

MATERIAL SAFETY DATA SHEET

MSDS No. : 5601-0PREPARED DATE : November 29, 2005-----
SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: XAREC EA 533 COLORED
NAME OF MANUFACTURER: Idemitsu Kosan Co., Ltd.
NAME OF SECTION: Engineering Plastics Department
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SECTION 2: CONPOSITION/INFORMATION ON INGREDIENTS

SUBSTANCE/MIXTURE: MIXTURE

CHEMICAL NAME	CAS No.	NOMINAL %
Syndiotactic polystyrene	28325-75-9 or 9003-53-6	35 - 80
Glass fiber	65997-17-3	0 - 50
Ethylene/octene copolymer	26221-73-8	0 - 10
Flame retardant (Brominated hydrocarbon)	CBI	5 - 20
Antimony trioxide	1309-64-4	< 6
Zinc compounds	CBI	0 - 5
Proprietary ingredients	CBI	3 - 25
Colorants	CBI	< 5

CBI : Confidential Business Information

SYNONYM: Syndiotactic Polystyrene Compound

CHEMICAL FORMULA: $[-CH_2-CHC_6H_5-]_n$

UNCLASS & UNNUMBER: Not available

SECTION 3: HAZARD IDENTIFICATION

EMERGENCY OVERVIEW: Color solid. Odorless. Toxic fumes may be released in fire situations. Slipping hazard.

POTENTIAL HEALTH EFFECTS:

EYE: Solid or dust may cause irritation or corneal injury due to mechanical action.

SKIN: May cause itching. May cause skin irritation due to mechanical abrasion.

Under normal processing conditions, material is heated to elevated temperatures; contact with the material may cause thermal burns. No adverse effects anticipated by skin absorption.

INGESTION: Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts.

INHALATION: Dust may cause irritation to the upper respiratory tract (nose and throat). Glass fibers in this product are non-respirable (unable to be inhaled into the lungs) due to their size.

SYSTEMIC (OTHER TARGET ORGAN) EFFECTS: Repeated exposure to particles generated by grinding fiberglass-reinforced materials may result in implantation of particles in the skin. Other additives are encapsulated in the product and are not expected to be released under normal processing conditions.

CANCER INFORMATION: The fiberglass in this product is continuous filament fiberglass. Based on available data, IARC concluded that there is inadequate evidence of carcinogenicity in laboratory animals and in humans for continuous filament fiberglass. No relevant information found on other component(s).

SECTION 4: FIRST AID MEASURES

EYE CONTACT :

Remove contact lenses at once. Immediately flush eyes with large quantities of water for at least 15 minutes. Get medical attention.

SKIN CONTACT:

If contact with molten product occurs, treat as for thermal burn. Do not try to peel molten polymer from the skin. Cool rapidly with water. Get medical attention promptly.

INHALATION:

Not likely to be inhaled due to physical form. For processing fume inhalation irritation, leave contaminated area and breathe fresh air. If coughing, difficult breathing or any other symptoms develop, get medical attention.

INGESTION:

Not a likely route of exposure. If person is conscious, give large amounts of water to drink. Induce vomiting. Get medical attention.

SECTION 5: FIRE FIGHTING MEASURES

FIRE FIGHTING:

Water spray is the preferred extinguishing medium. Use water spray to cool fire exposed surfaces, protect personnel, and extinguish the fire. Respiratory and eye protections are required for fire fighting personnel.

EXTINGUISHING MEDIA:

Water spray and foam. Carbon dioxide and dry chemical are not generally recommended because their lack of cooling capacity may permit re-ignition.

HAZARDOUS COMBUSTION PRODUCTS:

Combustion products may include intense heat and high levels of black smoke containing, carbon monoxide, carbon dioxide, and hydrocarbon fragments. Hydrogen bromide and possible antimony compound will also be present.

FLASH POINT:	360 °C (680 °F)
LOWER FLAMMABLE LIMIT:	Not established
UPPER FLAMMABLE LIMIT:	Not established
AUTOIGNITION TEMPERATURE:	489 – 496 °C (912 – 925 °F)

SECTION 6: ACCIDENTAL RELEASE MEASURES

GENERAL:

Sweep or gather up product and place in proper container for disposal or recovery. Obstruct exit to

sewers and waterways, because fish may eat pellets and injure their digestive tracts.

SECTION 7: HANDLING AND STORAGE

HANDLING:

Prevent contact with skin and eyes. Use good industrial hygiene practices. Provide adequate ventilation. Secondary operations such as grinding or sawing may produce a dust explosion hazard.

Employ venting and explosion relief provisions in accordance with accepted engineering practices.

STORAGE:

Store in a dry place away from moisture, excessive heat and sources of ignition.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational exposure limits is not established for this material, but application of following limits for organic dust is recommend.

OSHA regulation 29CFR1910.1000 :

5 mg/m³(respirable dust), and 15mg/m³(total dust) based on OSHA PEL for nuisance dust.

ACGIH TLV:

A TWA of 10 mg/m³ (total dust) for nuisance dust.

VENTILATION:

A continuous supply of fresh air to the workplace together with removal of processing fumes through exhaust systems is recommended. Ventilation requirements must be locally determined to limit exposure to materials at their point of use.

PERSONAL PROTECTION

SKIN: No precaution other than clean body-covering clothing should be needed.

EYE: Safety glasses should be sufficient for most operations; however, for dusty operations or when handling solutions of the material, wear chemical goggles.

RESPIRATION: When respiratory protection is required for certain operation, use an approved air-purifying respirator. In dusty atmospheres, use an approved dust respirator.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE:	Solid
ODOR AND APPEARANCE:	White to straw-colored pellet with slight odor
SOFTING POINT:	Depend on the grade, but melt finally at about 270 °C (680 °F)
VOLATILES:	Negligible
SPECIFIC GRAVITY (Water=1):	1.20 – 1.55
WATER SOLUBILITY:	Insoluble

SECTION 10: STABILITY AND REACTIVITY

STABILITY:

Stable under recommended conditions of storage and handling. But temperature over 320 °C (608 °F) release combustible gases.

REACTIVITY:

Not reactive under recommended conditions of storage, handling, processing and use.

Decomposition temperature of added flame retardant: 300 °C (572 °F)

Hazardous polymerization will not occur.

CONDITIONS & MATERIAL TO AVOID:

Attacked by strong oxidizing agents.

SECTION 11: TOXICOLOGICAL INFORMATION

ACUTE ORAL LD₅₀: > 15380 mg/kg (Brominated flame retardant),
> 20 g/kg (Antimony trioxide)
ACUTE SKIN LD₅₀: > 3038 mg/kg (Brominated flame retardant)
SEMIACUTE TOXICITY: Contact with antimony trioxide may inflame wet skin.
CHRONIC ORAL LD₅₀: Long exposure of antimony trioxide to the respiratory tract may inflame lungs.
CANCER INFORMATION:

The fiberglass in this product is continuous filament fiberglass. IARC's evaluation on this type of fiber glass is that there is inadequate evidence of carcinogenicity in Laboratory animals and in humans. IARC's evaluation is that antimony trioxide may influence carcinogenicity in humans, Group 2B. ACGIH's evaluation in this production is that antimony trioxide is doubtful carcinogenicity in humans. The components of this product are not hazardous under OSHA Hazard communication (29CFR 1910.1200).

AMES TEST: Brominated flame retardant is evaluated negative.
PEPRODUCTION TOXICITY: Russia's report says that woman workers who handle antimony trioxide have a natural miscarriage in their later half of pregnancy and a delay in growth of their newborn babies.

SECTION 12: ECOLOGICAL INFORMATION

DEGRADATION & PERSISTENCE: This water insoluble polymeric solid is expected to be inert in the environment. Surface photodegradation is expected with exposure to sunlight. No appreciable biodegradation is expected.
ECOTOXICITY: Not expected to be acutely toxic, but pellets may mechanically cause adverse effects if ingested by waterfowl or aquatic life.

SECTION 13: DISPOSAL CONSIDERATIONS

Efforts to recycle material should be made. If unable to use recycle, material should be buried in approved landfill, or incinerated in accordance all applicable with federal, state and local regulations.

SECTION 14: TRANSPORTATION INFORMATION

DOT HAZARD CLASS: Not Regulated
IDENTIFICATION NUMBER: Not Determined

SECTION 15: REGULATORY INFORMATION

This product complies with the Chemical Substance Inventory requirements of the U.S.A. EPA Toxic Substances Control Act (TSCA).

U.S. REGULATIONS:

SARA 313 INFORMATION: This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

CHEMICAL NAME	CAS NUMBER	CONCENTRATION
ANTIMONY COMPOUNDS		< 6 %
ZINC COMPOUNDS		< 5 %

SARA HAZARD CATEGORY: This product has been reviewed according to the EPA "Hazard Categories" promulgated under Section 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

Not to have met any hazard category

CALIFORNIA PROPOSITION 65: The following statement is made in order to comply with the

California Safe Drinking Water and Toxic Enforcement Act of 1986:

WARNING: This product contains a chemical(s) known to the State of California to cause cancer.

STATE RIGHT-TO-KNOW: The following product components are cited on certain state lists as mentioned. Non-listed components may be shown in the composition section of the MSDS.

CHEMICAL NAME	CAS NUMBER	LIST
ANTIMONY TRIOXIDE	1309-64-4	PA1 PA3
ZINC BORATE	1322-07-6	PA1 PA3
FIBROUS GLASS	999999-99-9	PA1

PA1=Pennsylvania Hazardous Substance (present at greater than or equal to 1.0%)

PA3=Pennsylvania Environmental Hazardous Substance (present at greater than or equal to 1.0%)

OSHA HAZARD COMMUNICAYION STANDARD: This product is not a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: OTHER INFORMATION

The information contained herein is based on the data available to us and is believed to be correct. However, IDEMITSU KOSAN MAKES NO WARRANTY, EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF. IDEMITSU KOSAN ASSUMES NO RESPONSIBILITY FOR INJURY FROM THE USE TO THE PRODUCT DESCRIBED HEREIN.

PREPARED BY
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