

MATERIAL SAFETY DATA SHEET
 PREPARED BY: Environmental, Health and Safety Department
 MSDS PREPARATION DATE: 1/3/05

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MANUFACTURER U.S. COATINGS
 ADDRESS 9291 Watson Industrial Park
 St. Louis, MO 63126
 INFORMATION 314-522-9552
 EMERGENCY 314-239-3703
 PRODUCT DESCRIPTION UREGRIP 3500 CONVERTER
 PRODUCT CODE UG3CAT3500

SECTION 2 - COMPOSITION, INFORMATION ON INGREDIENTS

1 ALIPHATIC POLYISOCYANATE
 Pct By Wt: 100.00
 ACGIH TLV-TWA 0.5 MG/M3 (AS RECOMMENDED BY MANUFACTURER)
 ACGIH TLV-STEL/C 1.0 MG/M3 (AS RECOMMENDED BY MANUFACTURER)
 OSHA PEL-TWA NE OSHA PEL-STEL NE
 OSHA PEL-CEILING NE SKIN DESIGNATION NE
 ODOR THRESHOLD NA LD50 (INGESTION) >10 G (ORAL-RAT)
 LC50 (INHALATION) 137-1150 MG/M3 RATS 4H AUTOIGNITION TEMP. 460 C / 860 F
 FLASH POINT 158 C / 316 F
 Other Limits: IARC-NO NTP-NO OSHA-NO ACGIH-NO NIOSH-NO

This product contains no chemicals listed in the NTP Annual Report on Carcinogens, the IARC Monographs, listed by ACGIH, NIOSH or regulated as a carcinogen by OSHA.

Hexamethylene Diisocyanate (CAS# 822-06-0) OSHA: NE ACGIH: .005 ppm TWA
 Monomer content is less than 0.7% based on resin solids at the time of manufacture.
 However, after 3-6 months storage, the free monomer content may rise to a maximum of 1.6%.
 IMPORTANT! This product may be blended with other products prior to use. Read all
 warnings and precautions on the MSDSs and labels of all products being blended as the
 combination may contain the hazards of each component.

SECTION 3 - HAZARDS IDENTIFICATION

POTENTIAL ACUTE HEALTH EFFECTS:

EYES: May cause moderate irritation, redness, tearing, and blurred vision. Liquid, aerosols and vapors are irritating and can cause pain, tearing, reddening, and swelling accompanied by a stinging sensation and/or a feeling that of fine dust in the eyes.

SKIN: Isocyanates react with skin protein and moisture and can cause irritation which may include the following symptoms: reddening, swelling, rash, scaling or blistering. Some persons may develop skin sensitization from skin contact. Cured material is difficult to remove. Persons with pre-existing skin disorders may be more susceptible to the effects of this material.

INHALATION: Isocyanate vapors or mist at concentrations above the TLV can irritate (burning sensation) the mucous membranes in the respiratory tract (nose, throat, lung) causing runny nose, sore throat, coughing, chest discomfort, shortness of breath and reduced lung function (breathing obstruction). Persons with a preexisting, nonspecific bronchial hyperreactivity can respond to concentrations below the TLV with similar symptoms as well as an asthma attack. Exposure well above the TLV may lead to bronchial spasm and pulmonary edema (fluid in lungs). These effects are usually reversible. Chemical or hypersensitive pneumonitis, with flu-like symptoms (e.g. fever, chills) has also been reported. Asthma, other respiratory disorders (bronchitis, emphysema, bronchial hyperreactivity), skin allergies and eczema may be aggravated by exposure to this material.

INGESTION: Can cause irritation of the digestive tract, nausea, vomiting and diarrhea. May cause burns of the mouth, throat and stomach.

POTENTIAL CHRONIC HEALTH EFFECTS: - Prolonged and repeated breathing of vapors, spray mist and/or sanding dust over a period of years may cause diseases of the lungs. - As a result of previous repeated overexposures or a single large dose, certain individuals 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, which include: chest tightness, wheezing, cough, shortness of breath or asthmatic attack could be immediate or delayed up to several hours after exposure. Similar to many non-specific asthmatic responses, there are reports that once sensitized an individual can experience these symptoms upon exposure to dust, cold air, or other irritants. This increased lung sensitivity can persist for weeks and in severe cases for several years. Chronic overexposure to isocyanates has also been reported to cause lung damage, including decrease in lung function, which may be permanent. Sensitization may be either temporary or permanent. - Prolonged contact with isocyanates can cause reddening, swelling, rash, scaling, blistering, and in some cases, skin sensitization. Individuals who have skin sensitization can develop these symptoms from contact with liquid or vapors. - Chronic eye contact may result in corneal opacity (clouding of the eye surface).

SECTION 4 - FIRST AID MEASURES

PRIMARY ROUTE(S) OF ENTRY (X) SKIN (X) BREATHING (X) SWALLOWING

IF IN EYES: Flush eyes with water for at least 15 minutes while holding eyelids apart; Seek medical attention.

IF ON SKIN: Remove contaminated clothing and flush contaminated skin with large amounts of water. If skin is damaged or if symptoms persist seek medical attention. Launder clothing before reuse.

IF INHALED: If symptoms develop, immediately move individual away from exposure and into fresh air. Seek immediate medical attention; Keep person warm and quiet. If individual is not breathing, begin artificial respiration. If breathing is difficult, administer oxygen. Asthmatic-type symptoms may develop and may be immediate or delayed up to several hours. Treatment is essentially symptomatic.

IF SWALLOWED: DO NOT induce vomiting unless directed to do so by medical personnel. Aspiration of material into lungs can cause chemical pneumonitis which may be fatal. If individual is drowsy or unconscious, place on their side with head down. Seek medical attention. If possible, do not leave individual unattended. NOTE TO PHYSICIAN: Eyes: Stain for evidence of corneal injury. If cornea is burned, instill antibiotic/steroid preparation frequently. Workplace vapors could produce reversible corneal epithelial edema impairing vision. Skin: This product is a known skin sensitizer. Treat symptomatically as for contact dermatitis or thermal burns. Ingestion: Treat symptomatically. There is no antidote. Inducing vomiting is contraindicated because of the irritating nature of the product. Inhalation: This product is a known pulmonary sensitizer. Treatment is essentially symptomatic. An individual having a dermal or pulmonary sensitization reaction to this material must be removed from further exposure to any isocyanate.

SECTION 5 - FIRE FIGHTING MEASURES

FIRE AND EXPLOSIVE PROPERTIES OF THE CHEMICAL: (Unless otherwise noted, data are derived from ingredients existing in this formula at concentrations of 1% by weight or greater, i.e., the flashpoint given is the lowest flashpoint of the ingredients listed in section 2.)

Flashpoint 316.0 F (157.7 C)

Explosion Level Low - -N/A

High - -N/A

Flammability Limits Lower - -N/A

Higher - -N/A

Auto-ignition Temperature -N/A or

EXTINGUISHING MEDIA: Use carbon dioxide or dry chemical for small fires; alcohol-type aqueous film-forming foam or water spray for large fires. Water may be ineffective but should be used to cool fire-exposed structures and vessels.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Keep away from heat, sparks, and flame. Do not smoke. Extinguish all pilot lights and turn off all sources of ignition, including heaters, fans and other non-explosion proof electrical equipment, during use and until all vapors are gone. Vapors may ignite explosively. Vapors may spread long distances and beyond closed doors. Prevent build up of vapors by maintaining a continuous flow of fresh air.

FIRE-FIGHTING PROCEDURES AND EQUIPMENT: Self-contained breathing apparatus with full facepiece operated in pressure-demand or other positive pressure mode. In case of fire, use dry chemical, foam, CO2 or other approved method for treating a Class B fire. Summon professional firefighters. During a fire, toxic gases and smoke are irritants present from decomposition/combustion. Closed container may explode when exposed to extreme heat. Personnel who are fighting isocyanate fires should wear self-contained breathing apparatus and full protective clothing. During a fire, isocyanate vapors and other irritating, highly toxic gases may be generated by thermal decomposition or combustion. Closed container may explode when exposed to extreme heat or burst when contaminated with water (CO2 evolved).

SECTION 6 - ACCIDENTAL RELEASE MEASURES

CLEAN-UP:

SMALL SPILL: Absorb liquid on inert material such as paper, vermiculite, floor absorbent, and transfer to hood.

LARGE SPILL: Eliminate all ignition sources (flares, flames including pilot lights, electrical sparks). Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. Stop spill at source, contain area of spill to prevent spreading, pump liquid to salvage tank. Remaining liquid may be absorbed with inert material such as sand, clay, earth, or floor absorbent, and shoveled into containers, with non-sparking tools. Prevent run-off to sewers, streams, or other bodies of water. If run-off occurs, notify the proper authorities as required that a spill has occurred.

SECTION 7 - HANDLING AND STORAGE

HANDLING: SENSITIVITY TO STATIC DISCHARGE - Grounding/Bonding required

STORAGE: Keep container tight and upright to prevent leakage. Keep container closed when not in use. Do not store above 49 C/120 F. Do not transfer contents to bottles or unlabeled containers. Protect from freezing. Containers of this material may be hazardous when emptied because they retain product residues (vapor, liquid, and/or solid). When empty, may contain explosive vapors. Do not cut, puncture or weld on or near this container. All hazard precautions given in this data sheet must be observed for empty containers. Closed container may burst when contaminated with water (through evolution of CO2).

SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION

RESPIRATORY PROTECTION/VENTILATION: Use only with adequate ventilation. Maintain continuous flow of fresh air. Do not breath vapors, spray mists, or sanding dusts. Contains isocyanates which require the use of positive pressure supplied-air respirators in most cases. Use air purifying respirators fitted with organic vapor/HEPA cartridges only if air monitoring of the work area demonstrates isocyanate levels are below applicable limits AND solvent and particulate levels do not exceed the respirator Maximum Use Concentration. Use only properly fitted NIOSH approved respirators. Follow respirator manufacturer's directions for use. Engineering or administrative controls should be implemented to reduce exposure. Paint spray booths, local exhaust, and general exhaust systems are advisable to minimize exposure.

PERSONAL PROTECTIVE EQUIPMENT: Use protective equipment to prevent contact with eyes, skin, or clothing. Use solvent resistant safety eyewear with splash guards. Protective garments such as nylon or Tyvek(R) coveralls typically used to protect from light overspray, splatters, etc. Saranex 23-P(R) coveralls recommended for messy applications. Nitrile or natural rubber gloves typically used to protect from minor contact. For prolonged contact, neoprene gloves are better and butyl are best.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical Appearance	: -N/A
Odor	: -N/A
Physical State	: -N/A
pH	: -N/A
Vapor Density	: -N/A
Boiling Range	: Lower - -N/A Higher - -N/A
Freezing Point	: -N/A °F
Melting Point	: -N/A °F
Water Solubility	: -N/A
Specific Gravity	: 1.159
Formula Weight per Volume	: 9.6499 LB/GL
VOC	: .000 lbs./gal. or 0 g/l
Evaporation Rate	: .000 (n-Butyl Acetate = 1)
Viscosity	: -N/A
% Volatile by Weight	: .0000
% Volatile by Volume	: .0000
Coeff of Water-Oil Distribution	: -N/A

SECTION 10 - STABILITY AND REACTIVITY

CONDITIONS TO AVOID AND INCOMPATIBILITIES: Alcohols, Amines, Strong bases, Metal compounds and surface active materials, Water (including high humidity, moisture and steam).

HAZARDOUS DECOMPOSITION PRODUCTS (Including Thermal Decomposition): Carbon dioxide and carbon monoxide, HCN, HDI, Nitrogen oxides.

POLYMERIZATION: - Contact with moisture, or other materials which react with isocyanates or temperatures above 400 F (204 C), may cause polymerization. - May occur at high temperatures.

STABILITY: - Stable under ordinary conditions of use and storage.

SECTION 11 - TOXICOLOGICAL INFORMATION

No additional toxicological data available. Please refer to Sections 2 & 3.

SECTION 12 - ECOLOGICAL INFORMATION

No ecological data available for this product.

SECTION 13 - DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: Dispose of contaminated absorbent, container and unused contents in accordance with local, state and federal regulations. Do not incinerate closed containers.

SECTION 14 - TRANSPORT INFORMATION

Not Regulated by DOT

SECTION 15 - REGULATORY INFORMATION

FEDERAL REGULATIONS:

SARA 313 INFORMATION This product contains NONE of the substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

SECTION 16 - OTHER INFORMATION

FOR INDUSTRIAL USE ONLY: This product is for use by professional, trained personnel using proper equipment, and is not intended for sale to, or use by, the general public.

WARRANTY: Any recommendation of U.S. Coatings contained herein covering use, utilization, chemical or physical properties and other qualities of the products sold is believed reliable; however, U.S. Coatings makes no warranty or representation with respect thereto. Use or application of any U.S. Coatings product is at the discretion of the Buyer without liability or obligation whatsoever of U.S. Coatings.

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