1. Identification

Covestro LLC  
1 Covestro Circle  
Pittsburgh, PA  15205  
USA

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

NON-TRANSPORTATION  
Emergency Phone:  Call Chemtrec  
Information Phone:  (844) 646-0545

Product Name:  MAKROLon AR ABRASION RES CLEAR A00 SMOOTH UNCOATED
Material Number:  58484680
Chemical Family:  Thermoplastic Polymer Sheet
Use:  For the production of plastic sheet products

2. Hazards Identification

GHS Classification
This product is not hazardous in the form in which it is shipped by the manufacturer.

GHS Label Elements
Signal word:  Warning
Hazard statements:  If fine particles are generated during further processing, handling or by other means, product may form combustible dust concentrations in air.

3. Composition/Information on Ingredients

Hazardous Components
There are no hazardous components above the relevant concentration limits according to OSHA HazCom 2012.

4. First Aid Measures

Most Important Symptom(s)/Effect(s)  
Acute:  Contact with heated material can cause thermal burns., Gases and fumes evolved during the
thermal processing or decomposition of this material may irritate the eyes, skin or respiratory tract.

**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. **Firefighting Measures**

**Suitable Extinguishing Media:** Water fog, Dry chemical, Carbon dioxide (CO2), Foam

**Unsuitable Extinguishing Media:** High Pressure Water Streams

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

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

**Unusual Fire/Explosion Hazards**
Toxic and irritating gases/fumes may be given off during burning or thermal decomposition. Avoid generating dust: fine dust dispersed in air in sufficient concentrations and in the presence of an ignition source is a potential dust explosion hazard.

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. Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture as they are released into the atmosphere in sufficient concentrations. Avoid dispersal of dust in the air (e.g., cleaning dust from surfaces with compressed air).

7. **Handling and Storage**

**Handling/Storage Precautions**
Handle in accordance with good industrial hygiene and safety practices. Wash thoroughly after handling. Minimize dust generation and accumulation. Routine housekeeping should be instituted to ensure that dust does not accumulate on surfaces. Solid particulate can generate electrical charging during operations such as unloading from containers and pneumatic transfer. Provide adequate precautions, such as electrical grounding and bonding, where conductive equipment is involved.
Storage Period:
None.

Storage Temperature
Maximum: 49 °C (120.2 °F)

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

Substances to Avoid
None known.

8. Exposure Controls/Personal Protection

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

Any component which is listed in section 3 and is not listed in this section does not have a known ACGIH TLV, OSHA PEL or supplier recommended occupational exposure limit.

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
Although no exposure limit has been established for this product, the OSHA PEL for Particulates Not Otherwise Regulated (PNOR) of 15 mg/m³ - total dust, 5 mg/m³ - respirable fraction is recommended. In addition, the ACGIH recommends 3 mg/m³ - respirable particles and 10 mg/m³ - inhalable particles for Particles (insoluble or poorly soluble) Not Otherwise Specified (PNOS).

Hand Protection
Wear heat resistant gloves when handling molten material.

Eye Protection
Safety glasses with side-shields

Skin 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

State of Matter: solid
Appearance: Sheet
Color: Clear
Odor: Odorless
Odor Threshold: No Data Available
pH: No Data Available
Melting Point: 220 - 230 °C (428 - 446 °F)
Boiling Point: No Data Available
Flash Point: No Data Available
Evaporation Rate: No Data Available
Flammability: No Data Available
Lower explosion limit: No Data Available
Upper Explosion Limit: No Data Available
Vapor Pressure: No Data Available
Vapor Density: No Data Available
Density: ca. 1.2 g/cm³ @ 20 °C (68 °F) (DIN 53479)
Relative Vapor Density: No Data Available
Specific Gravity: No Data Available
Solubility in Water: insoluble
Partition Coefficient: n-octanol/water: No Data Available
Auto-ignition Temperature: > 450 °C (842 °F)
Decomposition Temperature: >= 380 °C (716 °F)
Fumes evolved by overheating during improperly processing or by burning may be injurious to health.
Softening point: 150 - 160 °C (302 - 320 °F)
Dynamic Viscosity: not applicable
Kinematic Viscosity: No Data Available

10. Stability and Reactivity

Hazardous Reactions
Hazardous polymerisation does not occur.

Stability
Stable

Materials to Avoid
None known.

Conditions to Avoid
Generation of dust clouds.

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

11. Toxicological Information

Likely Routes of Exposure:
Inhalation
Skin Contact
Eye Contact

Health Effects and Symptoms
Acute: Contact with heated material can cause thermal burns., Gases and fumes evolved during the thermal processing or decomposition of this material may irritate the eyes, skin or respiratory tract.
Toxicity Data for: MAKROLON AR ABRASION RES CLEAR A00 SMOOTH UNCOATED

No data available for this product.

Carcinogenicity:
No carcinogenic substances as defined by IARC, NTP and/or OSHA

12. Ecological Information

Ecological Data for: MAKROLON AR ABRASION RES CLEAR A00 SMOOTH UNCOATED

No data available for this product.

13. Disposal Considerations

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

14. Transportation Information

Land transport (DOT)
Non-Regulated

Sea transport (IMDG)
Non-Regulated

Air transport (ICAO/IATA)
Non-Regulated

15. Regulatory Information

United States Federal Regulations

No substances are subject to TSCA 12(b) export notification requirements.

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 SDS 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>Bisphenol A Polycarbonate</td>
<td>25971-63-5</td>
</tr>
<tr>
<td>&gt;=1%</td>
<td>Bisphenol A Polycarbonate</td>
<td>CAS# is a trade secret</td>
</tr>
</tbody>
</table>

Massachusetts Right to Know Extraordinarily Hazardous Substance List:

<table>
<thead>
<tr>
<th>Weight percent</th>
<th>Components</th>
<th>CAS-No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;=3 ppm</td>
<td>Methylene Chloride</td>
<td>75-09-2</td>
</tr>
</tbody>
</table>

California Prop. 65:
Warning! This product contains chemical(s) known to the State of California to be Carcinogenic. Female
reproductive toxin.

<table>
<thead>
<tr>
<th>Weight percent</th>
<th>Components</th>
<th>CAS-No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;=3 ppm</td>
<td>Methylene Chloride</td>
<td>75-09-2</td>
</tr>
<tr>
<td>Trace element</td>
<td>Bisphenol A</td>
<td>80-05-7</td>
</tr>
</tbody>
</table>

Covestro polycarbonate sheet products as sold contain BPA at concentrations below which would require
the need for a warning under the Act.

Based on information provided by our suppliers, this product is considered “DRC Conflict Free” as defined
by the SEC Conflict Minerals Final Rule (Release No. 34-67716; File No. S7-40-10; Date: 2012-08-22).

16. Other Information

The method of hazard communication for Covestro LLC is comprised of product labels and safety data
sheets. Safety data sheets for all of our products and general product declarations are available for

Contact: Product Safety Department
Telephone: (412) 413-2835
SDS Number: 112000047562
Version Date: 06/07/2016
SDS Version: 2.4
This information is furnished without warranty, express or implied. This information is believed to be accurate to the best knowledge of Covestro LLC. The information in this SDS relates only to the specific material designated herein. Covestro LLC assumes no legal responsibility for use of or reliance upon the information in this SDS.

Changes since the last version are highlighted in the margin. This version replaces all previous versions.