

## Material Safety Data Sheet

(The composition information contained in this document is provided to satisfy the requirements of Regulation (EC) No 1907/2006, Article 33. Other information is provided voluntarily and not subject to regulatory requirement)  
(Revised 12-February-2013)

### 1. CHEMICAL PRODUCT/COMPANY IDENTIFICATION

#### Material Identification

NuRoll Polyester Film Type PKRA

#### Tradenames and Synonyms (Remarks)

This data sheet covers the following " NuRoll® Films " Types: PKRA

#### Company Identification

Nuroll SpA  
Strada Conte  
81052 – Pignataro Maggiore (CE)  
ITALY

#### PHONE NUMBERS

Product Information : +39 0823654090

Emergency : +39 0823654090

#### MSDS Technical info

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### 2. HAZARDS IDENTIFICATION

#### Classification on the substance or mixture

NuRoll Films PKRA is a registered trademark of NuRoll® Films of biaxially oriented chemical and coated, with a PVdC copolymer water latex, film made from polyethylene terephthalate.

#### Labels elements

As an article the product does not need to be labelled in accordance with EC-directives or respective national laws

#### Product Information

Appearance: Solid film

Odor: Odorless

No known health hazards at ambient temperature.

#### Potential Health Effects

Unlikely to cause harmful effects under normal conditions of handling and use.

High temperature operations using "NuRoll" Films can produce fumes or vapours of decomposition products of polyethylene terephthalate, isophthalate polymer and polyvinylidene chloride. The type and quantity of the fumes or vapours will vary based on temperature, time and other variables. These fumes or vapours may cause eye, nose, throat or respiratory irritation, or other effects such as headache.

Molten polymer can cause thermal burns.

Exposure to components used as fillers is not likely as these are encapsulated in the polymer and fully incorporated into the film.

Additives in this product do not present a respiration hazard unless the product is ground to a powder respirable size and the dust is inhaled. All dusts are potentially injurious to the respiratory tract if respirable particles are generated and inhaled. Dust may form explosive mixtures in air.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### Components

<i>Material</i>	<i>CAS Number</i>	<i>%</i>
<b>Base Film:</b>		
Polyethylene Terephthalate	25038-59-9	80-90
<b>PVdC Coating:</b>		
CoPolyVinylidene Chloride	9002-85-1	7-14
<b>The following Fillers and/or Additives may be present :</b>		
Silica	7631-86-9	< 1

#### **Components (Remarks)**

Material is not known to contain Toxic Chemicals or dangerous substances under EEC Directives and USA regulations

No classifiable hazardous ingredient (s)

The above products are REACH compliant.

### 4. FIRST AID MEASURES

#### INHALATION

No specific intervention is indicated as the compound is not likely to be hazardous by inhalation. However, if exposed to fumes from overheating or combustion, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician if necessary.

#### SKIN CONTACT

The compound is not likely to be hazardous by skin contact but cleansing the skin after use is advisable. If molten material gets on skin, cool rapidly with cold water. Do not attempt to remove material from skin. Obtain medical treatment for thermal burn.

#### EYE CONTACT

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Call a physician.

#### INGESTION

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

## Notes to Physicians

Prolonged eye irritation may occur from pieces of debris sticking to the eyeball or eyelids.

## 5. FIRE FIGHTING MEASURES

### Flammable Properties

The films can be combusted only by remaining in contact with flame. If flame source is stationary, the films will shrink away and self-extinguish.

The film remaining in contact with flame can continue to burn slowly, dropping flaming liquid which can spread the fire.

Hazardous gases/vapours produced in fire are carbon dioxide, carbon monoxide, organic acids, aldehydes, alcohols, hydrogen chloride (HCl).

The composition of combustion products depends on combustion conditions. Substances hazardous to health (toxic, corrosive, carcinogenic) can be produced in combustion process.

During processing, film may pick up a strong static charge. Avoid discharge into dust or solvent laden air as a flash fire or explosion may result.

### Extinguishing Media

Water, Foam, Dry Chemical, CO<sub>2</sub>.

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment

### Fire Fighting Instructions

Keep personnel removed and upwind of fire. Wear self-contained breathing apparatus. Wear full protective equipment.

## 6. ACCIDENTAL RELEASE MEASURES

NOTE: Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) sections before proceeding with clean-up.

Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean-up.

Spill Clean Up: sweep up to avoid slipping hazard.

Scrap film generates through processing, eg. slitting / shredding, should be swept up and disposed of on drums or plastic bags.

## 7. HANDLING AND STORAGE

### Handling (Personnel)

Do not breathe vapors or fumes that may be evolved during processing. Avoid skin contact with sharp film edges.

### Handling (Physical Aspects)

Rolls of film may telescope. Use caution when handling. Rolled film should be stored at intended processing temperature for approximately 24 hours prior to use. Plastic packaging materials can pick up static charge. Polyester film rolls packaged with

shrinkwrap (or other plastic overwrap) should be opened or unwrapped only in non-process areas where ignition sources such as solvents are not in use or in storage.

### **Process Hazards**

Static – in most processes in which there is movement of film (of any kind) over metal other rollers, surface electrical charges develop on the film. Static charges should be eliminated or reduced as much as possible, since they can provide a source of ignition for flammable vapours and gases or may give electrical shock to operators. Use either passive or active static eliminators to reduce the electrical charges

### **Reeling**

Machine design and work practices should be organised to remove the danger of trapping parts of the body, or clothing, in reeled materials and between film and machinery parts

### **Heating during processing**

Extra care should be taken to prevent from contact with hot material. All polymer degrade to some extent at their processing temperature, an effect which increasing temperature. The film has relatively high upper melting point of 255-260 °C. prior to this temperature, film shrinkage will occur – the degree being time / temperature related.

Chemicals produced during thermal decomposition are highly dependent upon temperature and conditions. It is therefore impossible to be precise about which substances may be evolved. However, it is only the minor components which vary substantially. The major components are given in section 10. Atmospheric levels should be controlled using the principle of good occupational hygiene practice.

### **Storage**

Store away from heat and sources of ignition. Do not store in direct sunlight. Avoid prolonged storage in high or low temperatures. Recommended storage at ambient temperatures. Avoid extremes of humidity.  
It is recommended not to stack the pallets.

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

### **Engineering Controls**

General exhaust is acceptable except where overheating can occur during processing. High temperature operations may require use of local exhaust ventilation to keep employee exposure below recommended limits. Movement of film over metal or rollers will produce a surface static charge on the film. Consider processing design and procedures that will reduce or dissipate this charge, and eliminate the possibility of unwanted electrical discharge to people, equipment and materials.

### **Personal Protective Equipment**

#### **EYE/FACE PROTECTION**

Wear safety glasses.

#### **RESPIRATORY PROTECTION**

Respirators are not needed for normal use.

Where airborne concentrations are expected to exceed exposure limits, a NIOSH approved respirator should be selected based on the form and concentration of the contaminant in air.

#### PROTECTIVE CLOTHING

If there is potential for contact with hot/molten material, wear heat resistant impervious clothing and footwear. Special protective clothing is not needed for normal use. Gloves are recommended as good industrial practice.

### Exposure Guidelines

Occupational Exposure Limits

Polyethylene Terephthalate

PEL (OSHA) None Established

TLV (ACGIH) None Established

TWA total inhalable dust 10 mg/m<sup>3</sup>, 8 hr.

TWA respirable dust 5 mg/m<sup>3</sup>, 8 hr.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Form :	Transparent film
Color :	Colourless to yellow-brown (depending on film aging)
Odor :	Negligible
Melting Point :	~260 °C (Base film) ~117 °C (Coating layer)
Solubility in Water :	Insoluble
Specific Gravity :	1,4 g/cm <sup>3</sup>
Vapor Pressure :	Negligible at 20 °C (68 °F)

## 10. STABILITY AND REACTIVITY

### Chemical Stability

Stable at normal temperatures and storage conditions.

Incompatibility with other materials: Strong acids and bases may hydrolyze the film.

### Decomposition

Combustion can produce carbon oxides and hydrocarbon oxidation products, including organic acids, aldehydes, esters and alcohols.

### Polymerization

Polymerization will not occur.

## 11. TOXICOLOGICAL INFORMATION

Animal Data

Polyethylene Terephthalate

Oral ALD: > 10,000 mg/kg in rats

Polyethylene Terephthalate is not a skin irritant, but is a mild eye irritant. Toxic effects from short exposures by inhalation resulted in no adverse effects.

Toxic effects from short exposures by ingestion resulted in no adverse effects.

Animal testing indicates that Polyethylene Terephthalate has not carcinogenic, mutagenic, developmental or reproductive effects.

Inhalation: combustion products may be irritant. High concentrations of dust may be irritant to the respiratory tract

## **12. ECOLOGICAL INFORMATION**

### **AQUATIC TOXICITY:**

No information is available. Toxicity is expected to be low based on insolubility in water.

## **13. DISPOSAL CONSIDERATIONS**

### **Waste Disposal**

Preferred options for disposal are (1) recycling, (2) incineration with energy recovery, and (3) landfill. The high fuel value of this product makes option 2 the most important way for material that cannot be recycled. Treatment, storage, transportation, and disposal must be in accordance with applicable European, State, National and Local regulations.

## **14. TRANSPORTATION INFORMATION**

Product not dangerous for Transport

Proper Shipping Name : Not regulated according to 92/32/EEC Directive

## **15. REGULATORY INFORMATION**

EU Regulation: this safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006 and CLP regulation. Not a dangerous substance according to GHS as the substance is not intended to be released from article.

## **16. OTHER INFORMATION**

**USE:** Printing, packaging, laminating, coating, for food contact application

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

*However it will remain the responsibility of the purchase / user to determine the suitability of each product for a particular application and shall assume all risk and liability in connection therewith. No warranty is implied with regard to information or recommendations given by our distributors and subcontractors.*