

## SECTION 1: Identification

### 1.1 Product identifier

#### Trade name

Sintratec PA12 black

### 1.2 Recommended use of the chemical and restrictions on use

#### Recommended use of the chemical and restrictions on use

Laser sintering

#### Restrictions on use

No data available.

### 1.3 Details of the supplier of the safety data sheet

#### Address:

Company name Sintratec AG

Street Badenerstrasse 13

Postal Code 5200

City Brugg

Country Switzerland

Phone number +41 56 552 00 22

Mail [info@sintratec.com](mailto:info@sintratec.com)

### Emergency telephone number

+41 56 552 00 22 (Mo – Fr 9am - 12pm & 13pm – 17pm) (CET)

## SECTION 2: Hazard(s) identification

### 2.1 Classification of the chemical

#### Classification information

This product is not subject to classification in accordance with paragraph (d) of 29 CFR § 1910.1200 "Hazard Communication".

### 2.2 Label elements

Not relevant.

### 2.3 Labelling information

No data available.

### 2.4 Hazards not otherwise classified (HNOC)

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

This product does not contain substances to be mentioned in accordance with paragraph (d) of 29 CFR § 1910.1200 "Hazard Communication".

## 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 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 chemical

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>); Combustion products of this material have to be classed invariably as respiratory poison.

## 5.3 Special protective equipment and precautions for fire-fighters

As in any fire, wear self-contained breathing apparatus (MSHA/ NIOSH approved or equivalent) and full protective gear.

## 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 Methods and materials for containment and cleaning up

Take up mechanically. When collected, handle material as described under the section heading “Disposal considerations.”

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

#### Precautions for 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 container tightly closed and dry.

#### Requirements for storage rooms and vessels

Store product in closed containers.

## Incompatible products

None known.

## SECTION 8: Exposure controls/personal protection

## 8.1 Control parameters

No	Substance name	CAS no.	EC no.
1	Dust		
	List of approved workplace exposure limits (WELs) / EH40		
	Dust respirable		
	WEL long-term (8-hr TWA reference period)	4	mg/m <sup>3</sup>
	Comments	See Definition 44 „Dust“	
	List of approved workplace exposure limits (WELs) / EH40		
	Dust inhalable		
	WEL long-term (8-hr TWA reference period)	10	mg/m <sup>3</sup>
	Comments	See Definition 44 „Dust“	
No	Substance name	CAS no.	EC no.
1	Dust		
	List of approved workplace exposure limits (WELs) / EH40		
	Dust respirable		
	WEL long-term (8-hr TWA reference period)	4	mg/m <sup>3</sup>
	Comments	See Definition 44 „Dust“	
	List of approved workplace exposure limits (WELs) / EH40		
	Dust inhalable		
	WEL long-term (8-hr TWA reference period)	10	mg/m <sup>3</sup>
	Comments	See Definition 44 „Dust“	
No	Substance name	CAS no.	
1	Dust		
	OSHA Permissible Exposure Limits (PELS)		
	Particulates not otherwise regulated (PNOR) Total dust		
	TWA	15	mg/m <sup>3</sup>
	OSHA Permissible Exposure Limits (PELS)		
	Particulates not otherwise regulated (PNOR) Total dust		
	TWA	5	mg/m <sup>3</sup>
2	titanium dioxide	13463-67-7	
	ACGIH Threshold Limit Values		
	Titanium dioxide		
	TWA	10	mg/m <sup>3</sup>
	Remarks	A4	
	OSHA Permissible Exposure Limits (PELS)		
	Titanium dioxide Total dust		
	TWA	15	mg/m <sup>3</sup>

## 8.2 Exposure controls

## Appropriate engineering controls

No data available.

## Individual protection measures, such as 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. A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI /88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. Respirator with particulate filter (filter cat. P 3).

## Eye / face protection

Safety glasses (EN 166); Use chemical splash goggles and face shield (ANSI Z87.1 or approved equipment).

## Hand protection

Unless otherwise indicated in the chemical risk assessment, following recommendations are made: In case of intensive contact, wear protective gloves (EN 374). In case of thermal processing, thermally insulating protective gloves are to be used.

## Other protection measures

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

## SECTION 9: Physical and chemical properties

<b>Form/Color</b>	
Powder	
dark grey	
<b>Odor</b>	
odorless	
<b>Odor threshold</b>	
No data available.	
<b>pH value</b>	
Not applicable.	
<b>Boiling point / boiling range</b>	
Not applicable.	
<b>Melting point / melting range</b>	
Value	185 °C
Method	EN ISO-11357-1
<b>Decomposition point / decomposition range</b>	
Value	> 300 °C
<b>Flash point</b>	
Not applicable.	
<b>Ignition temperature</b>	
Value	450 °C
Method	DIN 51794
Comments	Minimum ignition energy with inductance: 100 – 300 mJ
<b>Auto-ignition temperature</b>	
No data available.	

# Safety Data Sheet

Sintratec PA12 black

## Oxidising properties

No data available.

## Explosive properties

Product is explosive.

## Flammability

No data available.

## Lower flammability or explosive limits

Value	30 g/m <sup>3</sup>
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## Upper flammability or explosive limits

No data available.

## Vapour pressure

No data available. Not applicable

## Vapour density

No data available.

## Evaporation rate

No data available.

## Relative density

No data available.

## Density

Value	1.0 – 1.1 g/m <sup>3</sup>
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Reference temperature	20 °C
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## Solubility in water

Remarks	insoluble
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## Solubilit(ies)

No data available.

## Partition coefficient: n-octanol/water

No data available.

## Viscosity

No data available.

## 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 intended use.

### 10.5 Incompatible materials

None, if handled according to order.

### 10.6 Hazardous decomposition products

No hazardous decomposition products known.

## SECTION 11: Information on Toxicology

### 11.1 Information on toxicological effects

Acute oral toxicity	
No	Product Name
1	PA12
Remarks	No data available.

Acute dermal toxicity	
No	Product Name
1	PA12
Remarks	No data available.

Acute inhalational toxicity	
No	Product Name
1	PA12
Remarks	No data available.

Skin corrosion/irritation	
No	Product Name
1	PA12
Remarks	No data available.

Serious eye damage/irritation		
No	Product Name	
1	PA12	
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.		

NTP Report on Carcinogens (RoC)		
According to the data available and/or specifications supplied by upstream suppliers, this product does not contain any substance(s) listed "known" (to be a human carcinogen) or "RAHC" (reasonably anticipated to be a human carcinogen).		

OSHA Standards listing cancer as a health effect (Table VII.6.2)		
According to the data available and/or specifications supplied by upstream suppliers, this product does not contain any substance(s) listed as carcinogenic.		

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans			
The product contains following substance(s) classified by the IARC Monographs			
No	Substance Name	CAS no.	Group
1	Titanium dioxide	13463-67-7	2B

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

#### Toxicity to fish (acute)

No	Product Name
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1	PA12
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Remarks	No data available.
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#### Toxicity to fish (chronic)

No data available.

#### Toxicity to Daphnia (acute)

No	Product Name
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1	PA12
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Remarks	No data available.
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#### Toxicity to Daphnia (chronic)

No data available.

#### Toxicity to algae (acute)

No	Product Name
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1	PA12
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Remarks	No data available.
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#### Toxicity to algae (chronic)

No data available.

### 12.2 Persistence and degradability

#### Physio-chemical eliminability

No	Product Name
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1	PA12
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Remarks	If used properly, this product does not cause problems, on the strength of previous experience
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### 12.3 Bioaccumulative potential

No data available.

## 12.4 Mobility in soil

No data available.

## 12.5 Other adverse effects

No data available.

### Other information

Do not discharge product unmonitored into the environment.

## SECTION 13: Disposal considerations

### 13.1 Disposal consideration

#### Product

Dispose in accordance with federal, state and local regulations.

#### 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 accordance with federal, state and local regulations.

## SECTION 14: Transport Information

### 14.1 US DOT (Department of Transportation)

The product is not subject to DOT 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 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not relevant

## SECTION 15: Regulatory information

## 15.1 US Federal Regulations

**Toxic Substances Control Act (TSCA)**

According to the data available and/or specifications supplied by upstream suppliers, all components of this product are on the TSCA Inventory or are exempted from notification requirements.

**CERCLA (Comprehensive Environmental Response, Compensation and Liability Act)**

According to the data available and/or specifications supplied by upstream suppliers, this product does not contain any substance(s) that are considered being subject to Table 302.4 "List of Hazardous Substances and Reportable Quantities".

**Clean Air Act (CAA): Hazardous Air Pollutants (HAPS)**

According to the data available and/or specifications supplied by upstream suppliers, this product does not contain any substance(s) that are considered being "Hazardous Air Pollutants".

**Clean Water Act (CWA) Section 307 (Toxic Pollutants) and Section 311 (Hazardous Substances)**

According to the data available and/or specifications supplied by upstream suppliers, this product does not contain any substance(s) that are considered to be "Hazardous Substances".

**EPCRA SARA Section 313, Toxic Chemical Release Inventory**

According to the data available and/or specifications supplied by upstream suppliers, this product does not contain any substance(s) that are considered being subject to "SARA Reporting".

**Emergency Planning & Community Right-to-Know Act (EPCRA) - Sections 302 and 304**

According to the data available and/or specifications supplied by upstream suppliers, this product does not contain any substance(s) that are considered being subject to reporting requirements.

**Clean Air Act (CAA) - Section 602 Ozone depleting substances**

According to the data available and/or specifications supplied by upstream suppliers, this product does not contain any substance(s) listed as ozone depleting substance.

**NFPA Rating**

Health	1
Flammability	0
Reactivity	1

## 15.2 US State Regulations

**Pennsylvania State Right to Know Hazardous Substance List**

The product contains following substance(s) that are considered to be "Hazardous Substances".

No	Substance name	CAS no.
1	titanium dioxide	13463-67-7

**New Jersey State Right to Know Hazardous Substance List**

The product contains following substance(s) that are considered to be "Hazardous Substances".

No	Substance name	CAS no.
1	titanium dioxide	13463-67-7

**Massachusetts State Right to Know Hazardous Substance List**

According to the data available and/or specifications supplied by upstream suppliers, this product does not contain any substance(s) that are considered to be "Hazardous Substances".

**Right to Know - California State - Proposition 65**

The product contains following substance(s) that are considered to be "Hazardous Substances".

No	Substance name	CAS no.	type of toxicity
1	titanium dioxide	13463-67-7	cancer

## SECTION 16: Other information, including date of preparation or last revision

### 16.1 Other information

Abbreviations:

ACGIH American Conference of Governmental Industrial Hygienists

CAS Chemical Abstracts Service

HAPS Hazardous Air Pollutants

HMIS Hazardous Material Identification System

IARC International Agency for Research on Cancer

IDLH Immediate Dangerous to Life and Health

LEL Lower Explosion Limit

NTP National Toxicology Program

OEL Occupational Exposure Limit

OSHA Occupational Safety and Health Administration

PEL Permissible Exposure Limit

PPE Personal Protection Equipment

SARA Superfund Amendments and Reauthorization Act

STEL Short-Term Exposure Level (15 minutes)

TWA Time-Weighted Average (8 hours)

UEL Upper Explosion Limit

WEEL Workplace Environmental Exposure Level

### 16.2 Date of preparation/revision of the SDS

Current Version	1.1.0	06.08.2021
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Replaced Version	1.1.0	30.06.2021
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### 16.3 Department issuing safety data sheet

UMCO GmbH

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Tel. +49 40 / 555 546 300      Fax: +49 40 / 555 546 357      e-mail: [umco@umco.de](mailto:umco@umco.de)

### 16.4 Conclusions

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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Prod-ID: 773115

## 16.5 Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists  
ATE - Acute Toxicity Estimate  
BOD - Biochemical Oxygen Demand  
CA/MA/MN/NJ/PA - California/Massachusetts/Minnesota/New Jersey/Pennsylvania  
CAS - Chemical Abstracts Service  
CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act  
CFR - Code of Federal Regulations (US)  
CLP - Classification, Labelling, and Packaging  
DOT - Department of Transportation Commission  
ECHA - European Chemicals Agency  
EC / EL - Effective Concentration / Effective Loading  
EPA - Environmental Protection Agency  
IARC - International Agency for Research on Cancer  
IATA - International Air Transport Association  
IBC - Intermediate Bulk Container  
ICAO - International Civil Aviation Organization  
IDL - Ingredient Disclosure List  
IDLH - Immediately Dangerous to Life and Health  
IMDG - International Maritime Dangerous Goods  
IUCLID - International Uniform Chemical Information Database  
Kow - Octanol/water partition coefficient  
LD/LC - Lethal Dose/ Lethal Concentration  
MARPOL - Marine Pollution  
MEL - Maximum Exposure Limits  
NFPA - National Fire Protection Agency  
NIOSH - National Institute for Occupational Safety and Health  
NJTSR - New Jersey Trade Secret Registry  
NOEL/NOEC - No Observed Effect Level / No Observed Effect Concentration  
NTP - National Toxicology Program  
OSHA - Occupational Safety and Health Administration  
PEL - Permissible Exposure Limit  
RCRA - Resource Conservation and Recovery Act  
SARA - Superfund Amendments and Reauthorization Act  
STEL - Short-term Exposure Limit  
STOT - Specific Target Organ Toxicity  
TDG - Transportation of Dangerous Goods  
TLV - Threshold Limit Value  
TSCA - Toxic Substances Control Act  
TWA - Time Weighted Average  
UN/NA - United Nations /North American  
US - United States  
VLE - Exposure Limit Value (Mexico)  
VOC - Volatile Organic Compounds