

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: SEKISUI SPI, 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

Trace Impurities:

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

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

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ISO 9001 and 14001 Certified

Customer Service
6685 Low St, Bloomsburg, PA 17815 USA
Phone: 800.325.3133, +1.570.389.5810
Outside the US: +1.570.389.5814
Fax: 800.452.0155, +1.570.387.7786
Email: info@sekisui-spi.com

Technical Service
Phone: 800.682.8758
Fax: +1.570.387.8722
Outside the US: +1.570.387.6997
techservice@sekisui-spi.com

sekisui-spi.com

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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.

HMIS	
H	1
F	1
R	0
PPE†	
†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/m³. 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 (H₂O=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: Toxological Information

Toxicity Data:*

Eye Effects: Possible irritation due to dust particles.

Accute 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.

Accute 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.