CIP-F *Flexible Polyurea Crack Injection Paste-Over Adhesive*

SAFETY DATA SHEET

1. Identification

Product Identification

Product Identifier: **CIP-F (CIP-F22)**
Recommended Use: Two Component Flexible Polyurea Paste-Over
Use Restrictions: None Known.

Company Identification

Company: Simpson Strong-Tie Company Inc.
Address: 5956 W. Las Positas Blvd.
Pleasanton, CA 94588
Phone: 1-800-999-5099
Website: www.strongtie.com
Emergency: 1-800-535-5053 (US/Canada)
1-352-323-3500 (International)

For most current SDS, please visit our website at **www.strongtie.com/sds**

2. Hazard Identification

General Information

CIP-F Flexible Crack Injection Paste-Over Adhesive is a two part system. The two parts of this product have been assessed according to GHS and are classified below. The final hardened material is considered nonhazardous.

Resin (white side) GHS Classification

Physical Hazards: Not Classified.
Health Hazards:

Skin Corrosion/Irritation	Category 2
Serious Eye Damage/Irritation	Category 2A
Sensitization, Respiratory	Category 1
Sensitization, Skin	Category 1
Carcinogenicity	Category 2
STOT, Single Exposure	Category 3 (respiratory tract irritation)
STOT, Repeated Exposure (inhalation)	Category 2 (respiratory system)

Environmental Hazards: Not Classified.

Signal Word: **DANGER!**
Hazard Statements: Causes skin irritation. Causes serious eye irritation. May cause an allergic skin reaction. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause respiratory irritation. Suspected of causing cancer. May cause damage to organs (respiratory system) through prolonged or repeated exposure.

Precautionary Statements:

Prevention: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves/protective clothing/eye protection/face protection. Do not breathe dust/fume/gas/mist/vapors/spray. In case of inadequate ventilation wear respiratory protection. Wash thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace.

Response: If exposed or concerned: Get medical advice/attention. If inhaled: Remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a poison center/doctor. If on skin: Wash with plenty of water/. If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Storage: Store locked up. Store in a well-ventilated place. Store between 60-95°F (16-35°C).
Disposal: Dispose of contents/container in accordance with local/regional/national/international regulations.

Hardener (black side) GHS Classification

Physical Hazards:	Flammable Liquids	Category 4
Health Hazards:	Acute Toxicity, Oral	Category 4
	Skin Corrosion/Irritation	Category 2
	Serious Eye Damage/Irritation	Category 2A
	Sensitization, Skin	Category 1
Environmental Hazards:	Not Classified.	

Signal Word: **WARNING!**

Hazard Statements: Combustible liquid. Harmful if swallowed. Causes skin irritation. Causes serious eye damage. May cause an allergic skin reaction.

Precautionary Statements:

Prevention: Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Wear protective gloves/eye protection/face protection. Do not eat, drink or smoke when using this product. Avoid breathing dust/fume. Wash hands thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace.

Response: In case of fire: Use appropriate media for extinction. If swallowed: Call a poison center/doctor if you feel unwell. Rinse mouth. If on skin: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor.

Storage: Store locked up. Store in a well-ventilated place. Store between 60-95°F (16-35°C).

Disposal: Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazards Not Otherwise Classified (HNOC)

None known.

3. Composition Information

General Information

This product is a mixture. Hazardous ingredients for each component are listed below. May include other nonhazardous ingredients. May include other trace ingredients, see Section 15.

Resin (white side)

Chemical Name	CAS Number	Weight %
Methyl Diphenyl Diisocyanate	101-68-8	20-30

Hardener (black side)

Chemical Name	CAS Number	Weight %
Benzenamine,4,4'-methylenebisN-(1-methylpropyl)	5285-60-9	30-35
Glyceryl poly(oxypropylene)triamine	64852-22-8	< 5

4. First-Aid Measures

General Information

Provide general supportive measures and treat symptomatically. Symptoms may be delayed. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. If exposed or concerned: Get medical advice/attention. Wash contaminated clothing before reuse.

Routes of Exposure

Eye Contact: Immediately flush eyes with plenty of cool water for at least 15 minutes while holding the eyes open. Remove contact lenses if present and easy to do. If redness, burning, blurred vision, or swelling persists, **consult a physician.**

Skin Contact: Remove contaminated clothing and product, immediately wash affected area with soap and water. Do not apply greases or ointments. If redness, burning, or swelling persists, **consult a physician**.

Ingestion: Rinse mouth immediately. Do not induce vomiting. **Consult a physician.**

Inhalation: Remove patient to fresh air. Give oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. If patient continues to experience difficulty breathing, **consult a physician.**

Most Important Symptoms

Skin and eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Rash. Dermatitis. Respiratory tract irritation. Difficulty in breathing.

5. Fire-Fighting Measures

Suitable Extinguishing Media: Extinguish with foam, carbon dioxide, dry powder, or water fog.

Additional Information: None known.

Hazards during Fire-Fighting: Reacts slowly with water to produce carbon dioxide which may rupture closed containers. This reaction accelerates at higher temperatures. During fire, gases hazardous to health may be formed.

Fire-Fighting Procedures: Use standard firefighting procedures and consider the hazards of other involved materials. Move containers from fire area if you can do so without risk. Cool containers exposed to heat with water spray and remove container, if no risk is involved. Withdraw immediately in case of rising sound from venting safety device or any discoloration of tanks due to fire. Evacuate area.

6. Accidental Release Measures

Personal Precautions

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate personal protective equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Avoid inhalation of vapors or mists. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained.

Clean-Up Methods

Small spills: Wipe up with absorbent material. Place in leak-proof containers. Move to outside well-ventilated area. Treat with 10 parts decontamination solution to 1 part isocyanate. Mix well. Allow to stand uncovered for 48 hours. Carbon dioxide will form leaving insoluble polymer material. Dispose of in accordance applicable regulations.

Large spills: Approach suspected leak areas with caution. Eliminate all ignition sources. Evacuate and ventilate the area. Create a dike or trench to contain material. Keep out of sewers, storm drains, surface waters, and soils. Use self-contained breathing apparatus and chemical protective clothing. Clean-up residue with absorbent material non-reactive material. Do not use combustible material such as sawdust. Place material in leak-proof containers. Treat with 10 parts decontamination solution to 1 part isocyanate. Mix well. Allow to stand uncovered for 48 hours before disposal. Clean spill area with decontamination solution and allow to stand for 15 minutes before removal. Test atmosphere for MDI.

Decontamination Solution: Ammonia hydroxide (5%), detergent (0.5%) or 7% sodium carbonate in water.

Environmental Precautions

Avoid release to the environment. Contact local authorities in case of spillage to drain/aquatic environment. Prevent further leakage or spillage if safe to do so. Do not contaminate water. Avoid discharge into drains, water courses or onto the ground.

7. Handling and Storage

Handling

Mechanical ventilation or local exhaust ventilation is required. Persons already sensitized to diisocyanates may develop allergic reactions when using this product. Work practice should minimize contact. Keep the workplace clean. Avoid any exposure. Avoid breathing vapors/fumes. Wear suitable protective clothing, gloves and eye/face protection. Keep away from

open flames, hot surfaces and sources of ignition. When using, do not eat, drink or smoke. Change contaminated clothing. Use care in handling/storage. Wash thoroughly after handling. Observe good industrial hygiene practices.

Storage

Keep container tightly closed. Store in a cool, dry place. Closed containers may rupture violently if heated. Do not store in direct sunlight. Protect against physical damage. Protect from moisture. Do not reseal if contaminated. After container has been opened, blanket with nitrogen before resealing. Keep out of the reach of children. Keep away from food, drink and animal feeding stuffs. Store between 60-95°C (16-35°C).

8. Exposure Controls / Personal Protection

Personal Protective Equipment

General Protection: Wear appropriate personal protective equipment.
Eye Protection: Wear chemical splash goggles or safety glasses with side shield.
Hand Protection: Wear chemical-resistant gloves such as: Nitrile, neoprene, butyl.
Skin and Body Protection: Wear long sleeve shirt/long pants and other clothing as required to minimize contact.
Respirator Protection: If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. While grinding or cutting cured product the use of an approved respirator is recommended.
General Hygiene: Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

Engineering Controls

When using indoors good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Ready access to running water is required. Provide eyewash station.

Exposure Limits

Component	OSHA (PEL)	ACGIH (TLV)	NIOSH Pocket Guide
Methyl Diphenyl Diisocyanate (101-68-8)	0.2 mg/m^3(Ceiling) 0.02 ppm (Ceiling)	0.005 ppm	0.2 mg/m^3(Ceiling) 0.05 mg/m^3(TWA)

Additional Information

After Cure: Product forms an innocuous solid. Processing after cure (grinding or cutting) may produce dust containing compounds that present an inhalation hazard.

9. Physical and Chemical Properties

Property	Resin	Hardener
Physical State:	Liquid, Paste	Liquid, Paste
Color:	White	Black
Odor:	Mild	Ammonical
pH:	3.87	6.26
Flammability limit – lower %:	No data	No data
Flammability limit – upper %:	No data	No data
Vapor Pressure:	No data	< 1 mmHg
Vapor Density:	No data	No data
Solubility:	Minimal	Negligible
Freezing/Melting Point:	No data	No data
Boiling Point:	> 400 °F (> 204.4 °C)	> 300 °F (> 148.89 °C)
Flash Point:	200 °F (93.3 °C) Closed Cup	200 °F (93.3 °C) Closed Cup
Decomposition Temperature:	No data	No data
Specific Gravity:	200 °F (93.3 °C) Closed Cup	1.0 at 72°F (22°C)
VOC (after cure):	Not available.	Not available.
Kow:	No data	No data
Viscosity:	No data	No data

10. Stability and Reactivity

Resin (white side)

Reactivity: This product is stable and non-reactive under normal conditions.
Chemical Stability: Stable under normal storage conditions. This product must be mixed with another component or water (moisture) to react. Excessive heat, fumes, and foam generation can occur if improperly handled. Not sensitive to mechanical impact.
Condition to Avoid: Incompatible chemicals, high heat and open flame.
Substances to Avoid: Strong acids, strong bases. Amines, mercaptains, polyols, water and metal compounds.
Hazardous Reactions: Hazardous polymerization may occur if product is not handled per instruction.
Decomposition Products: Carbon dioxide, carbon monoxide, oxides of nitrogen, and other organic compounds. Trace amounts of hydrogen cyanide.

Hardener (black side)

Reactivity: This product is stable and non-reactive under normal conditions.
Chemical Stability: Stable under normal storage conditions. This product must be mixed with another component to react. Excessive heat, fumes, and foam generation can occur if improperly handled. Not sensitive to mechanical impact.
Condition to Avoid: Incompatible chemicals, high heat and open flame.
Substances to Avoid: Strong oxidizing agents, acids, epoxy resins, isocyanates, and organic peroxides.
Hazardous Reactions: Polymerization will not occur unless product is mixed with epoxy resins, isocyanates or urethane prepolymers.
Decomposition Products: Carbon dioxide, carbon monoxide, oxides of nitrogen, and other organic compounds.

11. Toxicological Information

Likely Routes of Exposure

Ingestion: Harmful if swallowed. Ingestion may cause irritation and malaise.
Inhalation: May cause irritation to the respiratory system. May cause allergy, asthma symptoms or breathing difficulties if inhaled. Inhalation of dust from grinding or cutting cured product may irritate the respiratory tract.
Skin contact: Causes skin irritation. May cause an allergic skin reaction.
Eye contact: Causes serious eye irritation.

Information on Toxicological Effects

Acute toxicity: Occupational exposure to the substance or mixture may cause adverse effects.

Product	Species	Test Result
CIP-F, Part A (CAS mixture)		
Acute, *Dermal*, LC50	Rabbit	>2 g/kg
Acute, *Oral*, LD50	Rat	>5 g/kg, Male >4.7 g/kg, Female
CIP-F, Part B (CAS mixture)		
Acute, *Dermal*, LC50	Rabbit	>2 g/kg
Acute, *Oral*, LD50	Rat	6.1 g/kg, Male 1.62 g/kg, Female

Skin corrosion/irritation: Causes skin irritation.
Eye damage/eye irritation: Causes serious eye irritation.
Respiratory sensitization: May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Skin sensitization: May cause an allergic skin reaction.
Germ cell mutagenicity: No data available.
Carcinogenicity: Suspected of causing cancer.
IARC Monographs. Overall Evaluation of Carcinogenicity
Methylene Diphenyl Diisocyanate (CAS 101-68-8) 3 Not classifiable as to carcinogenicity to humans
Reproductive toxicity: No data available.
Aspiration hazard: No data available.
Specific target organ toxicity:
Single exposure May cause respiratory irritation.
Repeated exposure May cause damage to organs through prolonged or repeated exposure.

Further Information

Toxicological, ecotoxicological, physical, and chemical properties may not have been fully investigated. Hazard data above is estimated based on best available information. Some workers with certain pre-existing medical conditions such as: asthma, allergies, or impaired pulmonary and/or liver functions, or who may be particularly susceptible to this material, may be affected by exposure to this material.

12. Ecological Information

General Information

Information given is based on data on the components and the ecotoxicology of similar products. The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Supporting Data

Persistence and degradability: The product reacts with water to form a solid insoluble reaction product which is non-degradable, according to information available.
Bioaccumulative potential: No data available.
Mobility in soil: No data available.

Further Information

No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this product.

13. Disposal Consideration

Waste Disposal of Substance: Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

Container Disposal: Empty containers or liners may retain some product residues; follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

Disposal of Cured Product: Grind or chip off surface. Solid product does not need special disposal consideration.

14. Transportation Information

Resin (white side)

Resin is not regulated as a dangerous good for transportation.

Hardener (black side)

Hardener is not regulated as a dangerous good for transportation.

Additional Information

Special precautions for user: Read safety instructions, SDS and emergency procedures before handling.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: Not applicable.

This information does not cover all specific regulatory or operational requirements of this product. The classifications for transportation may vary by container volume or different regional or national regulations.

15. Regulatory Information

United States

Federal Regulations: This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D): Not regulated.
US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050): Not listed.
CERCLA Hazardous Substance List (40 CFR 302.4): Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard Categories:	Immediate	Delayed	Fire	Pressure	Reactivity
Resin	Yes	Yes	No	No	Yes
Hardener	Yes	Yes	No	No	No

SARA 302 Extremely hazardous substance: No
SARA 311/312 Hazardous chemical: Yes
SARA 313 (TRI reporting)

Chemical Name	CAS Number	% by weight
Methylene Diphenyl Diisocyanate	101-68-8	20-30

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List
Methylene diphenyl diisocyanate (CAS 101-68-8)

US State Right-To-Know Lists

Chemical	Massachusetts RTK	New Jersey Work and Community RTK Act	Pennsylvania Worker and Community RTK Law	Rhode Island RTK
Methylene Diphenyl Diisocyanate (CAS 101-68-8)	Listed	Listed	Listed	Listed

This product does not contain known levels of any chemicals known to the State of California to cause cancer or reproductive harm as per **California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986).**

Canada

This product has been classified according to the hazard criteria of the CPR and the SDS contains all of the information required by the CPR.

WHMIS Classification

Class D-2B: Material Causing other toxic effects

International

International Inventories

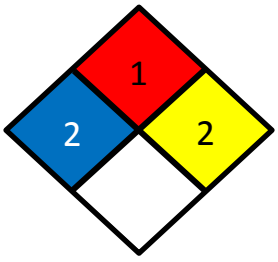
Country or Region	Inventory	On Inventory? (Yes/No)
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL) / Non-Domestic Substances List (NDSL)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

16. Other Information

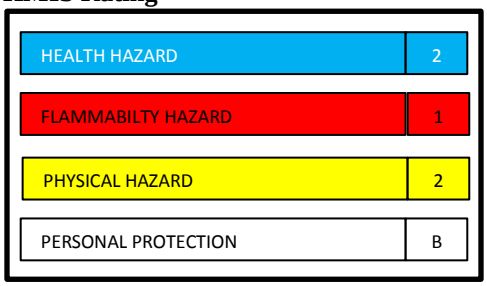
Date Prepared or Revised: September 2014
Supersedes: March 2012

Additional Resin (white side) Classifications

NFPA Ratings

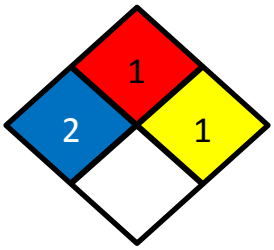


HMIS Rating



Additional Hardener (black side) Classifications

NFPA Ratings



HMIS Rating

HEALTH HAZARD	2
FLAMMABILTY HAZARD	1
PHYSICAL HAZARD	1
PERSONAL PROTECTION	B

Abbreviations

ACGIH:	American Conference of Governmental Industrial Hygienists
CAS No.:	Chemical Abstract Service Registry Number
CERCLA:	Comprehensive Environmental Response, Compensation and Liability Act (U.S. EPA)
CPR:	Controlled Product Regulations (Canada)
DOT:	Department of Transportation (U.S.)
EPA:	Environmental Protection Agency (U.S.)
GHS:	Globally Harmonized System of Classification and Labeling of Chemicals
HEPA:	High-Efficiency Particulate Air
HMIS:	Hazardous Materials Identification System
IARC:	International Agency for Research on Cancer
IATA:	International Air Transport Association
IMDG:	International Maritime Dangerous Goods code
LPP:	Limité Permisible Ponderado (Chile)
NIOSH:	National Institute of Occupational Safety and Health (U.S.)
NFPA:	National Fire Protection Association (US)
NTP:	National Toxicology Program (US)
OSHA:	Occupational Safety and Health Administration (U.S.)
PEL:	Permissible Exposure Limit
SARA:	Superfund Amendments and Reauthorization Act (U.S. EPA)
SDS:	Safety Data Sheet
STEL:	Short Term Exposure Limit (15 minute Time Weighted Average)
STOT:	Specific Target Organ Toxicity (GHS Classification)
TLV:	Threshold Limit Value
TSCA:	Toxic Substances Control Act (U.S.)
TWA:	Time Weighted Average (exposure for 8-hour workday)
U.S.:	United States
VOC:	Volatile Organic Compounds
WHMIS:	Canadian Workplace Hazardous Materials Information System

Disclaimer

This Safety Data Sheet (SDS) is prepared by Simpson Strong-Tie Co. in compliance with the requirements of OSHA 29 CFR Part 1910.1200. The information it contains is offered in good faith as accurate as of the date of this SDS. This SDS is provided solely for the purpose of conveying health, safety, and environmental information. No warranty, expressed or implied, is given. Health and Safety precautions may not be adequate for all individuals and/or situations. It is the user's obligation to evaluate and use this product safely and to comply with all applicable laws and regulations.

Internal

FOR INTERNAL USE ONLY

CIP-F Resin:	CIP-F Hardener:
XCOM3B – 50% Cartridge	XCOM3B – 50% Cartridge