1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product information

Trade name	:	**ROLASERIT® PP03OF3**
Company	:	AM Polymer Research GmbH, Bismarckstraße 120, 47057 Duisburg
Telephone	:	+49 (0) 203/306-4880
Telefax	:	+49 (0) 203/306-4889
Email address	:	info@am-polymer-research.de
Emergency phone no.	:	+49 (0) 203/306-4880
Use of the substance / preparation	:	Additive Manufacturing Please call us at the above telephone number to clarify further uses. We will connect you with the Applications Engineering staff who can help you.

2. HAZARDS INFORMATION

Classification: not classified

Additional safety information for humans and the environment
See item 10 + 11
Risk of skin burns caused by hot melt.
Powder: Dusts can form explosive mixtures with air.

3. COMPOSITION/INFORMATION ON INGREDIENTS

chemical nature
polypropylene

Information on ingredients / Hazardous components
Polypropylene Copolymer

Other information
The base materials of the polymer are included in the EINECS inventory.
This sheet describes a group of products. It only contains safety-relevant data. For specific data, see product information sheet.

4. FIRST AID MEASURES

Inhalation
Move exposed person to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Obtain medical attention if symptoms occur. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Ingestion
Wash out mouth with water. Remove dentures if any. Move exposed person to fresh air. Keep person warm and at rest. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Obtain medical attention if symptoms occur. Never give anything by mouth to an unconscious person. If unconscious, place in recovery

position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact
Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Obtain medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Eye contact
Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.

Protection of first-aiders
No action shall be taken involving any personal risk or without suitable training.

Notes to physician
No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

5. FIRE-FIGHTING MEASURES

Extinguishing media

Suitable:	Use an extinguishing agent suitable for the surrounding fire.
Not suitable:	None known.

Special exposure hazards No specific fire or explosion hazard.

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Hazardous combustion products
Decomposition products may include the following materials: carbon oxides
Under certain fire conditions, traces of other toxic products may occur.

Special protective equipment for fire-fighters
Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Remark
Electrical equipment and lighting should be protected to appropriate standards to prevent dust coming into contact with hot surfaces, sparks or other ignition sources.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions
In case product dust is released: Dust mask

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8).

Environmental precautions
Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods for cleaning up

Large spill

Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see section 1 for emergency contact information and section 13 for waste disposal.

Small spill

Move containers from spill area. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.

7. HANDLING AND STORAGE

Handling

Put on appropriate personal protective equipment (see section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Do not ingest. Avoid contact with eyes, skin and clothing. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Storage

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. Never stack pallets more than two high to prevent the risk of them falling over.

Packaging materials

Recommended Use original container.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Components with workplace control parameters

Exposure limit values: No exposure limit value known.

Recommended monitoring

If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to European Standard EN 689 for methods for the assessment of exposure by inhalation to chemical agents and national guidance documents for methods for the determination of hazardous substances.

Exposure controls

Occupational exposure controls

No special ventilation requirements. Good general ventilation should be sufficient to control worker exposure to airborne contaminants. If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.

Hygiene measures

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Respiratory protection
Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Recommended: Dust-protection mask P2

Hand protection
Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Powder:
The wearing of protective gloves is not required if the powder in question is handled at room temperature.
Protective heat-insulating gloves are to be used during thermal processing.

Any areas of skin covered with dust must be washed immediately with soap and water as the powder draws out natural moisture from the skin.
Use barrier cream regularly.

Eye protection
Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts.

Skin protection
Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Environmental exposure controls
Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Internal OEL
Contact medical specialist immediately if large quantities have been inhaled.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form/ physical state	Powder
Colour	natural - white

Safety data

pH-Value	not applicable
Softening point	105°-160 °C (221-320 °F)
Explosive properties	Dusts can form explosive mixtures with air. Explosive in the presence of the following materials or conditions: open flames, sparks and static discharge. Electrical equipment and lighting should be protected to appropriate standards to prevent dust coming into contact with hot surfaces, sparks or other ignition sources.
Solubility	Insoluble in the following materials: cold water and hot water.

Further information

Other information	The range of values given complies with the variation range of the product group. The specific physical chemical data can be read in the product information.

10.STABILITY AND REACTIVITY

Stability	The product is stable. Under normal conditions of storage and use, hazardous polymerisation will not occur.
Conditions to avoid	No specific data
Materials to avoid	No specific data
Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11.TOXICOLOGICAL INFORMATION

Potential acute health effects

Inhalation
Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.

Eye Contact:
Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.

Acute toxicity

Product/ Ingredient name	Result	Species	Dose
Polypropylene	LD50 Oral	Rat	>5000 mg/kg

Potential chronic health effects

Chronic effects:	Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation.
Mutagenicity:	No known significant effects or critical hazards.
Teratogenicity:	No known significant effects or critical hazards.
Developmental effects:	No known significant effects or critical hazards.

Over-exposure signs/symptoms
Inhalation
Adverse symptoms may include the following: respiratory tract irritation coughing

Eyes
Adverse symptoms may include the following: irritation redness

12.ECOLOGICAL INFORMATION

Elimination information (persistence and degradability)
Environmental effects: Not readily biodegradable.

Other ecological information

Biodegradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Polypropylene			not readily

Other adverse effects : No known significant effects or critical hazards.

13.DISPOSAL CONSIDERATIONS

Product

Waste must be disposed of according to applicable regulations.
With respect to local regulations, e.g. dispose of to suitable waste incineration plant. No waste key number as per the European Waste Types List can be assigned to this product, since such classification is based on the (as yet undetermined) use to which the product is put by the consumer. The waste key number must be determined as per the European Waste Types List (decision on EU Waste Types List 2000/532/EC) in cooperation with the disposal firm / producing firm / official authority.

14.TRANSPORT INFORMATION

Transport/further information
Not classified as dangerous in the meaning of transport regulations.

15.REGULATORY INFORMATION

EU-Regulations

Classification and labeling have been determined according to EU Directives 67/548/EEC and 1999/45/EC (including amendments) and take into account the intended product use.

Risk-phrases: This product is not classified according to EU legislation.

16.OTHER INFORMATION

Further information

This version replaces all previous versions.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.