1. Product and Company Identification

Product Name: VIVAK FROST CLEAR-A00, FROST - 2 SIDED
Material Number: 58095676
Chemical Family: Thermoplastic Polymer Sheet

2. Hazards Identification

Emergency Overview

Caution: Color: Transparent  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 FROST CLEAR-A00, FROST - 2 SIDED
Contact with heated material can cause thermal burns.

Ingestion
Acute Ingestion
For Product: VIVAK FROST CLEAR-A00, FROST - 2 SIDED
Ingestion is not a typical route of industrial exposure.

General Effects of Exposure
Acute Effects of Exposure
For Product: VIVAK FROST CLEAR-A00, FROST - 2 SIDED
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 FROST CLEAR-A00, FROST - 2 SIDED
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

Form: solid
Appearance: sheets
Color: Transparent
Odor: odourless
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

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)

### 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


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:**

<table>
<thead>
<tr>
<th>Weight percent</th>
<th>Components</th>
<th>CAS-No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;=1%</td>
<td>Copolyester</td>
<td>25640-14-6</td>
</tr>
<tr>
<td>&gt;=1%</td>
<td>Polyethylene Terephthalate Glycol (PETG)</td>
<td></td>
</tr>
<tr>
<td>&gt;=1%</td>
<td>Matting agent</td>
<td></td>
</tr>
<tr>
<td>&gt;=1%</td>
<td>Organic dyestuffs</td>
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**16. Other information**

**HMIS Rating**

<table>
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<tr>
<th>Health</th>
<th>Flammability</th>
<th>Physical Hazard</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

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: 112000037940
Version Date: 07/21/2010
Report version: 1.7

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