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MATERIAL SAFETY DATA SHEET

SECTION 1 Chemical Identification

NAME: **KDT Clear**

PRODUCT CODE: KDT-1068

SECTION 2 Composition/Information on Ingredients

COMPOSITION: Chemical Identity - Silazane Polymer in Solvent

10-30% Proprietary Silazane Based Resin	CASRN 475645-84-2
70-90% <i>n</i> -Butyl Acetate, <i>tert</i> -Butyl Acetate	CASRN 123-86-4, 540-88-5

SECTION 3 Hazards Identification

HMIS Ratings

Health hazard	3	Moderate
Flammability hazard	3	Moderate
Reactivity hazard	1	Slight

POTENTIAL HEALTH EFFECTS

Signs and Symptoms of Overexposure in the Workplace:

WARNING: Flammable, Corrosive liquid
Harmful by inhalation and in contact with skin. Irritating to eyes, respiratory system and skin. Target Organ (s): Liver, Kidneys

Medical Conditions Aggravated by Exposure: None known.

Primary Routes of Exposure/Entry:

\Eye or skin contact; inhalation of vapor or mist. Ingestion unlikely.
Note: Contact of this product with moisture can produce ammonia, which can cause irritation of the eyes, skin, nose, throat, lungs, etc.

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SECTION 4 First-Aid Measures**EYE EXPOSURE:**

In case of contact with eyes immediately flush with copious amounts of water for at least 15 minutes. If irritation or redness persists seek medical treatment.

DERMAL EXPOSURE:

In case of contact with skin or clothing; remove contaminated clothing and wash skin thoroughly with soap and water. If irritation or redness persists seek medical treatment.

INHALATION EXPOSURE:

If inhaled, remove to fresh air. If breathing is difficult, give oxygen and seek immediate medical assistance. If not breathing give artificial respiration and seek immediate medical assistance.

ORAL EXPOSURE:

If swallowed do not induce vomiting. Seek immediate medical treatment.

SECTION 5 Fire Fighting Measures**EXTINGUISHING MEDIA:**

Carbon dioxide, dry chemical powder or appropriate foam.

SPECIAL FIREFIGHTING PROCEDURES:

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Use water spray to cool fire-exposed containers.

UNUSUAL FIRE AND EXPLOSIONS HAZARDS:

Vapor may travel considerable distance to source of ignition and flash back

Container explosion may occur under fire conditions

Flammable liquid

Emits toxic fumes under fire conditions

SECTION 6 Accidental Release Measures

For small spills: Cover with an inorganic absorbent, like vermiculite, perlite, ground clay, or sand, sweep up, and dispose appropriately.

For large spills: Wear self contained breathing apparatus, rubber boots, and heavy rubber gloves. Dike to contain and pump into drums for use or disposal. If any material remains add inorganic absorbent (as above), sweep up, and dispose appropriately. Clean contaminated area with soap and water. In case of accidental spill or release, refer to Section 8, Personal Protective Equipment and General Hygiene Practices.

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SECTION 7 Handling And Storage

Flammable. Store in areas designated for flammable liquid storage (see NFPA requirements). Keep away from heat, sparks, and open flame. Keep container tightly closed. Vent periodically to release any head pressure.

SECTION 8 Exposure Controls/Personal Protection

APPROPRIATE HYGIENIC PRACTICES:

Avoid contact with eyes, skin, and clothing. Avoid breathing vapors, fumes and mists. Avoid prolonged or repeated exposure. Wash thoroughly after handling, and before eating, drinking, or smoking.

ENGINEERING CONTROLS:

Engineering controls should always be used when available as a first choice over personal protective equipment. Provide adequate ventilation. Use of fume hoods or closed booths recommended when product is used in a manner that may generate mist or aerosol.

PERSONAL PROTECTIVE EQUIPMENT:

Normal laboratory protective clothing recommended, i.e. lab coat and/or apron, impervious gloves and safety glasses. If mists or aerosols are generated during handling, and engineering controls are not present to prevent exposure, wear NIOSH certified full face respirator equipped with N99 filter. For cleanup after large spills wear self contained breathing apparatus, rubber boots, and heavy rubber gloves.

WORK PRACTICES:

Easily accessible eyewash fountains and safety showers recommended.

PROTECTIVE MEASURES DURING REPAIR AND MAINTENANCE:

Completely isolate and thoroughly clean all equipment, piping or vessels with high flash non-polar solvents before beginning maintenance or repairs.

SECTION 9 Physical And Chemical Properties

APPEARANCE AND ODOR: Clear Liquid. May detect slight ammonia and solvent odors during normal handling.

PHYSICAL PROPERTIES

Boiling Range:	98 - 140°C (208 - 284°F)
Flash Point:	26°C (79°F)
Specific Gravity:	0.904
Density:	7.53 lb/gallon
Viscosity:	N/A

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SECTION 10 Stability And Reactivity

STABILITY: Stable
INCOMPATIBILITIES: Strong oxidizing agents
Material may react with water, with certain protic solvents, acids and isocyanates.

HAZARDOUS COMBUSTION
OR DECOMPOSITION PRODUCTS: Carbon monoxide, Carbon dioxide, Hydrogen fluoride, Hydrogen chloride gas.

HAZARDOUS POLYMERIZATION: None.

SECTION 11a Toxicological Information - Silazane Polymer

CARCINOGENICITY INFORMATION:
Not listed as a carcinogen by NTP (National Toxicology Program); not regulated as a carcinogen by OSHA (Occupational Safety and Health Administration); not evaluated by IARC (International Agency for Research on Cancer).

REPORTED HUMAN EFFECTS:
No human studies have been conducted with this material. The use of recommended protective equipment should prevent any adverse effects. KDT has not received any reports of adverse effects from workers handling this material.

REPORTED ANIMAL EFFECTS:
Oral LD50, rat: 200 – 2,000 mg/kg.
Skin irritation, rabbit: severe erythema with signs of necrosis after 1-hour exposure.

SECTION 11b Toxicological Information - Hydrocarbon Solvent**ACUTE EXPOSURE EFFECTS**

SKIN CONTACT: May cause irritation, drying, redness, burning and cracking.

EYE CONTACT: May cause irritation and conjunctivitis.

INGESTION: Harmful or fatal if swallowed. May cause dizziness, nausea headache, weakness, drowsiness, vomiting, irritation of digestive tract, loss of coordination, fatigue, muscle twitches, diarrhea, gastrointestinal irritation, unconsciousness, convulsions and death.

CHRONIC EXPOSURE EFFECTS

Reports have associated repeated and prolonged overexposure to solvents with neurological and other physiological damage such as anemia, skin irritation, bone marrow, liver damage and jaundice. In addition, various organic solvents have exhibited mutagenic and teratogenic properties. For specific information regarding these effects please see individual manufacturing data sheets for solvent components listed in Section 2.

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SECTION 12 Ecological Information

This material may be hazardous to aquatic organisms. Avoid release to surface waters and waste treatment systems

SECTION 13 Disposal Considerations

Do not mix this product with aqueous or other protic wastes streams. Incineration of combustible waste material in a permitted facility in accordance with the local, state, and federal regulations is the recommended disposal method.

SECTION 14 Transport Information

US DOT: Flammable
IATA: UN 2924, Flammable liquid, corrosive, n.o.s. (butyl acetate/polysilazane mixture), 3 (8), II

SECTION 15 Regulatory Information

SARA 313: This product does not contain any chemicals subject to reporting under Section 313 of Title III of the Superfund Amendments and Reauthorization Act and 40CFR372.

CERCLA: This product does not contain any chemicals subject to reporting as a CERCLA Hazardous Substance under 40CFR302.4.

TSCA: This product is TSCA.

EU Labeling

C: Corrosive
F: Flammable
Xn: Harmful

EU Risk and Safety Phrases:

R10: Flammable
R22: Harmful if swallowed.
R34: Causes severe skin burns.
S16: Keep away from sources of ignition. No smoking.
S23: Do not breathe gas/fumes/vapor/spray.
S24/25/26: Avoid contact with skin and eyes. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S28: After contact with skin, wash immediately with plenty of water.
S37/39: Wear suitable gloves and eye/face protection.

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SECTION 16 Other Information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. KDT shall not be held liable for any damage resulting from handling or from contact with the above product.