

**MATERIAL SAFETY DATA SHEET**  
**URETHANE WINDSHIELD PRIMERS**  
**6/23/05**

**PRODUCT COVERED:** BP-UB, BP-UG

**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>					
BP-UB	Black Urethane Primer	1,2,3,4,6	3*	3	0	Black liquid, lacquer odor	5 to 10		70 to 80	
BP-UG	Urethane Glass Primer	1,2,3,5	3*	3	0	Black liquid, lacquer odor	5 to 10		70 to 80	

\*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>	<u>Flash Point</u>		<u>Vapor Pressure (mm Hg at 20°C)</u>	<u>Evapora- tion Rate (n-Butyl Acetate=1)</u>	<u>Boiling Point</u>		<u>Flammable Limits in %</u>		<u>Autoigni- tion Pt.</u>	
			<u>°F</u>	<u>°C</u>			<u>°F</u>	<u>°C</u>	<u>Low'r</u>	<u>Upp'r</u>	<u>°F</u>	<u>°C</u>
1. Butyl Acetate	123-86-4	150 A, O	76	24	8	1	248	120	1.7	7.6	797	425
2. Carbon Black	1333-86-4	3.5 mg/m <sup>3</sup> A, O	-NA-		NA	NA	-NA-		-NA-		-NA-	
3. Ethyl Acetate	141-78-6	400 A, O	24	-4	76	4.1	169	76	2.2	11.0	774	412
4. Methylene bisphenyl isocyanate	101-68-8	0.005 A	>200	>93	<0.01	<0.01	>392	>200	-Not Established-			
5. Toluene- 2,4-diisocyanate	584-84-9	0.005 A	>200	>93	<0.01	<0.01	>392	>200	-Not Established-			
6. Tris (4-isocyanatophenyl) thiophosphate	4151-51-3	N E	>200	>93	<0.01	<0.01	>392	>200	-Not Established-			

\*A means ACGIH TLV, O means OSHA PEL. Other abbreviations: > means greater than, < means less than, NE means Not Established.

**SECTION IV-PHYSICAL DATA**

**Evaporation Rate:** See SECTION III. **Vapor Density:** Heavier than air.

**Solubility in Water (Wt%):** 4,5,6 polymerize without hazard. Also see SECTION II. **Volatile Volume %:** 75-85

**Approximate Boiling Point:** See SECTION III.

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

**SECTION V-FIRE AND EXPLOSION DATA**

**Flammability Class:** Flammable Liquid

**Flash Point (SETA Closed Cup Method):** 27°F, -3°C

**Approximate Flammable Limits:** See SECTIONS II, III.

**Autoignition Temperature:** See SECTIONS II, III.

**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:** Vapors are heavier than air and may travel along the ground or be moved by ventilation and ignited by pilot lights, other flames, sparks, heaters, electric motors, smoking or other ignition sources at locations far from material handling point. At elevated temperatures [130°F (54°C) or over] containers may vent, rupture or burst.

**SECTION VI-HEALTH HAZARD DATA**

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

**SIGNS AND SYMPTOMS OF EXPOSURE:**

**INHALATION:**

**Acute Exposure:** Vapors or mist of Urethane Primers 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. Exposure well above the TLV may result in bronchitis, bronchial spasm, fluid in the lungs. Chemical or hypersensitivity pneumonitis with flu-like symptoms (fever, chills) has also been reported. Solvent (Butyl Acetate and Ethyl Acetate) 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 (tightness). May cause central nervous system depression with the following progressive symptoms: headache, dizziness, nausea, staggering gait, confusion, unconsciousness, cessation of breathing and death.

**Chronic Exposure:** Some individuals, from repeated overexposure, will develop isocyanate sensitization (chemical asthma) which will cause them to react to a later exposure to isocyanate 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. Chronic exposure (repeated and prolonged occupational overexposure) to solvents has been associated with permanent brain and nervous system damage. Symptoms include: loss of memory, loss of intellectual ability and loss of coordination.

**NOTE: INTENTIONAL MISUSE BY DELIBERATELY CONCENTRATING AND INHALING ANY SOLVENT VAPORS MAY BE HARMFUL OR FATAL!**

**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.

Repeated or prolonged skin contact with solvents can result in dry, defatted and cracked skin causing increased susceptibility to infection. Skin irritation may develop into contact dermatitis.

**Chronic Exposure:** Prolonged contact can cause reddening, swelling, rash, scaling or blistering. In sensitized persons these symptoms may occur as a result of contact with very small amounts of liquid or even exposure to vapors. Exposure to small amounts of solvent may cause some or all of the symptoms as in acute exposure to solvents.

#### **EYE CONTACT:**

**Acute Exposure:** Liquid or vapors of this product 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. Liquid contact of the eyes may cause corneal opacification and possibly vascularization.

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

#### **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 aspiration (breathing in the material) resulting in chemical pneumonia. Gastrointestinal upset (including diarrhea) may occur.

**Chronic Exposure: Unknown.**

#### **MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:**

(See NOTES) Asthma and other respiratory disorders (bronchitis, emphysema, hyperreactivity), skin allergies, eczema. It is possible that eye, respiratory tract, liver, kidney, blood cell formation, nervous system and brain diseases may be aggravated by over-exposure to this product.

**CARCINOGENICITY:** Ingredients not listed by NTP, IARC or OSHA.

### **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 under safety shower after removing clothing, then get medical attention. For lesser exposure seek medical attention if irritation develops or persists.

**INGESTION: DO NOT INDUCE VOMITING!** Give 1 or 2 cups of milk or water to drink. **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.

#### **NOTES TO PHYSICIAN:**

**Eyes:** Stain for evidence of corneal injury. If cornea is burned, instill antibiotic/steroid preparation frequently. Work place vapors could produce vision impairing reversible corneal epithelial edema.

**Skin:** Isocyanates are known skin sensitizers. Treat symptomatically as for contact dermatitis or thermal burn.

**Ingestion:** Treat symptomatically. There is no specific antidote. Inducing vomiting is contraindicated because of the irritating nature of the materials and possibility of aspiration of liquid.

**Inhalation:** Isocyanates are known pulmonary sensitizers. Treatment is essentially symptomatic. **NOTE: A person having a dermal or pulmonary sensitization reaction to isocyanates should never again be exposed to BP-UB or BP-UG in any way.**

### **SECTION VIII-EMPLOYEE PROTECTION RECOMMENDATIONS**

Precautions must be taken so that persons handling this product do not breathe the vapors or contact the skin or eyes with vapors or liquid.

**EYE PROTECTION:** Wear safety glasses, splash goggles or face shield. Contact lenses should not be worn.

**SKIN PROTECTION:** Wear solvent resistant gloves. 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 Black Urethane Primer (BP-UB) or Urethane Glass Primer (BP-UG) normally used, respiratory protection is not normally necessary unless proper ventilation is impossible or the material is 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. Observe OSHA regulations (29 CFR 1910.134) for respirator use. **NOTE: There must ALWAYS be enough ventilation to keep vapor concentration below the lower flammable limit!**

**OTHER PROTECTIVE MEASURES:** Eyewash stations should be available. Educate and train employees in safe use of product. Follow all label instructions. Medical supervision of all employees who handle or are exposed to BP-UB and BP-UG is recommended. This should include pre-employment and periodic medical examinations with respiratory function tests (FEV, FVC as a minimum). **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:** Stable under normal room conditions.

**HAZARDOUS POLYMERIZATION:** May occur if a closed container has been contaminated with water or other materials which react with isocyanates. The container will become pressurized with CO<sub>2</sub> liberated by the reaction.

**INCOMPATIBILITY (Materials to Avoid):** Water, ammonia, amines, strong bases, alcohols, metal compounds and surface active materials (detergents).

**HAZARDOUS DECOMPOSITION PRODUCTS:** By high heat and fire: carbon dioxide, carbon monoxide, oxides of nitrogen, oxides of sulfur, oxides of phosphorus, hydrogen cyanide, isocyanate containing compounds, phosgene, 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. Remove all sources of ignition and ventilate the area. Keep spill from reaching sewers and waterways. Cover the spill with sawdust, vermiculite, Fuller's Earth or other absorbent material. Pour decontamination solution over the spill area and allow to react for at least 10 minutes. Collect material with non-sparking tools and put in an open container. Add further amounts of decontamination solution. Remove container to a safe place, cover loosely, and allow to stand for 24-48 hours or until solvents evaporate. Wash down spill area with decontamination solution.

**Decontamination Solution:** Mix 2 quarts household ammonia, 1 cup detergent, 2 quarts water.

**WASTE DISPOSAL METHOD:** Follow all federal, state and local environmental control regulations. Incineration of the liquid or dried material is the preferred method.

**RCRA STATUS:** Since this product is ignitable and toxic it is

**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 tables 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 is legally required to be included in all MSDSs that are copied and distributed for materials covered by this MSDS.

**HAZARDOUS INGREDIENTS IN URETHANE PRIMERS**

<u>Ingredients (Chemicals)</u>	<u>CAS Number</u>	<u>Weight %</u>	
		<u>BP-UB</u>	<u>BP-UG</u>
1. n-Butyl Acetate	123-86-4	05	05
2. Carbon Black	1333-86-4	20	05
3. Ethyl Acetate	141-78-6	65	74
*4. Methylene bisphenylisocyanate	101-68-8	0.3	-
5. Toluene-2,4-diisocyanate	584-84-9	-	16
6. Tris (4-isocyanatophenyl) thiophosphate	4151-51-3	9.7	-
Physical Hazard-Fire		70	79
Physical Hazard-Pressure Release		NOT A HAZARD	
Health Hazard-Acute		80	95
Health Hazard-Chronic		10	16
Physical Hazard-Reactivity		NOT A HAZARD FOR UNOPENED CAN	

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

<u>Stock Numbers</u>	<u>BP-UB</u>	<u>BP-UG</u>
<b>Weight Percent</b>	70	79
<b>Pounds per Gallon</b>	5.83	6.51
<b>Grams per Liter</b>	698	780
<b>Pounds per Can</b>	0.273	0.305

**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".

**BP-UB:** No warning

**BP-UG: WARNING:** This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

**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.

hazardous when discarded.

**SECTION XI-SPECIAL PRECAUTIONS and STORAGE DATA****STORAGE TEMPERATURE**

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

**RECOMMENDED SHELF LIFE:** Unopened Container: One year

**PRECAUTIONS TO BE TAKEN IN HANDLING, STORAGE AND USE:** Keep away from heat, sparks and open flame. 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. Store in tightly closed containers to prevent moisture contamination. Do not reseal if contamination is suspected. 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).