SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

   Trade name

       PA 2200

1.2 Relevant identified uses of the substance or mixture and uses advised against

   Relevant identified uses of the substance or mixture

       Laser sintering

1.3 Details of the supplier of the safety data sheet

   Address

       EOS GmbH - Electro Optical Systems
       Robert-Stirling-Ring 1
       82152 Krailling / München
       GERMANY

   Telephone no. +49 (0) 89 / 8 93 36 - 0
   Fax no. +49 (0) 89 / 8 93 36 - 2 85

   Information provided by / telephone

       +49 (0) 89 / 893 36 - 0

   Advice on Safety Data Sheet

       MSDSInfo@eos.info

1.4 Emergency telephone number

   +49 (0) 89 / 893 36 - 0 (8 am - 5 pm)
   +49 (0) 89 / 893 36 - 151 (Mo - Thu: 9 am - 12 pm & 1 - 6 pm; Fr: 1 - 4 pm) (CET)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

   Classification information

       This product does not meet the classification and labelling criteria given in the Regulation (EC) No 1272/2008 (CLP).
       This product does not meet the classification and labelling criteria given in the Dangerous Preparations Directive 67/548/EC (DSD)

2.2 Label elements

   Not relevant

2.3 Other hazards

   No data available.

SECTION 3: Composition/information on ingredients

3.1 Substances

   Chemical characterization

       Substance name

       Polylaurolactam (polyamide 12) (CAS-No. 25038-74-8), modified, polymer

3.2 Mixtures

   Not applicable. The product is not a mixture.

SECTION 4: First aid measures

4.1 Description of first aid measures

   General information

       In case of persisting adverse effects, consult a physician. Change contaminated clothing.

   After inhalation

       Remove affected person from the immediate area. Ensure supply of fresh air.
After skin contact
When in contact with the skin, clean with soap and water. After contact with molten product, cool quickly with cold water. Do not pull solidified product from skin. Seek medical attention.

After eye contact
Separate eyelids, wash the eyes thoroughly with water (15 min.).

After ingestion
Seek medical advice immediately. Rinse mouth thoroughly with water. Never give anything by mouth to an unconscious person.

4.2 Most important symptoms and effects, both acute and delayed
No data available.

4.3 Indication of any immediate medical attention and special treatment needed
No data available.

SECTION 5: Firefighting measures

5.1 Extinguishing media
Suitable extinguishing media
Foam; Carbon dioxide; extinguishing powder; Water spray jet

Unsuitable extinguishing media
No data available.

5.2 Special hazards arising from the substance or mixture
In the event of fire, the following can be released: Carbon dioxide (CO2); Carbon monoxide (CO); Nitrogen oxides (NOx); Combustion products of this material have to be classed invariably as respiratory poison.

5.3 Advice for firefighters
Use self-contained breathing apparatus. Wear protective clothing.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel
Refer to protective measures listed in sections 7 and 8. Ensure adequate ventilation. Avoid dust formation. Keep away sources of ignition.

For emergency responders
No data available. Personal protective equipment (PPE) - see Section 8.

6.2 Environmental precautions
Do not discharge into the drains/surface waters/groundwater.

6.3 Methods and material for containment and cleaning up
Take up mechanically. When picked up, treat material as prescribed under heading "Disposal considerations".

6.4 Reference to other sections
No data available.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Advice on safe handling
No special measures necessary if stored and handled as prescribed. Avoid the formation and deposition of dust. Provide good ventilation of working area (local exhaust ventilation, if necessary).

General protective and hygiene measures
Do not eat, drink or smoke during work time. Keep away from foodstuffs and beverages. Wash hands before breaks and after work. Provide eye wash fountain in work area. Do not inhale dust. Use barrier skin cream. Areas of the skin soiled with dust are to be cleaned with soap and water without delay, as the powder draws the natural moisture from the skin.
Advice on protection against fire and explosion
Dust can form an explosive mixture with air. Take precautionary measures against static charges. Keep away from sources of heat and ignition.

7.2 Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions
Keep containers dry, tightly closed, at temperatures between 5 and 35°C and relative air moisture of 20 – 70%.

Requirements for storage rooms and vessels
Store product in closed containers.

Advice on storage assembly
None known

7.3 Specific end use(s)
No data available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values

<table>
<thead>
<tr>
<th>No</th>
<th>Substance name</th>
<th>CAS no.</th>
<th>EC no.</th>
</tr>
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<tr>
<td>1</td>
<td>DUST</td>
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<td></td>
<td>List of approved workplace exposure limits (WELs) / EH40</td>
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</tr>
<tr>
<td></td>
<td>total inhalable dust</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>10</td>
<td>mg/m³</td>
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<tr>
<td></td>
<td>List of approved workplace exposure limits (WELs) / EH40</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>respirable dust</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>4</td>
<td>mg/m³</td>
</tr>
</tbody>
</table>

8.2 Exposure controls

Appropriate engineering controls
No data available.

Personal protective equipment

Respiratory protection
If workplace exposure limits are exceeded, a respiration protection approved for this particular job must be worn. In case of dust formation, take appropriate measures for breathing protection in the event workplace threshold values are not specified.

Eye / face protection
Safety glasses (EN 166)

Hand protection
In case of intensive contact, wear protective gloves (EN 374). Before use, the protective gloves should be tested in any case for its specific work-station suitability (i.e. mechanical resistance, product compatibility and antistatic properties). Adhere to the manufacturer’s instructions and information relating to the use, storage, care and replacement of protective gloves. Protective gloves shall be replaced immediately when physically damaged or worn. Design operations thus to avoid permanent use of protective gloves. If this powder is handled at room temperature, it is not necessary to wear protective gloves.
In case of thermal processing, thermally insulating protective gloves are to be used.

Other
Normal chemical work clothing.

Environmental exposure controls
No data available.
## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
<th>Method</th>
</tr>
</thead>
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<tr>
<td><strong>Form/Colour</strong></td>
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</tr>
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<tr>
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</tr>
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<td></td>
</tr>
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<td><strong>Boiling point / boiling range</strong></td>
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<td></td>
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<td><strong>Melting point / melting range</strong></td>
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</tr>
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<td>Value</td>
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<tr>
<td>Method</td>
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<td></td>
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<td><strong>Explosive properties</strong></td>
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<td><strong>Flammability (solid, gas)</strong></td>
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<td></td>
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<td><strong>Upper flammability or explosive limits</strong></td>
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</tr>
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<td></td>
</tr>
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<td><strong>Vapour pressure</strong></td>
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<td></td>
</tr>
<tr>
<td><strong>Vapour density</strong></td>
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<td></td>
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<td></td>
</tr>
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<td><strong>Relative density</strong></td>
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<tr>
<td><strong>Density</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Value</td>
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<td>g/cm³</td>
</tr>
<tr>
<td>Reference temperature</td>
<td>20 °C</td>
<td></td>
</tr>
</tbody>
</table>
Solubility in water
Remarks | insoluble

Solubility(ies)
No data available

Partition coefficient: n-octanol/water
No data available

Viscosity
No data available

9.2 Other information
Other information
No data available.

SECTION 10: Stability and reactivity

10.1 Reactivity
No data available.

10.2 Chemical stability
No data available.

10.3 Possibility of hazardous reactions
No data available.

10.4 Conditions to avoid
None, if handled according to order.

10.5 Incompatible materials
none, if handled according to order

10.6 Hazardous decomposition products
No hazardous decomposition products known.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute oral toxicity
Remarks | No data available.

Acute dermal toxicity
Remarks | No data available.

Acute inhalational toxicity
Remarks | No data available.

Skin corrosion/irritation
Remarks | No data available.

Serious eye damage/irritation
Remarks | No data available.
Respiratory or skin sensitisation
No data available

Germ cell mutagenicity
No data available

Reproduction toxicity
No data available

Carcinogenicity
No data available

STOT-single exposure
No data available

STOT-repeated exposure
No data available

Aspiration hazard
No data available

Symptoms related to the physical, chemical and toxicological characteristics
Eye contact may cause mechanical irritation through dust particles.

Delayed and immediate effects as well as chronic effects from short and long-term exposure
Inhalation of dusts may irritate the respiratory tract.

SECTION 12: Ecological information

12.1 Toxicity

Fish toxicity
Remarks | No data available.

Daphnia toxicity
Remarks | No data available.

Algae toxicity
Remarks | No data available.

Bacteria toxicity
No data available

12.2 Persistence and degradability

Physico-chemical eliminability
Remarks | If used properly, this product does not cause problems, on the strength of previous experience.

12.3 Bioaccumulative potential
No data available.

12.4 Mobility in soil
No data available.

12.5 Results of PBT and vPvB assessment
No data available.

12.6 Other adverse effects
No data available.

12.7 Other information

Other information
Do not discharge product unmonitored into the environment.
SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product
Allocation of a waste code number, according to the European Waste Catalogue, should be carried out in agreement with the regional waste disposal company.

Packaging
Residuals must be removed from packaging and when emptied completely disposed of in accordance with the regulations for waste removal. Incompletely emptied packaging must be disposed of in the form of disposal specified by the regional disposer.

SECTION 14: Transport information

14.1 Transport ADR/RID/ADN
The product is not subject to ADR/RID/ADN regulations.

14.2 Transport IMDG
The product is not subject to IMDG regulations.

14.3 Transport ICAO-TI / IATA
The product is not subject to ICAO-TI / IATA regulations.

14.4 Other information
No data available.

14.6 Special precautions for user
No data available.

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

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

EU regulations
Remarks
Annex I, part 1 + 2: not mentioned. With regard to possibly appropriate decomposition products see Chapter 10.

15.2 Chemical safety assessment
No data available.

SECTION 16: Other information

Sources of key data used to compile the data sheet:
National Threshold Limit Values of the corresponding countries as amended in each case.
Transport regulations according to ADR, RID, IMDG, IATA as amended in each case.
The data sources used to determine physical, toxic and ecotoxic data, are indicated directly in the corresponding chapter.

Department issuing safety data sheet
UMCO Umwelt Consult GmbH
Georg-Wilhelm-Str. 183 , D-21107 Hamburg
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