



The MSDS format adheres to the standards and regulatory requirements of the United States and may not meet regulatory requirements in other countries.

DuPont
Material Safety Data Sheet

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KAP00025 PYRALUX-AP
Revised 8-APR-2008

CHEMICAL PRODUCT/COMPANY IDENTIFICATION

Material Identification

Pyralux is a registered trademark of DuPont.

Product Use

OSHA Hazard Communication Standard (29 CFR 1910.1200) requirements for Material Safety Data Sheets do not apply to this product. This product is excluded as an article. Information on potential hazards associated with product fabrication and/or installation are discussed in this data sheet.

Company Identification

MANUFACTURER/DISTRIBUTOR

DuPont
1007 Market Street
Wilmington, DE 19898

PHONE NUMBERS

Product Information : 1-800-441-7515 (outside the U.S.
302-774-1000)
Transport Emergency : CHEMTREC 1-800-424-9300(outside U.S.
703-527-3887)
Medical Emergency : 1-800-441-3637 (outside the U.S.
302-774-1000)

COMPOSITION/INFORMATION ON INGREDIENTS

Components

Material	CAS Number	%
Copper Laminated to Polyimide Film		100

Exposure limits for the following may apply:

*Copper 7440-50-8

* Disclosure as a toxic chemical is required under Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR part 372.

Components (Remarks)

The specific identity of the polymer is withheld as a trade secret.

HAZARDS IDENTIFICATION
-----**Potential Health Effects**

INHALATION: Not a probable route of exposure for this material as shipped.

Traces of hazardous vapors may be evolved during fabrication activities at elevated temperatures, such as lamination or soldering. These vapors are present at such low levels during normal use of this material that no hazardous exposure is anticipated.

SKIN CONTACT: No irritation is expected from handling the material.

EYE CONTACT: Not a probable route of exposure for this material.

INGESTION: Not a probable route of exposure for this material.

Carcinogenicity Information

None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, OSHA or ACGIH as a carcinogen.

FIRST AID MEASURES
-----**First Aid****INHALATION**

If large amounts of dust are inhaled, or if exposed to fumes from overheating or combustion, remove to fresh air. Consult a physician if breathing is difficult or if symptoms persist.

SKIN CONTACT

Wash with soap and water after handling. If skin irritation develops, consult a physician.

EYE CONTACT

In case of contact with dust or particles, immediately flush eyes with plenty of water for at least 15 minutes. Call a physician if irritation persists.

INGESTION

Ingestion is not an expected route of exposure during normal use of the product. If ingested, consult a physician immediately.

FIRE FIGHTING MEASURES
-----**Flammable Properties**

Not a fire or explosion hazard.

The flammability characteristic of polyimide film is reported as "self-extinguishing".

Polyimide film chars but does not burn. However, polyimide film will burn in an atmosphere of 100% oxygen. The major off-gases are carbon dioxide and carbon monoxide.

The processing of polyimide films can cause the generation of static charge. Precautions for static charges should also be taken when removing plastic films used as protective packaging for polyimide films.

Extinguishing Media

Use any available extinguishing media.

Fire Fighting Instructions

None required.

ACCIDENTAL RELEASE MEASURES
-----**Safeguards (Personnel)**

NOTE: Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) sections before proceeding with clean-up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean-up.

Accidental Release Measures

Practice good housekeeping to prevent and eliminate slipping hazards.

HANDLING AND STORAGE
-----**Handling (Personnel)**

Wash thoroughly after handling.

Handling (Physical Aspects)

Thin copper-clad laminates can have sharp metal edges. Personnel handling these materials should be cautioned and proved with suitable protective gloves to prevent cuts.

(HANDLING AND STORAGE - Continued)

Storage

Store away from flammable materials.

EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls

Safe handling of polyimide films at high temperatures (above 200 C/ 392 F) requires adequate ventilation. If small quantities of polyimide film are involved, normal air circulation may be all that is needed in case of overheating. Whether or not existing ventilation is adequate at higher temperatures will depend on the combined factors of film quantity, temperature and exposure time.

Personal Protective Equipment

Safety glasses are recommended as good industrial practice.

Respirators are not needed for normal use.

Special protective clothing is not needed for normal use. Gloves are recommended as good industrial practice.

Exposure Guidelines

Applicable Exposure Limits

Copper

PEL (OSHA)	: 0.1 mg/m ³ , fume, as Cu, 8 Hr. TWA 1 mg/m ³ , mist, as Cu, 8 Hr. TWA
TLV (ACGIH)	: 0.2 mg/m ³ , fume, 8 Hr. TWA 1 mg/m ³ , dusts and mists, as Cu, 8 Hr. TWA
	Notice of Intended Changes (2007) Withdrawn from the Notice of Intended Changes
AEL * (DuPont)	: None Established

* AEL is DuPont's Acceptable Exposure Limit. Where governmentally imposed occupational exposure limits which are lower than the AEL are in effect, such limits shall take precedence.

PHYSICAL AND CHEMICAL PROPERTIES

Physical Data

Solubility in Water : Insoluble
Form : Opaque film

STABILITY AND REACTIVITY
-----**Chemical Stability**

Stable at normal temperatures and storage conditions.

Incompatibility with Other Materials

None reasonably foreseeable.

Decomposition

At temperatures >285 C, traces of diethyl phthalate, benzophenone, acetone, acetonitrile and octene isomers have been measured by Headspace Gas Chromatography/Mass Spectrometry(Headspace GC/MS). At temperatures above 400 C, the major off-gases of polyimide film are carbon monoxide and carbon dioxide.

The quantity and composition of decomposition products will depend on the combined factors of film quantity, temperature and exposure time.

ECOLOGICAL INFORMATION
-----**Ecotoxicological Information**

Aquatic Toxicity:

Film is insoluble.

DISPOSAL CONSIDERATIONS
-----**Waste Disposal**

Incinerate or landfill in accordance with Federal, State or local laws and ordinances.

TRANSPORTATION INFORMATION
-----**Shipping Information**

DOT
Proper Shipping Name : NOT APPLICABLE
Hazard Class : NOT REGULATED

REGULATORY INFORMATION

U.S. Federal Regulations

TSCA Inventory Status : In compliance with TSCA Inventory requirements for commercial purposes.

RCRA

Under RCRA, it is the responsibility of the product user to determine at the time of disposal whether a material containing the product or derived from the product should be classified as a hazardous waste (40 CFR 261.11).

OTHER INFORMATION

Additional Information

MEDICAL USE: CAUTION: Do not use in medical applications involving permanent implantation in the human body. For other medical applications see DuPont CAUTION Bulletin No. H-50102.

The data in this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.

Address : DuPont
 Circleville, OH
Telephone : 740-474-0111

Indicates updated section.

This information is based upon technical information believed to be reliable. It is subject to revision as additional knowledge and experience is gained.

End of MSDS