

Safety Data Sheet



According to Ordinance (EC) No. 1907/2006 as per Article 32

Product Name: igumid® P150-PF Amended on: 10.05.2022

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SECTION 1: Description of the material or mixture and the company

1.1 Product identifier

Product Name: igumid® P150-PF

1.2 Relevant identified use of material or mixture and uses which should be avoided

Relevant identified use: plastic filament respectively moulded plastic part for 3D printing

Uses which should be avoided: direct contact with foodstuff

1.3 Details on supplier who provides the safety data sheet

Company: igus® GmbH
Spicher Str. 1a
D-51147 Köln

Telephone: +49 2203/9649-0
Fax: +49 2203/9649-222
E-mail: info@igus.de

1.4 Emergency phone number

Emergency phone number: +49 551/19240 (Poison Information Center North)

SECTION 2: Possible risks

2.1 Classification of material or mixture

Classification according to ordinance (EC) No. 1272/2008

Eye irritation, category 2 -	H319: Causes severe irritation of the eyes.
Sensitization by inhaling, category 1 -	H334: Can cause allergies, asthma-like symptoms or problems with breathing when inhaled
Sensitization upon skin contact, Category 1 -	H317: Can cause allergic skin reactions.

2.2 Labelling elements

The hazardous properties of this product are clearly reduced, since the dangerous product(s) is/are enclosed in a polymer matrix and will not be released during appropriate use. Therefore, it is not necessary to label the product with the danger label (refer to CLP ordinance 1272/2008/EC, Annex I, section 1.3.4).

Hazard pictogram:



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Signal word

Danger

Danger Warning

H317 Can cause allergic skin reactions.

H319: Causes severe eye irritation.

H334 Can cause asthma-like symptoms or respiratory problems.

Safety Notes

Prevention:

P261: Avoid inhalation of dust/smoke/gas/mist/vapour/aerosols

P280 Wear protective gloves/eye protection/face protection.

P284 Wear breathing protection.

Reaction:

P304 + 340 Inhalation: Take the affected person outside into the fresh air and ensure unobstructed breathing.

P333 + P313 Skin irritation or skin rash: Seek medical advice and provide treatment by a medical doctor

P342 + P311 In case of symptoms in the airways: Call the poison information center/ call a medical doctor.

Dangerous component(s) for labelling:

1,2,4,5-Benzol-tetracarboxylic acid dianhydride

2.3 Other risks

No special risks are known if regulations/notes on proper storage and handling are respected.

In case of secondary processing of the product appropriate prevention measures need to be taken. If dusts, fumes or mists occur during machining, use appropriate ventilation to keep the effects of air pollutants below the limit values. Dust can cause mechanical irritations.

In case of unintended release, remove mechanically in order to prevent the risk of slipping or tripping. Keep away from open fire since the product is combustible.

This product/mixture does not contain any components in concentrations above 0.1% or higher which are graded as either persistent, bioaccumulating and toxic (PBT) or very persistent or very bioaccumulating (vPvB).

Environmental information: This product/mixture does not contain any components which show according to REACH Article 57(f) or the delegated ordinance (EC) 2018/605 of the Commission endocrine-disrupting properties in quantities of 0.1% or more.

The hazardous properties of this product are clearly reduced, since the dangerous product(s) is/are enclosed in a polymer matrix and will not be released during appropriate use.

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SECTION 3: Composition / information about components

The product is based on a thermoplastic polymer compound with additives and fillers.

3.1 Substances

Not applicable.

3.2 Mixtures

Chemical designation	CAS.-No. EC No. Index No Registration No.	Grading	Concentration (% w/w)
1,2,4,5- Benzoltetracarboxylic acid dianhydride	89-32-7 201-898-9 607-098-00-X 01-2120755188-46	Eye Dam. 1; H318 Resp. Sens. 1; H334 Skin Sens. 1; H317	>=1-<3

For an explanation of the abbreviations please refer to Section 16 below.

SECTION 4: First-aid measures

4.1 Description of first-aid measures

General information: The first-aid workers must protect themselves. Move affected persons away from the danger zone. Let them rest. Do not leave affected person unattended.

Inhalation: After inhaling decomposition products, move affected person into the fresh air and position in such a way that breathing is facilitated. Seek medical treatment if complaints occur.

Skin contact: Irritations or injuries might occur due to mechanical contact. Rinse affected skin area with a lot of water. DO NOT use solvents or thinners. If symptoms occur, seek medical attention. Heated moulded plastic parts can cause thermal burns which could lead to pain, redness and the formation of blisters. Immediately cool affected skin areas with cold water after contact with the molten polymer. Seek immediate medical attention. Do not peel off the cooled product from the skin.

Eye contact: Irritations or injuries might occur due to mechanical contact. In the case of irritations caused by dust or combustion products rinse the affected eyes for several minutes (at least 15 minutes) with clean water or eyewash solution while keeping the eyelids pulled open. Check for contact lenses and remove them if applicable. Seek medical attention if complaints persist.

Ingestion: Risk of suffocation due to small particles. Seek medical advice. Do not induce vomiting.

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4.2 Important acute and delayed symptoms and effects

Inhalation: No special effects or risks are known.

Skin contact: No special effects or risks are known.

Eye contact: No special effects or risks are known.

Ingestion: No special effects or risks are known.

4.3 Information on immediate medical assistance or special treatment

Information for the medical doctor: Treat symptomatically.

Special treatment: No special treatment.

SECTION 5: Fire-fighting measures

The product is combustible.

5.1 Fire-extinguishing agents

Suitable fire-extinguishing agents: use water spray jet, extinguishing powder, alcohol-resistant foam or carbon dioxide

Unsuitable fire-extinguishing agents: water with full jet

5.2 Special hazards due to substance or mixture

Dangerous combustion products: in the case of a fire hazardous decomposition products can occur: carbon monoxide, carbon dioxide, unburned hydrocarbons (black smoke), sulphur compounds, aldehydes, organic acids, as well as toxic fumes, gases or particles.

Under certain fire conditions traces of other noxious products cannot be ruled out.

5.3 Notes on fire-fighting

Only enter danger zone with a breathing apparatus that is independent of the environmental air. Inhalation of decomposition products can cause health problems. Do not inhale explosion and fire gases.

Wear personal protective equipment.

Cool endangered containers from a safe distance with water spray jet.

Settle evolving vapours with water.

Prevent flashbacks.

Keep fire-fighting water away from surface, ground water and soil.

Wear appropriate protective clothing and keep a safety distance to avoid skin contact.

SECTION 6: Measures after unintentional release

6.1 Personal precautions, protective equipment and measures to be taken in the case of emergencies

Remove mechanically in order to prevent the risk of slipping or tripping. Avoid the formation of dust. Keep away from open fire since product is combustible.

6.2 Environmental protection measures

Do not allow to penetrate into soil, surface water, drains, drain pipes or into the sewage system. Inform authorities in charge if the product has caused environmental pollution.

6.3 Methods and material for retention and cleaning

Small released quantities: remove mechanically.

Large released quantities: remove mechanically.

6.4 References to other sections

Refer to Section 1 for emergency contact information.

Refer to Section 7 for handling and storage.

Refer to Section 8 for information regarding suitable personal protective clothing.

Refer to Section 13 for further information on waste treatment.

SECTION 7: Handling and storage

7.1 Protective measures for safe handling

Notes on safe handling: Provide good ventilation during machining or extraction systems at the processing machines. Avoid the inhalation of dusts/mists/fumes. An accumulation of dust can lead to the risk of a dust explosion. Generally prevent the accumulation of dust. Avoid the contact with skin, eyes and clothing. Take measures against electrostatic charging. Keep away from sources of ignition.

Do not inhale gases contained in the packaging.

Observe general hygiene measures for handling chemicals. Keep away from foodstuff and beverages. Do not eat, drink or smoke while working.

Do not heat the product to temperatures above 125°C.

7.2 Conditions for safe storage and taking into consideration incompatibilities

Special storage conditions: Store in a cool, dry and well ventilated place. Do not store in passageways and staircases. Keep clear from sources of ignition. The product is combustible. Do not store together with foodstuff, beverages, feedstuff, strong acids, strong alkalis and oxidizing agents. Protect from exposure to direct sunlight. Keep product packaging well sealed until use. Carefully seal containers again tightly after initial opening.

Storage class according to TRGS 510: (11) combustible solids.

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Observe the usual measures of preventive fire-fighting.

7.3 Specific final applications

Recommendations: not available

Specific solutions for the industrial sector: not available

Remarks: Do not stack container packages on top of one another without securing them.

SECTION 8: Limitation and monitoring of exposure/personal protective equipment

8.1 Parameters to be monitored

Occupational exposure limit values:

Substances	CAS-No.	Value type (type of exposition)	Parameters to be monitored	Basis
Poly(oxy-1,2 ethandiyloxy carbonyl-1,4phenylene carbonyl)	25038-59-9	AGW (Inhalable fraction)	10 mg/m ³	DE TRGS 900
Peak limit: Exceeding factor (category): 2;(II)				
		AGW (Inhalable fraction)	1.25 mg/m ³	DE TRGS 900
Peak limitation: Exceeding factor (category): 2;(II)				

DNEL/ PNEC: No data available.

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8.2 Limitation and monitoring of exposure

Provide sufficient ventilation and/or extraction systems at the workplace. Only handle product in a closed system or provide good ventilation and extraction at the processing machines. During machining good ventilation or extraction systems at the processing machines are required. Take measures to prevent dust explosions.

Personal protective measures

Eye Protection

Use safety glasses with side protection.

Hand protection

Protective gloves

Other skin protection measures:

Check with glove manufacturers if they are appropriate for the intended use at the workplace. The choice of a suitable glove does not only depend on the material but also on other quality criteria and depends on the respective manufacturer. Since the product is a mix of several substances, the durability of the glove materials cannot be calculated in advance and needs to be tested before its use. The exact breakthrough time needs to be clarified with the glove manufacturer and must be adhered to. The penetration time, among other things, depends on material, density and quality of the glove and needs to be determined individually before use. Please check the exact penetration quality with the glove supplier. Protective glove qualities for chemicals need to be selected depending on the hazardous substance concentration and quantity with regard to the intended use at the workplace.

Skin and body protection

Safety shoes. Wear suitable protective clothing when working.

Breathing protection

Wear suitable dust mask. In case of vapour formation wear breathing protection with appropriate filter type.

Other protective measures

Observe skin protection plan.

SECTION 9: Physical and chemical properties

9.1 Information on the basic physical and chemical properties

Commercial form:	Plastic filament/solid
Colour:	black
Odour:	weak, product-specific
Odour threshold:	not determined (not required with regard to safety and application).
pH value:	not applicable
Melting point/freezing point:	not determined

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Initial boiling point and boiling range:	not applicable, product decomposes.
Flashpoint:	not applicable
Evaporation rate:	not applicable
Flammability (solid, gaseous):	not determined
Upper/lower flammability or explosion limits	The product is not explosive, however the formation of explosive dust/air mixtures is possible
Vapour pressure:	not applicable
Vapour density:	not applicable
Relative density:	no data available
Density:	1.4 g/m ³
Solubility(ies):	insoluble in water
Distribution coefficient: n-octanol/water:	not applicable
Self-ignition temperature:	not determined
Decomposition temperature:	as of approx. 380°C
Viscosity:	not applicable
Explosive properties:	not applicable
Oxidizing properties:	not applicable

9.2 Additional information

For further technical information on the solid please refer to the respective material data sheet/ product information sheet.

SECTION 10: Stability and reactivity

10.1 Reactivity

If the regulations/notes on the use, storage and handling are observed, this material is not deemed to have any dangerous reactions.

10.2 Chemical stability

The product is chemically stable during appropriate use. Do not heat the product to temperatures above [refer to point 7.1].

10.3 Possible hazardous reactions

During normal storage conditions and appropriate use there will be no hazardous reactions. Finely dispersed particles cause explosive mixtures with air. Combustion causes noxious and poisonous smoke.

10.4 Conditions to be avoided

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The thermal decomposition of the product starts as of approx. 380°C.

10.5 Incompatible materials

Avoid contact with foodstuff, beverages, feedstuff, strong acids, strong alkalis and strong oxidizing agents.

10.6 Dangerous decomposition products

No dangerous decomposition products are known if product is appropriately used, stored and handled and when maximum operating temperatures are adhered to (see Section 7.1). Dangerous combustion products are listed in Section 5.

SECTION 11: Toxicological information

11.1 Information on noxious effects

The product does, to the best of our current knowledge, not have any noxious health effects if product is appropriately used and handled.

Processing and machining require good ventilation or extraction systems at the processing machines.

Toxicity

Product:

Acute oral toxicity: no data available

Acute inhalative toxicity: no data available

Acute dermal toxicity: no data available

Corrosivity/irritation of the skin

Product:

Can cause skin irritation.

Can irritate breathing apparatus.

Severe eye damage/ irritation

Product:

Contact with dust can cause mechanical irritation of the eyes.

Sensitization of breathing apparatus/skin

Product:

No sensitizing effects are known.

Germ cell mutagenicity

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Genotoxicity in vitro: no data available

Genotoxicity in vivo: no data available

Carcinogenicity

Product:

No information available.

Reproduction toxicity

Product:

Effect on fertility: no data available

Specific target organ toxicity during single exposition

Product:

No data available

Specific target organ toxicity during repeated expositions

Product:

No data available

Aspiration toxicity

Product:

No data available

11.2 Information on other hazards: endocrine-disrupting properties

Product:

Assessment: According to REACH Article 57(f) (EC) 2017/2100 of the Commission or the delegated Ordinance 2018/605 of the Commission the substance/this mixture does not contain any components which have endocrine-disrupting properties in quantities of 0.1% or more.

SECTION 12: Environmental information

12.1 Toxicity

Result/Summary: not available

12.2 Persistence and degradation

Result/ summary: not/poorly degradable

12.3 Bioaccumulation potential

No bio-availability

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12.4 Mobility in the soil

Distribution coefficient soil/water (Koc): not applicable

Mobility: not applicable

12.5 Results of PBT- and vPvB assessment

PBT: not applicable

vPvB: not applicable

12.6 Endocrine-disrupting properties

Product:

Assessment: According to REACH Article 57(f) (EC) 2017/2100 of the Commission or the delegated Ordinance 2018/605 of the Commission the substance/this mixture does not contain any components which have endocrine-disrupting properties in quantities of 0.1% or more.

12.7 Other detrimental effects

No special effects or dangers are known. However, do not allow to penetrate into the environment, ground waters, surface waters or the sewage system.

SECTION 13: Disposal information

13.1 Procedures of waste disposal

The product can be incinerated in an approved plant in compliance with technical guidelines or stored together with domestic waste in an appropriate landfill site. Hydrogen fluorides must be removed by flue gas scrubbing.

Waste name: plastic waste.

EC waste key no.: The waste keys depend on the intended use of this product.

Contaminated packaging: Packaging that cannot be cleaned has to be disposed of in the same way as the product itself.

General: Prevent the release into the environment. Dispose of in compliance with regional respectively national safety instructions.

SECTION 14: Transport information

Not deemed to be hazardous goods according to the transport regulations

14.1 UN number

Not applicable

14.2 Appropriate UN shipping name

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Not applicable

14.3 Transport hazard class

Not applicable

14.4 Packaging group

Not applicable

14.5 Environmental risks

Not known

14.6 Special precautions for the user

Not known

14.7 Bulk transport according to Annex II of the MARPOL – Convention and according to the IBC Code

Not applicable

SECTION 15: Legal regulations

15.1 Regulations on safety, health and the protection of the environment/ specific legal regulations for the product or mixture

No labelling required according to EC guidelines.

Water hazard class: nwg - not hazardous to water

Identification number: 766

Category according to AwSV, Annex 1 (5.2)

15.2 Chemical safety assessment

No chemical safety assessment is required.

The product is not classified as dangerous.

SECTION 16: Other information

The full hazard information text can be found in Sections 2 and 3.

H317 Can cause allergic skin reactions

H318 Causes severe eye damage

H334 Can cause allergies, asthma-like symptoms or breathing problems when inhaled.

Abbreviations and acronyms

EK: Europäischen Kommission (European Commission)

REACH: Registration, Evaluation, Authorisation and Restriction of Chemical substances
(Registrierung, Bewertung, Zulassung und Beschränkung chemischer Stoffe)

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STOT: Specific Target Organ Toxicity (Zielorgan-Toxizität)

PBT: Persistent, Bioaccumulating, Toxic

vPvB: very Persistent and very Bioaccumulating (sehr Persistent und sehr Bioakkumulierbar)

ADR: Accord européen relatif au transport international des marchandises Dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

RID: Règlement concernant le transport international ferroviaire des marchandises dangereuses (Regulations for the International Transport of Dangerous Goods by Rail)

ADN: Accord européen relatif au transport international des marchandises Dangereuses par voies de Navigation intérieures

(European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)

IMDG: International Maritime Dangerous Goods Code

ICAO: International Civil Aviation Organization

Eye Dam.: severe eye damage

Resp. Sens.: sensitization due to inhalation

Skin Sens.: sensitization due to skin contact

DE TRGS900: Germany. TRGS 900 –workplace limit values DETRGS 900/AGW workplace limit value

There is no legal requirement to provide a Safety Data Sheet for this product and it is only provided by us for customer service reasons.

The information provided above in this Safety Data Sheet is based on the current state of our knowledge and experience and describes the product with regard to safety requirements. The information does not provide any analysis certificate or technical data sheet respectively a description of the quality guarantee of the goods. An agreement or quality agreement or the suitability of the product for a concrete intended use purpose may not be derived from the intended use listed in the safety data sheet. The recipient of the product is responsible for compliance with existing laws and regulations and possible property rights.

The product is not classified as hazardous so that no obligation exists to supply a safety data sheet according to REACH Art. 31, Section 1. The presented product information was created in its layout according to REACH, Annex II, in order to meet the information requirements according to REACH Art. 31 Sect. 3, Art.32 and Art. 33 also for products, where no accompanying safety data sheet is required upon delivery of the product.

This document is not subject to a change service.

This is to certify that the above translation from German into English is complete and correct.

Sabine Bartsch
Königswinter, 20.10.2022

Certified translator for the Higher Regional Court of Cologne/Germany