

MATERIAL SAFETY DATA SHEET

1. PRODUCT IDENTIFICATION

Material: Rowlux® Illusion Film – PC-XX-001

Company Name: Rowland Technologies Inc.
320 Barnes Rd.
Wallingford, CT 06492
203-269-9500

Chemical Name: Polycarbonate – CAS Reg. No.103598-77-2

Color: Clear
Odor: Odorless

2. POTENTIAL HEALTH EFFECTS

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

SKIN CONTACT: Prolonged contact is essentially nonirritating to the skin. Mechanical injury only. If under normal processing conditions, material is heated to elevated temperatures; contact with the material may cause thermal burns.

SKIN ABSORPTION: No adverse effects anticipated by skin absorption.

INHALATION: No adverse effects are anticipated from single exposure to dust. Vapors/fumes released during thermal processing may cause respiratory irritation.

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

3. FIRST AID MEASURES

EYE CONTACT: Flush eyes with plenty of water; remove contact lenses after the first 1-2 minutes then continue flushing for several minutes. Only mechanical effects expected. If effects occur, consult a physician, preferably an ophthalmologist.

SKIN CONTACT: If molten material comes in contact with the skin, do not apply ice but cool under ice water or running stream of water. **DO NOT** attempt to remove the material from skin. Removal could result in severe tissue damage. Seek medical attention immediately.

INHALATION: Move person to fresh air; if effects occur, consult a physician.

INGESTION: If swallowed, seek medical attention. May cause gastrointestinal blockage. Do not give laxatives. Do not induce vomiting unless directed to do so by medical personnel.

NOTES TO PHYSICIAN: If burn is present, treat as any thermal burn, after decontamination. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

4. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES

FLASH POINT: Not applicable

METHOD USED: Not applicable

AUTOIGNITION TEMPERATURE: Not applicable

FLAMMABILITY LIMITS

LFL: Not applicable

UFL: Not applicable

HAZARDOUS COMBUSTION PRODUCTS: Under fire conditions polymers decompose. The smoke may contain polymer fragments of varying compositions in addition to unidentified toxic and/or irritating compounds. Hazardous combustion products may include and are not limited to carbon monoxide and carbon dioxide. Hazardous combustion products may include trace amounts of: phenol.

OTHER FLAMMABILITY INFORMATION: Dense black smoke is emitted when burned without sufficient oxygen. Mechanical handling can cause formation of dusts. To reduce the potential for dust explosion, do not permit dust to accumulate.

EXTINGUISHING MEDIA: Water, carbon dioxide, dry chemical.

FIRE FIGHTING INSTRUCTIONS: Keep people away. Isolate fire area and deny unnecessary entry. Cool surroundings with water to localize fire zone. Hand held carbon dioxide or dry chemical extinguishers may be used for small fires. Soak thoroughly with water to cool and prevent re-ignition.

PROTECTIVE EQUIPMENT FOR FIRE FIGHTERS: Wear positive pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, pants, boots, and gloves). If protective equipment is not available or not used, fight fire from a protected location or safe distance.



5. ACCIDENTIAL RELEASE MEASURES

ENVIRONMENTAL PRECAUTIONS: Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

CLEANUP: Sweep up. Collect with vacuum equipment. Collect in suitable and properly labeled containers.

6. HANDLING AND STORAGE

GENERAL HANDLING: No smoking, open flames or sources of ignition in handling and storage area. Good housekeeping and controlling of dusts are necessary for safe handling of product. Avoid breathing process fumes. Use with adequate ventilation. Do not get molten material in eyes, on skin or clothing. Pneumatic conveying and other mechanical handling operations can generate combustible dust. To reduce the potential for dust explosions, electrically bond and ground equipment and do not permit dust to accumulate. Dust can be ignited by static discharge.

STORAGE: Store in a dry place.

7. EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS: Control airborne concentrations below the exposure guideline. Good general ventilation should be sufficient for most conditions. Local exhaust ventilation may be necessary for some operations.

PERSONAL PROTECTIVE EQUIPMENT

EYE/FACE PROTECTION: Use safety glasses. If there is a potential for exposure to particles which could cause eye discomfort wear chemical goggles.

SKIN PROTECTION: No precautions other than clean body-covering clothing should be needed. Use gloves with insulation for thermal protection, when needed.

RESPIRATORY PROTECTION: For most conditions, no respiratory protection should be needed; however, if handling at elevated temperature without sufficient ventilation, use an approved air-purifying respirator. In dusty or misty atmospheres, use an approved particulate respirator.

EXPOSURE GUIDELINE: None established.

INGESTION: Use good personal hygiene. Do not consume or store food in the work area. Wash hands before smoking or eating.

EXPOSURE LIMITS: None established



8. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Clear, Film

ODOR: Odorless

VAPOR PRESSURE: Not applicable

VAPOR DENSITY: Not applicable

BOILING POINT: Not applicable

SOLUBILITY IN WATER: Not applicable

SPECIFIC GRAVITY: 1.19 – 1.23

9. STABILITY AND REACTIVITY

CHEMICAL STABILITY: Thermally stable at typical use temperatures.

CONDITIONS TO AVOID: Avoid temperatures above 797°F (425°C). Product can decompose at elevated temperatures.

INCOMPATIBILITY WITH OTHER MATERIALS: None known.

HAZARDOUS DECOMPOSITION PRODUCTS: Processing may release fumes which may include polymer fragments and other decomposition products. Fumes can be irritating. At temperatures exceeding melt temperatures polymer fragments can occur. Hazardous decomposition products depend upon temperature, air supply and the presence of other materials. Toxic gases are released during decomposition. Hazardous decomposition products may include bisphenol A and trace levels of hydrocarbon fragments, phenols, alkyphenols and diarylcarbonates.

HAZARDOUS POLYMERIZATION: Will not occur.

10. TOXICOLOGICAL INFORMATION (see Section 2 for Potential Health Effects.)

SKIN: The dermal LD50 – Has not been determined.

INGESTION: The oral LD50 – Has not been determined.

MUTAGENICITY: No relevant information found.



11. ECOLOGICAL INFORMATION

ENVIRONMENTAL FATE

MOVEMENT & PARTITIONING: No bioconcentration is expected because of the relatively high molecular weight (MW greater than 1000). In the terrestrial environment, material is expected to remain in the soil. In the aquatic environment, material will sink and remain in the sediment.

PERSISTENCE AND DEGRADABILITY: This water-insoluble polymeric solid is expected to be essentially unreactive in the environment over a period of many years. Surface photodegradation is expected with exposure to sunlight. No appreciable biodegradation is expected.

ECOTOXICITY: Not expected to be acutely toxic.

12. DISPOSAL CONSIDERATIONS

DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator.

FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: recycler, reclaimer, incinerator or other thermal destruction device.

13. TRANSPORT INFORMATION

DEPARTMENT OF TRANSPORTATION (D.O.T.): This product is not regulated by D.O.T. when shipped domestically by land.

CANADIAN TDG INFORMATION: This product is not regulated by TDG when shipped domestically by land.

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.



14. REGULATORY INFORMATION

NOTICE: The information herein is presented in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied is given. Regulatory requirements are subject to change and may differ from one location to another; it is the buyer's responsibility to ensure that its activities comply with federal, state or provincial, and local laws. The following specific information is made for the purpose of complying with numerous federal, state and provincial, and local laws and regulations. See other sections for health and safety information.

U.S. REGULATIONS

SARA 313 INFORMATION: To the best of our knowledge, this product contains no chemical subject to SARA Title III Section 313 supplier notification requirements.

SARA HAZARD CATEGORY: This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 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.

TOXIC SUBSTANCES CONTROL ACT (TSCA): All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements under 40 CFR 720.30 CEPA - Domestic Substances List (DSL) All substances contained in this product are listed on the Canadian Domestic Substances List (DSL) or are not required to be listed.

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

CANADIAN REGULATIONS

WHMIS INFORMATION: The Canadian Workplace Hazardous Materials Information System (WHMIS) Classification for this product is:

This product is not a "Controlled Product" under WHMIS.

