PRODUCT NAME: ELASTUFF 210 PART A
PRODUCT CODE: EL-210-A

~~~~ SECTION 1 ~~~~ MANUFACTURER IDENTIFICATION ~~~~

Manufacturer's Name : UNITED COATINGS MANUFACTURING CO
Address : 2810 SOUTH 18TH PLACE
: PHOENIX, ARIZONA 85034
: INITIAL(FIRST CALL)CHEMTREC(800)424-9300
INFORMATION PHONE : (480) 754-8900
TOLL FREE : BACKUP(800)541-4383
DATE PRINTED : 1/7/2005
DATE REVISED : January 2005

~~~~ SECTION 2 ~~~~ HAZARDOUS INGREDIENTS/SARA III INFORMATION ~~~~

Reportable Components	CAS Number	MM HG @ Temp	Weight %
Homopolymer of Hexamethylene Diisocyanate	28182-81-2		79

No OEL's have been established for this chemical
~
Homopolymer of Hexamethylene Diisocyanate 28182-81-2 0.000075 68F/20C 21
No OEL's have been established for this chemical.
~

* Indicates toxic chemical(s) subject to the reporting requirements of section 313 of Title III and of 40 CFR 372.
# Indicates carcinogenic chemical.
NOTE: If tinted may contain Carbon Black CAS#1333-86-4 AND/OR Crystalline Silica CAS#14808-60-7. If tinted DARK GRAY or BLACK consider these levels to be reportable.

This MSDS may be used for other container sizes of this product. When parts A & B are combined, the hazard warnings for both components are present.

~~~~ SECTION 3 ~~~~ HAZARDS IDENTIFICATION ~~~~

Potential Health Effects
Eyes:
Eye exposure, will cause intense burning of the eyes, photophobia, blepharospasm, profuse lacrimation, lid edema, and superficial corneal ulceration with a resulting reversible blindness. Contact with isocyanates may result in conjunctival irritation and mild corneal opacity. Isocyanate is reported to induce chemical burns in rabbit eye studies. A similar degree of eye injury may develop after contact with human eyes.

Skin:
Skin absorption is believed to generally be too slow to produce signs of acute systemic poisoning. However, animal studies

have shown that respiratory sensitization can be induced by skin contact with known respiratory sensitizers, including isocyanates. Isocyanates are a primary skin irritant--they react with skin protein and moisture and can cause irritation. Symptoms can include: redness, swelling, rash, scaling or blistering. Isocyanates are also strong skin sensitizers. Experience indicates that direct skin contact is the route of exposure most likely to cause skin sensitization. Once sensitized, an individual may react even to airborne levels below the TLV with the following symptoms; itching and tingling of the earlobes and neck, rash, hives, swelling of the arms and legs or other symptoms common to allergic dermititus. These symptoms may be immediate or delayed several hours. Prolonged contact can cause reddening, swelling, rash, scaling or blistering. In those who have developed a skin sensitization, these symptoms can develop as a result of contact with very small amounts of liquid material or even as a result of vapor-only exposure.

Ingestion:
Swallowing may result in local irritation. Vomiting may also result. Do not allow vomit to be breathed into the lungs, as chemical pneumonitis and pulmonary edema/hemorrhage is possible. The isocyanate in this product is classified as "practically non-toxic" by ingestion. In humans, irritation or chemical burns and corrosive action in the mouth, pharynx, esophagus, stomach & digestive tract can develop following ingestion. Symptoms can include sore throat, abdominal pain, nausea, vomiting and diarrhea. Injury may be severe and cause death.

Inhalation:
Repeated or prolonged exposure to vapors or mists are irritating to the respiratory tract. Inhalation of vapors and mists of isocyante at concentrations above recommended exposure limits can irritate the mucous membranes in the respiratory tract (nose, throat, lungs) causing runny nose,sore throat, coughing, chest discomfort, shortness of breath and reduced lung function. Persons with a preexisting,nonspecific bronchial hyperreactivity can respond to concentrations below the intended recommended exposure level with similar symptoms as well as an asthma attack. Exposure to higher levels may lead to bronchitis, bronchial spasm and pulmonary edema (fluid in the lungs). These effects are usually reversible.Chemical or hypersensitive pneumonitis,with flu-like symptoms (e.g., fever, chills) has also been reported.

~~~~ SECTION 4 ~~~~ FIRST AID MEASURES ~~~~

Eyes:
For eye exposure, irrigate the exposed eyes with copious amounts of tepid water for at least 15 minutes. If the victim is wearing contact lenses, they should be removed, provided such removal does not cause further damage to the eyes.

Skin:

Remove product and immediately flush affected area with water for at least 15 minutes. Cover the affected area with a sterile dressing or clean sheeting and consult a physician immediately, except for the most minor, superficial and localized burns. Do not apply greases or ointments. Control shock if present. Discard or launder contaminated clothing before reuse. Contaminated leatherwear should be discarded.

Ingestion:
Do not induce vomiting. Give 1 to 2 cups milk or water. If vomiting occurs, keep victim's head below the hips to prevent breathing vomit into the lungs. Consult a physician immediately.

Inhalation:
Move to fresh air; administer oxygen by a qualified individual or artificial respiration as needed. Consult a physician immediately. Asthmatic-type symptoms may develop and may be immediate or delayed several hours. Treatment is essentially symptomatic.

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 compound is a potent skin sensitizer. 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 compound.
Inhalation- treatment is essentially symptomatic. An individual having a dermal or pulmonary sensitization reaction to this material should be removed from any exposure to Issocyanate. Throughout a symptomatic victim's treatment course, monitor the ECG, chest x-ray, pulse oximetry, peak airflows, arterial blood gases, serum electrolytes, and renal and hepatic function

~~~~ SECTION 5 ~~~~ FIRE FIGHTING MEASURES ~~~~

Flammable Properties
Flash Point: N/A
Lower Flammable Limits: N/A
Upper Flammable Limit: N/A
Auto Ignition Temperature:
Not available
Extinguishing Media:
Carbon dioxide, dry chemical, foam or water fog.
Special Fire Fighting Procedures:
Isolate fire area and deny unnecessary entry. Move container from fire area if this is possible without hazard. Stay upwind. Keep

out of low areas where gases (fumes) can accumulate.
Personnel engaged in fighting Issocyanate fires must be protected against nitrogen dioxide fumes as well as Issocyanate vapors.
Firefighters must wear self-contained breathing apparatus and turnout gear.

~~~~ SECTION 6 ~~~~ ACCIDENTAL RELEASE MEASURES ~~~~

Small Spill:
Clean up personnel must be equipped with self contained breathing apparatus and butyl rubber protective clothing. Evacuate area of all non-essential personnel. Extinguish all nearby sources of ignition and ventilate area using explosion proof mechanical exhaust ventilation as vapors are heavier than air and are combustible or flammable and may migrate to a source of ignition.

Clear the area of unnecessary personnel. Insure a trained response team is in emergency protective equipment. Prevent further spillage and contain the spill using dikes made of sand, earth or spill pillows. Cover the spill area with a non-combustable absorbant material (e.g., absorbant clay, earth, sand) to absorb as much liquid as possible. Shovel the absorbant into open top containers. Do not fill to the top or cover the containers. Prepare a decontaminating solution as follows:
Option 1: consists of a solution 90% water, 8% concentrated ammonia solution and 2% liquid detergent.
Option 2: consists of a solution 90-95% water, 5-10% sodium carbonate and 0.2-0.5% liquid detergent.

Pour the liquid decontaminant liberally over the remaining spill area and spread with a broom or squeegee to insure contact. Let stand 10-15 minutes @25c(77f), longer at lower temperatures. Then wash down the area with plenty of water. In a well ventilated area, add enough liquid decontaminent solution to the containers with the absorbed spill material to obtain an approximate 10:1 ratio of decontaminate solution to spill material. Mix the liquid-absorbant slurry and let stand for 12-24 hours. Stir periodically, or the liquid-absorbant slurry may solidify. Leave the lids on loosely. After decontamination solution has been in contact with the spilled material for 24-48 hours, and the evolved carbon dioxide has vented away, tighten down the lids and dispose of the mixture in accordance with local, state and federal regulations. Test the area for residual isocyanate vapors before allowing workers to re-enter the area. When safe working conditions have been re-established, remove and decontaminate all equipment used.

Large Spill:
Clear the area of all non-essential personnel. Stay up-wind to avoid breathing vapor. If inside a building, or near HVAC equipment, shut down the HVAC system and ventilate the area as vapors are harmful and flammable or combustible and may migrate to a source of ignition.(if mechanical ventilation equipment is to be used to

ventilate the area, use only explosion proof equipment). Prevent access to area.

If transportation spill involved call Chemtrec, (800) 424-9300.if temporary control of isocyanate vapor is required, a blanket of protein foam (available at most fire departments) may be placed over the spill. Large quantities may be pumped into closed but not sealed containers for disposal. Dike spill to prevent entry into sewers, storm drains, surface waters or soil.

Notify the appropriate state, local and federal authorities as well as the material supplier. Insure a trained response team is in appropriate emergency equipment. Prevent further spillage. Contain the spill using sand bags; spill pillows, dirt dikes, etc. It is important that this material not be allowed to enter drains. The reaction with water can be violent and forms an insoluble material, which may cause blockage. If this material does enter drains, flush with ample quantities of water and notify the sewer authority immediately.

For further information see Small Spill.

Solidified spillage:

Where spills have solidified, sandblasting is the preferred removal method, particularly for road spills. Wear special protective clothing for sandblasting, along with self-contained breathing equipment. Contaminated sand must be collected for decontamination and disposal.

~~~~ SECTION 7 ~~~~ HANDLING AND STORAGE ~~~~

Handling & Storage:
Handling: Vapors can be evolved when material is heated during processing operations. See SECTION 8, Exposure Controls/Personal Protection, for types of ventilation required. Wash after handling and shower at end of work period. Avoid eye contact.Avoid skin contact.Do not breathe vapor. Material is hydroscopic and may absorb atmospheric moisture. Use dry nitrogen to purge opened, partially filled containers before resealing.
~
Storage conditions: Store in a cool, dry and well ventilated place. Isolate from incompatible materials. Store in a tightly closed container.
Avoid contact with water, or moist air.

Other Precautions:
Closed containers may explode due to pressure build-up if exposed to extreme heat. Do not get in eyes, on skin or on clothing. Avoid prolonged or repeated breathing of vapor or spray mist. Keep container tightly closed when not in use. Empty containers, especially drums, should be completely drained, properly bunged and

promptly returned to a drum reconditioner, or properly disposed of. Use only in a well ventilated area. Keep out of the reach of children.

~~~~ SECTION 8 ~~~~ EXPOSURE CONTROLS/PERSONAL PROTECTION ~~~~

Engineering Controls:
In outside spray, mixing and rolling applications situate workers upwind of operation & provide airflow in a downwind direction so as to carry fumes and residual spray away from workers.

Hazard control from vapor or spray mist is ideally performed by the use of engineering controls. Effective engineering controls should be used whenever possible to eliminate and/or reduce worker exposure to all respiratory hazards. General ventilation, local ventilation, or isolation may prove adequate to keep airborne concentraions of diisocyanate below the expsure limit. Exhaust air may need to be cleaned by scrubbers or filters to reduce environmental concentrations.

Respiratory Protection:
The hazards of both part A and part B will be exhibited when combined.
Good industrial hygiene practice dictates that when Isocyanate-based coatings are mixed/sprayed and applied, some Type of respiratory protection should be worn.
A properly fitted air-purifying (combination organic vapor and particulate) respirator, proven by test to be effective in isocyanate containing spray/vapors during coating operations, and used in accordance with the recommendations of the manufacturer, can be used when the following conditions are met:
-concentration of vapors is unknown.
-or concentrations exceed those in section II.
-or the airborne Isocyanate (polymeric, oligomeric) concentration exceeds 5MG/M3 Averaged Over 8 Hours) OR 10 MG/M3 AVG OVER 15 Minutes
-or operations are being performed in combined space.
-and a NIOSH certified end of service life indicator or a change schedule based upon objective information or data is used to ensure that cartridges are replaced before the end of their service life. In addition, pre-filters should be changed whenever breathing resistance increases due to particulate buildup.
if a NIOSH certified end of service life indicator or a change schedule based upon objective information or data cannot be met, then a supplied air respirator must be used.

Monitoring: Refer To Patty's Industrial Hygiene And Toxicology-Volume 1(3rd Edition) Chapter 17 Volume III (First Edition) Chapter 3, for guidance concerning appropriate air sampling strategy to determine airborne concentrations of Isocyanate.

Medical surveillance: Supervision of all employees who handle or come in contact with this product is recommended. This should include pre-

employment and periodical medical examinations with respiratory function test (fev, fvc as a minimum). Persons with asthma-type conditions, chronic bronchitis, other chronic respiratory diseases or recurrent skin eczema or sensitization should be excluded from working with Isocyanate. Once a person is diagnosed as sensitized to Isocyanate, no further exposure can be permitted

Additional protective measures safety showers and eyewash stations should be readily available to work area. Educate and train employees in safe use of product. Follow all label instructions.

Skin Protection:
Hand protection: Chemical-resistant gloves should be worn whenever this material is handled. The glove(s) listed below may provide protection against permeation. (Gloves of other chemically resistant materials may not provide adequate protection): nitrile rubber Gloves should be removed and replaced immediately if there is any indication of degradation or chemical breakthrough. Rinse and remove gloves immediately after use. Wash hands with soap and water.

Skin and body protection: Use chemically resistant apron or other impervious clothing to avoid prolonged or repeated skin contact.

Eye Protection:
Chemical goggles. If splashing may occur or during spray operations wear a face shield, unless a full-face piece respirator is used. Do not wear contact lenses as they may contribute to the severity of injury to the eye from contact with liquid and spray mist.

~~~~ SECTION 9 ~~~~ PHYSICAL AND CHEMICAL PROPERTIES ~~~~

Boiling Range: 382F/194.4C
Specific Gravity(H2O=1): 1.117
Vapor Density(Air=1): Not determined.
Evaporation Rate(N-Butyl Acetate=1) : Unknown
Coating V.O.C.: 0.0 lb/gl Coating V.O.C.: 0 g/l
Material V.O.C.: 0.0 lb/gl Material V.O.C.: 0 g/l
Solubility in Water: Reacts slowly with water. Forms carbon dioxide gas.

Appearance: Light yellow liquidOdor: Mild odor.

~~~~ SECTION 10 ~~~~ STABILITY & REACTIVITY DATA ~~~~

Stability:
This product is stable under normal storage conditions
Conditions To Avoid:
Moisture will lead to product performance degradation. If

contaminated with water or other incompatible materials, container may become pressurized.

Incompatible Materials:
Water, amines, strong bases, alcohols, metal compounds and surface active materials.

Hazardous Decomposition Products
Thermal decomposition may yield carbon monoxide and carbon dioxide. Unidentified organic compounds in fumes and smoke may be formed during combustion.
When parts A and B are combined: isocyanate vapor & mist may be released as well.

Hazardous Polymerization:
May occur. Contact with moisture or other materials, which react with isocyanates, may cause polymerization.

~~~~ SECTION 11 ~~~~ TOXICOLOGICAL INFORMATION ~~~~

*Data is for individual components of preparation.
Materials having a known chronic/accute effects on eyes:
Severe irritant capable of inducing cornel injury (rabbit); maximun primary eye irritation score: 54.6/110 for a 24-hour exposure.

Materials having a known dermal toxicity.
Moderate to severe irritation. Practically non-toxic.
Isocyanates are potent skin sensitzers.

Materials having a known oral toxicity.ORAL LD50-RAT: >5000 MG/KG.
Materials having a known Inhalation hazard:
LC50: Lower respiratory (pulmonary) irritant. LC50 values range from 137-1150mg/m3 were obtained in rats exposed to aerosols. (4H exp.)

Identified Carcinogens/Longterm Effects:
As a result of previous repeated over exposures 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 PEL/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 a decrease in lung function, which may be permanent. Sensitization may be either temporary or permanent. Prolonged contact can cause reddening, swelling, rash, scaling, or blistering. In those who have developed a skin sensitization, these symptoms can develop as a

result of contact with very small amounts of liquid material, or even as a result of vapor-only exposure.

Identified Teratogens:
NO DATA
Identified Reproductive toxins :
NO DATA.
Identified Mutagens:
NO DATA.

~~~~ SECTION 12 ~~~~ ECOLOGICAL INFORMATION ~~~~

Ecotoxicological effects on plants and animals:
LC0:> 100mg/l (Zebra fish, 96hrs)
EC0:> 100mg/l (Water flea, 48hrs)
EC50:> 1,000mg/l (Green Algae, 72hrs)
EC50:> 1,000mg/l (Activated sludge microorganisms, 3hrs)

Chemical Fate :
This product is not expected to be biodegradable. Avoid spillage into the environment.

~~~~ SECTION 13 ~~~~ DISPOSAL CONSIDERATIONS ~~~~

Instructions:
If transportation spill involved call CHEMTREC, (800) 424-9300.
If temporary control of isocyanate vapor is required, a blanket of protein foam (available at most fire departments) may be placed over the spill. Large quantities may be pumped into closed but not sealed containers for disposal. Dike spill to prevent entry into sewers, storm drains, surface waters or soil.

Minor spill: Absorb the isocyanate with sawdust or other absorbent and shovel into open top containers. Do not make pressure tight. Transport to a well-ventilated area (outside) and treat with neutralizing solution consisting of a mixture of water and 3-8% concentrated ammonium hydroxide or 5-lO% sodium carbonate. Add about 10 parts of neutralizer per part of isocyanate with mixing. Allow to stand for 48 hours letting evolved carbon dioxide to escape.

CLEANUP: Decontaminate floor using water/ammonia solution with l-2% added detergent letting stand over affected area for at least 10 minutes. Cover mops and brooms used for this with plastic and dispose properly (often by incineration).

~~~~ SECTION 14 ~~~~ TRANSPORT INFORMATION ~~~~

Shipping Information:
DOT INFORMATION: 49 CFR 172.101
DOT DESCRIPTION: NON HAZARDOUS

~~~~ SECTION 15 ~~~~ REGULATORY INFORMATION ~~~~

(Not meant to be all inclusive-selected regulations represented)
US Regulations:
Status Of Substances Lists:
The Concentrations Shown In Section II Are Maximum Ceiling Levels (Weight %) to be used for calculations for regulations.
A reportable quantity is a quantity of a hazardous substance that triggers reporting requirements under the Comprehensive Environmental Response Compensation And Liability Act (CERCLA).
If a spill of a substance exceeds it's reportable quantity (RQ) in CFR 302.3,Table 40 302.4 Appendix A & 302.4 Appendix B, the release must be reported to The National Response Center At (800) 424-8802, The State Emergency Response Commission (SERC), And community emergency coordinators likely to be affected.
Components present that could require reporting under the statute are:
NONE KNOWN
Superfund Amendments And Reauthorization Act Of 1986 (SARA) Title III Requires emergency planning based on the Threshold Quantities(TPQ'S)and release reporting based on Reportable Quantities (RQ'S) In 40 CFR 355 Appendix A&B Extremely Hazardous Substances. The emergency planning and release requirements of 40 CFR 355 apply to any facility at which there is present any amount of any extremely hazardous substance(EHS) equal to or in excess of it's Threshold Planning Quantity(TPQ).
Components present that could require reporting under the statute are:
NONE KNOWN
EPCRA 40 CFR 372(Section 313) Requires EPA and the States to anually collect data on releases of certain toxic materials from industrial facilities, and make the data available to the public in the Toxics Release Inventory(TRI). This information must be included in all MSDS'S that are copied and distributed or compiled for this material.
Reporting Threshold: Standard: A facility must report if it manufactures (including imports) or processes 25,000 pounds or more or otherwise uses 10,000 pounds or more of a listed toxic chemical during the calendar year.
Components present that could require reporting under the statute are:
See Section II
The components of this product are listed or excluded from listing on the US Toxic Substance Control Act (TSCA) chemical substance inventory.
Mixtures shall be assumed to present the same health hazards as do the Components Which Comprise One Percent(By Weight Or Volume) or greater of the Mixture,except that the mixture shall be assumed to present carcinogenic hazard if it has a component in concentrations of 0.1 percent greater.For a list of hazardous ingredients:
See Section II
the remaining percentage of unspecified ingredients, if any, are not contained in above DeMinimis concentrations and/or are believed to be non-hazardous under the OSHA Hazard Communication Standard (29 CFR 1910.1200), and may consist of pigments, fillers, defoamers, wetting agents, resins, dryers,anti-bacterial agents, water and/or solvents in varying concentrations.
International Regulations:

Canadian WHMIS:
Subdivision B of Division 2 of Class D, Poisonous and infectious material.

Canadian Environmental Protection Act (CEPA):
NONE KNOWN
EINECS:
All of the components of this product are listed in the
EINECS inventory or are exempt from notification requirements.

State Regulations:
California:
California Proposition 65: The following Statement is made in order
to comply with The California Safe Drinking Water and Toxic
Enforcement Act of 1986
"WARNING:This product contains the chemical(s) appearing below known to the State of California to:
A: Cause Cancer
NONE KNOWN
*If tinted contains Carbon Black:CAS#1333-86-4 and may also contain trace amounts of Crystalline Silica:CAS#14808-60-7
B: Cause Birth Defects or other Reproductive Harm :
NONE KNOWN
In addition to the above named chemical(s)(if any),this product may contain trace amounts of chemicals, known to the State of California, to cause Cancer or Birth Defects and other Reproductive Harm
Delaware:
NONE KNOWN
Florida:
NONE KNOWN
Massachusetts:
NONE KNOWN
Michigan:
NONE KNOWN
Minnesota:
NONE KNOWN
New Jersey:
NONE KNOWN
New York:
NONE KNOWN
Pennsylvania:
NONE KNOWN
Washington:
NONE KNOWN

~~~~ SECTION 16 ~~~~ OTHER INFORMATION ~~~~

HMIS® III

Health	**:2***
Flammability	**:1**
Physical Hazard	**:1**

*Following Health rating Indicates Chronic or Carcinogenic Effects
HMIS® III Personal Protection :H

This rating is for the product as it is packaged. This rating will need to be adjusted by the user based on conditions of use.

The information contained herein is furnished without warranty of any kind. Users should consider these data only as a supplement to other information gathered by them & determine the suitability & completeness of information from all sources to assure proper use & disposal of these materials & the safety & health of employees & customers

The information contained herein relates only to the specific material identified. United Coatings believes that such information is accurate and reliable as of the date of this material safety data sheet, but no representation, guarantee or warranty, expressed or implied, is made as to the accuracy, reliability, or completeness of the information. To assure proper use & disposal of these materials & the safety & health of employees & customers,United Coatings urges persons receiving this information to make their own determination as to the information's suitability and completeness for their particular application.