

4. First-aid measures

Inhalation	If exposed to excessive levels of dusts or fumes, remove to fresh air and get medical attention if cough or other symptoms develop.
Skin contact	If burned by contact with hot material, cool molten material adhering to skin as quickly as possible with water, and see a physician for removal of adhering material and treatment of burn. Wash the skin immediately with soap and water. Get medical attention if irritation develops and persists.
Eye contact	If hot product contacts eye, flush with water for at least 15 minutes and seek medical attention immediately. Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. If eye irritation persists: Get medical advice/attention.
Ingestion	Rinse mouth. Get medical attention if symptoms occur.
Most important symptoms/effects, acute and delayed	Direct contact with eyes may cause temporary irritation.
Indication of immediate medical attention and special treatment needed	Treat symptomatically.
General information	Get medical attention if symptoms occur. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Water spray, dry chemical, carbon dioxide.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	Wear suitable protective equipment. Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	Static charges generated by emptying package in or near flammable vapor may cause flash fire.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Avoid inhalation of fumes from molten product. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits. Avoid contact with hot material. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Attempt to reclaim the free product, if this is possible. Collect and dispose of spillage as indicated in section 13 of the SDS.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling	Avoid heat, sparks, open flames and other ignition sources. Do not smoke. Ground container and transfer equipment to eliminate static electric sparks. Avoid contact with hot material. Avoid breathing vapor from heated material. Avoid prolonged exposure. Avoid release to the environment. Observe good industrial hygiene practices. Follow all SDS/label precautions even after container is emptied because they may retain product residues.
Conditions for safe storage, including any incompatibilities	Keep away from heat, sparks and open flame. Store in original tightly closed container. Keep containers closed when not in use. Store at ambient temperature and atmospheric pressure. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Biological limit values	No biological exposure limits noted for the ingredient(s).
Appropriate engineering controls	Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Ventilation should be sufficient to effectively remove and prevent buildup of any dusts or fumes that may be generated during handling or thermal processing.

Individual protection measures, such as personal protective equipment

Eye/face protection	Wear a face shield when working with molten material. Wear safety glasses with side shields (or goggles).
Skin protection	
Hand protection	Wear appropriate chemical resistant gloves.
Other	Wear suitable protective clothing and gloves. For molten product, use any type rubber thermal insulating gloves and other clothing as necessary to protect from thermal burns.
Respiratory protection	If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.



General hygiene considerations

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Eye wash fountain and emergency showers are recommended.

9. Physical and chemical properties

Appearance	Solid.
Physical state	Solid.
Form	Pellets.
Color	Amber.
Odor	Mild amine
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	Not available.
Flash point	519.8 °F (271.0 °C) Cleveland Open Cup Data is for similar product.
Evaporation rate	0 n-BuAc=1 estimated
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	< 0.001 mm Hg at 20°C
Vapor density	Not available.
Relative density	0.97 at 25°C/25°C (water=1)
Solubility(ies)	
Solubility (water)	< 0.1 % at 25°C
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	6250 cP Brookfield at 190°C

Other information

Chemical family	Polyamide Resin
Density	970.00 kg/m ³
Percent volatile	0 % by weight estimated
Softening point	269.6 °F (132 °C) Ring & Ball
Weighted solids	100 %

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	This product may react with oxidizing agents.
Conditions to avoid	Strong oxidizing agents. Heat, flames and sparks.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	Upon decomposition this product emits acrid dense smoke with carbon dioxide, carbon monoxide, water and other products of combustion.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Inhalation of vapors/fumes generated by heating this product may cause respiratory irritation with throat discomfort, coughing or difficulty breathing.
Skin contact	Molten material will produce thermal burns.
Eye contact	Molten material will produce thermal burns. Fumes released during thermal processing may cause eye irritation.
Ingestion	Expected to be a low ingestion hazard.

Symptoms related to the physical, chemical and toxicological characteristics	Direct contact with eyes may cause temporary irritation.
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Information on toxicological effects

Acute toxicity	Based on available data, the classification criteria are not met.
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Components	Species	Test Results
Polyamide Resin		
<u>Acute</u>		
Oral		
LD50	Rat	> 5000 mg/kg, 14 days At this dose no death occurred.;Data is for similar product.; OECD 401

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation	Molten material will produce thermal burns.
Serious eye damage/eye irritation	Molten material will produce thermal burns. Fumes released during thermal processing may cause eye irritation.

Respiratory or skin sensitization

Respiratory sensitization	Not available.
Skin sensitization	This product is not expected to cause skin sensitization.

Sensitization

Polyamide Resin	Buehler Test, Not a skin sensitizer.; Data is for similar product.; Result: Negative Species: Guinea pig Organ: Skin
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Germ cell mutagenicity	Not available.
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Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.
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IARC Monographs. Overall Evaluation of Carcinogenicity

Not listed.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure Not classified.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard Not available.

12. Ecological information

Ecotoxicity The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Components		Species	Test Results
Polyamide Resin			
<i>Acute</i>	EC50	Bacteria (<i>Pseudomonas putida</i>)	> 1000 mg/l, 16 hr >> Water solubility; Data is for similar product.;
Aquatic			
Crustacea	NOEC	Water flea (<i>Daphnia magna</i>)	> 1000 mg/l, 48 hr Data is for similar product.; OECD 202;
<i>Acute</i>			
Crustacea	EL50	Water flea (<i>Daphnia magna</i>)	> 1000 mg/l, 48 hr >> Water solubility; Data is for similar product.; OECD 202;

* Estimates for product may be based on additional component data not shown.

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential No data available.

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not available.

15. Regulatory information

US federal regulations This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
All components are on the U.S. EPA TSCA Inventory List.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - No
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

NFPA ratings Health: 1
Flammability: 1
Instability: 0

NFPA ratings



16. Other information, including date of preparation or last revision

Issue date 03-15-2015
Revision date 12-14-2016
Version # 2.0

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Revision information