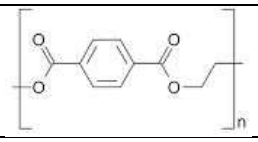
Safety Data Sheet

(Globally Harmonized System SDS)

Of Polyethylene Terapthalate film

Section 1.0	Identification of the substance and the company
1.1	**Product Identifier**
Product name	**Polyester film (BOPET), Corona and Plain, Metalised and coated(Including all thickness range)**
Trade Name	**Sarafil**
Synonyms	Bi axially oriented Polyethylene Polyester film (BOPET)
CAS no	Poly Ethylene Terapthalate , CAS No-25038-59-9 Silicon Dioxide, CAS no- 7631-86-9
Chemical Formula, Name	(C10H8O4)n, Poly Ethylene Terapthalate polymer, Min 90%
Structural Formula	
1.2	**Relevant identified uses of the substance and uses advised against**
Relevant identified uses	• Flexible packaging, Printing, Lamination • Food packaging, Lidding • Industrial, Electrical, Decorative • Building protection, ducting. • Cosmetic packaging • Label, Cards • Safety film, Thermal lamination
Uses advised against	No data available.
1.3	**Details of the Supplier of the Safety Data Sheet**
Manufacturer/Supplier	**Polyplex Corporation Ltd**.
Street address/P.O. Box	B-37, Sector-1, Noida, Distt. Gautam Budh Nagar,
Country ID/Postcode/ Place	Uttar Pradesh (UP), India, Pin-201301
Telephone number & Fax	Tel: +91 120 2443716-19 Fax: +91 120 2443723
Email ID	mintoohazarika@polyplex.com, website:www.polyplex.com
National Contact	Mentioned against respective site address below
Manufacturing sites:	**India: Site I** **Polyplex Corporation Limited** Lohia Head Road, Khatima-262308, Distt: Udham Singh Nagar, Uttrakhand, India Tel # 05943 250165 Fax # 05943 250069 E-mail :lbisht@polyplex.com **India: Site II** **Polyplex Corporation Ltd** Plot no. 227MI-228MI, Vikrampur, Bannakhera Road

	Bazpur-262401, Distt: Udham Singh Nagar, Uttrakhand Tel No:+91 5949281592-94, 96 E-mail :atyagi@polyplex.com; **Thailand:** **Polyplex (Thailand) Public Company Ltd.** Siam Eastern Industrial Park, 60/24 Moo 3,Tambol Marbyangporn Amphoe Pluakdaeng, Rayong-21140 Tel: + 663 889 1352-4, Fax: +663 889-1358, E-Mail: rksingh@polyplex.com **Turkey:** Polyplex Europa Polyester Film San. Tic. A.S Karamehmet Mahallesi Avrupa Serbest Bölgesi 3. Sok No: 4 59930 Ergene, Tekirdağ/ Turkey Tel: +90-282 691 10 51, Fax: +90 282 691 10 52, E-Mail: bkizilkaya@POLYPLEX.com **USA:** **Polyplex USA LLC** 3001 Mallard Fox Dr NW, Decatur, AL 35601 (256) 686-2950, Fax: (256) 686-2951, E-Mail: dkdubey@Polyplex.com **Indonesia:** **PT. Polyplex Films Indonesia** Jl. Modern Industri XVIII Blok AN No. 7, Kawasan Industri Modern, Desa Nambo Udik, Kecamatan Cikande, Kabupaten Serang - 42186 (Banten), INDONESIA **E Mail:**skjha@polyplex.com
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2.0	**Hazard Identification**
2.1	**Classification of the substance or mixture to CLP**
2.11 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 **1272/2008** *(amending and repealing Directive 67/548/EEC and 1999/45/EC, and Regulation (EC) No 1907/2006*)
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 labeling required (no dangerous properties)
Signal Word	No signal word
Hazard Statement	• no classification required (no dangerous properties)

	• P280: Wear protective gloves/protective clothing/eye protection/face protection
Precautionary Statement prevention	• P261: Avoid breathing dust/fume/gas/mist/vapors/spray • 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
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
25038-59-9	Not available	99.35 to 99.75 % (PET)	Base Polymer
7631-86-9	231-545-4	Max 0.4 % (SiO2)	Slip agent
1309-64-4	215-175-0	0.035% (as Antimony)	Catalyst
7429-90-5	231-072-3	Thin layers of AL, upto 600 Angstroms	Metal barrier layer

4.0	**First Aid Measures**
4.1	**Description of first aid measures**
General notes	No special measures required provided product is used correctly
Eye contact	Exposure to hot molten material. In this case: Rinse immediately with plenty of water. Seek immediate special treatment at hospital, medical center. In case of irritation caused by vapors or fumes wash with water and seek medical advice. Use of safety glasses is good industrial practice.
Skin Contact	Exposure to hot molten material. In this case: Rinse immediately 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 and clothing is good industrial practice
Inhalation	Fumes and vapors produced by heated or burnt material may be irritating for the respiratory track. If exposed to fumes from overheating or combustion, remove patient from exposure, bring patient into fresh air; get medical advice if the symptoms continue.
Ingestion	Ingestion is not an expected route of exposure during normal use of the product. If ingested, call a physician immediately. It is unlikely to occur. If necessary treat symptomatically.
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 specific advice. Treat according to symptoms present.
5.0	**Fire Fighting Measures**
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 dioxide, Carbon monoxide, alcohols, acetaldehydes, organic acids.
5.3	**Advice for fire-fighters**
	Stop the fire spreading, call the Fire brigade and evacuate non-essential personal. Protective clothing's, goggles, headgear and self contained breathing equipment should be made available for fireman.
Other Information's	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:	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**
	Films and film scraps can create a slipping hazard. Collect product for recovery or disposal. Use proper personal protection. Scrap film generated through processing, eg slitting/shredding, should be swept up and disposed of on drums or plastic bags according to local regulations, don't allow entering drains and waterways.
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:	Store in cool, dry place at an ambient temperature (preferably 25°C with Relative Humidity of 50%) in a closed storage area. • Use both the films by FIFO system & it is advised to rotate the film stock. **Shelf life:** • 12 months for Sarafil plain and corona treated film and • 6 months for coated and metallized film from the date of manufacturing
Packaging materials	Keep packages closed to prevent contamination
7.3	**Specific end uses (s)**
	As per 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 formed while cutting, grinding, stamping. Total dust : 10 mg/m3 Respiratory dust : 5 mg/m3
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:	Safety goggles and face protecting gears
8.2.2.2	
Skin protection:	Wear cover all 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:	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:	Film on the floor can be slippery, due care requires 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** Plastic film with glossy clear **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. **Melting point** 255-265 °C. (Coatings/co polyester layers if any can melt at lower temperatures.) **Density** 1.35 - 1.42 gm/cm3 **Flash point** 440°C ASTM 09129-68 **Auto ignition point** 480º C- ASTM 10929-68 **Combustion** Film burns along with flame. In case of non contact of flame, it will shrink and extinguish of its own. The molten material may drip and ignite fire. Combustion will evolve irritant vapors. At complete combustion the major products formed are Carbon Di Oxide, Carbon mono Oxide and water. **Water solubility:** Practically insoluble. **In organic solvents at 20°C** Insoluble in common organic solvents
9.3 **Other information**	**Std. enthalpy of formation $\Delta H^{\circ}_{f\ 298}$** No data available. **Standard molar antropy S°_{298}** No data available.
10.0	**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**	Acetic anhydride, acetone, aniline, benzene, chloroform, chromic acid, cyclohexanone, dimethylformamide, dioxan, ethyl acetate, methyl ethyl ketone, methylene chloride, phenol, tetrahydrofuran, trichloroethylene, triethanolamine, caustic soda. Strong oxidation agents as well as strong acids and caustic will decompose polyester. Water may deteriorate surface properties and lead to sticking of film layers
10.6 **Hazardous decomposition products**	Above the decomposition temperature, the major volatiles will be terephthalic acid, oligomers of PET, carbon dioxide, carbon monoxide, acetaldehyde, and low molecular weight alcohols/ aldehydes When heated to decomposition it emits acrid smoke and irritating fumes

11.0	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 components 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:	**Inhalation:** No data available. **Eyes:** 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. **Ingestion** Material is biologically inert and has no risk of ingestion in normal use, in case injected please seek medical advice. **Chronic toxicity** 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
11.2 **Acute Toxicity:**	**Method:** No data available
12.0	**Ecological Information**
12.1	**Eco toxicity**
12.1.1 Acute aquatic toxicity (With M factor)	No data available
12.1.2. Chronic aquatic toxicity: freshwater	
12.1.3. Chronic aquatic toxicity: marine waters	
12.1.4. Sediment toxicity	
12.1.5. Soil toxicity	
12.1.6. Toxicity to micro-organisms in STP	
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	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).
13.0	**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:	It is recommended that Polyester films to be recycled. (Recycling has commercial value too). Dispose in accordance with local regulations, Landfill is preferred. Forced draft incineration is an alternate or recycling Recycle any unused portion of the material for its approved use or return it to the manufacturer or supplier.
13.1.3 Sewage disposal-relevant information:	No data available.
13.1.4 Other disposal recommendations	Pick up film to avoid a slipping hazard
14.0	**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
15.0	**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.
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
16.0	**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	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
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The information's furnished herein are intended to provide a summary of our knowledge and guidance regarding use of the designated product. Its contents are offered in good faith as accurate and complete as of the date specified below, but without guarantee. It relates only to the product and does not relate to its use in combination with any other product or material or in any process. Local laws and regulations and conditions of use and suitability of the product for particular uses are beyond the control of Polyplex; all risks of use, storage, handling, transportation and disposal of the product are therefore assumed by the user and we expressly disclaims all warranties of every kind and nature, in respect to the use or suitability of the Product. Polyplex shall not be responsible for any damage or injury resulting from abnormal use of the product, from any failure to adhere to recommendations, or from any hazards inherent in the nature of the product. Polyplex corporation Ltd, extends no warranties, makes no representations, and assumes no responsibility as to the accuracy or suitability of such information to the purchaser's intended purpose or for consequences of its use.

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