

**MATERIAL SAFETY DATA SHEET  
TWO PART URETHANE REPAIR COMPOUNDS**

6/22/05

**Products Covered:** CF-30, CF-F, CF-PA, CF-PR, CF-QS, CF-SA, CF-SL, CF-SS, TC-B

**SECTION I-MANUFACTURER**

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**SECTION II-PRODUCTS**

<u>Stock Number</u>	<u>Product Name on Label</u>	<u>Numbers of Ingredients in Products</u>	<u>HMIS RATING</u>			<u>Appearance and Odor</u>	<u>Solubility % in Water</u>	<u>Volatile Volume %</u>
			<u>H</u>	<u>F</u>	<u>R</u>			
<b>RESINS</b>								
CF-30	30 Second Rigid Adhesive	2,10,11,15	2*	1	1	Tan viscous liquid, no odor	NA	<1
CF-F	Flexi-Foam	10,14	2*	1	1	Brown viscous liquid, no odor	NA	<1
CF-PA	Panel Adhesive	2,7,10,11,15	2*	1	1	Tan viscous liquid, no odor	NA	<1
CF-PR	Universal Plastic Repair	2,7,10,11,15	2*	1	1	Tan viscous liquid, no odor	NA	<1
CF-QS	Quick Set Rigid Adhesive	2,7,10,11,15	2*	1	1	Tan viscous liquid, no odor	NA	<1
CF-SA	Universal Structural Adhesive	2,7,10,11,15	2*	1	1	Tan viscous liquid, no odor	NA	<1
CF-SL	Self-Leveling Seam Sealer	2,7,10,11,15	2*	1	1	Tan viscous liquid, no odor	NA	<1
CF-SS	Seam Sealer	2,7,10,11,15	2*	1	1	Tan viscous liquid, no odor	NA	<1
TC-B	Channel Bonder Automotive							
	Side Glass Channel Adhesive	10	3*	1	1	Blue viscous liquid, no odor	NA	<1
<b>HARDENERS</b>								
CF-30	30 Second Rigid Adhesive	5,7	2*	1	1	Tan viscous liquid, no odor	NA	<1
CF-F	Flexi-Foam	1,4,8,13	2*	1	1	Black viscous liquid, no odor	NA	<1
CF-PA	Panel Adhesive	2,5,7,15	2*	1	1	Tan viscous liquid, no odor	NA	<1
CF-PR	Universal Plastic Repair	2,5,7,15	2*	1	1	Tan viscous liquid, no odor	NA	<1
CF-QS	Quick Set Rigid Adhesive	2,5,7,15	2*	1	1	Tan viscous liquid, no odor	NA	<1
CF-SA	Universal Structural Adhesive	2,5,7,15	2*	1	1	Tan viscous liquid, no odor	NA	<1
CF-SL	Self-Leveling Seam Sealer	6	2*	1	1	Tan viscous liquid, no odor	NA	<1
CF-SS	Seam Sealer	6,12	2*	1	1	Tan viscous liquid, no odor	NA	<1
TC-B	Channel Bonder Automotive							
	Side Glass Channel Adhesive	3,9	1	1	0	Beige viscous liquid, no odor	NA	<1

\*Chronic health effects are possible. See SECTION VI-HEALTH HAZARD DATA below.

**SECTION III-HAZARDOUS INGREDIENTS**

<u>Ingredients</u>	<u>CAS Number</u>	<u>Exposure Limits* in ppm (parts per million)</u>
1. Amine Salts	NA-Mixture	-NE-
2. Amorphous Silica	112945-52-5	10 A, 15 O mg/m <sup>3</sup> dust
3. Calcium Carbonate	1317-65-3	10 A mg/m <sup>3</sup> dust
4. Carbon Black	1333-86-4	3.5 A mg/m <sup>3</sup> dust
5. Clay	71011-26-2	10 A, 15 O mg/m <sup>3</sup> dust
6. Colloidal Silica	67762-90-7	-NE-
7. Crystalline Silica (Quartz)	14808-60-7	0.1 A, O mg/m <sup>3</sup> dust
8. Dibutyltin Dilaurate	77-58-7	0.01 mg/m <sup>3</sup> O dust
9. Kaolin	1332-58-7	2 A, 5 O mg/m <sup>3</sup> dust
*10. Methylene Phenylene Isocyanate (MDI)	101-68-8	0.005 A, 0.02 O (C)
11. Modified Methylene Phenylene Isocyanate	39310-05-9	-NE-
12. Piperazine	110-85-0	-NE-
13. Polyether Polyol	52624-57-4	-NE-
14. Polymethyl Polyphenyl Isocyanic Acid Ester	9016-87-9	-NE-
15. Talc	14807-96-6	2 A, 3 O mg/m <sup>3</sup> dust

\*A means ACGIH TLV, C means Ceiling, O means OSHA PEL.

Other abbreviations: NA means Not Applicable, NE means Not Established, > means greater than, < means less than.

**SECTION IV-PHYSICAL DATA**

**Evaporation Rate:** (n-Butyl Acetate = 1) Less than 1. **Vapor Pressure (mm Hg @ 20°C):** NA. **Vapor Density:** >1.

**Solubility in Water (Wt%):** NA. **Volatile Volume %:** <1%.

**Boiling Point:** Greater than 392°F (200°C).

**Product Density (water=1):** Greater than 1.

**SECTION V-FIRE AND EXPLOSION DATA**

**Flammability Class:** Non-flammable

**Flash Point (SETA Closed Cup Method):** >200°F (>93.3°C)

**Approximate Flammable Limits:** NA

**Autoignition Temperature:** NA

**Extinguishing Media:** Foam, carbon dioxide, dry chemical  
**Special Fire Fighting Procedures:** Full protective equipment, including self-contained breathing apparatus, is recommended. During a fire Isocyanate and Polyisocyanate vapors and highly toxic gasses may be generated by combustion or thermal decomposition. Water from fog nozzles may be used to cool closed containers to prevent pressure build-up.

**Unusual Fire and Explosion Hazards:** At elevated temperatures [130°F (54°C) or over] containers may leak or rupture.

**SECTION VI-HEALTH HAZARD DATA**

**PRIMARY ROUTES OF EXPOSURE:** Inhalation, Skin contact, Eye contact.

**SIGNS AND SYMPTOMS OF EXPOSURE:**

**INHALATION:**

**Acute Exposure:** Vapors at concentrations above the TLV can irritate the respiratory tract (nose, throat, lungs) causing a burning sensation, runny nose, sore throat, coughing, chest discomfort, shortness of breath and reduced lung function (breathing obstruction). Similar symptoms at vapors of much lower concentration may be caused in persons especially sensitive and those with asthma. Asthma attack may also be triggered.

**Chronic Exposure:** Some individuals, from repeated overexposure, will develop isocyanate sensitization (chemical asthma) which will cause them to react to a later exposure to isocyanates at levels well below the TLV. These symptoms, including chest tightness, wheezing, cough, shortness of breath or asthmatic attack, could be immediate or delayed up to several hours after exposure. Sensitized individuals can experience these symptoms upon exposure to dust, cold air or other irritants for weeks or even several years in severe cases. Chronic overexposure can cause lung damage, including decrease in lung function, which may be permanent. Sensitization may be either temporary or permanent. **NOTE: Under normal use conditions the small amounts of volatile materials contained in individual packages of these products present very limited inhalation hazard when used with normal shop ventilation.**

**SKIN CONTACT:**

**Acute Exposure:** Isocyanates react with skin protein and moisture and can cause skin irritation resulting in reddening, swelling, rash, scaling or blistering. Some persons may develop skin sensitization. Cured material is difficult to remove. Skin irritation may develop into contact dermatitis.

**Chronic Exposure:** Prolonged contact can cause reddening, swelling, rash, scaling or blistering or sensitization. In sensitized persons these symptoms may occur as a result of contact with very small amounts of product or even exposure to vapors.

**EYE CONTACT:**

**Acute Exposure:** These products are mildly to moderately irritating and can cause tearing, reddening and swelling accompanied by pain and perhaps a feeling as of fine dust in the eyes. Sensitization may occur.

**Chronic Exposure:** As in acute exposure but to a lesser degree. Sensitization may occur.

**INGESTION:**

**Acute Exposure:** Mildly to moderately irritating to the mouth and, if swallowed, to the esophagus, stomach and intestinal tract. Swallowing may cause nausea, vomiting and diarrhea. Sensitization may occur.

**Chronic Exposure:** Sensitization may occur.

**MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:**

Asthma and other respiratory disorders (bronchitis, emphysema, hyperreactivity), eye diseases, skin allergies, eczema.

**CARCINOGENICITY:** Products are not listed by NTP, IARC or OSHA. IARC has determined that **7. Crystalline Silica (Quartz)** is carcinogenic. **NOTE: 3. Calcium Carbonate, 5. Clay, 9. Kaolin, 15. Talc** may contain small but detectable amounts of **7. Crystalline Silica (Quartz)** which if inhaled can cause cancer of the lungs. Under normal use conditions the Crystalline Silica is not free to be inhaled as dust. If the dried sealants are sanded, inhalation of the sanding dust must be avoided. **WEAR A DUST MASK WHEN SANDING THESE MATERIALS.**

**SECTION VII-EMERGENCY and****FIRST AID PROCEDURES**

**INHALATION:** Move to an area free from risk of further exposure. Administer oxygen or artificial respiration as needed. Obtain medical attention. Asthmatic type symptoms may develop immediately or be delayed up to several hours. Treatment is essentially symptomatic. Consult a physician.

**EYE CONTACT:** Flush with clean, lukewarm water (low pressure) for at least 15 minutes while lifting eyelids. Refer person to physician for immediate attention.

**SKIN CONTACT:** Remove contaminated clothing immediately. Wash affected areas thoroughly with soap (green tincture soap is recommended) and water. Wash contaminated clothing thoroughly before reuse. For severe exposure get medical attention. For lesser exposure seek medical attention if irritation develops or persists.

**INGESTION:** Give 2 cups of water to drink and immediately induce vomiting by either giving syrup of ipecac or placing a finger at the back of the throat. **DO NOT GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS OR CONVULSING PERSON!** Consult physician, hospital emergency room or poison control center immediately. Have list of ingredients available.

**SECTION VIII-EMPLOYEE PROTECTION  
RECOMMENDATIONS**

Precautions must be taken so that persons handling these products do not breathe the vapors or contact the skin or eyes with vapors or the uncured products.

**EYE PROTECTION:** Wear safety glasses.

**SKIN PROTECTION:** Wear resistant gloves such as rubber or vinyl. Cover as much of the skin as possible with appropriate

clothing. If skin creams are used, keep the area protected by the cream to a minimum.

**VENTILATION AND RESPIRATORY PROTECTION:** Due to the small amount of vapors emitted (much less than 1 percent of the total product weight) respiratory protection is not normally necessary unless proper ventilation is impossible or large amounts of the material are used or spilled. If exhaust ventilation sufficient to keep the airborne concentrations of vapors below their respective TLV's is not possible, a respirator that is approved for use in isocyanate containing areas (air purifying or fresh air supplying) may be necessary. Always wear a dust mask when sanding the products to protect against Crystalline Silica (Quartz) dust. Observe OSHA regulations (29 CFR 1910.134) for respirator use.

**OTHER PROTECTIVE MEASURES:** Eyewash stations should be available. Educate and train employees in safe use of the products. Follow all label instructions. **NOTE: Persons with asthmatic type conditions, chronic bronchitis, other chronic respiratory diseases or recurrent skin eczema or sensitization should be excluded from working with isocyanates. Once a person is diagnosed as sensitized to an isocyanate, no further exposure can be permitted.**

**SECTION IX-REACTIVITY DATA**

**STABILITY OF PRODUCTS:** Stable under normal room conditions.

**HAZARDOUS POLYMERIZATION OF PRODUCTS:** Can occur.

**CONDITIONS TO AVOID:** Excessive heat.

**INCOMPATIBILITY (Materials to Avoid):** Ammonia, amines, strong acids, strong alkalis, surface active materials (detergents) and water.

**HAZARDOUS DECOMPOSITION PRODUCTS:**

By high heat and fire: carbon dioxide, carbon monoxide, oxides of nitrogen, hydrogen cyanide, isocyanate containing compounds, hydrocarbon vapors, smoke.

**SECTION X-SPILL OR LEAK PROCEDURES**

**STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:** Put on protective equipment including respiratory protection. Prevent further spillage. Evacuate nonessential personnel. Ventilate the area. Keep spill from reaching sewers and waterways. Pour decontamination solution consisting of aqueous solution of ammonia over the spill area and allow to react for at least 10 minutes. Cover the spill with sawdust, vermiculite, Fuller's Earth or other absorbent material. Collect material and put into containers.

**WASTE DISPOSAL METHOD:** Follow all federal, state and local environmental control regulations. Incineration of the liquid material is the preferred method. Cured material may be put into regular trash.

**RCRA STATUS:** Since this product is toxic it is hazardous when discarded.

**SECTION XI-SPECIAL PRECAUTIONS &  
STORAGE DATA****STORAGE TEMPERATURE:**

**MINIMUM / MAXIMUM:** 50°F (10°C) / 120°F (49°C)

**RECOMMENDED SHELF LIFE:** Unopened Container [Stored at temperature below 95°F (35°C)]: One year.

**PRECAUTIONS TO BE TAKEN IN HANDLING, STORAGE AND USE:** Do not store in temperatures above 120°F (49°C) or in direct sunlight. Do not store above 95°F (35°C) for maximum shelf life. At maximum storage temperature, material may slowly polymerize without hazard. Do not inhale vapors. Avoid contact with skin and eyes. Wash hands after use and before eating, drinking, smoking or using the toilet. Employee education and training in the safe use and handling of this material are required under the OSHA Hazard Communication Standard (29 CFR 1910.1200).

**KEEP OUT OF THE REACH OF CHILDREN!**

**SECTION XII-FEDERAL EPA REGULATION COMPLIANCE INFORMATION-EMERGENCY PLANNING and COMMUNITY RIGHT-TO-KNOW ACT of 1986**

**1) Section 313 Supplier Notification:** Chemicals marked with an \* in the following table are subject to the Toxic Chemical Release Inventory Reporting Requirements using **EPA FORM R** (40 CFR Part 372).

**2) Section 312:** All the chemicals listed are subject to Emergency and Hazardous Chemical Inventory Forms and Community Right-to-Know Reporting Requirements: Tier I and Tier II Reports (40 CFR Part 370).

**NOTE:** This information **must** be included in all MSDSs that are copied and distributed for materials covered by this MSDS.

**HAZARDOUS INGREDIENTS IN TWO PART URETHANE REPAIR COMPOUNDS-APPROXIMATE PERCENTAGES BY WEIGHT**

Ingredients	Stock Number CAS Number	CF-30		CF-F		CF-PA		CF-PR		CF-QS	
		Resin	Hard	Resin	Hard	Resin	Hard	Resin	Hard	Resin	Hard
1. Amine Salts	Mixture	-	-	-	08	-	-	-	-	-	-
2. Amorphous Silica	112945-52-5	2-6	-	-	-	1-7	1-4	1-7	1-4	1-7	1-4
4. Carbon Black	1333-86-4	-	-	-	02	-	-	-	-	-	-
5. Clay	71011-26-2	-	1-4	-	-	-	1-5	-	1-5	-	1-5
7. Crystalline Silica (Quartz)	14808-60-7	-	0.1-2	-	-	<1	0-3	<1	0-3	<1	0-3
8. Dibutyltin Dilaurate	77-58-7	-	-	-	02	-	-	-	-	-	-
*10. Methylene Phenylene Isocyanate (MDI)	101-68-8	35	-	<1	-	35	-	35	-	35	-
11. Modified Methylene Phenylene Isocyanate	39310-05-9	12-16	-	-	-	6-12	-	6-12	-	6-12	-
13. Polyether Polyol	52624-57-4	-	-	-	88	-	-	-	-	-	-
14. Polymethyl Polyphenyl Isocyanic Acid Ester	9016-87-9	-	-	99	-	-	-	-	-	-	-
15. Talc	14807-96-6	8-12	-	-	-	7-13	21-25	7-13	21-25	7-13	21-25
Physical Hazard-Fire		NOT A HAZARD FOR THESE PRODUCTS									
Physical Hazard-Pressure Release		NOT A HAZARD FOR THESE PRODUCTS									
Health Hazard-Acute		-----100 PERCENT-----									
Health Hazard-Chronic		-----LESS THAN 3 PERCENT-----									
Physical Hazard-Reactivity		-----100%-SEE SECTION IX-----									

Ingredients	Stock Number CAS Number	CF-SA		CF-SL		CF-SS		TC-B	
		Resin	Hard	Resin	Hard	Resin	Hard	Resin	Hard
2. Amorphous Silica	112945-52-5	1-7	1-4	1-7	-	1-7	-	-	-
3. Calcium Carbonate	1317-65-3	-	-	-	-	-	-	-	>1
5. Clay	71011-26-2	-	1-5	-	-	-	-	-	-
6. Colloidal Silica	67762-90-7	-	-	-	1-5	-	1-5	-	-
7. Crystalline Silica (Quartz)	14808-60-7	<1	0-3	<1	-	<1	-	-	<1
9. Kaolin	1332-58-7	-	-	-	-	-	-	-	>1
*10. Methylene Phenylene Isocyanate (MDI)	101-68-8	35	-	35	-	35	-	40-50	-
11. Modified Methylene Phenylene Isocyanate	39310-05-9	6-12	-	6-12	-	6-12	-	-	-
12. Piperazine	110-85-0	-	-	-	-	-	1-5	-	-
15. Talc	14807-96-6	7-13	21-25	7-13	-	7-13	-	-	-
Physical Hazard-Fire		NOT A HAZARD FOR THESE PRODUCTS							
Physical Hazard-Pressure Release		NOT A HAZARD FOR THESE PRODUCTS							
Health Hazard-Acute		-----100 PERCENT-----							
Health Hazard-Chronic		-----LESS THAN 3 PERCENT-----							
Physical Hazard-Reactivity		-----100%-SEE SECTION IX-----							

**SECTION XIII-VOLATILE ORGANIC COMPOUND (V.O.C.) CONTENT**

All materials contain less than 1 % V.O.C.s

**SECTION XIV-CALIFORNIA PROPOSITION 65 WARNINGS**

According to the California Safe Drinking Water and Toxic Enforcement Act (PROPOSITION 65) "No person in the course of doing business shall knowingly and intentionally expose any individual to a chemical known to the State of California to cause cancer, birth defects or reproductive toxicity without first giving clear and reasonable warning to such individuals of such an exposure".

**THE FOLLOWING WARNING APPLIES TO CF-30, CF-PA, CF-PR, CF-QS, CF-SA, CF-SL, CF-SS and TC-B:**

**WARNING:** This product contains Crystalline Silica (Quartz), a chemical known to the State of California to cause cancer.

**SECTION XV-OZONE DEPLETION IN THE UPPER ATMOSPHERE**

None of the products on this MSDS contains upper atmosphere ozone-depleting substances.

**DISCLAIMER:** The information contained in this MSDS is believed to be accurate and reliable as of the date indicated. **Crest Industries, Inc.** assumes no legal responsibility and makes no representation, warranty or guarantee, expressed or implied, as to the completeness or accuracy of the information. It is offered solely for your consideration, investigation and verification. The user is ultimately responsible for the safe use of the material in accordance with applicable federal, state, provincial and local laws and regulations.