

## Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03.

Issue date 03/16/2016

Reviewed on 03/16/2016

### \* 1 Identification

- **Product Identifier**
- **Trade name: 850CF Part A ISO**
- **Relevant identified uses of the substance or mixture and uses advised against:**  
No further relevant information
- **Product Description** Polyurea Crack Filler
- **Details of the Supplier of the Safety Data Sheet:**
- **Manufacturer/Supplier:**  
SIMIRON  
32700 Industrial Drive  
Madison Heights, MI 48071  
Phone: (248) 686-3600  
Fax: (248) 677-9325  
www.simiron.com
- **Emergency telephone number:** 800-535-5053

### 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.

STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.



GHS07

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-determining components of labeling:**

4,4'-methylenediphenyl diisocyanate

Diphenylmethanediisocyanate, isomeres and homologues

o-(p-isocyanatobenzyl)phenyl isocyanate

- **Hazard statements:**

H315 Causes skin irritation.

H319 Causes serious eye irritation.

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H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H317 May cause an allergic skin reaction.

H335 May cause respiratory irritation.

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

**Precautionary statements:**

- P260 Do not breathe dust/fume/gas/mist/vapors/spray.
- P284 [In case of inadequate ventilation] wear respiratory protection.
- P261 Avoid breathing dust/fume/gas/mist/vapors/spray.
- P271 Use only outdoors or in a well-ventilated area.
- P280 Wear protective gloves.
- P280 Wear eye protection / face protection.
- P264 Wash thoroughly after handling.
- P272 Contaminated work clothing must not be allowed out of the workplace.
- P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P321 Specific treatment (see supplementary first aid instructions on this Safety Data Sheet).
- P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER/doctor.
- P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- P312 Call a POISON CENTER/doctor if you feel unwell.
- P363 Wash contaminated clothing before reuse.
- P304+P341 If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.
- 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.
- P314 Get medical advice/attention if you feel unwell.
- P302+P352 IF ON SKIN: Wash with plenty of water.
- P362+P364 Take off contaminated clothing and wash it before reuse.
- P405 Store locked up.
- P403+P233 Store in a well-ventilated place. Keep container tightly closed.
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

**Unknown acute toxicity:**

30 % of the mixture consists of component(s) of unknown toxicity.

**Classification system:**

**NFPA ratings (scale 0 - 4)**



**HMIS-ratings (scale 0 - 4)**



**Hazard(s) not otherwise classified (HNOC):** None known

**\* 3 Composition/Information on Ingredients**

**Non-hazardous components:**

6846-50-0	2,2,4-Trimethyl-1,3-pentanediol diisobutyrate	25-30%
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**Trade name: 850CF Part A ISO**

- **Chemical characterization: Mixtures**
- **Description:** Mixture: consisting of the following components.

**Dangerous Components:**

CAS: 101-68-8 RTECS: NQ 9350000	4,4'-Methyldiphenyldiisocyanat ⚠ Resp. Sens. 1, H334; Carc. 2, H351; STOT RE 2, H373; ⚠ Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335	25-50%
CAS: 9016-87-9 RTECS: TR 0320000	Diphenylmethanediisocyanate, isomeres and homologues ⚠ Resp. Sens. 1, H334; STOT RE 2, H373; ⚠ Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335	25-50%
CAS: 5873-54-1	o-(p-isocyanatobenzyl)phenyl isocyanate ⚠ Resp. Sens. 1, H334; STOT RE 2, H373; ⚠ Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335	10-15%

### \* 4 First-Aid Measures

- **Description of first aid measures:**
- **General information:**  
Symptoms of poisoning may occur after exposure to dust, fumes or particulates; seek medical attention if feeling unwell.
- **After inhalation:**  
Supply fresh air. If required, provide artificial respiration. 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.  
If skin irritation occurs, consult a doctor.
- **After eye contact:**  
Rinse opened eye for at least 15 minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** Immediately call a doctor.
- **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:** Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture:**  
Thermal decomposition will produce toxic oxides of carbon.
- **Advice for firefighters:**
- **Protective equipment:**  
As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent) and full protective gear to prevent contact with skin and eyes.

### \* 6 Accidental Release Measures

- **Personal precautions, protective equipment and emergency procedures:**  
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**  
Dilute with plenty of water.  
Do not allow to enter sewers/surface or ground water.

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**Trade name: 850CF Part A ISO****Methods and material for containment and cleaning up:**

Ensure adequate ventilation.

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

Dispose contaminated material as waste according to section 13.

**Reference to other sections:**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

### 7 Handling and Storage

**Handling****Precautions for safe handling:**

Avoid contact with skin, eyes and clothing

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

**Information about protection against explosions and fires:** No special measures required.**Conditions for safe storage, including any incompatibilities:****Storage****Requirements to be met by storerooms and receptacles:** Store in a cool, dry place.**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.

### 8 Exposure Controls/Personal Protection

**Additional information about design of technical systems:** No further data; see section 7.**Control parameters:****Components with occupational exposure limits:**

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.

**4,4'-methylenediphenyl diisocyanate**PEL Ceiling limit value: 0.2 mg/m<sup>3</sup>, 0.02 ppmREL Long-term value: 0.05 mg/m<sup>3</sup>, 0.005 ppmCeiling limit value: 0.2\* mg/m<sup>3</sup>, 0.02\* ppm  
\*10-minTLV Long-term value: 0.051 mg/m<sup>3</sup>, 0.005 ppm**Additional information:** The lists that were valid during the creation of this SDS were used as basis.**Exposure controls:****Personal protective equipment:****General protective and hygienic measures:**

The usual precautionary measures for handling chemicals should be followed.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing and wash before reuse.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

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**Trade name: 850CF Part A ISO**

· **Breathing equipment:**



NIOSH/OSHA or EN approved respiratory protection is recommended for use in airborne concentrations exceeding exposure limits.

· **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Select glove material based on penetration times, rates of diffusion and degradation.

· **Material of gloves:**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material 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 determined and observed by the manufacturer of the protective gloves.

· **Eye protection:**



Tightly sealed goggles

### \* 9 Physical and Chemical Properties

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

· **General Information**

· **Appearance:**

<b>Form:</b>	Liquid
<b>Color:</b>	Light yellow
<b>Odor:</b>	Not determined
<b>Odor threshold:</b>	Not determined.

· **Change in condition**

<b>Melting point/Melting range:</b>	Not determined.
<b>Boiling point/Boiling range:</b>	190 °C (374 °F)

· **Flash point:** 111 °C (232 °F)

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

· **Ignition temperature:** 398 °C (748 °F)

· **Decomposition temperature:** Not determined.

· **Auto igniting:** Product is not self-igniting.

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

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**Trade name: 850CF Part A ISO**

- **Explosion limits:**
  - Lower:** 0.4 Vol %
  - Upper:** 3.1 Vol %
- **Vapor pressure:** Not determined.
- **Density @ 20 °C (68 °F):** 1.13 g/cm<sup>3</sup> (9.43 lbs/gal)
- **Relative density:** Not determined.
- **Vapor density:** Not determined.
- **Evaporation rate:** Not determined.
- **Solubility in / Miscibility with:**
  - Water:** Fully miscible.
- **Partition coefficient (n-octanol/water):** Not determined.
- **Viscosity:**
  - Dynamic:** Not determined.
  - Kinematic:** Not determined.
- **Solvent content:**
  - Organic solvents:** 0.0 %
  - Solids content:** 30.0 %
- **Other information:** No further relevant information available.

### \* 10 Stability and Reactivity

- **Reactivity:** No further relevant information available.
- **Chemical stability:** Stable under normal conditions.
- **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:** Strong oxidizers; Strong acids; Strong bases
- **Hazardous decomposition products:** Phenolics, carbon monoxide

### \* 11 Toxicological Information

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

· **LD/LC50 values that are relevant for classification:**

**4,4'-methylenediphenyl diisocyanate**

Oral	LD50	2200 mg/kg (mouse)
Dermal	LD50	>9400 mg/kg (rabbit)
Inhalative	LC50/4 h	>1000 mg/l (Trout)

**6846-50-0 2,2,4-Trimethyl-1,3-pentanediol diisobutyrate**

Oral	LD50	>2000 mg/kg (rat)
Dermal	LD50	>2000 mg/kg (rabbit)

- **Primary irritant effect:**
- **On the skin:**  
Irritant to skin and mucous membranes.  
May cause an allergic skin reaction.
- **On the eye:** Irritating effect.

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**Trade name: 850CF Part A ISO**

· **Sensitization:**

Sensitization possible through inhalation.  
Sensitization possible through skin contact.

· **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:

Harmful  
Irritant

· **Carcinogenic categories:**

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

101-68-8	4,4'-Methylenediphenyldiisocyanat	3
9016-87-9	Diphenylmethanediisocyanate, isomeres and homologues	3

· **NTP (National Toxicology Program):**

None of the ingredients are listed.

· **OSHA-Ca (Occupational Safety & Health Administration):**

None of the ingredients are listed.

### 12 Ecological Information

· **Toxicity:**

· **Aquatic toxicity:**

**4,4'-methylenediphenyl diisocyanate**

EC50 >1000 mg/l (daphnia)

**6846-50-0 2,2,4-Trimethyl-1,3-pentanediol diisobutyrate**

EC50 >7.49 mg/l (Green algae)

· **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:**

Do not allow undiluted product or product that has not been neutralized to reach ground water, water course or sewage system.

· **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 not be disposed of together with household garbage. Do not allow product to reach sewage system. Observe all federal, state and local environmental regulations when disposing of this material.

· **Uncleaned packagings**

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

· **Recommended cleansing agent:** Water, if necessary with cleansing agents.

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**\* 14 Transport Information**

- **UN-Number:**
- **DOT, ADR, ADN, IMDG, IATA** Non-Regulated Material
- **UN proper shipping name:**
- **DOT, ADR, ADN, IMDG, IATA** Non-Regulated Material
- **Transport hazard class(es):**
- **DOT, ADR, ADN, IMDG, IATA**
- **Class:** Non-Regulated Material
- **Packing group:**
- **DOT, ADR, IMDG, IATA** Non-Regulated Material
- **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.
- **UN "Model Regulation":** Non-Regulated Material

**15 Regulatory Information**

- **Safety, health and environmental regulations/legislation specific for the substance or mixture:**
- **SARA (Superfund Amendments and Reauthorization):**

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

None of the ingredients are listed.

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

	4,4'-methylenediphenyl diisocyanate
9016-87-9	Diphenylmethanediisocyanate, isomeres and homologues

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

All ingredients are listed or exempt from listing.

· **California Proposition 65:**· **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 for males:**

None of the ingredients are listed.

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

None of the ingredients are listed.

· **New Jersey Right-to-Know List:**

	4,4'-methylenediphenyl diisocyanate
9016-87-9	Diphenylmethanediisocyanate, isomeres and homologues

· **New Jersey Special Hazardous Substance List:**

None of the ingredients are listed.

· **Pennsylvania Special Hazardous Substance List:**

4,4'-methylenediphenyl diisocyanate

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· **Carcinogenic categories:**

· **EPA (Environmental Protection Agency):**

	4,4'-methylenediphenyl diisocyanate	D, CBD
9016-87-9	Diphenylmethanediisocyanate, isomeres and homologues	CBD

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

None of the ingredients are listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health):**

None of the ingredients are listed.

· **GHS label elements**

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

· **Hazard pictograms:**



GHS07 GHS08

· **Signal word:** Danger

· **Hazard-determining components of labeling:**

4,4'-methylenediphenyl diisocyanate  
 Diphenylmethanediisocyanate, isomeres and homologues  
 o-(p-isocyanatobenzyl)phenyl isocyanate

· **Hazard statements:**

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.  
 H335 May cause respiratory irritation.  
 H373 May cause damage to organs through prolonged or repeated exposure.

· **Precautionary statements:**

P260 Do not breathe dust/fume/gas/mist/vapors/spray.  
 P284 [In case of inadequate ventilation] wear respiratory protection.  
 P261 Avoid breathing dust/fume/gas/mist/vapors/spray.  
 P271 Use only outdoors or in a well-ventilated area.  
 P280 Wear protective gloves.  
 P280 Wear eye protection / face protection.  
 P264 Wash thoroughly after handling.  
 P272 Contaminated work clothing must not be allowed out of the workplace.  
 P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P321 Specific treatment (see supplementary first aid instructions on this Safety Data Sheet).  
 P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER/doctor.  
 P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
 P312 Call a POISON CENTER/doctor if you feel unwell.  
 P363 Wash contaminated clothing before reuse.  
 P304+P341 If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.  
 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.

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P314	Get medical advice/attention if you feel unwell.
P302+P352	IF ON SKIN: Wash with plenty of water.
P362+P364	Take off contaminated clothing and wash it before reuse.
P405	Store locked up.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

**National regulations:**

The product is subject to be classified according with the latest version of the regulations on hazardous substances.

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

### 16 Other Information

The information and recommendations in this safety data sheet are, to the best of our knowledge, accurate as of the date of issue. Nothing herein shall be deemed to create warranty, expressed or implied, and shall not establish a legally valid contractual relationship. It is the responsibility of the user to determine applicability of this information and the suitability of the material or product for any particular purpose.

**Date of preparation / last revision:** 03/16/2016 / 2

**Abbreviations and acronyms:**

ADR: The European Agreement concerning the International Carriage of Dangerous Goods by Road  
ADN: The European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways  
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, Hazard Category 4  
Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2  
Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2  
Eye Irrit. 2A: Serious eye damage/eye irritation, Hazard Category 2A  
Resp. Sens. 1: Sensitisation - Respirat., Hazard Category 1  
Skin Sens. 1: Sensitisation - 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

**\* Data compared to the previous version altered.**

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