

## KYDEX® Thermoplastic Sheet MSDS - 101

### Section 1: Chemical Product and Company Identification

**Product/Chemical Name:** KYDEX® thermoplastic sheet; acrylic/PVC alloy  
**Other Designations:** Mixture of polyvinyl chloride, chlorinated polyvinyl chloride, acrylic polymer, processing aids, impact modifiers, heat stabilizers, and lubricants  
**General Use:** Thermoforming  
**Manufacturer:** KYDEX, LLC, 6685 Low Street, Bloomsburg, PA 17815, PHONE 570.387.6997, FAX 570.387-8722  
**Emergency Phone Numbers:** 570.387.6997. For transportation emergencies call CHEMTREC at 800.424.9300.

### Section 2: Composition / Information on Ingredients

Ingredient Name	CAS Number	% wt
Polyvinyl chloride; ethene, chloro-homopolymer	9002-86-2	0-99
Chlorinated polyvinyl chloride	68648-82-8	0-99
Mixture of processing aids, impact modifiers, heat stabilizers, lubricants and pigments	TRADE SECRET	2-50
Organotin	TRADE SECRET	0.1-3

#### Trace Impurities:

Ingredient Name	OSHA PEL		ACGIH TLV	
	TWA	STEL	TWA	STEL
Polyvinyl chloride	None estab.	None estab.	Particles not otherwise classified: 10 mg/m <sup>3</sup>	None estab.
Chlorinated polyvinyl chloride	None estab.	None estab.	Particles not otherwise classified: 10 mg/m <sup>3</sup>	None estab.
Organotin	0.1 mg/m <sup>3</sup>	None estab.	0.1 mg/m <sup>3</sup>	0.02 mg/m <sup>3</sup>
Titanium Oxide	5 mg/m <sup>3</sup>	None estab.	10 mg/m <sup>3</sup>	None estab.

#### KYDEX, LLC

ISO 9001 and 14001 Certified

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### Section 3: Hazards Identification

#### Emergency Overview:

KYDEX thermoplastic sheet dry blend, a powder, is in general a non-hazardous polymeric material and does not present any serious hazards during its normal handling and use. As with any material; however, there are guidelines that should be followed in an emergency situation. If dust or vapors are inhaled, move to a well ventilated area. If skin or eyes are irritated, flush with water for 15 minutes. PPE†

HMIS	
H	1
F	1
R	0

†Sec. 8

#### Potential Health Effects:

**Primary Entry Routes:** Inhalation, skin/eyes, ingestion (vapors if burned or dust from machining the sheet)

**Target Organs:** Respiratory system, eyes

#### Acute Effects:

**Inhalation:** Prolonged inhalation of dust from cutting or machining the plastic sheet may cause nose, throat and upper respiratory tract irritation. Excessive heating may lead to decomposition with the release of hydrogen chloride which could cause irritation to upper respiratory tract.

**Eye:** Excessive heating may lead to decomposition with the release of hydrogen chloride which could cause irritation of eyes

**Skin:** Dust from cutting and machining may be irritating to skin.

**Ingestion:** Not a likely route of exposure

**Carcinogenicity:** IARC, NTP, and OSHA do not list KYDEX® sheet as a carcinogen.

**Medical Conditions Aggravated by Long-Term Exposure:** Not known

**Chronic Effects:** Not known

### Section 4: First Aid Measures

**Inhalation:** If irritation occurs from dust or vapors from excessive heating, move to a well-ventilated area; if irritation persists, consult a physician.

**Eye Contact:** If irritation occurs from dust or vapors from excessive heating, flush eyes with large amounts of water for at least 15 minutes; if irritation persists, consult a physician.

**Skin Contact:** Cool skin rapidly with cold water after contact with hot polymer. Wash off immediately with soap and plenty of water. Consult a physician.

**Ingestion:** Not a likely route of exposure

**Notes to Physician:** None

**Special Precautions/Procedures:** None

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### Section 5: Fire-Fighting Measures



**Flash Point:** 735°F (390°C)

**Autoignition Temperature:** 849°F (454°C)

**Explosive Limits:**

LEL: Not available

UEL: Not available

**Flammability Classification:** Not flammable

**Extinguishing Media:** Water, carbon dioxide, dry chemical or foam

**Unusual Fire or Exposure Hazards:** Polyvinyl chloride-based material will NOT continue to burn after ignition without an external heat source. When burning, or at temperatures above 425°F, slow evolution of hydrogen chloride could occur.

**Hazardous Combustion Products:** Hydrogen chloride, carbon monoxide, carbon dioxide

NOTE: Hydrogen chloride is detectable by its sharp pungent odor in concentrations as low as 1 PPM. Low concentrations (< 50 PPM) are not harmful in short-term exposures but do provide excellent warning properties by causing coughing or irritation. Because the protective response is so strong, humans rarely submit to damaging concentrations -- instead there is an unmistakable urge to leave the area. Repeated or prolonged exposure to high concentrations can cause eye and respiratory damage.

**Fire-Fighting Instructions:** Keep unauthorized personnel removed.

**Fire-Fighting Equipment:** Because fire may produce toxic thermal decomposition products, wear a self-contained breathing apparatus (SCBA) with a full face piece operated in pressure-demand or positive-pressure mode.

### Section 6: Accidental Release Measures

**Spill /Leak Procedures:** Not applicable. KYDEX® Thermoplastic sheets will not spill or leak; it is solid; however, dust from machining the product may leak or spill.

**Small Spills:** If dust or powder from cutting and machining the plastic sheet is spilled, vacuum or sweep up and place in containers for recovery or disposal.

**Large Spills:** If dust or powder from cutting and machining the plastic sheet is spilled, vacuum or sweep up and place in containers for recovery or disposal.

**Containment:** Not Applicable

**Cleanup:** Vacuum or sweep up and place in containers for recovery or disposal.

**Regulatory Requirements:** Follow applicable OSHA regulations (29 CFR 1910.120).

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### Section 7: Handling and Storage

**Handling Precautions:** Dust levels should be kept below respiratory dust concentrations of 5 mg/m<sup>3</sup>. Take proper care when moving, loading, or unloading. Electrostatic charge may build up during handling; grounding of equipment is recommended.

**Storage Requirements:** Store in a dry area below 100°F (37.7°C).

**Regulatory Requirements:** KYDEX® sheets are not regulated.

### Section 8: Accidental Release Measures

**Engineering Controls:** Maintain levels of airborne contaminants below exposure levels by controlling general and local room ventilation in areas where machining, cutting or thermoforming occurs. Ground equipment to prevent build up of electrostatic charge.

**Ventilation:** Provide general or local exhaust ventilation systems to maintain airborne concentrations below OSHA PELs (Sec.2). Local exhaust ventilation is preferred because it prevents contaminant dispersion into the work area by controlling it at its source.

**Respiratory Protection:** Seek professional advice prior to respirator selection and use. Follow OSHA respirator regulations (29 CFR 1910.134) and, if necessary, wear a MSHA/NIOSH-approved respirator. Select respirator based on its suitability to provide adequate worker protection for given working conditions, level of airborne contamination, and presence of sufficient oxygen. Warning! Air-purifying respirators do not protect workers in oxygen-deficient atmospheres. If respirators are used, OSHA requires a written respiratory protection program that includes at least: medical certification, training, fit testing, periodic environmental monitoring, maintenance, inspection, cleaning, and convenient, sanitary storage areas.

**Protective Clothing/Equipment:** Wear protective eyeglasses or chemical safety goggles, per OSHA eye- and face-protection regulations (29 CFR 1910.133). Contact lenses are not eye protective devices. Appropriate eye protection must be worn instead of, or in conjunction with contact lenses.

**Safety Stations:** Make emergency eyewash stations, quick-drench showers, and washing facilities available in work area.

**Contaminated Equipment:** Not applicable

### Section 9: Physical and Chemical Properties

**Physical State:** Solid

**Appearance and Odor:** Opaque plastic sheets; none or slight odor

**Odor Threshold:** Not available

**Vapor Pressure:** Not available

**Vapor Density (Air=1):** Not available

**Formula Weight:** Not available (Mix)

**Density:** 1.3-1.5 g/cc

**Specific Gravity (H<sub>2</sub>O=1, at 4 °C):** 1.3-1.5

**pH:** Not available

**Water Solubility:** Negligible

**Other Solubilities:** Tetrahydrofuran

**Boiling Point:** Not available

**Freezing Point:** Not available

**Viscosity:** Not available (solid)

**Refractive Index:** Not available (opaque)

**Surface Tension:** Not available

**% Volatile:** Not available

**Evaporation Rate:** Not available

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### Section 10: Stability and Reactivity

**Stability:** KYDEX® sheets are stable at room temperature under normal storage and handling conditions.

**Polymerization:** Hazardous polymerization WILL NOT occur.

**Chemical Incompatibilities:** Polyvinyl chloride-based materials should not come in contact with acetal or acetal polymers in elevated temperature processing equipment. The two materials are not compatible and will react in violent decomposition when mixed under conditions of heat and pressure.

**Conditions to Avoid:** Avoid temperatures of 425°F and above.

**Hazardous Decomposition Products:** Carbon monoxide, carbon dioxide, hydrogen chloride.

### Section 11: Toxicological Information

**Toxicity Data:\***

**Eye Effects:** Possible irritation due to dust particles.

**Acute Inhalation Effects:** Polyvinyl chloride [PVC]: Rats and guinea pigs exposed continuously to PVC dust for 24 hrs/day for periods varying from 2-7 months were found to have extensive lung damage. In rats, inhalation of fumes from heated PVC produced interstitial edema as well as focal, bronchial and intraveolar hemorrhage.

**Acute Oral Effects:** Not known

**Chronic Effects:** Not known

**Carcinogenicity:** KYDEX® sheet is not a carcinogen

**Mutagenicity:** Not known

**Teratogenicity:** Not known

*\* See NIOSH and RTECS for additional toxicity data.*

### Section 12: Ecological Information

No ecological data available.

### Section 13: Disposal Considerations

Wastes can be landfilled. Dispose of in accordance with federal, state, and local regulations.

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### Section 14: Transport Information

#### DOT Transportation Data (49 CFR 172.101):

**Shipping Name:** KYDEX sheet  
**Shipping Symbols:** None  
**Hazard Class:** Not regulated  
**ID No.:** Not applicable  
**Packing Group:** Not applicable

**Label:** Not applicable  
**Special Provisions (172.102):** None  
**Packaging Authorizations:** None  
**Quantity Limitations:** None  
**Vessel Stowage Requirements:** None

### Section 15: Regulatory Information

#### EPA Regulations:

RCRA Hazardous Waste Number: Not listed (40 CFR 261.33)  
CERCLA Hazardous Substance (40 CFR 302.4) unlisted specific per RCRA, Sec. 3001; CWA, Sec. 311 (b)(4); CWA, Sec. 307(a), CAA, Sec. 112  
CERCLA Reportable Quantity: None  
SARA /Title III Hazard Categories:  
Immediate (Acute) Health: NO  
Delayed (Chronic) Health: NO  
Fire Hazard: NO  
Reactive Hazard: NO  
Sudden Release of Pressure: NO

#### OSHA Regulations:

Air Contaminant (29 CFR 1910.1000, Table Z-1, Z-1-A): Not listed  
OSHA Standard (29 CFR 1910.1200) requires that information be provided to employees regarding the hazards of chemicals by means of a hazard communication program including labeling, material safety data sheets, training and access to written records. We request that you, and it is your legal duty to make all information in the Material Safety Data Sheet available to your employees.

#### State Regulations:

New Jersey Workplace Hazardous Substance List: Chlorinated polyvinyl chloride, organotin compound, modifier and lubricant, titanium dioxide  
Pennsylvania Right to Know Act: Chlorinated polyvinyl chloride, organotin compound, modifier, lubricant

### Section 16: Other Information

**Prepared By:** Carole Reed  
**Revision Notes:** None  
**Additional Hazard Rating Systems:** None

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This information supersedes all previously published data.