



**RAINBOW TECHNOLOGY**  
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Woman-Owned Business Enterprise - Founded 1971

# Safety Data Sheet (SDS)

## 1 Identification

MANUFACTURER/DISTRIBUTOR: ..... Rainbow Technology Corporation (800) 637-6047

CONTACT PERSON: ..... Larry Joe Steeley, Jr.

EMERGENCY PHONE # (24 HRS.)..... Chem-Tel Inc. (800) 255-3924

PRODUCT NUMBER:..... **79515C, 79506, 79512, & 79515GS**

**Part B - Isocyanate**

PRODUCT NAME:..... **Duct Sealing Kit (Single Barrel)**

ISSUE DATE: ..... May 19, 2017

REPLACES SDS DATED:..... April 24, 2013

## 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 if inhaled.

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.

Eye Irrit. 2A H319 Causes serious eye irritation.

Skin Sens. 1 H317 May cause an allergic skin reaction.

STOT SE 3 H335 May cause respiratory irritation.

### · Label elements

· **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

### · Hazard pictograms



GHS07



GHS08

### · Signal word Danger

### · Hazard statements

Harmful if inhaled.

Causes skin irritation.

Causes serious eye irritation.

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

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*May cause an allergic skin reaction.*  
*Suspected of causing cancer.*  
*May cause respiratory irritation.*  
*May cause damage to organs through prolonged or repeated exposure.*  
· **Precautionary statements**  
*Do not breathe dust/fume/gas/mist/vapors/spray.*  
*[In case of inadequate ventilation] wear respiratory protection.*  
*Wear protective gloves.*  
*Wear eye protection / face protection.*  
*Wash thoroughly after handling.*  
*Use only outdoors or in a well-ventilated area.*  
*Contaminated work clothing must not be allowed out of the workplace.*  
*Obtain special instructions before use.*  
*Do not handle until all safety precautions have been read and understood.*  
*If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.*  
*Continue rinsing.*  
*Specific treatment (see on this label).*  
*If experiencing respiratory symptoms: Call a POISON CENTER/doctor.*  
*IF INHALED: Remove person to fresh air and keep comfortable for breathing.*  
*Call a POISON CENTER/doctor if you feel unwell.*  
*Wash contaminated clothing before reuse.*  
*IF exposed or concerned: Get medical advice/attention.*  
*If skin irritation or rash occurs: Get medical advice/attention.*  
*If eye irritation persists: Get medical advice/attention.*  
*Get medical advice/attention if you feel unwell.*  
*IF ON SKIN: Wash with plenty of water.*  
*Take off contaminated clothing and wash it before reuse.*  
*Store locked up.*  
*Store in a well-ventilated place. Keep container tightly closed.*  
*Dispose of contents/container in accordance with local/regional/national/international regulations.*

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



· **HMIS-ratings (scale 0 - 4)**

HEALTH	2	Health = 2
FIRE	1	Fire = 1
PHYSICAL HAZARD	1	Physical Hazard = 1

· **Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

## 3 Composition/information on ingredients

· **Chemical characterization:** Mixtures

· **Description:** Polyurethane

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## · **Hazardous components:**

101-68-8	4,4'-methylenediphenyl diisocyanate	25-50%
9016-87-9	diphenylmethanediisocyanate, isomers and homologues	25-50%
5873-54-1	o-(p-isocyanatobenzyl)phenyl isocyanate	2.5-10%

## 4 First-aid measures

### · **Description of first aid measures**

#### · **After inhalation:**

Supply fresh air or oxygen; call for doctor.

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:** Do not induce vomiting; immediately call for medical help.

#### · **Information for doctor:**

· **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.

## 5 Fire-fighting measures

### · **Extinguishing media**

#### · **Suitable extinguishing agents:**

CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray.

Use fire fighting measures that suit the environment.

#### · **Special hazards arising from the substance or mixture**

In case of fire, the following can be released:

Carbon Dioxide (CO<sub>2</sub>).

#### · **Advice for firefighters**

· **Protective equipment:** Mouth respiratory protective device.

## 6 Accidental release measures

### · **Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

#### · **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.

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

Use neutralizing agent.

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

Dispose of contaminated material as waste in accordance with federal state and local regulations.

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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## 7 Handling and storage

- **Handling:**
- **Precautions for safe handling**  
Open and handle receptacle with care.  
Prevent formation of aerosols.
- **Information about protection against explosions and fires:**  
Product reacts with water. Reaction may produce heat and/or gases.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Protect from moisture. Keep packages dry.
- **Information about storage in one common storage facility:** Store away from water.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data.
- **Control parameters**
- **Components with limit values that require monitoring at the workplace:**  
The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.  
At this time, the other constituents have no known exposure limits.

### 101-68-8 4,4'-methylenediphenyl diisocyanate

PEL	Ceiling limit value: 0.2 mg/m <sup>3</sup> , 0.02 ppm
REL	Long-term value: 0.05 mg/m <sup>3</sup> , 0.005 ppm Ceiling limit value: 0.2* mg/m <sup>3</sup> , 0.02* ppm *10-min
TLV	Long-term value: 0.051 mg/m <sup>3</sup> , 0.005 ppm

- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment (see listings below)**
- **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:**  
Use approved respiratory protection equipment when airborne exposure is excessive. Consult the respirator manufacturer to determine the appropriate type of equipment for a given application. Observe respirator use limitations specified by the manufacturer.
- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

- **Material of gloves**  
Butyl rubber, BR  
Chloroprene rubber, CR

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Nitrile rubber, NBR

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.

· **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

· **Body protection:**

Apron

Protective work clothing

## 9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form: Liquid

Color: Amber

· **Odor:** Musty

· **Odor threshold:** Not determined.

· **pH-value:** Not determined.

· **Change in condition**

Melting point: Undetermined.

· **Boiling point:** > 203 °C (> 397 °F)

· **Flash point:** > 203 °C (> 397 °F)

· **Flammability (solid, gaseous):** Not applicable.

· **Ignition temperature:** 400 °C (752 °F)

· **Decomposition temperature:** Not determined.

· **Auto igniting:** Product is not selfigniting.

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

· **Flammable limits:**

Lower: 0.4 Vol %

· **Vapor pressure:** Not determined.

· **Specific gravity at 20 °C (68 °F):** 1.23 g/cm<sup>3</sup> (10.264 lbs/gal)

· **Relative density** Not determined.

· **Vapor density** Not determined.

· **Evaporation rate** Not determined.

· **Solubility in / Miscibility with**

Water: Not miscible or difficult to mix.

· **Partition coefficient (n-octanol/water):** Not determined.

· **Viscosity:**

Dynamic: Not determined.

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<b>Kinematic:</b>	Not determined.
· <b>Solvent content:</b>	
<b>Organic solvents:</b>	0.0 %
· <b>Other information</b>	No further relevant information available.

## 10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:**  
Contact with moisture, other materials that react with isocyanates, or temperatures above 350F (177C), may cause polymerization.
- **Possibility of hazardous reactions**  
Violent reaction with water at high temperatures.  
May produce violent reactions with bases and numerous organic substances including alcohols and amines.  
MDI reacts slowly with water to form Carbon Dioxide gas. The gas can cause sealed containers to expand and possibly rupture.  
Reacts with water.
- **Conditions to avoid**  
Moisture  
Exposure to high temperatures.
- **Incompatible materials:**  
Reacts with amines.  
Reacts with alcohols.  
Reacts with water  
May produce violent reactions with bases and numerous organic substances including alcohols and amines.  
copper and copper alloys.
- **Hazardous decomposition products:**  
Nitrogen oxides  
Carbon monoxide and carbon dioxide  
Isocyanate  
Isocyanic acid

## 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

· <b>LD/LC50 values that are relevant for classification:</b>		
<b>101-68-8 4,4'-methylenediphenyl diisocyanate</b>		
Oral	LD50	2200 mg/kg (mouse)

- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Irritating effect.
- **Sensitization:**  
Inhalation - Sensitization possible through inhalation.  
Skin Contact - Sensitization possible through skin contact.
- **Additional toxicological information:**  
The product shows the following dangers according to internally approved calculation methods for preparations:  
Harmful

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*Irritant*

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**

101-68-8	4,4'-methylenediphenyl diisocyanate	3
9016-87-9	diphenylmethanediisocyanate, isomers and homologues	3

· **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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## 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:** At present there are no ecotoxicological assessments.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

\*

## 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:** Must be specially treated adhering to official regulations.
- **Uncleaned packagings:**
- **Recommendation:** Packagings that cannot be cleansed are to be disposed of in the same manner as the product.

\*

## 14 Transport information

· <b>UN-Number</b>	
· <b>DOT, ADR, ADN, IMDG, IATA</b>	not regulated
· <b>UN proper shipping name</b>	
· <b>DOT, ADR, ADN, IMDG, IATA</b>	not regulated
· <b>Transport hazard class(es)</b>	
· <b>DOT, ADR, ADN, IMDG, IATA</b>	
· <b>Class</b>	not regulated
· <b>Packing group</b>	
· <b>DOT, ADR, IMDG, IATA</b>	not regulated
· <b>Environmental hazards:</b>	Not applicable.

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· **Special precautions for user** Not applicable.

· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.

· **UN "Model Regulation":** not regulated

## 15 Regulatory information

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

· **Sara**

· **Section 355 (extremely hazardous substances):**

None of the ingredients is listed.

· **Section 313 (Specific toxic chemical listings):**

101-68-8 4,4'-methylenediphenyl diisocyanate

9016-87-9 diphenylmethanediisocyanate, isomers and homologues

· **TSCA (Toxic Substances Control Act):**

All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements.

· **Proposition 65**

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity:**

None of the ingredients is listed.

· **(DSL) Canada Domestic Substance List**

All components of this product are on the DSL (Canada Domestic Substance list) or are exempt from DSL requirements.

· **Carcinogenicity categories**

· **EPA (Environmental Protection Agency)**

101-68-8 4,4'-methylenediphenyl diisocyanate

D, CBD

9016-87-9 diphenylmethanediisocyanate, isomers and homologues

CBD

· **TLV (Threshold Limit Value established by ACGIH)**

None of the ingredients listed.

· **MAK (German Maximum Workplace Concentration)**

101-68-8 4,4'-methylenediphenyl diisocyanate

4

9016-87-9 diphenylmethanediisocyanate, isomers and homologues

4

· **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.

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

## 16 Other information

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## · **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)*

*HMIS: Hazardous Materials Identification System (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 – Category 4*

*Skin Irrit. 2: Skin corrosion/irritation – Category 2*

*Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A*

*Resp. Sens. 1: Respiratory sensitisation – Category 1*

*Skin Sens. 1: Skin sensitisation – Category 1*

*Carc. 2: Carcinogenicity – Category 2*

*STOT SE 3: Specific target organ toxicity (single exposure) – Category 3*

*STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2*