# Garware Polyester Ltd.

**Polyester Film Plant**
Aurangabad – Pune Road, P.O. Waluj
Dist. Aurangabad – 431 133. (INDIA)
TEL. : (0240) 2554427 – 30
FAX : (0240) 2554672
e-mail: wgarware@bom4.vsnl.net.in

# MATERIAL SAFETY DATA SHEET

## SECTION 1 : PRODUCT AND COMPANY IDENTIFICATION

| | | |
|---|---|---|
| Product Name | : | Bi Axially Oriented Polyethylene Terephthalate Film |
| Manufacturer | : | Garware Polyester Ltd. |
| Division | : | Film Plant, Aurangabad |
| Address | : | 10/2, Naigaon Waluj,<br>Aurangabad – Pune Road<br>AURANGABAD – 431133 |

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| | | |
|---|---|---|
| Issue Date | : | 01/08/2012 |
| Supercedes Date | : | Revision 4 dated 01/08/2012 |
| Document Group | : | SP/PF / 00/B |
| Product Use | : | Industrial use |

## SECTION 2 : INGREDIENTS

| Ingredients | C.A.S. No. | % by Wt |
|---|---|---|
| PET Resin | 25038-59-9 | 99.35 to 99.71 % |
| Antimony Trioxide | 1309-64-4 | 0.04% |
| Triphenyl Phosphate | 115-86-6 | 0.07% |
| Silicon Dioxide | 7631-86-9 | Max 0.4% |
| TiO2 | 13463-67-7 | Max 0.1% |
| Magnesium acetate tetra hydrate | 142-72-3 | Max 0.03 % |
| Sodium acetate trihydrate | 6131-90-4 | Max 0.01 % |

SiO2 & TiO2 are the additives and concentration of them is added as per type of film.

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## SECTION 3 : HAZARDS IDENTIFICATION

Odor, Color, Grade : PET is odorless. Color – Clear, Translucent white.

General Physical Form : FILM

**Immediate health, physical, and environmental hazards** :

Unlikely to cause harmful effects under normal condition of handling and use. Occupational exposure limit.

### 3.1 OCCUPATIONAL EXPOSURE LIMITS

The following values apply to nuisance dust, which may be formed during cold processing (e.g., cutting, grinding, stamping).

Total dust : 10 mg/m3 (8 hr TWA)
Respiratory dust : 5 mg/m3 (8 hr TWA)

### 3.2 POTENTIAL HEALTH EFFECTS

**Eye Contact:**

Eye contact is not expected to occur during normal use of the product.

**Skin Contact:**

Contact with the skin during product use is not expected to result in significant irritation.

**Ingestion:**

Unlikely to be required but if necessary, treat symptomatically.

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## SECTION 4 : FIRST AID MEASURES

### 4.1 FIRST AID PROCEDURES

Only normally needed for thermal burns and following inhalation of smoke from burning material. Treat in same way as other normal burns and wood smoke inhalation.

| | | |
|---|---|---|
| Eye Contact | : | Irrigate with eyewash solution or clean by water holding eyelid apart. |
| Skin Contact | : | If symptoms develop, obtain medical attention |
| Inhalation | : | Remove patient from exposure |
| Ingestion | : | Unlikely to be required but if necessary treat symptomatically. |

## SECTION 5 : FIRE FIGHTING MEASURES

### 5.1 FLAMMABLE PROPERTIES

| | | |
|---|---|---|
| Autoignition temperature | : | 480° C – ASTM 10929-68 |
| Flash Point | : | 440° C – ASTM 09129-68 |
| Flammable Limits – LEL | : | No Data Available |
| Flammable Limits – UEL | : | No Data Available |

### 5.2 EXTINGUISHING MEDIA

Normal Extinguishing media

### 5.3 PROTECTION OF FIRE FIGHTERS

Special Fire Fighting Procedures : Water may be used to blanket the fire.

Unusual Fire and Explosion Hazards : Combustible but not readily ignited. This film will shrink away from source of flame. Persistent application of a flame will ignite the material. Burning is accompanied by melting and dripping which may cause the fire to spread. Combustion will evolve irritant vapours. At complete combustion, the major products formed are carbon dioxide and water. Some of the products of

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decomposition will also be present but at a concentration considerably less than carbon dioxide and water. During incomplete combustion a range of products will be formed but mainly carbon dioxide, water and carbon monoxide.

## SECTION 6 : SPILLAGE / ACCIDENTAL RELEASE MEASURES

Scrap film generated through processing e.g. Slitting / Shredding should be swept up and disposed off in drums or plastic bags.

## SECTION 7 : HANDLING AND STORAGE

### 7.1 HANDLING

Thick gauges of film have very sharp edges, which can easily cause cuts.

### 7.2 STORAGE

Keep away from heat and sources of ignition.

Storage temperature : Ambient. Exposure to extremes of heat & cold To be avoided. Avoid extremes of humidity.

## SECTION 8 : EXPOSURE CONTROLS / PERSONAL PROTECTION

### 8.1 ENGINEERING CONTROLS / PROCESS HAZARDS

STATIC

In most processes in which there is movement of film (of any kind) over metal or other rollers, surface electrical charges develop on the film. Static charges should be eliminated or reduced as much as possible, since they 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 charges.

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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 the film and machinery parts.

DUSTS

Operations, which produce dusts, (e.g., stamping, tape slitting, cutting and grinding) should be controlled so that the appropriate standard for dusts is not exceeded.

Suitable respiratory equipment should be used in cases of insufficient ventilation or where operational procedures demand it.

HEATING DURING PROCESSING

Extra care should be taken to prevent burns from contact with hot material.

All polymers degrade to some extent at their processing temperature, an effect which increases with increasing temperature.

Garfilm has a relatively high upper melting point of 255-260 deg C. prior to this temperature, film shrinkage will occur - the degree of shrinkage being time / temperature related.

The exact quantity and nature of the degradation products varies with temperature, oxygen supply and process conditions. It is therefore, impossible to be precise about which substances may be evolved. However, it is only the minor components, which vary substantially. Appropriate control measures, such as ventilation, should be applied.

## 8.2 **PERSONAL PROTECTIVE EQUIPMENT (PPE)**

### 8.2.1 Eye/Fact Protection

Wear suitable eye protection when using the material in cold process (e.g. cutting, stamping, grinding)

### 8.2.2 Skin Protection

Wear suitable gloves to avoid cuts from sharp edges of film .

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8.2.3 Respiratory Protection

Under normal use conditions, airborne exposures are not expected to be significant enough to require respiratory protection.

8.2.4 Prevention of Swallowing

Not an expected route of exposure

8.3 **EXPOSURE GUIDELINES**

Not established.

## SECTION 9 : PHYSICAL AND CHEMICAL PROPERTIES

Odor, Color, Grade : Odor - Odourless, Color – Clear, white translucent

Upper melt temperature (Deg C) : Min 250 BY D.S.C.

| | |
|---|---|
| Specific heat | : 1.34 KJ/Kg @ 25 Deg.C |
| Thermal conductivity | : 0.14 W/mk |
| Heat of combustion | : 23.5 MJ/Kg |
| Limiting oxygen index | : 21 ASTM D863 |
| Density (gm/cc) | : 1.39-1.42 |
| Flash point (Deg C) | : 440 |
| | ASTM 09129-68 |
| | Garfilm is one of the slower burning film. |

Minimum ignition temperature.(Deg C) : 480 ASTM 10929-68
Decomposition temperature.(Deg C) : >260

Solubility in Water : Insoluble

## SECTION 10 : STABILITY AND REACTIVITY

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Hazardous decomposition Product(s) : Above the decomposition temperature the major volatiles will be terephthalic acid, carbon dioxide, carbon monoxide and small molecular weight alcohols / aldehydes.

Hazardous Reactions : Not Known, Chemically inert.

## SECTION 11 : TOXICOLOGICAL INFORMATION

| | | |
|---|---|---|
| Inhalation | : | Combustion products may be irritant. |
| Skin contact | : | No evidence of irritant effects from normal handling use. Sharp edges may cause cuts. |
| Eye contact | : | Sharp off-cuts may cause eye damage. |
| Ingestion | : | Not applicable. |
| Long Term Exposure | : | This material has been in use for many years with no evidence of adverse effects. |

## SECTION 12 : ECOLOGICAL INFORMATION

Will slowly degrade with exposure to UV light. Adverse effects would not be expected.

## SECTION 13 : DISPOSAL CONSIDERATIONS

Waste material should be burned in a smokeless incinerator capable of high temperatures and long residence times, to enable complete combustion. To achieve this, the incinerator must have an after burner, which maintains the gases at a suitable temperature for 3 or 4 seconds.

## SECTION 14 : TRANSPORT INFORMATION

TRANSPORT : Not classified as Hazardous for Transport.

## SECTION 15 : REGULATORY INFORMATION

USER : Not Classified as Hazardous to Users

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## SECTION 16 : OTHER INFORMATION

Garfilm is free from Cadmium ,Hexavalent Chromium ,Lead ,Mercury , PBB & PBDE ,hence it is RoHS compliant.

**Status under REACH**

Garfilm is not classified as hazardous .The REACH regulation ( 1907/2006) does not require an EU safety datasheet or other communication in the supply chain concerning substances of very high concern ( SVHC list of 18 th June 2012 ) as Garfilm is an "Article " under REACH .

Reason for Reissue : Status under REACH added.