



# Flex Film

## SAFETY DATA SHEET

SAFETY DATA SHEET In accordance with Regulation Annex I to Commission Regulation 453/2010  
DATE OF ISSUE 24 February 2014  
UPDATED ON 11 January 2017

## SAFETY DATA SHEET

### Bi axially oriented Poly ethylene terephthalate film (BOPET)

#### 1.0 IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY

##### 1.1 Product identifier:

REACH Registration Number	Not applicable		
EC# & CAS#	<b>Name of substance</b>	<b>CAS</b>	<b>EC</b>
	Poly ethylene terephthalate	25038-59-9	Not available
	diantimony trioxide	1309-64-4	215-175-0
	orthophosphoric acid	7664-38-2	231-633-2
	silicon dioxide	7631-86-9	231-545-4
Trade Name:	aluminium	7429-90-5	231-072-3
Chemical Formula	FLEXPET™ & FLEXMETPROTECT™		
	UVCB		

Manufacturing Sites: \_\_\_\_\_

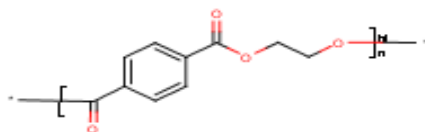
- 1) India: UFLEX LIMITED (Film Business), A-1, Sector-60, NOIDA - 201 301, U.P. INDIA., Tel: +91 (120) 4002121, 3982121, Fax: +91 (120) 2580511, 2580003, E-Mail: enquiry@flexfilm.com
- 2) UAE: FLEX MIDDLE EAST FZ.E, P.O. Box 17930,, Jebel Ali Free Zone,, Dubai, United Arab Emirates, Tel: +971 4 810 2300, Fax: +971 4 883 9683, E-Mail: enquiry@flexfilm.com
- 3) Mexico: FLEX AMERICAS S.A. de C.V., Boulevard de los Rios 5680,, Zona Puerto Industrial Altamira,, Tamaulipas Mexico C.P. 89603, Tel: +52 (833) 260 8100, Fax: +52 (833) 260 8111, E-Mail: enquiry@flexfilm.com
- 4) Egypt: FLEX P. FILMS (EGYPT) S.A.E, Plot no. R2 in Engineering Square (e2),, Plot no. 3 in North Extension of Industrial Zone,, 6 October City,, Arab Republic of Egypt, Tel: +202 38283000, Fax: +202 38283050, E-Mail: enquiry@flexfilm.com
- 5) POLAND: Flex Films Europa Sp. z o.o., 62 300 Wrzesniaul, Gen.Wladyslawa Sikorskiego 48, Poland., Phone: +48506132393 Website: [www.flexfilm.com](http://www.flexfilm.com) NIP 779-23-87-276 KRS 0000376525
- 6) USA: FLEX FILMS (USA) INC., 1221, North Black Branch Road,, Elizabethtown, KY 42701, Tel: +1 270 982 3456, Fax: +1 270 982 3457, E-Mail: enquiry@flexfilm.com



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### Structural Formula



### 1.2 Relevant identified uses of the substance or mixture and uses advised against

#### Relevant identified uses:

- Flexible packaging application.
- Decorative application.
- Industrial application.
- Food packaging.
- Building protection.
- Cosmetic packaging.
- Electrical insulation & other applications

**Uses advised against:** No data available.

### 1.3 Details of the Supplier of the Safety Data Sheet

#### Manufacturer/Supplier

UFLEX LIMITED

#### Street address/P.O. Box

A-1,SECTOR-60,NOIDA – 201301

#### Country ID/Postcode/Place

(U.P), INDIA

#### Telephone number (if possible, indicate telefax)

+91 120-3982121, 3982535, 3982658  
Fax: +91 120-2580152, 2580511, 2580003

#### Email ID

[jitendrak.sharma@flexfilm.com](mailto:jitendrak.sharma@flexfilm.com)  
Web site : [www.flexfilm.com](http://www.flexfilm.com)

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National contact:

Mob. No. +91-9717355528

Phone +91-120-3982-249

### 1.4 Emergency telephone number

Only available during office hours.

+91 120-3982121, 3982535, 3982658

## 2.0 HAZARDS IDENTIFICATION

### 2.1. Classification of the substance or mixture to CLP

#### 2.1.1. Classification according to Regulation (EC) No 1272/2008 (CLP/GHS)

Not a dangerous substance according to GHS.

This substance is not classified as dangerous according to Directive 67/548/EEC.

#### 2.1.2. Classification according to Directive 67/548/EEC (DSD)

This substance is not classified as dangerous according to Directive 67/548/EEC.

2.1.3 Additional information: No data available.

### 2.2. Label elements (CLP only) Labeling according to Regulation (EC) No 1272/2008 (CLP/GHS)

Classification and labeling according to EU Regulation (EC) 1272/2008 (CLP Regulation) and Globally Harmonized System (GHS):

#### Label elements

GHS Pictogram	no labelling required (no dangerous properties)
Signal Word	No signal word
Hazard Statement	no classification required (no dangerous properties)
Precautionary Statement prevention	P280: Wear protective gloves/protective clothing/eye protection/face protection P262: Do not get in eyes, on skin, or on clothing
Precautionary Statement Storage	P402+404: Store in a dry place. Store in a closed container

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### 2.3. Other hazards Substance meets the criteria for PBT OR vPvB according to Regulation (EC) 1907/2006, Annex XIII

None

### 3.0 COMPOSITION/INFORMATION ON INGREDIENTS

CAS No	EC No	%Purity(w/w)	Remarks
7429-90-5	231-072-3	Deposition of a thin layer up to 300 angstroms thickness.	None
7631-86-9	231-545-4	Max 0.4 %	None
7664-38-2	231-633-2	0.03%	None
1309-64-4	215-175-0	0.035% ( as Antimony)	None
25038-59-9	Not available	99.35 to 99.75 %	None

### 4.0 FIRST AID MEASURES

#### 4.1. Description of first aid measures

<b>General notes</b>	No special measures necessary provided product is used correctly.
<b>Eye contact</b>	Exposure to hot molten material. In this case: Rinse with plenty of water. Seek immediate special treatment at hospital or medical center in case of irritation caused by vapors or fumes wash with water and seek medical advice.
<b>Skin Contact</b>	Exposure to hot molten material. In this case: Rinse with plenty of water. Do NOT remove clothing (risk of sticking to skin) or do not try removing adhering material. Seek medical advice immediately. However, use of protective gloves/clothing is good industrial practice
<b>Inhalation</b>	Fumes and vapours produced by heated or burnt material may be irritating for the respiratory track. Bring patient into fresh air; get medical advice if the symptoms continue.
<b>Ingestion</b>	Ingestion is not an expected route of exposure during normal use of the product. If ingested, call a physician immediately.

#### 4.2. Most important symptoms and effects, both acute and delayed

Decomposition products caused by overheating polyethylene terephthalate may cause skin, eye or respiratory tract irritation.

#### 4.3. Indication of any immediate medical attention and special treatment needed

No data available.

### 5.0 FIRE-FIGHTING MEASURES

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### 5.1. Extinguishing media:

**Suitable extinguishing media:** Water mist only to cool the surface exposed to fire, carbon dioxide, foam, Halon, AFFF(Aqueous film forming foam)

**Unsuitable extinguishing media:** Do not use water jets for extinguishing fire, since they could help to spread the flames.

### 5.2. Special hazards arising from the substance or mixture

#### Hazardous combustion products:

Carbon monoxide, carbon dioxide, alcohols, acetaldehydes, organic acids, aluminium fumes, aluminium oxides.

### 5.3. Advice for fire-fighters

Stop the fire spreading, call the Fire brigade immediately, evacuate non-essential personal. Protective clothing's, goggles and self contained breathing equipment should be made available for fireman.

### Other information

#### Special Remarks on Fire Hazards

Equipment should be thoroughly decontaminated after use. Wear self-contained breathing apparatus and full protective equipments.

## 6.0 ACCIDENTAL RELEASE MEASURES

### 6.1. Personal precautions, protective equipment and emergency procedures

#### 6.1.1 For non-emergency personnel

##### Protective equipment:

Use personal protective clothing

#### 6.1.2 For emergency responders

Handle the product using protective gloves resistant to the chemicals exposed. Avoid contact with skin and inhalation of its vapours or smoke. Maintain adequate ventilation in the working area after spilling

### 6.2 Environmental precautions:

No special environmental precautions required.

### 6.3 Methods and material for containment and cleaning up

#### 6.3.1 For containment:

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Contaminated protective clothing should be segregated in such a manner so that there is no direct personal contact by personnel who handle, dispose, or clean the clothing. Quality assurance to ascertain the completeness of the cleaning procedures should be implemented before the decontaminated protective clothing is returned for reuse by the workers. Contaminated clothing should not be taken home at end of shift, but should remain at employee's place of work for cleaning.

### 6.3.2 For cleaning up:

Sweep up and recover, or mix material with moist absorbent and shovel into suitable chemical waste container.

### 6.3.3 Other Information:

No data available.

### 6.4 Reference to other sections:

None

## 7.0 HANDLING AND STORAGE

### 7.1 Precautions for safe handling

#### Protective measures:

- Handle in accordance with good industrial hygiene and safety practices.
- Keep original wrapping on the film until it is used. In case the roll is partially used, the balance roll should be preserved on the standard packing with sticker.
- Film rolls should be moved only with equipment designed for the purpose as film rolls and pallets are heavy. Film edges are sharp and may cause cuts/wounds, handle with most care.

#### Measures to prevent fire:

- Stop the fire spreading, call the Fire brigade immediately, evacuate non-essential personal. Protective clothing's, goggles and self contained breathing equipment should be made available for fireman.
- Keep away from ignition sources.
- Observe the general rules of industrial fire protection.

### 7.2 Conditions for safe storage, including any incompatibilities

#### Technical measures and storage conditions:

- Need to be stored in a close warehouse and should not be exposed to direct sunlight or light sources and from humidity.

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It is recommended to store below 35 °C in dry place.

- Use both the films by FIFO system & it is advised to rotate the film stock.
- **Shelf life: 9 months for bare film ( FLEXPET™ ) and 6 months for metallized film ( FLEXMETPROTECT™ ) from the date of manufacturing**

### Packaging materials:

Keep packages closed to prevent contamination.

### 7.3. Specific end use(s)

Same as mentioned in section 1.2

## 8.0 EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters

No data available.

### 8.2 Exposure controls

- Use local ventilation to control fumes from hot processing.
- Standard usage condition of material does not generate the dust particles. The following values apply to nuisance dust which may be gormed while cutting, girnding, stamping. Total dust : 10 mg/m<sup>3</sup>  
Respiratory dust : 5 mg/m<sup>3</sup>

#### 8.2.1. Occupational Exposure controls

No data available.

#### 8.2.2 Personal protection equipment:

Use static controls. Static charges can build up and ignite dust or solvent laden atmospheres. Design precautions into processes that can create dust, such as pneumatic conveying systems, grinding and other physical operations. There is the potential for a dust explosion hazard.

##### 8.2.2.1 Eye and face protection:

splash goggles

##### 8.2.2.2 Skin protection:

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Wear overall chemical splash goggles when the possibility exists for eye or face contact from airborne material. If there is potential for contact with hot/molten material, wear heat-resistant impervious clothing and footwear.

### Hand protection:

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

### Other skin protection:

If contact with hot molten material is possible, wear heat insulating and chemical proof gloves and clothes and face shield and goggles for eyes

### 8.2.2.3 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 and in accordance with OSHA Respiratory Protection Standard CFR 1910.134.

### 8.2.2.4 Thermal hazards:

No data available.

### 8.2.3 Environmental exposure controls:

No data available.

**Other personal Protection:** Slabs of film on the floor can be slippery. Exercise due care in areas where slippage can occur.

## 9.0 PHYSICAL AND CHEMICAL PROPERTIES

\* These are indicative values only and should not be regarded as product specification.

### 9.1 General Information

Physical state at 20 °C	Solid
Color	Glossy, Silver Plastic film.
Odor	Odorless
Appearance	Flexible Plastic Film

### 9.2 Important health, safety and environmental information

pH(1% soln/water)	No data available.
Molecular Weight	No data available.
Boiling point/boiling range	No data available.

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<b>Melting point</b>	255-265 °C. (Co polyester layer or coatings can melt at lower temperatures.)
<b>Density</b>	1.3 - 1.4 gm/cm <sup>3</sup>
<b>Flash point</b>	440°C ASTM 09129-68
<b>Auto ignition point</b>	480° C- ASTM 10929-68
<b>Combustion</b>	The film burns along with flame. In case of non contact of flame, it will shrink and estinguish of its own. The molten material may drip and ignite fire. Combustion will evolve irritant vapours. At complete combustion the major products formed are Carbon di Oxide, Carbon mono Oxide and water.
<b>Water solubility:</b>	Practically insoluble.
<b>In organic solvents at 20°C</b>	Insoluble in common organic solvents.

### 9.3 Other information

**Std. enthalpy of formation  $\Delta_f H^\circ_{298}$**  No data available.

**Standard molar antropy  $S^\circ_{298}$**  No data available.

## 10. STABILITY AND REACTIVITY

### 10.1 Reactivity

Stable under normal conditions of use up to 45°C.

### 10.2 Chemical stability

Stable under normal conditions of use up to 45°C.

### 10.3 Possibility of hazardous reactions

No hazardous reactions known under normal atmospheric conditions.

### 10.4 Conditions to avoid

- Strong acid and base may hydrolyze the film. Avoid contact with strong oxidizing agent.
- Do not heat to temperature exceeding 235 deg. C

### 10.5 Incompatible materials

Acetaldehyde (CH<sub>3</sub>CHO) is the dominant, volatile product that is formed during thermal degradation of PET.

### 10.6 Hazardous decomposition products

When heated to decomposition it emits acrid smoke and irritating fumes.

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### 11 TOXICOLOGICAL INFORMATION

#### 11.1. Information on toxicological effects

##### Acute effects (acute toxicity, irritation and corrosivity) Acute Toxicity

**Skin corrosion/irritation:** No significant irritation expected in normal conditions of use. The contact with hot molten material may cause severe burns.

**Serious eye damage/irritation:** No data available.

**Respiratory or skin sensitization:** No data available.

**Germ cell mutagenicity:** No data available.

**Summary of evaluation of the CMR properties:** IARC: No component of this product present at levels greater than or equal to 0.1% is identified as Probable, possible or confirmed human carcinogen by IARC.

**Mutagenic Effects:** No data available.

**Reprotoxic Effects:** No data available.

#### Other Toxic Effects on Humans:

<b>Inhalation:</b>	No data available.
<b>Eyes:</b>	Eye contact is not expected during normal use of product. If heated to higher temperature (>260°C) the product may form vapors or fumes which may cause irritation to eyes. Sharp cut pieces may cause eye damage.
<b>Ingestion</b>	Material is biologically inert and have no risk of ingestion in normal use, in case injected please seek medical advice.
<b>Chronic toxicity</b>	The product is harmless and biologically inert.

#### NIOSH Immediately Dangerous To Life or Health Concentration (IDLH):

No data available.

#### Specific target organ toxicity (single exposure)

No data available.

#### Specific target organ toxicity (repeated exposure)

No data available.

**Aspiration hazard:** No data available.

#### 11.1.188 Acute Toxicity:

Method: No data available.

**Manufacturing Sites:** \_\_\_\_\_

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# Flex Film

## SAFETY DATA SHEET

### 12. ECOLOGICAL INFORMATION

#### 12.1 Ecotoxicity

##### 12.1.1 Acute aquatic toxicity (With M factor)

Method	Results
No data available.	
12.1.2. Chronic aquatic toxicity: freshwater	
No data available.	
12.1.3. Chronic aquatic toxicity: marine waters	
No data available.	
12.1.4. Sediment toxicity	
No data available.	
12.1.5. Soil toxicity	
No data available.	
12.1.6. Toxicity to micro-organisms in STP	
No data available.	
12.2 Persistence and degradability	
Non biodegradable, non compostable	
12.3 Bioaccumulative potential	
No data available.	
12.4 Mobility in soil	
No data available.	
12.5 Results of PBT and vPvB assessment	
No data available.	
12.6 Other adverse effects	
No data available.	
12.7 Additional information	

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## SAFETY DATA SHEET

PURE CULTURE: After a 3-week incubation which tested for degradation by fungi, polyethylene terephthalate showed no growth, therefore no susceptibility to attack by fungi (1).

### 13 DISPOSAL CONSIDERATIONS

#### 13.1. Waste treatment methods

##### 13.1.1 Product / Packaging disposal:

##### Waste codes / waste designations according to LoW:

Treatment, storage, transportation, and disposal must be in accordance with applicable Federal, State/Provincial, and Local regulations.

##### 13.1.2 Waste treatment-relevant information:

The most favorable course of action is to use an alternative chemical product with less inherent propensity for occupational exposure or environmental contamination. Recycle any unused portion of the material for its approved use or return it to the manufacturer or supplier. Ultimate disposal of the chemical must consider: the material's impact on air quality; potential migration in soil or water; effects on animal, aquatic, and plant life; and conformance with environmental and public health regulations.

This product should not be dumped, spilled raised or washed into sewers or public waterways

##### 13.1.3 Sewage disposal-relevant information:

No data available.

##### 13.1.4 Other disposal recommendations:

##### Spill, leak or release

Pick up film to avoid a slipping hazard.

### 14 TRANSPORT INFORMATION

14.1. UN number	Not regulated.
14.2. UN proper shipping name	Not regulated.
14.3. Transport hazard class (as)	Not regulated.
14.4. Packing group	Not regulated.
14.5. Environmental hazards	Not regulated.

### 15 REGULATORY INFORMATION

#### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

EU regulations: 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.

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## SAFETY DATA SHEET

### 15.2. Chemical Safety Assessment

**Chemical safety assessment:** A chemical safety assessment has been carried out for the substance or the mixture by the supplier.(LR)- No

### 16 OTHER INFORMATION

#### Technical Advice

Use data given in this Safety Data Sheet and make an inventory list of all chemicals used in the factory.

Create a Register for Workplace Chemicals.

Set priorities concerning the safety in the organization.

Create emergency plans for the assessed hazards.

Organize occupational health care and regular surveys as necessary.

Organize contacts with authorities/laboratories to create a monitoring system for chemical hazards, and to reliably measure and/or estimate occupational exposures to chemicals when needed.

Start collecting case studies of accidents and sickness records in the enterprise to create a basis for priority measures in the control of hazards.

Involve workers in safety organizations, such as the system of Safety Representatives and Committees.

Do regular inspection using checklists made for the particular chemicals and chemical processes in use.

Mark and label all chemicals.

Keep at hand an inventory list of all chemicals handled in the place of work together with a collection of Chemical Safety Data Sheets for these chemicals;

Train workers to read and understand the Chemical Safety Information, including the health hazards and routes of exposure; train them to handle dangerous chemicals and processes with respect.

Plan, develop and choose the safe working procedures.

Reduce the number of people coming into contact with dangerous chemicals.

Reduce the length of time and/or frequency of exposure of workers to dangerous chemicals.

Train workers to know and understand the emergency procedures.

Equip and train workers to use personal protective equipment properly after everything possible has been done to eliminate hazards by means of other methods.

#### Key literature references and sources for data

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## SAFETY DATA SHEET

PubMed Toxicology  
ECHA  
OECD  
HSDB® - Hazardous Substances Data Bank  
Registry of Toxic Effects of Chemical Substances (RTECS)

### **Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:**

Not a dangerous substance according to GHS as the substance is not intended to be released from article.

### **Relevant R-phrases and/or H-statements (number and full text):**

This substance is not classified as dangerous according to Directive 67/548/EEC.

### **Further information:**

#### **Created By:**

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