

SAFETY DATA SHEET

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



PLAFF

Version
2.0
IT/EN

Revision Date:
23.04.2024

SDS Number
1016

Date of last issue: 23.04.2024
Date of first issue: 23.04.2024
Print Date: 23.04.2024

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

1.1 Product identifier

Trade name : PLAFF

Product code : 1016

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. Poliniclinico "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

SAFETY DATA SHEET

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



PLAFF

Version
2.0
IT/EN

Revision Date:
23.04.2024

SDS Number
1016

Date of last issue: 23.04.2024
Date of first issue: 23.04.2024
Print Date: 23.04.2024

Azienda Ospedaliera Integrata Verona (Verona)
+39(0)800/011858

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

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

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No. 1272/2008)
Not classified

2.2 Label elements

Labelling (REGULATION (EC) No. 1272/2008)

Signal word: None

Hazard Statements: None

Precautionary Statements: None

2.3 Other hazards

May form combustible dust concentrations in air if small particles are generated during further processing, handling or by other means. Refer to protective measures listed in Sections 7 and 8.

SECTION 3: Composition/information on ingredients

3.1 Substances

Chemical name	EC-No:	Weight %	Classification:
Poly lactide resin 9051-89-2	618-575-7	>98	Not classified

SECTION 4: First aid measures

4.1 Description of first aid measures

If inhaled : Move to fresh air.
If symptoms persist, call a physician.

In case of skin contact : Do NOT use solvents or thinners.

SAFETY DATA SHEET

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



PLAFF

Version	Revision Date:	SDS Number	Date of last issue:23.04.2024
2.0	23.04.2024	1016	Date of first issue: 23.04.2024
IT/EN			Print Date: 23.04.2024

Wash off with soap and water.
If symptoms persist, call a physician.
Cool melted product on skin with plenty of water. Do not remove solidified product.
In case of burns apply cold water until pain subsides then seek medical advice.

In case of eye contact : Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
Keep eye wide open while rinsing.
Remove contact lenses.

If swallowed : Do NOT induce vomiting.
If symptoms persist, call a physician.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms : No information available

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : symptomatically

SECTION 5: Firefighting measures

Flammability:

Auto-ignition temperature: 730°F / 388°C

Flammability Limits in Air:

Flammable limits in air - lower (%): Not applicable

Flammable limits in air - upper (%): Not applicable

5.1 Extinguishing media

Suitable extinguishing media : Foam. Water. Carbon dioxide (CO₂). Dry chemical.
Alcohol resistant foams are preferred if available. General-purpose synthetic foams (including AFFF) or protein foams may function, but much less effectively..

Unsuitable extinguishing media : None known

5.2 Special hazards arising from the substance or mixture

Hazardous decomposition products : Burning produces obnoxious and toxic fumes
Aldehydes
Carbon monoxide (CO)
carbon dioxide (CO₂)

5.3 Advice for firefighters

Special protective equipment for firefighters : Exposure to decomposition products may be a hazard to health.
In the event of fire, wear self-contained breathing apparatus

Under fire conditions: : Cool containers / tanks with water spray Water mist may be

SAFETY DATA SHEET

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



PLAFF

Version
2.0
IT/EN

Revision Date:
23.04.2024

SDS Number
1016

Date of last issue: 23.04.2024
Date of first issue: 23.04.2024
Print Date: 23.04.2024

used to cool closed containers Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air)

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Use personal protective equipment as required. Avoid contact with skin and eyes.
Avoid dust formation. Remove all sources of ignition. Sweep up to prevent slipping hazard.

Use personal protection recommended in Section 8.

6.2 Environmental precautions

Environmental precautions : Should not be released into the environment.
Do not allow contact with soil, surface or ground water.
Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air).

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Clean up promptly by scoop or vacuum. Sweep up and shovel into suitable containers for disposal.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling : Use personal protective equipment as required.
Avoid contact with skin and eyes.
Low hazard for usual industrial or commercial handling. Workers should be protected from the possibility of contact with molten material during fabrication.
Avoid dust formation.
May form combustible dust concentrations in air if small particles are generated during further processing, handling or by other means.

7.2 Conditions for safe storage, including any incompatibilities

Store at temperatures not exceeding 50 °C/ 122 °F. Keep cool No special restrictions on storage with other products.

7.3 Specific end use(s)

Specific use(s) : No data available

SAFETY DATA SHEET

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



PLAFF

Version
2.0
IT/EN

Revision Date:
23.04.2024

SDS Number
1016

Date of last issue: 23.04.2024
Date of first issue: 23.04.2024
Print Date: 23.04.2024

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Engineering measures: Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction.
Provide appropriate exhaust ventilation at places where dust is formed.

8.2 Exposure controls

Exposure limits:

Not Established.

This material can generate Particulates Not Otherwise Classifiable (PNOC).

The Occupational Safety and Health Administration (OSHA) PEL/TWA for PNOC is 15 mg/m³ for total dust and 5 mg/m³ for the respirable fraction.

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 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

SAFETY DATA SHEET

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



PLAFF

Version
2.0
IT/EN

Revision Date:
23.04.2024

SDS Number
1016

Date of last issue: 23.04.2024
Date of first issue: 23.04.2024
Print Date: 23.04.2024

9.1 Information on basic physical and chemical properties

Physical state	: filament
Colour	: Clear, Translucent, Opaque
Odour	: Sweet
Melting point/range	: 150- 180°C (302- 356°F) , Tg (Gl a s s Tr a n s i t i o n Te m p e r a t u r e) : 55- 60°C (131- 140°F) , @ 101. 3 kPa
Boiling point/boiling range	: Not applicable
Flammability	: Fine dust dispersed in air may ignite
Flammability Limits in Air:	: No data available
Flash point	: not determined
Ignition temperature	: 730°F / 388°C
Decomposition temperature	: 482°F / 250°C @ 101.3 kPa
pH	: Not applicable
Water solubility:	: Insoluble
Solubility in other solvents	: not determined
Solubility:	: not determined
Vapour pressure	: not determined
Relative density	: not determined
Evaporation rate:	: not determined
Density	: 1.25 g/cc @ 20 °C, 101.3 kPa

9.2 Other information

Information with regards to physical hazard classes:

Workers should be protected from the possibility of contact with molten material during fabrication.

Other safety characteristics:

See section 8 for more information

SECTION 10: Stability and reactivity

10.1 Reactivity

None under normal use conditions

SAFETY DATA SHEET

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



PLAFF

Version	Revision Date:	SDS Number	Date of last issue:23.04.2024
2.0	23.04.2024	1016	Date of first issue: 23.04.2024
IT/EN			Print Date: 23.04.2024

10.2 Chemical stability

Stable under recommended storage conditions

10.3 Possibility of hazardous reactions

Hazardous reactions : None under normal use conditions

10.4 Conditions to avoid

Conditions to avoid : Temperatures above 446F (230 °C).
Avoid keeping resin molten for excessive periods at temperatures above 230 °C.
Prolonged exposure above 230 °C will cause polymer degradation.

10.5 Incompatible materials

Materials to avoid : oxidising agents. Strong bases.

10.6 Hazardous decomposition products

Burning produces obnoxious and toxic fumes.
Aldehydes.
Carbon monoxide (CO).
Carbon dioxide(CO₂).

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

Based on available data, the classification criteria are not met.
There were no target organ effects noted following ingestion or dermal exposure in animal studies.

Principle routes of exposure: : Eye contact, Skin contact, Inhalation, Ingestion

Skin: : LD50/dermal/rabbit > 2000 mg/kg

Ingestion: : Oral LD50 (rat) >5000 mg/kg

Skin corrosion/irritation

Based on available data, the classification criteria are not met

Long term toxicity: : Did not cause skin allergic reactions in skin sensitization studies using guinea pigs.

Serious eye damage/eye irritation

Based on available data, the classification criteria are not met

Respiratory or skin sensitisation

Based on available data, the classification criteria are not met

Germ cell mutagenicity

Not mutagenic in AMES Test

SAFETY DATA SHEET

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



PLAFF

Version
2.0
IT/EN

Revision Date:
23.04.2024

SDS Number
1016

Date of last issue: 23.04.2024
Date of first issue: 23.04.2024
Print Date: 23.04.2024

Carcinogenicity

This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP

Reproductive toxicity

Based on available data, the classification criteria are not met

STOT - single exposure

Based on available data, the classification criteria are not met

STOT - repeated exposure

Based on available data, the classification criteria are not met

Aspiration hazard

Based on available data, the classification criteria are not met

11.2 Information on other hazards

- | | |
|------------------|---|
| Local effects | : Product dust may be irritating to eyes, skin and respiratory system.
Resin particles, like other inert materials, are mechanically irritating to eyes.
Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.. |
| Specific effects | : May cause skin irritation and/or dermatitis
Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea
Inhalation of dust may cause shortness of breath, tightness of the chest, a sore throat and cough
Burning produces irritant fumes. |

Endocrine disrupting properties

No data is available on the product itself.

Other information:

SECTION 12: Ecological information

12.1 Toxicity

EC50/72h/algae > 1100 mg/L

12.2 Persistence and degradability

Inherently biodegradable under industrial composting conditions

12.3 Bioaccumulative potential

Not likely to bioaccumulate

12.4 Mobility in soil

No data available

SAFETY DATA SHEET

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



PLAFF

Version
2.0
IT/EN

Revision Date:
23.04.2024

SDS Number
1016

Date of last issue: 23.04.2024
Date of first issue: 23.04.2024
Print Date: 23.04.2024

12.5 Results of PBT and vPvB assessment

Not applicable

12.6 Endocrine disrupting properties

No data is available on the product itself.

12.7 Other adverse effects

SECTION 13: Disposal considerations

In compliance with the requirements of Directive 2008/98/EC

13.1 Waste treatment methods

- Product : In accordance with local and National regulations. Should not be released into the environment. Do not contaminate ponds, waterways or ditches with chemical or used container. Contact manufacturer.
- Contaminated packaging : Empty remaining contents Do not re-use empty containers. Empty containers should be transported/delivered using a registered waste carrier to local recyclers for disposal.

THE COMPANY HAS 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

SECTION 14: Transport information

14.1 UN number or ID number

None

14.2 UN proper shipping name

None

14.3 Transport hazard class(es)

None

14.4 Packing group

None

14.5 Environmental hazards

None

14.6 Special precautions for user

None

SAFETY DATA SHEET

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



PLAFF

Version	Revision Date:	SDS Number	Date of last issue:23.04.2024
2.0	23.04.2024	1016	Date of first issue: 23.04.2024
IT/EN			Print Date: 23.04.2024

14.7 Maritime transport in bulk according to IMO instruments

None

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

Other regulations: The product does not need to be labelled in accordance with EC directives or respective national laws.

15.2 Chemical safety assessment

Not applicable.

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

SAFETY DATA SHEET

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



PLAFF

Version
2.0
IT/EN

Revision Date:
23.04.2024

SDS Number
1016

Date of last issue:23.04.2024
Date of first issue: 23.04.2024
Print Date: 23.04.2024

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.