

## Safety Data Sheet



## Section 1: Identification of the Substance/Mixture and of the Company/Undertaking

### 1.1 Product identifier

**Product Name**

- **TPU Film**

**Synonyms**

- Defender Platinum, Defender Ultimate, Defender Ultra, Defender MAX, Defender Hydro; Satin, Matte; Smoke PPF30, Smoke PPF 50, Somke PPF 70; Matte Black, Deep Black, Diamond White, Satin Grey, Light Grey, Satin Deep Grey, Deep Grey; Satin Orange, Bright Orange, Satin Bubblegum, Bright Bubblegum, Sunshine Yellow, Satin Sunshine Yellow, Grass Green, Satin Grass Green, Crimson Red, Crimson Satin Red, Sky Blue, Satin Sky Blue; Defender SPF Series 70, Satin Latte, Military Olive Green, Satin Military Olive Green, Gloss Night Sky, Gloss Dark Amethyst, Gloss Lipstick Kiss Red, Bahama Sea Breeze

**SDS Number/Grade**

- F-39

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

**Relevant identified use(s)**

- Used in a broad range of industrial, commercial and consumer applications requiring one or more of the following attributes, chemical resistance, strength, resiliency and elastic recovery.

**Use(s) advised against**

- Possible thermal decomposition products: carbon monoxide, carbon dioxide, hydrogen cyanide isocyanates, nitrogen oxides.

### 1.3 Details of the supplier of the safety data sheet

**Manufacturer**

- Zhejiang Shichuang Optics Film Manufacturing Co., Ltd  
No. 68 Fangjiadai Road,  
Haiyan Economic Development Zone,  
Zhejiang Province, China.  
www.gswf.com

**Telephone (General)** • 86-18057368699/86-573-86803333

### 1.4 Emergency telephone number

**Manufacturer**

- 86-18057368699

## Section 2: Hazards Identification

### EU/EEC

According to: Regulation (EC) No 1272/2008 (CLP)/REACH 1907/2006 [amended by 453/2010]

According to: EU Directive 67/548/EEC (DSD) or 1999/45/EC (DPD)

### 2.1 Classification of the substance or mixture

**CLP**

- Not classified

**DSD/DPD**

- Not classified

### 2.2 Label Elements

**CLP**

**Hazard statements** • No label element(s) required

**DSD/DPD**

**Risk phrases** • No label element(s) required

**2.3 Other Hazards****CLP**

- This material is exempt from CLP/REACH obligations as an article as specified in REACH (1907/2006) and related ECHA guidance.

**DSD/DPD**

- Under European Directive 1999/45/EC these product(s) are exempt and considered manufactured article(s) under stated normal conditions of use.

**UN GHS**

According to: **UN Globally Harmonized System of Classification and Labelling of Chemicals (GHS)**

**2.1 Classification of the substance or mixture****UN GHS**

- Not classified

**2.2 Label elements****UN GHS**

**Hazard statements** • No label element(s) required

**2.3 Other hazards****UN GHS**

- Under United Nations Globally Harmonized System for the Classification and Labeling of Hazardous Chemicals (GHS) this product is exempt from regulation as a manufactured article.

**United States (US)**

According to: **OSHA 29 CFR 1910.1200 HCS**

**2.1 Classification of the substance or mixture****OSHA HCS 2012**

- Not classified

**2.2 Label elements****OSHA HCS 2012**

**Hazard statements** • No label element(s) required

**2.3 Other hazards****OSHA HCS 2012**

- Under United States Regulations (29 CFR 1910.1200(c) - Hazard Communication Standard), the product(s) listed above are exempt as article(s) under stated normal conditions of use.

**Canada**

According to: **WHMIS**

**2.1 Classification of the substance or mixture****WHMIS**

- Not classified

**2.2 Label elements****WHMIS**

- No label element(s) required.

**2.3 Other hazards****WHMIS**

- Under Canadian regulations (Workplace Hazardous Materials Information System (WHMIS) - Hazardous Products Act (HPA), Section 11(1)), these product(s) are exempt and considered manufactured article(s) under stated normal conditions of use.

## Section 3 - Composition/Information on Ingredients

### 3.1 Substances

- Material does not meet the criteria of a substance.

### 3.2 Mixtures

Composition		
Chemical Name	Identifiers	%
Thermo Plastic Polyurethane	NDA	90% TO 100%
Additives	NDA	0% TO 10%
Additives	NDA	0% TO 10%
Additives	NDA	0% TO 10%
Additives	NDA	0% TO 10%
Additives	NDA	0% TO 10%

## Section 4 - First Aid Measures

### 4.1 Description of first aid measures

#### Inhalation

- First aid is not expected to be necessary if material is used under ordinary conditions and as recommended. If signs/symptoms develop, move person to fresh air. Administer oxygen if breathing is difficult. Give artificial respiration if victim is not breathing. If signs/symptoms continue, get medical attention.

#### Skin

- First aid is not expected to be necessary if material is used under ordinary conditions and as recommended. If burned by contact with hot material, cool molten material adhering to skin as rapidly as possible with water. Removal of solidified molten material from skin requires medical assistance. Wash skin with soap and water. If signs/symptoms develop, get medical attention.

#### Eye

- First aid is not expected to be necessary if material is used under ordinary conditions and as recommended. If contact with material occurs flush eyes with water. If signs/symptoms develop, get medical attention.

#### Ingestion

- First aid is not expected to be necessary if material is used under ordinary conditions and as recommended. If signs/symptoms develop, get medical attention.

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

- Under normal conditions of use, no health effects are expected.

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

#### Notes to Physician

- No specific actions or treatments recommended related to exposure to this material.

## Section 5 - Firefighting Measures

### 5.1 Extinguishing media

**Suitable Extinguishing Media** • Carbon Dioxide, Foam, Dry Chemical, and Water.

**Unsuitable Extinguishing Media** • No data available.

## 5.2 Special hazards arising from the substance or mixture

- Unusual Fire and Explosion Hazards** • None known.
- Hazardous Combustion Products** • No data available

## 5.3 Advice for firefighters

- Wear positive pressure self-contained breathing apparatus (SCBA). Structural firefighters' protective clothing will only provide limited protection. Use water to cool materials and containers exposed to fire.

## Section 6 - Accidental Release Measures

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

- Personal Precautions** • No special precautions expected to be necessary if material is used under ordinary conditions and as recommended.
- Emergency Procedures** • No emergency procedures are expected to be necessary if material is used under ordinary conditions as recommended. Use normal clean up procedures.

### 6.2 Environmental precautions

- Avoid release to the environment.

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

- Containment/Clean-up Measures** • As rolled film this material should not result in spills. However, scrap and excess material should be placed in suitable containers for disposal in a licensed facility.

### 6.4 Reference to other sections

- Refer to Section 8 - Exposure Controls/Personal Protection and Section 13 - Disposal Considerations.

## Section 7 - Handling and Storage

### 7.1 Precautions for safe handling

- Handling** • Use good safety and industrial hygiene practices.

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

- Storage** • Store in a cool, dry place. Keep away from incompatible materials.

### 7.3 Specific end use(s)

- Refer to Section 1.2 - Relevant identified uses.

## Section 8 - Exposure Controls/Personal Protection

### 8.1 Control parameters

- Exposure Limits/Guidelines** • No applicable exposure limits available for product or components.

### 8.2 Exposure controls

- Engineering Measures/Controls** • No special requirements under ordinary conditions of use. When product is heated local exhaust is advised.

#### Personal Protective Equipment

- Respiratory** • No special requirements under ordinary conditions of use and with adequate ventilation.

- Eye/Face** • Normal industrial eye protection practices should be employed. No special equipment is required.

- Skin/Body** • Gloves as required to handle hot material. No special equipment required for cool

product.

### Environmental Exposure Controls

- Follow best practice for site management and disposal of waste.

## Section 9 - Physical and Chemical Properties

### 9.1 Information on Physical and Chemical Properties

Material Description			
Physical Form	Solid	Appearance/Description	Plastic film with no odor and various colors.
Color	Various colors.	Odor	Odorless
Odor Threshold	Data lacking		
General Properties			
Boiling Point	Data lacking	Melting Point/Freezing Point	Data lacking
Decomposition Temperature	Data lacking	pH	Data lacking
Specific Gravity/Relative Density	> 1 Water=1	Water Solubility	Negligible < 0.1 %
Viscosity	Data lacking	Explosive Properties	Data lacking
Oxidizing Properties:	Data lacking		
Volatility			
Vapor Pressure	Data lacking	Vapor Density	Data lacking
Evaporation Rate	Data lacking	VOC (Wt.)	0 %
VOC (Vol.)	0 %		
Flammability			
Flash Point	Data lacking	UEL	Data lacking
LEL	Data lacking	Autoignition	Data lacking
Flammability (solid, gas)	Data lacking		
Environmental			
Octanol/Water Partition coefficient	Data lacking		

### 9.2 Other Information

- No additional physical and chemical parameters noted.

## Section 10: Stability and Reactivity

### 10.1 Reactivity

- No dangerous reaction known under conditions of normal use.

### 10.2 Chemical stability

- Stable under normal temperatures and pressures.

### 10.3 Possibility of hazardous reactions

- Hazardous polymerization will not occur.

### 10.4 Conditions to avoid

- Excess heat.

### 10.5 Incompatible materials

- Strong oxidizing materials.

### 10.6 Hazardous decomposition products

- Unknown due to the complex nature of this material. Fumes from complete or incomplete combustion of this material may include oxides of carbon, oxides of

nitrogen, water vapor, cyanic acid, or a wide variety of innocuous or toxic fumes.

## Section 11 - Toxicological Information

### 11.1 Information on toxicological effects

GHS Properties	Classification
Respiratory sensitization	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking UN GHS • Data lacking
Serious eye damage/Irritation	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking UN GHS • Data lacking
Acute toxicity	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking UN GHS • Data lacking
Aspiration Hazard	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking UN GHS • Data lacking
Carcinogenicity	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking UN GHS • Data lacking
Skin corrosion/Irritation	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking UN GHS • Data lacking
Skin sensitization	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking UN GHS • Data lacking
STOT-RE	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking UN GHS • Data lacking
STOT-SE	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking UN GHS • Data lacking
Toxicity for Reproduction	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking UN GHS • Data lacking
Germ Cell Mutagenicity	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking UN GHS • Data lacking

### Potential Health Effects

#### Inhalation

- Acute (Immediate)**                      • Under normal conditions of use, no health effects are expected.
- Chronic (Delayed)**                      • No data available

#### Skin

- Acute (Immediate)**                      • Under normal conditions of use, no health effects are expected.
  - Chronic (Delayed)**                      • No data available
- Eye**
- Acute (Immediate)**                      • Under normal conditions of use, no health effects are expected.
  - Chronic (Delayed)**                      • No data available
- Ingestion**
- Acute (Immediate)**                      • Under normal conditions of use, no health effects are expected.
  - Chronic (Delayed)**                      • No data available

**Section 12 - Ecological Information**

**12.1 Toxicity**

- Material data lacking.

**12.2 Persistence and degradability**

- Material data lacking.

**12.3 Bioaccumulative potential**

- Material data lacking.

**12.4 Mobility in Soil**

- No data available

**12.5 Results of PBT and vPvB assessment**

- PBT and vPvB assessment has not been conducted.

**12.6 Other adverse effects**

- No studies have been found.

**Section 13 - Disposal Considerations**

**13.1 Waste treatment methods**

**Product waste**

- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

**Packaging waste**

- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

**Section 14 - Transport Information**

	<b>14.1 UN number</b>	<b>14.2 UN proper shipping name</b>	<b>14.3 Transport hazard class(es)</b>	<b>14.4 Packing group</b>	<b>14.5 Environmental hazards</b>
DOT	NDA	Not Regulated	NDA	NDA	NDA
TDG	NDA	Not Regulated	NDA	NDA	NDA
IMO/IMDG	NDA	Not Regulated	NDA	NDA	NDA
IATA/ICAO	NDA	Not Regulated	NDA	NDA	NDA

**14.6 Special precautions for user**

- None specified.

**14.7 Transport in bulk**

- Data lacking.

according to Annex II of  
MARPOL 73/78 and the IBC  
Code

## Section 15 - Regulatory Information

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

SARA Hazard Classifications • None

#### Canada

##### Labor

Canada - WHMIS - Classifications of Substances

Not Listed

Canada - WHMIS - Ingredient Disclosure List

Not Listed

##### Environment

Canada - CEPA - Priority Substances List

Not Listed

#### United States

##### Labor

U.S. - OSHA - Process Safety Management - Highly Hazardous Chemicals

Not Listed

U.S. - OSHA - Specifically Regulated Chemicals

Not Listed

##### Environment

U.S. - CAA (Clean Air Act) - 1990 Hazardous Air Pollutants

Not Listed

U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities

Not Listed

U.S. - CERCLA/SARA - Radionuclides and Their Reportable Quantities

Not Listed

U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances EPCRA RQs

Not Listed

U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances TPQs

Not Listed

U.S. - CERCLA/SARA - Section 313 - Emission Reporting

Not Listed

U.S. - CERCLA/SARA - Section 313 - PBT Chemical Listing

Not Listed

#### United States - California

##### Environment

U.S. - California - Proposition 65 - Carcinogens List

Not Listed

U.S. - California - Proposition 65 - Developmental Toxicity

Not Listed

U.S. - California - Proposition 65 - Maximum Allowable Dose Levels (MADL)

Not Listed

U.S. - California - Proposition 65 - No Significant Risk Levels (NSRL)

Not Listed

U.S. - California - Proposition 65 - Reproductive Toxicity - Female

Not Listed

U.S. - California - Proposition 65 - Reproductive Toxicity - Male



Not Listed

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## 15.2 Chemical Safety Assessment

- Chemical Safety Assessment is not required.
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### Section 16 - Other Information

**Revision Date**

- 17/September/2015

**Preparation Date**

- 01/April/2010

**Disclaimer/Statement of Liability**

- While Zhejiang Shichuang Optics film believes the data set forth herein is accurate as the date hereof, Zhejiang Shichuang Optics Film makes no warranty with respect thereon. Such data are offered solely for consideration, investigation and verification.

**Key to abbreviations**

NDA = No Data Available

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