



Material Safety Data Sheet

Date of Preparation: October 4, 2005

Section 1 - Product Information

Product Name: ULTIMATE 2K URETHANE CATALYST

Product Code: 5555, 5556, 5557

Emergency Phone: Chemtrec 800-424-9300

Company: Bondo Corporation
3700 Atlanta Industrial Parkway NW
Atlanta, GA 30331

Revision Number: 5

Intended Use: Catalyst

Emergency Overview

Signs of Overexposure: Intestinal upset (nausea, vomiting, diarrhea), Irritation of nose, throat, and airways, central nervous system effects (dizziness, drowsiness, weakness, fatigue, headache, unconsciousness), Additional effects may include nausea, vomiting, loss of voice, chest pain, shortness of breath, wheezing, low blood pressure, head ache and lung congestion., Asthma

Emergency First Aid: Flush eyes with plenty of water. Avoid rubbing eyes. If irritation develops, seek medical attention. Seek medical attention. If individual is drowsy or unconscious, do not give anything by mouth; place individual on the left side with head down. Contact physician for advise about whether to induce vomiting. Remove to fresh air. If breathing is difficult, have a trained individual administer oxygen. Get medical attention immediately Wash with soap and water. If symptoms persist, get medical attention.

Handling: Avoid contacting and avoid breathing the material. Use only in a well ventilated area.

Material Physical Appearance: Colorless to pale yellow Liquid

Fire Fighting: Use alcohol resistant foam, carbon dioxide, or dry chemical extinguishing agents. Water may be ineffective but water spray can be used extinguish a fire if swept across the base of the flames. Water can absorb heat and keep exposed material from being damaged by fire.

Your local fire department may require that you display the NFPA 704 diamond symbol on the front and/or rear entrance to your building.

NFPA 704: Health: 2, Fire: 3, Reactivity: 1

Bondo Corporation has no oversight with respect to the guidance practices or policies or manufacturing processes of other companies handling or using this material. The information given in this MSDS is only related to the product as shipped in its original condition. The information contained in this safety data sheet

does not constitute the user's own assessment of workplace risks as required by regulations.

Section 2 - Hazardous Ingredients

Chemical Name	%	CAS#	OSHA Exposure Limits
n-Butyl acetate	40.0 - 50.0	123-86-4	150 ppm TWA; 710 mg/m ³ TWA
hexamethylene diisocyanate homopolymer	40.0 - 50.0	28182-81-2	No PEL established
Methoxypropanol acetate	10.0 - 20.0	108-65-6	No PEL established
Toluene	1.0 - 5.0	108-88-3	200 ppm TWA; C 300 ppm C 300 ppm

Section 3 – Hazards Identification

Routes of Entry: Inhalation, Ingestion, Skin contact, Eye contact, Skin contact, Eye contact, Absorption

Target Organs Potentially Affected by Exposure: Skin, Respiratory Tract, Nervous System, Eyes, Liver, Kidneys

Chemical Interactions That Change Toxicity: None Known

Medical Conditions Aggravated by Exposure: Skin disease including eczema and sensitization, Respiratory disease including asthma and bronchitis, Eye disease, Kidney disease, Liver disease

Immediate (Acute) Health Effects by Route of Exposure

Inhalation Irritation: Can cause moderate respiratory irritation, dizziness, weakness, fatigue, nausea and headache. Causes respiratory tract irritation Sensitizer! Avoid exposure. If sensitized, exposure below the published exposure limits (e.g. TLV or PEL) can result in respiratory irritation, shortness of breath and difficulty breathing. These asthma-type symptoms may develop immediately or be delayed up to several hours.

Inhalation Toxicity: Highly toxic! Can cause systemic damage (see "Target Organs"). Respiratory failure is possible at high doses.

Skin Contact: Causes skin irritation. Allergic reactions are possible. Contact causes severe skin irritation and possible burns.

Skin Absorption: Harmful if absorbed through the skin. May cause severe irritation and systemic damage. Component(s) may be absorbed through intact skin, but it is unlikely that harmful effects will occur unless contact is prolonged, repeated, and extensive.

Eye contact: Contact with the eyes may cause moderate to severe eye injury. Eye contact may result in tearing and reddening, but not likely to permanently injure eye tissue. Temporary vision impairment (cloudy or blurred vision) is possible. Mildly irritating but will not injure eye tissue.

Ingestion Irritation: Severely irritating to mouth, throat, and stomach. Can cause abdominal discomfort, nausea, vomiting and diarrhea. Small amounts (a tablespoonful) swallowed during normal handling operations are not likely to cause injury; swallowing

amounts larger than that may cause injury. Aspiration of material into the lungs can cause chemical pneumonitis which can be fatal.

Ingestion Toxicity: slightly toxic

Long-Term (Chronic) Health Effects

Carcinogenicity: No data.

Reproductive and Developmental Toxicity: Contains a substance(s) that is a possible reproductive system hazard based on high dose tests with laboratory animals. Contains a substance that is a possible reproductive system hazard based on animal studies at doses that could be encountered in the workplace.

Mutagenicity: No data available to indicate product or any components present at greater than 0.1% is mutagenic or genotoxic.

Inhalation: Upon prolonged and/or repeated exposure, can cause moderate respiratory irritation, dizziness, weakness, fatigue, nausea and headache. Highly toxic! Can cause systemic damage upon prolonged and/or repeated exposure (see "Target Organs").

Skin Contact: Contact causes severe skin irritation and possible burns.

Skin Absorption: Upon prolonged or repeated exposure, harmful if absorbed through the skin. May cause severe irritation and systemic damage

Ingestion: Toxic if swallowed. May cause target organ failure and/or death.

Section 4 – First Aid Measures

Inhalation: Remove to fresh air. If breathing is difficult, have a trained individual administer oxygen. If not breathing, give artificial respiration and have a trained individual administer oxygen. Get medical attention immediately. If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical attention immediately.

Eyes: Immediately flush eyes with plenty of water for at least 20 minutes retracting eyelids often. Tilt the head to prevent chemical from transferring to the uncontaminated eye. Get immediate medical attention and monitor the eye daily as advised by your physician. In case of eye contact, flush immediately with plenty of water for at least 15 minutes and get medical attention immediately; for skin, wash thoroughly with soap and water. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.

Skin Contact: Wash with soap and water. Remove contaminated clothing and launder. Get medical attention if irritation develops or persists.

Ingestion: Severely irritating. Do not induce vomiting. Seek medical attention immediately. Drink 2 glasses of water or milk to dilute. If swallowed, do not induce vomiting. Get medical attention immediately. Induce vomiting as a last measure. Induced vomiting may lead to aspiration of the material into the lungs potentially causing chemical pneumonitis that may be fatal.

Notes to Doctor: No additional first aid information available

Section 5 – Fire Fighting Measures

Flammability Summary: Flammable

Extinguishing Media: Use alcohol resistant foam, carbon dioxide, or dry chemical extinguishing agents. Water may be ineffective but water spray can be used to extinguish a fire if swept across the base of the flames. Water can absorb heat and keep exposed material from being damaged by fire.

Fire and/or Explosion Hazards: Vapors may be ignited by sparks, flames or other sources of ignition if material is above the flash point giving rise to a fire (Class B). Vapors are heavier than air and may travel to a source of ignition and flash back. Flammable Liquid. Can release vapors that form explosive mixtures at temperatures at or above the flash point.

Empty containers that retain product residue (liquid, solid/sludge, or vapor) can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose container to heat, flame, sparks, static electricity, or other sources of ignition. Any of these actions can potentially cause an explosion that may lead to injury or death.

Fire Fighting Methods and Protection: Do not enter fire area without proper protection including self-contained breathing apparatus and full protective equipment. Fight fire from a safe distance and a protected location due to the potential of hazardous vapors and decomposition products. Flammable component(s) of this material may be lighter than water and burn while floating on the surface. Use water spray/fog for cooling. Flammable component(s) of this material may be lighter than water and burn while floating on the surface.

Hazardous Combustion Products: Carbon dioxide, Carbon monoxide, Hydrocarbons, Toxic gases

Flash Point (SFCC): 4 deg. C 39 deg. F

Lower Flammable/Explosive Limit: 1.3

Section 6 - Accidental Release

Personal Precautions and Equipment: Exposure to the spilled material may be irritating or harmful. Follow personal protective equipment recommendations found in Section 8 of this MSDS. Additional precautions may be necessary based on special circumstances created by the spill including; the material spilled, the quantity of the spill, the area in which the spill occurred. Also consider the expertise of employees in the area responding to the spill.

Methods for Clean-up: Prevent the spread of any spill to minimize harm to human health and the environment if safe to do so. Wear complete and proper personal protective equipment following the recommendation of Section 8 at a minimum. Dike with suitable absorbent material like granulated clay. Gather and store in a sealed container pending a waste disposal evaluation.

Section 7 – Handling and Storage

Handling Technical Measures and Precautions: Harmful or irritating material. Avoid contacting and avoid breathing the material. Use only in a well ventilated area. Use

spark-proof tools and explosion-proof equipment. As with all chemicals, good industrial hygiene practices should be followed when handling this material. Avoid contact with material, avoid breathing dusts or fumes, use only in a well ventilated area. Wash thoroughly after handling.

Do not get in eyes, on skin and clothing.

Ground and bond containers when transferring material. Keep in air-tight containers-material is hygroscopic. Remove contaminated clothing and wash before reuse.

Storage Technical Measures and Conditions: Store in a cool dry ventilated location. Isolate from incompatible materials and conditions. Keep container(s) closed. Keep away from sources of ignition. Store in a cool dry place. Store in a tightly closed container. Keep away from heat, sparks, and flame.

Section 8 – Exposure Controls/Personal Protection

Engineering Measures: No exposure limits exist for the constituents of this product. Use local exhaust ventilation or other engineering controls to minimize exposures and maintain operator comfort. Engineering controls must be designed to meet the OSHA chemical specific standard in 29 CFR 1910. Explosion proof exhaust ventilation should be used. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

Respiratory Protection: Respiratory protection may be required to avoid overexposure when handling this product. General or local exhaust ventilation is the preferred means of protection. Use a respirator if general room ventilation is not available or sufficient to eliminate symptoms. Wear a NIOSH approved respirator if levels above the exposure limits are possible. When spraying product as directed in this product's Operations Manual, utilize a NIOSH/MSHA approved air purifying respirator equipped with combination organic vapor / particulate cartridges. Ensure cartridges are changed according to facility's cartridge change out schedule in its Written Respiratory Protection Program. If usage is not according to Manual, and no monitoring for airborne contaminants has been carried out, a NIOSH/MSHA approved positive pressure air supplied respirator should be worn. Follow respirator manufacturer's directions for use. Wear the respirator for the whole time of spraying and until all vapors and mists are gone. NO PERSONS SHOULD BE ALLOWED IN THE AREA WHERE THIS PRODUCT IS BEING USED UNLESS EQUIPPED WITH THE SAME RESPIRATOR PROTECTION RECOMMENDED FOR THE APPLICATORS. Follow a respiratory protection program that meets 29 CFR 1910.134 and ANSI Z88.2 requirements whenever work place conditions warrant the use of a respirator. Wear a NIOSH approved respirator if any exposure is possible.

Eye Protection: Wear chemically resistant safety glasses with side shields when handling this product. Wear additional eye protection such as chemical splash goggles and/or face shield when the possibility exists for eye contact with splashing or spraying liquid, or airborne material. Have an eye wash station available. Wear goggles and a Face shield.

Skin Protection: Avoid skin contact by wearing chemically resistant gloves, an apron and other protective equipment depending upon conditions of use. Inspect gloves for

chemical break-through and replace at regular intervals. Clean protective equipment regularly. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work. Where contact is likely, wear chemical resistant gloves, a chemical suit, rubber boots, and chemical safety goggles plus a face shield

Gloves: Required for prolonged or repeated contact. Use solvent resistant gloves. Barrier creams are not substitutes for full physical protection. Refer to safety equipment supplier for effective glove recommendations.

Control Parameters:

Chemical Name	ACGIH TLV-TWA	ACGIH STEL	IDLH
n-Butyl acetate	150 ppm TWA; 713 mg/m ³ TWA	200 ppm STEL; 950 mg/m ³ STEL	Not determined
hexamethylene diisocyanate homopolymer	Not established	Not established	Not determined
Methoxypropanol acetate	Not established	Not established	Not determined
Toluene	50 ppm TWA; 188 mg/m ³ TWA	Not established	Not determined

Section 9 – Physical and Chemical Properties

Physical State: Liquid

Color: Colorless to pale yellow

Odor: Moderate Ester-like

pH: Not determined

Solubility in Water: Low; 10-49% Moderate; 50-99%

Volatiles, % by weight: 62.1

Volatiles, % by volume: 65.26

Volatile Organic Compounds excluding exempt solvents and water:

5.02Lb/gallon 602.8 g/l

Volatile Organic Compounds including exempt solvents and water:

5.02LB/gallon 602.8g/l

Vapor Density:

Vapor Pressure: Not determined

Boiling Point: 126.0000000 deg. C; 258 deg. F

Specific Gravity: 0.883

Weight per Gallon: 8.1078

Section 10 – Stability and Reactivity

Stability: Stable under normal conditions.

Conditions to Avoid: Sparks, open flame, other ignition sources, and elevated temperatures. Contamination Elevated temperatures

Materials to Avoid/Chemical Incompatibility: Strong oxidizing agents, Strong alkalies, Strong acids

Hazardous Decomposition Products: Hydrocarbons, Carbon monoxide, Carbon dioxide, Toxic gases

Section 11 - Toxicological Information

Sensitization (effects of repeated exposure): No data

Component Toxicology Data (NIOSH)

Chemical Name	CAS Number	LD50/LC50
n-Butyl acetate	123-86-4	N-BUTYL ACETATE: ORAL, RAT: LD50 = 10768 MG/KG; INHALATION, RAT: LC50 = 2000 P
hexamethylene diisocyanate homopolymer	28182-81-2	No data available
Methoxypropanol acetate	108-65-6	Oral LD50 Rat : 8532 mg/kg; Dermal LD50 Rabbit : >5 gm/kg
Toluene	108-88-3	Inhalation LC50 Rat : 49 gm/m ³ /4H; Inhalation LC50 Mouse : 400 ppm/24H; Oral

Section 12 - Ecological Information

Overview: Avoid runoff into ground, storm drains or sewers that lead into waterways. Water runoff may cause environmental damage. There are extensive ecological data available on the various components of these products. An adequate representation of all these data is beyond the scope of this document. Please contact the information phone number found in Section 16.

Section 13 – Disposal Information

Waste Description for Spent Product: Spent or discarded material is a hazardous waste.

Disposal Methods: Dispose of in accordance with federal, state or provincial and local pollution requirements. Clean preferably with a detergent, avoid the use of solvents. This information applies only to the material as manufactured; processing, use or contamination may make this information inappropriate, inaccurate or incomplete. The generator of the waste has the responsibility for proper waste classification, transportation and disposal.

Waste Disposal Codes: D001

Section 14 – Transportation Information

DOT Basic Description: DOT: Consumer Commodity, ORM-D
IMDG: Paint Related Material, 3, UN 1263, II, LTD QTY
Hazard Class: ORM-D
UN Number: NA
Packing Group: Paint Related Material, 3, UN1263, II LTD. QTY.

Section 15 - Regulatory Information

Note: Materials listed in this section may be present as trace level contaminants to raw materials. Check Section 2 - Hazardous Ingredients to determine if a significant amount is present

OSHA: This product is considered hazardous under the Federal OSHA Hazard Communication Standard.

WHMIS: B2D2A, D2B

SARA Title III:

Section 302 Extremely Hazardous Substances: None

Section 311 / 312 Hazard Categories: Immediate health, delayed health, fire hazard.

Section 313 Toxic Chemicals: Toluene, Hexamethylene Diisocyanate, Xylene and ethylbenzene

You may be required to submit this MSDS to state and local emergency response agencies (SERC & LEPC) and to your local fire department. Also, you may be affected by other sections of this law, depending on the chemicals and amounts that you inventory at your location. To learn more about your responsibilities, call the EPA Hotline (800) 535-0202

TSCA status: All components in this product are on the TSCA Inventory.**Canadian**

Domestic Substances List: The components of this product ARE listed on the Canadian Domestic Substances List.

Proposition 65: WARNING: This product contains a chemical known to the state of California to cause cancer and birth defects, or other reproductive harm.

Section 16 - Preparation Information

Prepared by Bondo Corporation Research and Development Department
Information phone number: (404) 696-2730

Do not handle until the manufacturer's safety precautions have been read and understood. Regulations require that all employees be trained on Material Safety Data Sheets for all products with which they come in contact.

While Bondo Corporation believes that the data contained herein are accurate and derived from qualified sources, the data are not to be taken as a warranty or representation for which Bondo Corporation assumes legal responsibility. They are offered solely for your consideration, investigation and verification. Any use of these data and information must be determined by the user to be in accordance with applicable federal, state or provincial and local laws and regulations.