

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 / Regulation (EU) 2020/878



ABS PERFORMANCE

Version
2.0
IT/EN

Revision Date:
23.04.2024

SDS Number
1023

Date of last issue: 23.04.2024
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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name : ABS PERFORMANCE

Product code : 1023

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

Use of the Sub-
stance/Mixture : Hight-performance material for fused deposition modeling

1.3 Details of the supplier of the safety data shewet

Company : Treedplast
Via Messina, 103
20831 Seregno MB
Italy
Telephone : +039(0)362/320500
Responsible/issuing person : sales@treedfilaments.com

1.4 Emergency telephone number

Telephone : CAV "Osp. Pediatrico Bambino Gesù" Dip. Emergenza e Accettazione DEA (Roma)
+39(0)6/68593726

Az. Osp. Univ. Foggia (Foggia)
+039(0)800/183459

Az. Osp. "A. Cardarelli" (Napoli)
+039(0)81/5453333

CAV Policlinico "Umberto I" (Roma)
+39(0)6/49978000

CAV. Polinclinico "A. Gemelli" (Roma)
+39(0)6/3054343

Az. Osp. "Careggi" U.O. Tossicologia Medica (Firenze)
+39(0)55/7947819

CAV. Centro Nazionale di Informazione Tossicologica (Pavia)
+39(0)38224444

Osp. Niguarda Ca' Granda (Milano)
+39(0)2/66101029

Azienda Ospedaliera Papa Giovanni XXII (Bergamo)
+39(0)800/883300

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(DE): GIZ Giftinformationszentrum-Nord
49(0)551/19240

(IT): OSPEDALE NIGUARDA
CENTRO ANTIVELENI
(39)0266101029

SECTION 2: Hazards identification

2.1 Hazard classification

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)
Combustible dust

2.2 Label elements

Signal word: **WARNING!**

Hazards

If small particles are generated during further processing, handling or by other means, may form combustible dust concentrations in air.

Other hazards

No data available

SECTION 3: Composition/information on ingredients

Component	CASRN	Concentration
Acrylonitrile/butadiene/ styrene resin	9003-56-9	>= 99.5 %

SECTION 4: First aid measures

4.1 Description of first aid measures

- General advice : First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.
- If inhaled : Move to fresh air.
If symptoms persist, call a physician.
- In case of skin contact : Wash off with plenty of water. Seek first aid or medical attention

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as needed. If molten material comes in contact with the skin, do not apply ice but cool under ice water or running stream of water. DO NOT attempt to remove the material from skin. Removal could result in severe tissue damage. Seek medical attention immediately. Suitable emergency safety shower facility should be immediately available.

- In case of eye contact : Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist.
- If swallowed : If swallowed, seek medical attention. May cause gastrointestinal blockage. Do not give laxatives. Do not induce vomiting unless directed to do so by medical personnel.

4.2 Most important symptoms and effects, both acute and delayed

- Symptoms : Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

4.3 Indication of any immediate medical attention and special treatment needed

- Treatment : If burn is present, treat as any thermal burn, after decontamination. If lavage is performed, suggest endotracheal and/or esophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

SECTION 5: Firefighting measures

5.1 Extinguishing media

- Suitable extinguishing media : Water fog or fine spray..
Dry chemical fire extinguishers..
Carbon dioxide fire extinguishers..
Foam..

- Unsuitable extinguishing media : None known..

5.2 Special hazards arising from the substance or mixture

- Hazardous combustion products : During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating.. Combustion products may include and are not limited to:..
Nitrogen oxides..
Carbon monoxide.

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Carbon dioxide.
Combustion products may include trace amounts of:
Styrene.
Hydrogen cyanide..

Unusual Fire and Explosion Hazards: : Pneumatic conveying and other mechanical handling operations can generate combustible dust. To reduce the potential for dust explosions, do not permit dust to accumulate.. Dense smoke is produced when product burns.

5.3 Advice for firefighters

Fire Fighting Procedures : Keep people away. Isolate fire and deny unnecessary entry. Soak thoroughly with water to cool and prevent re-ignition.. If material is molten, do not apply direct waterstream. Use fine water spray or foam.. Cool surroundings with water to localize fire zone.. Hand held dry chemical or carbon dioxide extinguishers may be used for small fires..

Special protective equipment for firefighters : Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). If protective equipment is not available or not used, fight fire from a protected location or safe distance.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Spilled material may cause a slipping hazard. Use appropriate safety equipment.
For additional information, refer to Section 8, Exposure Controls and Personal Protection.

6.2 Environmental precautions

Environmental precautions : Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Contain spilled material if possible. Sweep up. Collect in suitable and properly labeled containers. See Section 13, Disposal Considerations, for additional information

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling : No smoking, open flames or sources of ignition in handling and

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storage area. Good housekeeping and controlling of dusts are necessary for safe handling of product. Avoid breathing process fumes. Use with adequate ventilation. When appropriate, unique handling information for containers can be found on the product label. Workers should be protected from the possibility of contact with molten resin. Do not get molten material in eyes, on skin or clothing. Pneumatic conveying and other mechanical handling operations can generate combustible dust. To reduce the potential for dust explosions, electrically bond and ground equipment and do not permit dust to accumulate. Dust can be ignited by static discharge.

7.2 Conditions for safe storage

Store in accordance with good manufacturing practices.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

If exposure limits exist, they are listed below. If no exposure limits are displayed, then no values are applicable.

8.2 Exposure controls

Engineering controls

: Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.

Personal protective equipment

Eye/face protection

: Safety glasses with side-shields
Equipment should conform to EN 166

Hand protection

Material

: Protective gloves

Directive

: Equipment should conform to EN 374

Remarks

: The suitability for a specific workplace should be discussed with the producers of the protective gloves. The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other. The exact break through time can be obtained from the protective glove producer and this has to be observed. The break through time depends amongst other things on the material, the thickness and the type of glove and therefore has to be measured for each case. Request information on glove

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permeation properties from the glove supplier. Choose gloves to protect hands against chemicals depending on the concentration and quantity of the hazardous substance and specific to place of work.

Skin and body protection : Safety shoes
Wear suitable protective clothing

Respiratory protection : Effective dust mask
In the case of vapour formation use a respirator with an approved filter.

Protective measures : Follow the skin protection plan.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state : filament

Colour : Off-white

Odour : Odorless

Odor Threshold : No test data available

Melting point/range : Not available

Freezing point : Not available

Boiling point (760 mmHg) : Not available

Flammability : Not expected to form explosive dust-air mixtures.

Upper explosion limit / Upper flammability limit : No data available

Lower explosion limit / Lower flammability limit : Not available

Flash point : closed cup Not available

Evaporation Rate (Butyl Acetate = 1) : No test data available

Decomposition temperature : No test data available

pH : Not available

Viscosity, kinematic : Not applicable

Solubility(ies)
Water solubility : negligible

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Partition coefficient: n-octanol/water	: No data available
Vapour pressure	: Not available
Relative density	: Not available
Density	: 1.05 - 1.07 Literature
Auto-ignition temperature	: No test data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Molecular weight	: No data available

NOTE: The physical data presented above are typical values and should not be construed as a specification.

SECTION 10: Stability and reactivity

10.1 Reactivity

No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

The product is chemically stable.

10.3 Possibility of hazardous reactions

Hazardous reactions : Polymerization will not occur.

10.4 Conditions to avoid

Conditions to avoid : Avoid temperatures above 300 °C
Exposure to elevated temperatures can cause product to decompose

10.5 Incompatible materials

Materials to avoid : None known.

10.6 Hazardous decomposition products

Decomposition products depend upon temperature, air supply and the presence of other materials.
Processing may release fumes and other decomposition products.
At temperatures exceeding melt temperatures, polymer fragments can be released. Fumes can be irritating.

SECTION 11: Toxicological information

Toxicological information appears in this section when such data is available.

Acute toxicity (represents short term exposures with immediate effects - no chronic/delayed effects known unless otherwise noted)

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Acute oral toxicity

Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts.
May cause choking if swallowed.

Single dose oral LD50 has not been determined.

Typical for this family of materials.
LD50, Rat, > 5,000 mg/kg Estimated.

Information for components:

Acrylonitrile/butadiene/ styrene resin

Single dose oral LD50 has not been determined

Acute dermal toxicity

No adverse effects anticipated by skin absorption.

The dermal LD50 has not been determined.

Typical for this family of materials.
LD50, Rabbit, > 2,000 mg/kg Estimated.

Information for components:

Acrylonitrile/butadiene/ styrene resin

The dermal LD50 has not been determined.

Acute inhalation toxicity

No adverse effects are anticipated from single exposure to dust. Vapors released during thermal processing may cause respiratory irritation.

The LC50 has not been determined.,

Information for components:

Acrylonitrile/butadiene/ styrene resin

The LC50 has not been determined.

Skin corrosion/irritation

Prolonged contact is essentially nonirritating to skin.

Mechanical injury only.

Under normal processing conditions, material is heated to elevated temperatures; contact with the material may cause thermal burns.

Serious eye damage/eye irritation

Solid or dust may cause irritation or corneal injury due to mechanical action.

Elevated temperatures may generate vapor levels sufficient to cause eye irritation. Effects may include discomfort and redness.

Sensitization

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For skin sensitization:
No relevant data found.

For respiratory sensitization:
No relevant data found.

Specific Target Organ Systemic Toxicity (Single Exposure)

The substance or mixture is not classified as specific target organ toxicant, single exposure.

Aspiration Hazard

Based on physical properties, not likely to be an aspiration hazard.

Chronic toxicity (represents longer term exposures with repeated dose resulting in chronic/delayed effects - no immediate effects known unless otherwise noted)

Specific Target Organ Systemic Toxicity (Repeated Exposure)

Additives are encapsulated in the product and are not expected to be released under normal processing conditions or foreseeable emergency.

Carcinogenicity

No relevant data found.

Teratogenicity

No relevant data found.

Reproductive toxicity

No relevant data found.

Mutagenicity

No relevant data found.

SECTION 12: Ecological information

Ecotoxicological information appears in this section when such data is available.

12.1 Toxicity

Product:

Toxicity to fish

: Not expected to be acutely toxic, but material in pellet or bead form may mechanically cause adverse effects if ingested by waterfowl or aquatic life.

12.2 Persistence and degradability

Product:

Biodegradability

: This water-insoluble polymeric solid is expected to be inert in the environment. Surface photodegradation is expected with exposure to sunlight. No appreciable biodegradation is expected.

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12.3 Bioaccumulative potential

Product:

Bioaccumulation

: No bioconcentration is expected because of the relatively high molecular weight (MW greater than 1000).

12.4 Mobility in soil

Product:

Mobility

: In the terrestrial environment, material is expected to remain in the soil.
In the aquatic environment, material will sink and remain in the sediment.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

: DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER.
All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations.
Regulations may vary in different locations.
Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator.
AS YOUR SUPPLIER, WE HAVE NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION: Composition Information. FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: Recycler. Reclaimer. Incinerator or other thermal destruction device. Landfill.

SECTION 14: Transport information

DOT

: Not regulated for transport

Classification for SEA transport (IMO-IMDG):

Not regulated for transport

Transport in bulk according to Annex I or II of MARPOL 73/78 and the IBC or IGC Code

: Consult IMO regulations before transporting ocean bulk

Classification for AIR transport (IATA/ICAO):

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This information is not intended to convey all specific regulatory or operational requirements/information relating to this product.

Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations.

Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

SECTION 15: Regulatory information

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

Water hazard class (Italy) : No data available

SECTION 16: Other information

Full text of other abbreviations

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TRGS - Technical

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Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

Contact Point : Business Unit "FILAMENT 3D, PRINTING"

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.