

PA-12

SAFETY DATA SHEET



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

Product identifier	
Trade name	Filament PA12 1,75mm; Filament PA12 2,85mm
Relevant identified uses of the substance or mixture and uses advised against	
Relevant identified uses	Thermal processing: FDM/FFF
Uses advised against	No data
Details of the supplier of the safety data sheet	
Manufacturer/Supplier	VSHAPER Sp. z o.o.
Address	Tajęcina 105, 36-002 Jasionka-Rzeszów
Telephone	+48 801 011 637
E-mail	kontakt@vshaper.com
Emergency telephone number	An EU-wide emergency dive: 112

2. HAZARD IDENTIFICATION

Classification of the substance/mixture	
Classification of the substance/mixture	Classification according to Regulation (EC) No. 1272/2008 [CLP] Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008
Label elements	Labelling as per Regulation (EU) No. 1272/2008 [CLP] Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.
Other hazards	Risk of skin burns caused by hot melt. Dust can occur through abrasion if the granulate is subjected to mechanical loading. A PBT/vPvB evaluation is not available, since a chemical safety evaluation is not required / has not been carried out.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances	Chemical nature: moulding compound on the base: polyamide. Other information: this sheet describes a group of products. It only contains safety-relevant data.
Mixtures	Not applicable.

4. DESCRIPTION OF FIRST AID MEASURES

General Information	First aider needs to protect himself. Remove from exposure, lie down. Do not leave the victim unattended
Inhalation	In case of symptoms of irritation caused by vapours in thermal processing: Provide fresh air, seek medical advice if necessary. If breathed in, move person into fresh air.
Skin contact	Cool melted product on skin with plenty of water. Do not remove solidified product. Consult a physician.
Eye contact	Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart. If eye irritation persists, consult a specialist
Ingestion	Seek medical advice
Most important symptoms and effects, both acute and delayed	Symptoms – product dust may be irritating to eyes, skin and respiratory system Hazards – risk of skin burns caused by hot product
Indication of any immediate medical attention and special treatment needed	Continue with first aid measures. Depending on the pathology and clinical findings, patient monitoring and symptomatic treatment are necessary.

5. FIREFIGHTING MEASURES 5.1.

Extinguishing media	Suitable extinguishing media – water spray jet, foam, carbon dioxide (CO ₂), dry powder. Unsuitable extinguishing media – high volume water jet.
Special hazards arising from the substance or mixture	May be released in case of fire: carbon monoxide, carbon dioxide, nitric oxides, organic products of decomposition. Under certain fire conditions, traces of other toxic products may occur.
Advice for firefighters	Wear self-contained breathing apparatus for firefighting if necessary.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	Avoid breathing dust. Ventilate the area
Environmental precautions	Should not be released into the environment. Try to prevent the material from entering drains or water courses.
Methods and material for containment and cleaning up	Sweep up or vacuum up spillage and collect in suitable container for disposal. Avoid dust formation
Reference to other sections	Wear personal protective equipment; see section 8

7. HANDLING AND STORAGE

Precautions for safe handling	Avoid dust formation. Provide appropriate exhaust ventilation at machinery and at places where dust can be generated. Protect from moisture. Avoid exceeding the given occupational exposure limits (see section 8).In thermal processing: risk of skin burns
Conditions for safe storage, including any incompatibilities	
Advice on protection against fire and explosion	Take precautionary measures against static discharges. During processing, dust may form explosive mixture in air
Storage	Keep container tightly closed in a dry and well-ventilated place. Avoid moisture
Advice on common storage	Keep away from food, drink and animal feeding stuffs. Observe prohibition against storing together!
German storage class	11 - Combustible Solids
Storage stability	Stable under recommended storage conditions
Storage stability	Stable under recommended storage conditions

8. EXPOSURE CONTROL/PERSONAL PROTECTION

Control parameters	No data
Exposure controls	
Engineering measures	In case of thermal processing, provide for extraction of the vapours or adequate ventilation. Avoid dust formation. Dust must be extracted directly at the point of origin.
Personal protective equipment	
Respiratory protection	Do not breathe dust. In the case of dust or aerosol formation use respirator with an approved filter. Note time limit for wearing respiratory protective equipment. In the case of vapour formation use a respirator with an approved filter. Respirator with filter for organic vapour Note time limit for wearing respiratory protective equipment.
Hand protection	The wearing of protective gloves is not required if the granulate in question is handled at room temperature. 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. Protective heat-insulating gloves are to be used during thermal processing.
Eye protection	safety glasses

Hygiene measures

Wash contaminated clothing before re-use. Wash hands before breaks and at the end of workday. Do not eat, drink or smoke during use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance form Physical state	fiber (filament) solid
Odour	odourless
Próg zapachu	not determined; not considerations required by safety or application
pH	not applicable
Melting point/range	165 – 190 °C
Boiling point/range	not applicable; decomposition
Flash point	not applicable
Evaporation rate	not applicable
Flammability (solid, gas)	the product is not flammable
Lower explosion limit	see Explosiveness
Upper explosion limit	see Explosiveness
Vapour pressure	not applicable
Vapour density	not applicable
Relative density	1,0 – 1,2 (20°C)
Water solubility	insoluble
Partition n-octanol/water coefficient	no data available; not considerations required by safety or application considerations
Autoinflammability	the substance or mixture is not classified as pyrophoric; the substance or mixture is not classified as self heating
Thermal decomposition	> 300°C
Viscosity, dynamic	no data available; not considerations required by safety or application

Viscosity, kinematic	no data available; not considerations required by safety or application
Explosiveness	not explosive; dust might form explosive mixtures with air.
Oxidizing properties	the substance or mixture is not classified as oxidizing
Other information	
Formation of flammable gases	the substance or mixture does not emit flammable gases in contact with water.
Ignition temperature	> 350°C
Peroxides	the substance or mixture is not classified as organic peroxide
Metal corrosion	not corrosive to metals

10. STABILITY AND REACTIVITY

Reactivity	Under normal conditions: stable
Chemical stability	Stable under recommended storage conditions
Possibility of hazardous reactions	Do not bring hot smelter into contact with water (steam formation)
Conditions to avoid	Extremes of temperature and direct sunlight
Incompatible materials	None known
Hazardous decomposition products	Decomposition products on thermal decomposition: carbon monoxide, carbon dioxide, nitrogen oxides, organic products of decomposition.

11. : TOXICOLOGICAL INFORMATION

Acute toxicity	The properties of this product which are hazardous to health have been calculated as per regulation (EC) No. 1272/2008. See section 2 „Hazards Identification“.
Skin corrosion/irritation	The properties of this product which are hazardous to health have been calculated as per regulation (EC) No. 1272/2008. See section 2 „Hazards Identification“.
Eye corrosion/irritation	The properties of this product which are hazardous to health have been calculated as per regulation (EC) No. 1272/2008. See section 2 „Hazards Identification“.
Respiratory sensitization	The properties of this product which are hazardous to health have been calculated as per regulation (EC) No. 1272/2008. See section 2 „Hazards Identification“.

Skin sensitization	The properties of this product which are hazardous to health have been calculated as per regulation (EC) No. 1272/2008. See section 2 „Hazards Identification“.
Mutagenicity	The properties of this product which are hazardous to health have been calculated as per regulation (EC) No. 1272/2008. See section 2 „Hazards Identification“.
Carcinogenicity	The properties of this product which are hazardous to health have been calculated as per regulation (EC) No. 1272/2008. See section 2 „Hazards Identification“.
Reproductive toxicity	The properties of this product which are hazardous to health have been calculated as per regulation (EC) No. 1272/2008. See section 2 „Hazards Identification“.
Specific target organ toxicity (single exposure)	The properties of this product which are hazardous to health have been calculated as per regulation (EC) No. 1272/2008. See section 2 „Hazards Identification“.
Specific target organ toxicity (repeated exposure)	The properties of this product which are hazardous to health have been calculated as per regulation (EC) No. 1272/2008. See section 2 „Hazards Identification“.
Aspiration hazard	The properties of this product which are hazardous to health have been calculated as per regulation (EC) No. 1272/2008. See section 2 „Hazards Identification“.

12. ECOLOGICAL INFORMATION

Toxicity	Toxicity to fish see item 12
Persistence and degradability	Further information see item 12
Bioaccumulative potential	Bioaccumulation see item 12
Mobility in soil	Mobility see item 12
Results of PBT and vPvB assessment	A PBT/vPvB evaluation is not available, since a chemical safety evaluation is not required / has not been carried out.
Other adverse effects	The properties of this product which are characteristics posing a threat to the environment have been calculated as per regulation (EC) No. 1272/2008. See section 2 „Hazards Identification“.

13. : DISPOSAL CONSIDERATIONS

Waste treatment methods

Where possible recycling is preferred to disposal or incineration. Can be landfilled or incinerated, when in compliance with local regulations. Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities.

14. TRANSPORT INFORMATION

Un number	No data
UN proper shipping name	No data
Transport hazard class(es)	No data
Packing group	No data
Environmental hazard	No data
Special precautions for user	No data
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	No data

15. REGULATORY INFORMATION

Safety, health and environmental regulation/legislation specific for the substance or mixture	
National legislation	Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.
Listing	Listing
Chemical safety assessment	USA (TSCA) - listed/registered Canada (DSL)- listed/registered Australia (AICS)- listed/registered Japan (MITI)- listed/registered Korea (KECI)- listed/registered Philippines (PICCS)- listed/registered China- listed/registered New Zealand- listed/registered Taiwan- listed/registered

16. OTHER INFORMATION

Wskazanie zmian	Brak informacji
Skróty i akronimy	
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ASTM	American Society for Testing and Materials
ATP	Adaptation to Technical Progress

BCF	Bioconcentration factor
BetrSichV	German Ordinance on Industrial Safety and Health
c.c.	closed cup
CAS	Chemical Abstract Services
CESIO	European Committee of Organic Surfactants and their Intermediates
ChemG	German Chemicals Act
CMR	carcinogenic-mutagenic-toxic for reproduction
DIN	German Institute for Standardization
DMEL	Derived minimum effect level
DNEL	Derived no effect level
EINECS	European Inventory of Existing Commercial Chemical Substances
EC50	half maximal effective concentration
GefStoffV	German Ordinance on Hazardous Substances
GGVSEB	German ordinance for road, rail and inland waterway transportation of dangerous goods
GGVSee	German ordinance for sea transportation of dangerous goods
GLP	Good Laboratory Practice
GMO	Genetic Modified Organism
IATA	International Air Transport Association
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods
ISO	International Organization For Standardization
LOAEL	Lowest observed adverse effect level
LOEL	Lowest observed effect level
NOAEL	No observed adverse effect level
NOEC	no observed effect concentration
NOEL	no observed effect level
o. c.	open cup

OECD	Organisation for Economic Cooperation and Development
OEL	Occupational Exposure Limit
PBT	Persistent, bioaccumulative, toxic
PEC	Predicted effect concentration
PNEC	Predicted no effect concentration
REACH	REACH registration
RID	Convention concerning International Carriage by Rail
STOT	Specific Target Organ Toxicity
SVHC	Substances of Very High Concern
TA	Technical Instructions
TPR	Third Party Representative (Art. 4)
TRGS	Technical Rules for Hazardous Substances
VCI	German chemical industry association
vPvB	very persistent, very bioaccumulative
VOC	volatile organic compounds
VwVwS	German Administrative Regulation on the Classification of Substances Hazardous to Waters into Water Hazard Classes
WGK	Water Hazard Class
WHO	World Health Organization

Key literature references and sources for data

The product safety data sheet has been prepared based on the documentation provided by the manufacturer of the granulate from which the filament product was made.

Relevant R phrases and H statements	No data
Training advice	No data

Further information

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