °C (>1112 °F)

**Danger of explosion:** Product does not present an explosion hazard.

**Vapor pressure at 20 °C (68 °F):**  $1 \times 10^5$  hPa (1x84 mm Hg)

**Density at 25 °C (77 °F):** 1.13 g/cm<sup>3</sup>

**Solubility in/Miscibility with Water:** Not miscible or difficult to mix.

#### Viscosity:

**Dynamic at 25 °C (77 °F):** 130 mPas

**Other information** No further relevant information available.

**NOTE:** The physical data presented above are typical values and should not be construed as a specification.

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## Section 10: STABILITY AND REACTIVITY

**Reactivity:** No further relevant information available.

### Chemical stability

**Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

**Possibility of hazardous reactions:** No dangerous reactions known.

**Conditions to avoid:** No further relevant information available.

**Incompatible materials:** No further relevant information available.

**Hazardous decomposition products:** No dangerous decomposition products known.

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## Section 11: TOXICOLOGICAL INFORMATION

### Information on toxicological effects

#### Acute toxicity:

#### LD/LC50 values that are relevant for classification:

9016-87-9 diphenylmethanediisocyanate, isomeres and homologues  
Oral LD50 >15000 mg/kg (Rat)  
Dermal LD50 >5000 mg/kg (Kaninchen)  
Inhalative LC50/4 h 490 mg/l (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.

#### Other information (about experimental toxicology):

In the case of over-sensitive persons intensive contact may lead to sensitizing of the skin. Danger of sensitizing by continuous skin contact. May cause sensitizing of the respiratory system in the case of allergic persons.  
Skin contact and inhaling aerosols must be avoided.

#### Subacute to chronic toxicity:

Subacute-chronical toxicity  
Length of trials: 2 years  
Application: inhalative (rat): > 0.2 < 1 mg/m<sup>3</sup> aerosol (PMDI).  
Findings: when inhaled, the substance caused clear local irritation in the rats with epithelium damage.  
Application: inhalative (rat): 6 mg/m<sup>3</sup> aerosol (PMDI).  
Findings: when inhaled, the substance caused clear local irritation in the rats with epithelium damage. Some of the animals also suffered local tumor growth after this.

#### Additional toxicological information:

#### Carcinogenic categories

IARC (International Agency for Research on Cancer): None of the ingredients is listed.  
NTP (National Toxicology Program): None of the ingredients is listed.  
OSHA - CA (Occupational Safety & Health Administration): None of the ingredients is listed.

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## Section 12: ECOLOGICAL INFORMATION

### Toxicity

**Aquatic toxicity:** No further relevant information available.

**Persistence and degradability:** No further relevant information available.

### Behavior in environmental systems

**Bioaccumulative potential:** No further relevant information available.

**Mobility in soil:** No further relevant information available.

#### Additional ecological information:

**General notes:** Water hazard class 1 (Self-assessment): slightly hazardous for water

#### Results of PBT and vPvB assessment

**PBT:** Not applicable.

**vPvB:** Not applicable.

**Other adverse effects:** No further relevant information available.

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## Section 13: DISPOSAL CONSIDERATIONS

### Waste treatment methods

**Recommendation:** Must not be disposed of together with household garbage. Do not allow product to reach sewage system. Must be specially treated adhering to official regulations.

### Uncleaned packagings

**Recommendation:** Disposal must be made according to official regulations.

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## Section 14: TRANSPORT INFORMATION

**UN-Number (DOT, ADR, ADN, IMDG, IATA):** Not applicable.

**UN proper shipping name (DOT, ADR, ADN, IMDG, IATA):** Not applicable.

**Transport hazard class (DOT, ADR, ADN, IMDG, IATA):** Not applicable.

**Packing group (DOT, ADR, IMDG, IATA):** Not applicable.

**Environmental hazards:** Not applicable.

**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.

**UN "Modal Regulation":** Not Applicable

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## Section 15: REGULATORY INFORMATION

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

#### Sara

**Section 355 (extremely hazardous substances):** None of the ingredient 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

124-17-4 2-(2-butoxyethoxy) ethyl acetate

2530-83-8 [3-(2,3-epoxypropoxy)propyl] trimethoxysilane

105-53-3 diethyl malonate

73891-99-3 Rapsölmethylester

#### Proposition 65

**Chemicals known to cause cancer:** None of the ingredients is listed.

**Chemicals known to cause reproductive toxicity for females:** None of the ingredients is listed.

**Chemicals known to cause reproductive toxicity for males:** None of the ingredients is listed.

**Chemicals known to cause developmental toxicity:** None of the ingredients is listed.

#### Cancerogenity categories

##### EPA (Environmental Protection Agency):

9016-87-9 diphenylmethanediisocyanate, isomeres and homologues: D;CBD

**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: 3

**NIOSH-CA (National Institute for Occupational Safety and Health):** None of the ingredients is listed.

#### National regulations:

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

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**Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

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## Section 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.

Contact: 919-481-1977

Date of preparation: 1/19/2016

### Abbreviations and acronyms:

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

ICAO: International Civil Aviation Organisation

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

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

Acute Tox. 4: Acute toxicity, Hazard Category 4

Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2

Eye Irrit. 2A: Serious eye damage/eye irritation, Hazard Category 2A

Resp. Sens. 1: Sensitization - Respirat., Hazard Category 1

Skin Sens. 1: Sensitization - Skin, Hazard Category 1

Carc. 2: Carcinogenicity, Hazard Category 2

STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

STOT RE 2: Specific target organ toxicity - Repeated exposure, Hazard Category 2

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Please assure that all persons coming into contact with this product are aware of the information contained herein. The information has been compiled from sources considered to be reliable, and is accurate to the knowledge of the manufacturer, although not guaranteed to be so. It is the user's ultimate responsibility to determine for themselves the suitability of any material for a specific use, and to adopt such safety precautions as may be necessary. If you need additional information from RS Lining Systems, please call the above listed telephone numbers.

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