

# MATERIAL SAFETY DATA SHEET



Bayer MaterialScience

**Bayer MaterialScience LLC**  
Product Safety & Regulatory Affairs  
100 Bayer Road  
Pittsburgh, PA 15205-9741  
USA

## TRANSPORTATION EMERGENCY

CALL CHEMTREC: (800) 424-9300  
INTERNATIONAL: (703) 527-3887

## NON-TRANSPORTATION

Emergency Phone: Call Chemtrec  
Information Phone: (800) 662-2927

## 1. Product and Company Identification

**Product Name:** VIVAK UV SOLAR RESISTANT CLEAR-A00, SMOOTH / SMOOTH  
**Material Number:** 58095927  
**Chemical Family:** Thermoplastic Polymer Sheet

## 2. Hazards Identification

### Emergency Overview

**Caution:** **Color:** tint **Form:** solid sheets **Odor:** odourless.  
Melted product is flammable and produces intense heat and dense smoke during burning. Irritating gases/fumes may be given off during burning or thermal decomposition. Contact with hot material will cause thermal burns.

### Potential Health Effects

**Primary Routes of Entry:** Inhalation, Skin Contact, Eye Contact

**Medical Conditions Aggravated by Exposure:** Respiratory disorders

### HUMAN EFFECTS AND SYMPTOMS OF OVEREXPOSURE

#### Skin

##### Acute Skin

**For Product:** VIVAK UV SOLAR RESISTANT CLEAR-A00, SMOOTH / SMOOTH  
Contact with heated material can cause thermal burns.

#### Ingestion

##### Acute Ingestion

**For Product:** VIVAK UV SOLAR RESISTANT CLEAR-A00, SMOOTH / SMOOTH  
Ingestion is not a typical route of industrial exposure.

#### General Effects of Exposure

##### Acute Effects of Exposure

Material Name: VIVAK UV SOLAR RESISTANT CLEAR-A00, SMOOTH / SMOOTH

Article Number: 58095927

**For Product:** VIVAK UV SOLAR RESISTANT CLEAR-A00, SMOOTH / SMOOTH

Gases and fumes evolved during the thermal processing or decomposition of this material may irritate the eyes, skin or respiratory tract.

**Chronic Effects of Exposure**

**For Product:** VIVAK UV SOLAR RESISTANT CLEAR-A00, SMOOTH / SMOOTH

Not expected to cause any adverse chronic health effects.

**Carcinogenicity:**

No Carcinogenic substances as defined by IARC, NTP and/or OSHA

**3. Composition/Information on Ingredients**

**Hazardous components**

This material is not hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29 CFR 1910.1200.

**4. First aid measures**

**Eye contact**

In case of contact, flush eyes with plenty of lukewarm water.

**Skin contact**

Cool melted product on skin with plenty of water. Do not remove solidified product. Get medical attention if thermal burn occurs.

**Inhalation**

Move to fresh air in case of accidental inhalation of dust or fumes from overheating or combustion.

**Ingestion**

Get medical attention.

**5. Fire-fighting measures**

**Suitable extinguishing media:**

Water fog, Dry chemical, Carbon dioxide (CO2)

**Special Fire Fighting Procedures**

Firefighters should be equipped with self-contained breathing apparatus to protect against potentially toxic and irritating fumes.

**Unusual Fire/Explosion Hazards**

Toxic and irritating gases/fumes may be given off during burning or thermal decomposition.

**6. Accidental release measures**

**Spill and Leak Procedures**

If molten, allow material to cool and place into an appropriate marked container for disposal. Sweep up and shovel into suitable containers for disposal.

## 7. Handling and storage

**Storage temperature:**  
**maximum:** 49 °C (120.2 °F)

### Storage period

Containers should be tightly closed to prevent contamination with foreign materials and moisture.

### Handling/Storage Precautions

Handle in accordance with good industrial hygiene and safety practices. Wash thoroughly after handling. Avoid creating dust.

### Further Info on Storage Conditions

Protect equipment (e.g. storage bins, conveyors, dust collectors) with explosion vents.

## 8. Exposure controls/personal protection

Country specific exposure limits have not been established or are not applicable

### Industrial Hygiene/Ventilation Measures

General dilution and local exhaust as necessary to control airborne vapors, mists, dusts and thermal decomposition products below appropriate airborne concentration standards/guidelines, especially during cutting, grinding and high heat operations.

### Respiratory protection

In the case of dust or aerosol formation use respirator with an approved filter.

### Hand protection

Wear heat resistant gloves when handling molten material.

### Eye protection

Safety glasses with side-shields

### Skin and body protection

No special skin protection requirements during normal handling and use.

### Additional Protective Measures

Employees should wash their hands and face before eating, drinking, or using tobacco products. Educate and train employees in the safe use and handling of this product. Purgings should be collected as small flat thin shapes or thin strands to allow for rapid cooling.

## 9. Physical and chemical properties

<b>Form:</b>	solid
<b>Appearance:</b>	sheets
<b>Color:</b>	tint
<b>Odor:</b>	odourless
<b>pH:</b>	not applicable
<b>Flash point:</b>	> 450 °C (> 842 °F)
<b>Lower explosion limit:</b>	Not Established
<b>Upper explosion limit:</b>	Not Established

Material Name: VIVAK UV SOLAR RESISTANT CLEAR-A00, SMOOTH / SMOOTH

Article Number: 58095927

**Vapour pressure:** not applicable  
**Solubility in Water:** Insoluble  
**Autoignition temperature:** > 450 °C (> 842 °F)  
**Decomposition temperature:** Approximately 380 °C (716 °F)  
**Softening point:** Begins at 70 °C (158 °F)  
**Bulk density:** Approximately 608.7 kg/m<sup>3</sup>

## 10. Stability and reactivity

### Hazardous Reactions

Hazardous polymerisation does not occur.

### Stability

Stable

### Materials to avoid

None known.

### Conditions to avoid

None known.

### Hazardous decomposition products

By Fire and Thermal Decomposition: Phenol; Carbon oxides, Hazardous decomposition products due to incomplete combustion.

## 11. Toxicological information

### Toxicity Data for Copolyester

#### Acute oral toxicity

LD50: > 3,200 mg/kg (Rat, Male)

LD50: > 3,200 mg/kg (mouse, male)

#### Acute dermal toxicity

LD50: > 1,000 mg/kg (Guinea pig)

#### Skin irritation

Guinea pig, Slightly irritating

#### Eye irritation

rabbit, Slightly irritating

Guinea pig, Non-irritating

### Toxicity Data for 2-(4,6-diphenyl-1,3,5-triazin-2-yl)-5-((hexyl)oxy)-phenol-2-(4,6-Diphenyl-1,3,5-triazin-2-yl)-5-hexyloxyphenol

#### Acute oral toxicity

LD50: > 2,000 mg/kg (rat)

#### Acute dermal toxicity

LD50: > 1,333 mg/kg (rat)

#### Skin irritation

rabbit, Non-irritating

#### Eye irritation

Material Name: VIVAK UV SOLAR RESISTANT CLEAR-A00, SMOOTH / SMOOTH

Article Number: 58095927

rabbit, Non-irritating

**Sensitisation**

Maximisation Test: non-sensitizer (guinea pig)

**Mutagenicity**

Genetic Toxicity in Vitro:

Cytogenetic assay: negative (Chinese hamster V79 cell line)

Ames test: negative (E. coli)

**12. Ecological information**

**Ecological Data for Copolyester**

**Acute and Prolonged Toxicity to Fish**

LC50: > 100 mg/l (Fathead minnow (Pimephales promelas), 96 h)

**Acute Toxicity to Aquatic Invertebrates**

LC50: > 100 mg/l (Water flea (Daphnia magna), 96 h)

**Ecological Data for 2-(4,6-diphenyl-1,3,5-triazin-2-yl)-5-((hexyl)oxy)-phenol2-(4,6-Diphenyl-1,3,5-triazin-2-yl)-5-hexyloxyphenol**

**Biodegradation**

Not readily biodegradable.

Under test conditions no biodegradation observed.

**Acute and Prolonged Toxicity to Fish**

LC50: > 9.2 mg/l (Zebra fish (Brachydanio rerio), 96 h)

LC50: > 103 ppm (Killifish (Oryzias latipes), 48 h)

**Acute Toxicity to Aquatic Invertebrates**

EC50: > 11.2 ppm (Water flea (Daphnia magna), 48 h)

**13. Disposal considerations**

**Waste Disposal Method**

Waste disposal should be in accordance with existing federal, state and local environmental control laws.

**14. Transport information**

**Land transport (DOT)**

**Non-Regulated**

**Sea transport (IMDG)**

**Non-Regulated**

**Air transport (ICAO/IATA)**

**Non-Regulated**

## 15. Regulatory information

### United States Federal Regulations

**OSHA Hazcom Standard Rating:** Non-Hazardous

**US. Toxic Substances Control Act:** Listed on the TSCA Inventory.

**US. EPA CERCLA Hazardous Substances (40 CFR 302):**

#### Components

None

**SARA Section 311/312 Hazard Categories:**

Non-hazardous under Section 311/312

**US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 302 Extremely Hazardous Substance (40 CFR 355, Appendix A):**

#### Components

None

**US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 313 Toxic Chemicals (40 CFR 372.65) - Supplier Notification Required:**

#### Components

None

**US. EPA Resource Conservation and Recovery Act (RCRA) Composite List of Hazardous Wastes and Appendix VIII Hazardous Constituents (40 CFR 261):**

Under RCRA, it is the responsibility of the person who generates a solid waste, as defined in 40 CFR 261.2, to determine if that waste is a hazardous waste.

### State Right-To-Know Information

The following chemicals are specifically listed by individual states; other product specific health and safety data in other sections of the MSDS may also be applicable for state requirements. For details on your regulatory requirements you should contact the appropriate agency in your state.

The concentrations reported below in units of parts per million (ppm) or parts per billion (ppb) are maximum values.

**Massachusetts, New Jersey or Pennsylvania Right to Know Substance Lists:**

#### Weight percent

#### Components

#### CAS-No.

>=1%

Copolyester

CAS# is a trade secret

>=1%

2-(4,6-diphenyl-1,3,5-triazin-2-yl)-5-  
((hexyl)oxy)-phenol2-(4,6-Diphenyl-  
1,3,5-triazin-2-yl)-5-hexyloxyphenol

147315-50-2

## 16. Other information

### HMIS Rating

<b>Health</b>	0
<b>Flammability</b>	1
<b>Physical Hazard</b>	0

Material Name: VIVAK UV SOLAR RESISTANT CLEAR-  
A00, SMOOTH / SMOOTH

Article Number: 58095927

0=Minimal 1=Slight 2=Moderate 3=Serious 4=Severe  
\* = Chronic Health Hazard

The method of hazard communication for Bayer MaterialScience LLC is comprised of Product Labels and Material Safety Data Sheets. HMIS and NFPA ratings are provided by Bayer MaterialScience LLC as a customer service.

Contact person: Product Safety Department  
Telephone: (412) 777-2835  
MSDS Number: 112000028893  
Version Date: 02/27/2010  
Report version: 1.6

This information is furnished without warranty, express or implied. This information is believed to be accurate to the best knowledge of Bayer MaterialScience LLC. The information in this MSDS relates only to the specific material designated herein. Bayer MaterialScience LLC assumes no legal responsibility for use of or reliance upon the information in this MSDS.