Global Hi-Tech Films Inc.
101, Lake Forest Blvd. Suite 410
Gaithersburg MD 20877
United States
Office : (954) 499 7990 Fax: (954) 499 7992
Email : info@globalwindowfilms.com www.globalwindowfilms.com

09.07.2021

MATERIAL SAFETY DATA SHEET

Section1:PRODUCT AND COMPANY IDENTIFICATION

Product Name	:Global Window Films
Manufacturer	:Garware Hi-Tech Films Ltd.
	:SunControl Film Plant
Address	:Aurangabad-Pune Road
	: P.O.Waluj
	:AURANGABAD-431 133

EMERGENCY PHONE: +91 240 2567400
Fax No. +91 240 2554672
Email- ask@garwarehitech.com

Issue Date	:09/07/2021
Supercedes Date	:Revision 1 Dated 15.06.2006
Document Group	:--
Product use	: Window films for Automotive and Architectural application.

SECTION 2:-INGREDIENTS

Ingredients	C.A.S. No.	% by Wt
Singlelayer,Multilayer, clear, Dyed metallised PET film	Trade Secret	40-61
Silicon Coated Film	Proprietary	26-45
Adhesive	Mixture	7-14
Coating	Mixture	2 - 6

SECTION 3:- HAZARD IDENTIFICATION

Global Hi-Tech Films Inc.
101, Lake Forest Blvd. Suite 410
Gaithersburg MD 20877
United States
Office : (954) 499 7990 Fax: (954) 499 7992
Email : info@globalwindowfilms.com www.globalwindowfilms.com

3.1 EMERGENCY OVERVIEW

Odor, Color Grade	: Colored,metallised or clear window film
General physical form	: Solid

Immediate health, physical and environmental hazards:

Unlikely to cause harmful effects under normal condition of handling and use. Product has not been identified as Hazardous.

3.2 POTENTIAL HEALTH EFFECTS

Eye Contact:

Eye contact is not expected to occur during normal use of the product. No health effects are expected.

Skin Contact:

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

Ingestion:

Unlikely to be required but if necessary, treat symptomatically.

Inhalation:

No specific intervention is indicated as the product is not likely to be hazardous by inhalation. If exposed to fumes from combustion of the product, remove to fresh air.

SECTION 4: FIRST AID MEASURES

4.1 FIRST AID PROCEDURES

Global Hi-Tech Films Inc.
101, Lake Forest Blvd. Suite 410
Gaithersburg MD 20877
United States
Office : (954) 499 7990 Fax: (954) 499 7992
Email : info@globalwindowfilms.com www.globalwindowfilms.com

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 to fresh air from exposure
Ingestion	:Unlikely to be required but if necessary treat symptomatically.

SECTION 5 :FIRE FIGHTING MEASURES

5.1 FLAMMABLE PROPERTIES

Flash Point	:Not Applicable
Auto ignition Temperature	:No data available
Flammable limits –LEL	:Not Applicable
Flammable limits –UEL	:Not Applicable

5.2 EXTINGUISHING MEDIA

Normal extinguishing media (e.g. Water, Carbon dioxide, Dry chemical powder (DCP)

5.3 PROTECTION OF FIRE FIGHTERS

Special Fire Fighting procedures:- Water may be used to blanket the fire. If exposed to Fumes, use full protective equipment's and breathing apparatus.

Unusual Fire and Explosion hazards: No Unusual Fire and Explosion hazards are anticipated.

SECTION 6:SPILLAGE / ACCIDENTAL RELEASE MEASURES

Global Hi-Tech Films Inc.
101, Lake Forest Blvd. Suite 410
Gaithersburg MD 20877
United States
Office : (954) 499 7990 Fax: (954) 499 7992
Email : info@globalwindowfilms.com www.globalwindowfilms.com

Scrap generated during film installation on the window glasses should be collected and disposed off . Sweep up to avoid slipping hazard.

SECTION 7:HANDLING AND STORAGE

7.1 Handling

Avoid breathing of dust generated in cutting.

7.2 Storage

Store in dry place at room temperature away from heat & source of ignition. Avoid skin contact with sharp film edges.
Exposure to extremes of heat and 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.

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.,slitting, cutting and grinding) should be controlled so that the appropriate standard for dusts is not exceeded.

Global Hi-Tech Films Inc.
101, Lake Forest Blvd. Suite 410
Gaithersburg MD 20877
United States
Office : (954) 499 7990 Fax: (954) 499 7992
Email : info@globalwindowfilms.com www.globalwindowfilms.com

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.

Global window films have 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 safety glass with side shields for eye protection.

8.2.2 Skin Protection

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

8.2.3 Respiratory Protection

Under normal use conditions, airborne exposures are not expected to be significant enough to require respiratory protection. Avoid breathing of dust created by cutting,grinding.

Global Hi-Tech Films Inc.
101, Lake Forest Blvd. Suite 410
Gaithersburg MD 20877
United States
Office : (954) 499 7990 Fax: (954) 499 7992
Email : info@globalwindowfilms.com www.globalwindowfilms.com

8.2.4 Prevention of Swallowing

Not an expected route of exposure

8.3 **EXPOSURE GUIDELINES**

Not established.

SECTION 9 : PHYSICAL AND CHEMICAL PROPERTIES

Form		Solid Film
Colour	Charcoal Neutral	Clear, White, Grey, Brown, Green, Blue. Yellow, Black, colored window film
Odor		Negligible
Melting point		Above 255^{O} C
Solubility in Water		Insoluble in water
Volatile Content %		Negligible
Specific Gravity		NA
Auto ignition temp		Not applicable
Flash Point		Not applicable
Flammable Limits LEL		Not applicable
Flammable Limits UEL		Not applicable
Boiling point		Not applicable
Density (gm/cc)		1.38 to 1.42

SECTION 10 : STABILITY AND REACTIVITY

Stability –Stable
Materials and Conditions to Avoids: Sparks and/or flames.
Hazardous polymerization: Hazardous polymerization will not occur.
Hazardous decomposition : 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.

Hazardous decomposition: Under recommended usage conditions, hazardous decompositions products are not expected. Hazardous

Global Hi-Tech Films Inc.
101, Lake Forest Blvd. Suite 410
Gaithersburg MD 20877
United States
Office : (954) 499 7990 Fax: (954) 499 7992
Email : info@globalwindowfilms.com www.globalwindowfilms.com

decomposition products may occur as a result of oxidation, heating or reaction with another material.

Incompatible Materials :- Strong oxidizing agents.

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.

Does not have carcinogenic, mutagenic, developmental or reproductive effects.

SECTION 12 : ECOLOGICAL INFORMATION

Toxicity is expected to be low based on the products insolubility in water. Will slowly degrade with exposure to UV light. Adverse effects would not be expected.

SECTION 13 : DISPOSAL CONSIDERATIONS

Scrap film is generated through processing like slitting, shredding and while installation of film on glasses. Extra film waste should be swept & collected in closed drums or plastic bags.

Pick up the film to avoid slipping Hazard. Do not allow the film to lie in passage, walkways.

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.

Global Hi-Tech Films Inc.
101, Lake Forest Blvd. Suite 410
Gaithersburg MD 20877
United States
Office : (954) 499 7990 Fax: (954) 499 7992
Email : info@globalwindowfilms.com www.globalwindowfilms.com

SECTION 14 : TRANSPORT INFORMATION

TRANSPORT : Not classified as Hazardous for Transport.

SECTION 15 : REGULATORY INFORMATION

USER : Not Classified as Hazardous to Users.

SECTION 16 : OTHER INFORMATION

Global Window Films are free of Cadmium, Lead and Mercury.

DISCLAIMER :-

Information contained in this material safety data sheet is believed to be reliable but no representation, guarantee of any kind are made as to its accuracy, suitability for a particular application or result to be obtained from them. This document is intended only as a guide to the appropriate precautionary handling of the material by properly trained person using this product. The company makes no warranties expressed or implied in respect of the adequacy of this document for any particular purpose.