

**MATERIAL SAFETY DATA SHEET**

**Kane Ace X-CP, MC 1403**

*Revised June 21, 2005*

**MSDS # 02206**

**Section 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

**Kaneka Texas Corporation**  
**6161 Underwood Road**  
**Pasadena, Texas 77507**

**Emergency Phone Number:** (281) 474-1836

**Technical Information:** (281) 447-0755

**Product Name** Kane Ace X-CP; **Product codes:** MC 1403 Acrylic Capstock

**Synonyms** Acrylic Resin Compound

**Formula** Trade Secret

**Section 2. COMPOSITION / INFORMATION ON INGREDIENTS**

<b>Component</b>	<b>CAS No.</b>	<b>Concentration (%)</b>	<b>Hazardous in Mixture</b>
Methyl methacrylate – acrylic copolymer	Trade Secret	>86	No
Titanium dioxide	13463-67-7	<12.0	No
Acrylonitrile monomer	107-13-1	<0.1	No

**OSHA Regulatory Status**

This material is not classified as hazardous under OSHA regulations. Based on calculations, if the dust exposure levels are maintained below the PEL, (see Section 8) there should be no hazardous exposures to any ingredient found in the product, under conditions of normal use. The MSDS contains valuable information critical to the safe handling and proper use of the product. This MSDS should be retained and made available for employees and other users of this product.

**Section 3. HAZARDS IDENTIFICATION**

**Emergency Overview**

- Pellets or powder with a mild acrylic ester odor.
- In limited circumstances dust may form explosive mixtures in air; minimize dust generation. (See Section 5)

If heated, fumes irritating to eyes and respiratory tract may develop. These fumes may contain monomers. One of these monomers may be Acrylonitrile which has been listed as a known carcinogen (OSHA 1910.1045). (See Section 11)

**Potential Health Effects**

- Acrylonitrile monomer may be a component of the manufacture of the resin and is present in trace quantities in the resin. Acrylonitrile monomer may evolve into the atmosphere under some conditions of high heat application to the resin. Users are advised to evaluate their

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potential exposures in such heat applications and refer to the Acrylonitrile standard of OSHA found at 29CFR §1910.1045 for specific personnel exposure control requirements.

### **Eye**

- Exposure to dust may cause tearing. May act as a foreign body irritant and cause mechanical abrasion to tissues of the eyes.
- May cause thermal burns to the eye if contacted with heated material. Vapors generated by heating may cause mild irritation.

### **Skin**

- Not expected to be harmful. Prolonged exposures to moist skin may cause itching, skin irritation, and dermatitis.
- May cause thermal burns to the skin if contacted with heated material

### **Ingestion**

- Not expected to be harmful if small quantities are ingested. Ingestion of large quantities may cause stomach and abdominal pain, nausea, vomiting, gastro-intestinal distress, and diarrhea.

### **Inhalation**

- Inhalation of high dust concentrations (above the PEL for nuisance dust) may cause coughing and difficulty breathing.
- Inhalation of dust may cause irritation to the mucous membranes of the nose throat and upper respiratory tract.
- Inhalation of vapors generated by heating the plastic may cause irritation to the nose, throat and upper respiratory tract.

### **Medical Conditions Aggravated by Exposure**

- No applicable information available.

### **Additional Information:**

- Please refer to Section 11 - Toxicological Information, for additional information.

### **Potential Environmental Effects**

- May be hazardous to aquatic life if product is released to open waters. Carefully vacuum or sweep up material and place in a suitable container for disposal. Avoid creating a dusty atmosphere. Dampen spills with water to reduce dust.

## **Section 4. FIRST AID MEASURES**

### **Eye**

- Immediately flush eyes with water, for at least 15 minutes.
- If redness or irritation persists, refer patient to a physician.

### **Skin**

- Immediately flush with plenty of water.
- Remove contaminated clothing and wash before reuse.
- If skin irritation or redness is present, refer patient to a physician.

### **Ingestion**

- Seek medical attention immediately.
- Do NOT induce vomiting.

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- If conscious, give the patient 2-3 glasses of milk or water to drink.
- Vomiting should only be induced under medical supervision.

**Inhalation**

- Immediately remove patient to fresh air.
- If patient is conscious and having difficulty breathing, administer oxygen.
- If patient is unconscious, administer artificial respiration and refer patient to a physician.

**Note to physicians**

- No additional, applicable information available.

**Section 5. FIRE FIGHTING MEASURES**

**Flash Point** Not applicable

**Method** Not applicable

**Autoignition Temperature** 765 F (407 C)

**NFPA Classification**

**Health** 1 (Slight)

**Reactivity** 0 (None)

**Fire** 2 (Moderate)

**Specific Hazard** Not Rated

**Extinguishing Media** Water spray, foam or ABC dry chemicals

**Flammable Properties** In solid form, material is combustible and burns with intense heat.

**Firefighting Instructions**

- Avoid scattering burning material or creating dust hazard with water stream. A solid stream of water could create airborne dust and then possibly cause a dust explosion.
- Avoid eye and skin contact.
- Do not breathe fumes or inhale dust. If material is heated sufficiently to cause copolymer degradation, vapors irritating to the respirator tract may form. These vapors may contain various component monomers. This potential indicates the need to wear SCBA approved by MSHA/NIOSH.
- Use water spray to keep containers cool and control heat.
- Firefighters should wear full bunker gear and MSHA/NIOSH approved SCBA.
- Firefighting equipment should be thoroughly decontaminated after use.

**Hazardous Combustion Products**

- Products of combustion may include acrylonitrile, hydrogen cyanide, carbon dioxide, carbon monoxide, nitrogen oxides and other hydrocarbons which may be toxic and hazardous.

**Unusual Fire and Explosion Hazards**

- Dust can form explosive mixtures in the air.

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### **Section 6. ACCIDENTAL RELEASE MEASURES**

#### **Spill Response**

- May be hazardous to aquatic life if released to open waters. Carefully vacuum or sweep up material and place in a suitable container for disposal as solid waste.

#### **Personal Protection**

- Appropriate protective equipment must be worn when handling a spill of this material. See Section 8 for recommendations.
- If exposed to material during clean-up operations, see Section 4 for actions to follow.

#### **Procedures**

- Floor may be slippery; use care to avoid falling.
- Eliminate all ignition sources.
- Ventilate the spill area without creating dusty conditions.
- Avoid breathing dust. (See Section 8 for PPE) Dampen spilled material with water to minimize dust.
- Transfer spilled material to containers suitable for recovery or disposal.

### **Section 7. HANDLING AND STORAGE**

#### **Handling**

- When transferring, avoid creating dust.
- Minimize chance of static spark; ground all equipment.
- If handling of pellets causes dust, systems must be designed to safely handle and convey a material capable of a dust explosion.
- Avoid contact with eyes, skin and clothing.
- Wash thoroughly after handling.
- Use adequate ventilation.
- Avoid breathing dust. Processing vapors from heating the material may contain monomers.
- Wear MSHA/NIOSH approved respiratory protection.
- Emptied container retains product residue.
- Observe all label safeguards until container is cleaned, reconditioned or destroyed.
- Do not spill into public water systems or waterways.

#### **Storage**

- Store in original container in cool, dry area.
- Keep containers closed.
- Do not store near high temperature, boilers, heaters, hot pipes, flames or oxidizing agents.
- Keep area ventilated.
- Since material can burn, consider limiting indoor storage to areas equipped with appropriate automatic sprinkler systems.
- Improper storage conditions may shorten safe storage time.

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**Section 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Engineering Controls**

- Provide adequate ventilation to reduce dust and chemical exposures to below allowable levels.
- Provide local exhaust ventilation at the site of dust or vapor release.
- Consult NFPA Standard 91 and ACGIH Industrial Ventilation Manual for design of exhaust systems.
- Provide eye washes and safety showers in areas where exposure to chemicals may occur..

**Personal Protective Equipment**

- Respiratory
  - For dusts and vapors – it is recommended that dust and vapor concentrations be maintained below the PEL using exhaust ventilation. In the event that this cannot be accomplished, an appropriate respirator should be selected depending on the air contaminant and its concentration. For selecting the correct respirator, refer to NIOSH publications and also refer to 29 CRF §1910.1045.
- Skin
  - If skin irritation results, nitrile or neoprene gloves will prevent further skin contact.
  - Wash skin thoroughly after handling.
- Eye
  - It is recommended that contact lenses not be worn when working with this product due to the potential for eye irritation from course product.
  - Safety goggles must be worn when sawing, cutting or grinding the product.
  - Have eye flushing equipment available in the vicinity.

**Additional Information:**

Kaneka has determined, via calculation, that if the exposure to dusts is kept below the PEL for respirable particulates, then there will be no exposure to any of the ingredients contained in the product above their PEL or TLV.

**Exposure Limits**

COMPOUND	OSHA PEL		ACGIH TLV	
	TWA	Ceiling	TWA	STEL
Polymethyl methacrylate	None	None	None	None
Titanium dioxide	15 mg/m <sup>3</sup>	None	10 mg/ m <sup>3</sup>	None
Acrylonitrile monomer	2 ppm	10 ppm (averaged over 15 min.)	2 ppm	None
Particulates not otherwise classified (Total)	15 mg/m <sup>3</sup>	None	10 mg/m <sup>3</sup>	None
Particulates not otherwise classified (Respirable fraction)	5 mg/m <sup>3</sup>	None	3 mg/m <sup>3</sup>	None

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**Section 9. PHYSICAL AND CHEMICAL PROPERTIES**

**pH** Not applicable

**Specific Gravity** 0.9-1.1 (*Water = 1*)

**Boiling Point** Not applicable

**Vapor Pressure** Not applicable

**Freezing/Melting Point** Not applicable

**Percent Volatile** 1.5% maximum

**Vapor Density (air =1)** Not applicable

**Physical State** Solid

**Solubility in Water** Insoluble in water

**Appearance and Odor** White Pellets with mild acrylic ester odor

See Section 5 for additional properties

**Section 10. STABILITY AND REACTIVITY**

**Stability**

- Stable under specified conditions. (*See Section 7*)

**Hazardous Polymerization**

- Will not occur

**Incompatibility**

- Avoid contact with acids, alkalies and strong oxidizing agents.

**Hazardous Decomposition Products**

- Products of combustion may include hydrogen cyanide, carbon dioxide, carbon monoxide, nitrogen oxides and other hydrocarbons which may be toxic and hazardous.
- Thermal decomposition may yield monomers including Acrylonitrile, Methyl methacrylate, and other acrylates. Acrylonitrile has been listed as a known carcinogen OSHA (Occupational, Safety, Health Administration). Refer to the advisory presented under Potential Health Effects of Section 3, Hazards Identification.

**Conditions to Avoid**

- See Section 7, Handling and Storage

**Section 11. TOXICOLOGICAL INFORMATION**

The following information represents human and animal experience. The dosages in these tests were intentionally selected to induce toxic effects; hence, evaluation of the information may require interpretation by qualified medical persons.

**Product Listed as a Carcinogen or Potential Carcinogen by**

**NTP** No      **IARC** No      **OSHA** No      **Other** No

**Toxicity Information**

- *Polymethyl methacrylate:*

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Implanting Polymethyl methacrylate in test animals has caused tumors at the site of the implant. Since this is not a normal route of exposure in humans, we believe this finding is not significant.

- **Titanium dioxide:**

Acute Lethal Dose – Rats

LD - ROUTE: Intratracheal; DOSE: >100 ug/kg

Skin Irritation (Standard Draize) – Humans

ROUTE: Skin; DOSE: 300 ug/3D intermittent; REACTION: Mild

Inhalation Toxicity – Rats

TCLo - ROUTE: Inhalation; DOSE: 50 mg/m<sup>3</sup>/6H/13W intermittent.

- **Acrylonitrile:**

IARC has designated acrylonitrile as possibly carcinogenic to humans (Group 2B).

NTP has listed acrylonitrile Group IIB – Reasonably anticipated to be Human Carcinogens.

State of California (under Proposition 65) has listed acrylonitrile as a chemical known to the state to cause cancer.

### Section 12.ECOLOGICAL INFORMATION

No applicable information available.

### Section 13.DISPOSAL CONSIDERATIONS

- Recover, reclaim or recycle when practical.
- Dispose of material as solid waste in a suitable closed container.
- Federal, State and Local regulations should be observed when disposing.

### Section 14.TRANSPORT INFORMATION

#### US DOT Hazard Class

- Non-regulated

### Section 15.REGULATORY INFORMATION

#### Workplace Classifications

- This product is not considered hazardous under the OSHA Hazard Communication Standard (29 CFR 1910.1200).
- This product is not a “controlled product” under the Canadian Workplace Hazardous Materials Information System (WHMIS).

#### TSCA

- All components of this product are listed on the U.S. EPA Toxic Substances Control Act (TSCA) Inventory

#### CERCLA

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- Reportable quantities of trace ingredient in polymer might be exceeded for a release greater than 5,000,000 lbs of the product.

**DSL**

- All components of this product are listed on Environment Canada's Domestic Substance List (DSL).

**SARA TITLE III**

**Reportable Quantity**

- Reportable quantities of trace ingredient in polymer might be exceeded for a release greater than 5,000,000 lbs of the product.

**Section 302/304 Extremely Hazardous Substances** None

**Section 311 Hazard Category**

- None

**Acute** no **Chronic** no **Fire** no **Pressure** no **Reactive** no

**Section 313 Toxic Chemicals**

- None greater than de minimis.

**State Regulatory Information**

- Components of this product appear on State Regulatory list such as, but not limited to:  
CA, MA, NJ, PA

**Section 16. OTHER INFORMATION**

**DISCLAIMER**

**Kaneka Texas Corporation believes that such information is accurate and reliable as of the date of this Material Safety Data Sheet, but no representation, guarantee or warranty, express or implied, is made as to the accuracy, reliability, or completeness of the information. Since conditions of storage, handling and use are beyond our control, no warranties of merchantability or fitness for a particular purpose are expressed or implied. This MSDS is not intended as a license to operate under, or recommendation to infringe on, any patents. Appropriate warnings and safe handling procedures should be provided to handlers and users.**

**Prepared By:**

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