

**Trade name:** PA 2201

**Product no.:** 9012-0019 / 200000332

**Current version :** 4.1.0, issued: 27.01.2023

**Replaced version:** 4.0.2, issued: 03.10.2022

**Region:** GB

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

### 1.1 Product identifier

**Trade name**

**PA 2201**

**Form**

This mixture contains nanoforms (according to REACH regulation).

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

**Relevant identified uses of the substance or mixture**

Laser sintering

**Uses advised against**

No data available.

### 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 - 22 85

e-mail MSDSInfo@eos.info

**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). According to the provisions of the CLP-Regulation (EC) No. 1272/2008, this product is not subject to mandatory labeling.

### 2.2 Label elements

Not relevant

### 2.3 Other hazards

PBT assessment

No data available.

vPvB assessment

No data available.

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

Not applicable. The product is not a substance.

### 3.2 Mixtures

**Hazardous ingredients**

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This product does not contain substances to be mentioned according to EU Regulation No 1907/2006 (REACH), annex II.

### 3.3 Other information

This mixture contains nanoforms (according to REACH regulation)

## 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

Remove contact lenses. Rinse eye thoroughly under running water keeping eyelids wide open and protecting the unaffected eye (at least 10 to 15 minutes).

#### After ingestion

Seek medical advice immediately. Rinse the 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

High power water jet

### 5.2 Special hazards arising from the substance or mixture

In the event of fire, the following can be released: Carbon dioxide (CO<sub>2</sub>); Carbon monoxide (CO); Nitrogen oxides (NO<sub>x</sub>)

### 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 from ignition sources.

#### 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 collected, handle material as described under the section heading "Disposal considerations".

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**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 at the work 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 container tightly closed and dry in a cool, well-ventilated place.

**Requirements for storage rooms and vessels**

Store product in closed containers.

**Incompatible products**

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**

| No | Substance name  | CAS no.                  | EC no.            |
|----|---|--------------------------|-------------------|
| 1  | Dust  |                          |                   |
|    | <b>List of approved workplace exposure limits (WELs) / EH40</b> |                          |                   |
|    | Dust respirable   |                          |                   |
|    | WEL long-term (8-hr TWA reference period)                       | 4                        | mg/m <sup>3</sup> |
|    | Comments  | see Definition 44 "Dust" |                   |
|    | <b>List of approved workplace exposure limits (WELs) / EH40</b> |                          |                   |
|    | Dust inhalable  |                          |                   |
|    | WEL long-term (8-hr TWA reference period)                       | 10                       | mg/m <sup>3</sup> |
|    | Comments  | see Definition 44 "Dust" |                   |

**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 that workplace threshold values are not specified. Respirator with particulate filter (filter cat. P 3)

**Eye / face protection**

Safety glasses (EN 166)

**Hand protection**

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Unless otherwise indicated in the chemical risk assessment, following recommendations are made: 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. In case of thermal processing, thermally insulating protective gloves are to be used.

**Other**

Wear fully closed, flame retardant clothing. Closed ESD safety footwear (ESD according to EN 61340-4-3 or equivalent).

**Environmental exposure controls**

No data available.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

|                                      |                              |
|--------------------------------------|------------------------------|
| <b>State of aggregation</b>          |                              |
| solid                                |                              |
| <b>Form</b>                          |                              |
| Powder                               |                              |
| <b>Colour</b>                        |                              |
| natural colours                      |                              |
| <b>Odour</b>                         |                              |
| odourless                            |                              |
| <b>pH value</b>                      |                              |
| Not applicable                       |                              |
| <b>Boiling point / boiling range</b> |                              |
| Not applicable                       |                              |
| <b>Melting point/freezing point</b>  |                              |
| Value                                | > 80 °C                      |
| <b>Decomposition temperature</b>     |                              |
| Value                                | > 300 °C                     |
| <b>Flash point</b>                   |                              |
| Not applicable                       |                              |
| <b>Ignition temperature</b>          |                              |
| Value                                | > 350 °C                     |
| <b>Auto-ignition temperature</b>     |                              |
| Comments                             | Product is not selfigniting. |
| <b>Explosive properties</b>          |                              |
| Product is explosive.                |                              |
| <b>Flammability</b>                  |                              |
| No data available                    |                              |
| <b>Lower explosion limit</b>         |                              |
| No data available                    |                              |
| <b>Upper explosion limit</b>         |                              |
| No data available                    |                              |
| <b>Vapour pressure</b>               |                              |
| Not applicable                       |                              |
| <b>Relative vapour density</b>       |                              |

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No data available

**Relative density**

|                       |     |   |     |    |
|-----------------------|-----|---|-----|----|
| Value                 | 1.0 | - | 1.2 |    |
| Reference temperature |     |   | 20  | °C |

**Density**

No data available

**Solubility in water**

|          |           |
|----------|-----------|
| Comments | insoluble |
|----------|-----------|

**Solubility**

No data available

**Partition coefficient n-octanol/water (log value)**

No data available

**Kinematic viscosity**

No data available

**Particle characteristics**

This mixture contains nanoforms (according to REACH regulation). Contains small amounts of components that are nanomaterials as an additive.

**9.2 Other information****Other information**

No data available.

**SECTION 10: Stability and reactivity****10.1 Reactivity**

No data available.

**10.2 Chemical stability**

Stable under recommended storage and handling conditions (See section 7).

**10.3 Possibility of hazardous reactions**

Dangerous reactions are not to be expected when handling product according to its intended use.

**10.4 Conditions to avoid**

None, if handled according to intended use.

**10.5 Incompatible materials**

None known.

**10.6 Hazardous decomposition products**

None, if handled according to intended use.

**SECTION 11: Toxicological information****11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008****Acute oral toxicity**

No data available

**Acute dermal toxicity**

No data available

**Acute inhalational toxicity**

No data available

**Skin corrosion/irritation**

No data available

**Serious eye damage/irritation**

No data available

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|   |
|---|
| <b>Respiratory or skin sensitisation</b>  |
| No data available   |
| <b>Germ cell mutagenicity</b>   |
| No data available   |
| <b>Reproduction toxicity</b>  |
| No data available   |
| <b>Carcinogenicity</b>  |
| No data available   |
| <b>STOT - single exposure</b>   |
| No data available   |
| <b>STOT - repeated exposure</b>   |
| No data available   |
| <b>Aspiration hazard</b>  |
| No data available   |
| <b>Symptoms related to the physical, chemical and toxicological characteristics</b>               |
| Eye contact may cause mechanical irritation through dust particles.                               |
| <b>Delayed and immediate effects as well as chronic effects from short and long-term exposure</b> |
| Inhalation of dusts may irritate the respiratory tract.   |

## 11.2 Information on other hazards

### Endocrine disrupting properties

No data available.

### Other information

No data available.

## SECTION 12: Ecological information

### 12.1 Toxicity

|                                      |
|--------------------------------------|
| <b>Toxicity to fish (acute)</b>      |
| No data available                    |
| <b>Toxicity to fish (chronic)</b>    |
| No data available                    |
| <b>Toxicity to Daphnia (acute)</b>   |
| No data available                    |
| <b>Toxicity to Daphnia (chronic)</b> |
| No data available                    |
| <b>Toxicity to algae (acute)</b>     |
| No data available                    |
| <b>Toxicity to algae (chronic)</b>   |
| No data available                    |
| <b>Bacteria toxicity</b>             |
| No data available                    |

### 12.2 Persistence and degradability

No data available.

### 12.3 Bioaccumulative potential

No data available.

### 12.4 Mobility in soil

No data available.

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**12.5 Results of PBT and vPvB assessment****Results of PBT and vPvB assessment**

|                 |                    |
|-----------------|--------------------|
| PBT assessment  | No data available. |
| vPvB assessment | No data available. |

**12.6 Endocrine disrupting properties**

No data available.

**12.7 Other adverse effects**

No data available.

**12.8 Other information****Other information**

Do not discharge product unmonitored into the environment.

**SECTION 13: Disposal considerations****13.1 Waste treatment methods****Product**

Disposal of the product should be carried out in accordance with all applicable regulations following consultation with the responsible local authority and the disposal company in an authorised and suitable disposal facility.

**Packaging**

Residues 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.

**14.5 Environmental hazards**

Information on environmental hazards, if relevant, please see 14.1 - 14.3.

**14.6 Special precautions for user**

No data available.

**14.7 Maritime transport in bulk according to IMO instruments**

Not relevant

**SECTION 15: Regulatory information****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****EU regulations****Regulation (EC) No 1907/2006 (REACH) Annex XIV (List of substances subject to authorisation)**

According to the data available and/or specifications supplied by upstream suppliers, this product does not contain any substances considered as substances requiring authorisation as listed on Annex XIV of the REACH regulation (EC) 1907/2006.

**REACH candidate list of substances of very high concern (SVHC) for authorisation**

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According to available data and the information provided by preliminary suppliers, the product does not contain substances that are considered substances meeting the criteria for inclusion in annex XIV (List of Substances Subject to Authorisation) as laid down in Article 57 and article 59 of REACH (EC) 1907/2006.

**Regulation (EC) No 1907/2006 (REACH) Annex XVII: RESTRICTIONS ON THE MANUFACTURE, PLACING ON THE MARKET AND USE OF CERTAIN DANGEROUS SUBSTANCES, MIXTURES AND ARTICLES**

According to the data available and/or specifications supplied by upstream suppliers, this product does not contain any substances subject to restriction as listed in Annex XVII of the REACH regulation (EC) 1907/2006.

**Directive 2012/18/EU on the control of major-accident hazards involving dangerous substances**

This product is not subject to Part 1 or 2 of Annex I.

## 15.2 Chemical safety assessment

A chemical safety assessment has not been carried out for this substance.

## SECTION 16: Other information

### Sources of key data used to compile the data sheet:

Regulation (EC) No 1907/2006 (REACH), 1272/2008 (CLP) as amended in each case.

Directives 2000/39/EC, 2006/15/EC, 2009/161/EU, (EU) 2017/164.

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 section.

### Creation of the safety data sheet

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This information is based on our present knowledge and experience.

The safety data sheet describes products with a view to safety requirements.

It does not however, constitute a guarantee for any specific product properties and shall not establish a legally valid contractual relationship.

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