

DELRAY Material

Safety Data Sheet

According to EU Directive 1907/2006

Product name: PLA Pro DM

Date of issue: 31-05-2018

Version: 1.2

1. Identification of the substance/preparation and of the company

- 1.1 Trade name:**
PLA Pro DM
- 1.2 Use of the product:**
3Dprinter Filament
- 1.3 Supplier:**
DELRAY Systems LLC
419 Golf View Lane
Rochester, MI 48309
Phone: 248-218-1916

2. Hazards identification

- 2.1 Classification of the substance or mixture**
According to Regulation (EC) No 1272/2008 [CLP]
No need for classification according to GHS criteria for this product
- 2.2 Label elements**
None
- 2.3 Other hazards**
This product does not meet the criteria for PBT or vPvB in accordance with Annex XIII of REACH.

3. Composition/information on ingredients

3.2. Mixtures

Chemical name	EC-No	CAS-No	Weight %	Classification (1272/2008/EC)	REACH registration number
Polylactic acid	-	9051-89-2	>98%	-	Exempted
Additives	-	-	2%	-	-

4. First aid measures

4.1 Description of first aid measures

General Advice

No hazards which require special first aid measures.

Eye Contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention immediately if symptoms occur.

Skin Contact

Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get medical attention immediately if symptoms occur.

Ingestion

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Rinse mouth. Get medical attention immediately if symptoms occur.
Inhalation
Move to fresh air. Get medical attention immediately if symptoms occur.
Protection of first-aiders
Use personal protective equipment. Avoid contact with skin, eyes and clothing.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms: No acute and delayed symptoms and effects are observed.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment: Treat according to symptoms

5. Fire fighting measures

5.1 Extinguishing media

Suitable extinguishing media:
Water spray, Foam, Dry powder, Carbon dioxide (CO₂).
Unsuitable extinguishing media :
Do not use a solid water stream as it may scatter and spread fire.

5.2 Special hazards arising from the substance or mixture

Hazardous decomposition products formed under fire conditions: Carbon oxides, Acetaldehyde.

5.3 Advice for fire fighters

Fire fighting measures

Evacuate non-essential personnel Move containers from fire area if you can do it without risk.
Keep containers and surroundings cool with water spray. Prevent fire extinguishing water from contaminating surface water or the ground water system.

Special protective equipment for fire-fighters

Wear self-contained breathing apparatus and protective suit.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Evacuate personnel to safe areas. Risk of slipping. Avoid dust formation. Avoid contact with skin, eyes and clothing. Do not breathe dust. Use personal protective equipment. Ensure adequate ventilation.

6.2 Environmental precautions

Should not be released into the environment. Prevent further leakage or spillage if safe to do so.

6.3 Methods and materials for containment and cleaning up

Avoid dust formation. Sweep up and shovel into suitable containers for disposal. Following product recovery, rinse area with water.

6.4 Reference to other sections

Refer to section (8)

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7. Handling and storage

7.1 Handling

Handle in accordance with good industrial hygiene and safety practice. Avoid dust formation. Do not breathe dust. Avoid contact with skin, eyes and clothing. Ensure adequate ventilation. Wear personal protective equipment. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Keep containers tightly closed in a cool, well-ventilated place. Protect from moisture / Water.

8. Exposure controls/personal protection

8.1 Control parameters

Components with occupational exposure limits

Contains no substances with occupational exposure limit values.

Biological Limit Values

Not established.

PNEC

The obligation to register acc. to the REACH Regulation (EC) No 1907/2006 does not apply to polymers.

DNEL

The obligation to register acc. to the REACH Regulation (EC) No 1907/2006 does not apply to polymers.

8.2 Exposure controls

Appropriate Engineering Controls

Ensure adequate ventilation, especially in confined areas. Keep at temperatures below 230 °C / 446 °F.

Individual protection measures, such as personal protective equipment

Eye Protection

Tightly fitting safety goggles.

Hand Protection

Protective gloves: Butyl rubber.

Skin and body protection

Long sleeved clothing.

Respiratory Protection

In case of insufficient ventilation wear suitable respiratory equipment. Recommended Filter Type P2 / FFP2.

Hygiene Measures

Handle in accordance to good industrial hygiene and safety practice. Workers must be trained in the proper use and handling of this product as required under applicable regulations. Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product. Wash contaminated clothing before re-use.

Environmental exposure controls

The product should not be allowed to enter drains, water courses or the soil

9. Physical and chemical properties

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9.1 Information on basic physical and chemical properties

Appearance	Solid Filament
Odour	Odourless
Colour	depending on product grade
Odour threshold	Odourless
pH	Not applicable
Melting/freezing point	150-230 °C / 302-446 °F
Initial boiling point and boiling range	Not applicable
Flash point	Not applicable
Evaporation rate	Not applicable
Flammability (solid, gas)	flammable
Upper/lower flammability or explosive limits	Not applicable
Vapour pressure	Not applicable
Vapour density	Not applicable
Relative density	Ca. 1.1-1.3 g/cm ³
Solubility(ies)	Insoluble
Partition coefficient (n-octanol/water)	Not available
Auto-ignition temperature	No information available
Decomposition temperature	>230°C
Viscosity	Not applicable
Explosive properties	Not explosive
Oxidizing properties	Not oxidizing

10. Stability

10.1 Reactivity: No information available

10.2 Chemical stability:
Decomposes in contact with hot water.

10.3 Possibility of hazardous reactions:
No hazardous reactions observed under normal handling and storage conditions

10.4 Conditions to avoid
Temperatures above 230 °C / 446 °F.

10.5 Incompatible materials:
Moisture, Water.

10.6 Hazardous decomposition products
Hazardous decomposition products formed under fire conditions: Carbon oxides, Acetaldehyde.

11. Toxicological information

11.1 Information on toxicological effects

Acute toxicity:

Ingestion: No known effect.

Skin Contact : No known effect.

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Inhalation :	No known effect.
Skin Corrosion/Irritation	No known effect.
Serious eye damage/irritation	No known effect.
Respiratory or skin sensitisation	No known effect.
Germ Cell Mutagenicity	Not known to cause heritable genetic damage.
Carcinogenicity	Contains no ingredient listed as a carcinogen.
Reproductive Toxicity	No known effect
STOT-single exposure	No known effect.
STOT-repeated exposure	No known effect.
Aspiration Hazard	No known effect.

12. Ecological information

12.1 Toxicity

Contains no substances known to be hazardous for the environment.

12.2 Persistence and degradability

Decomposes in contact with water. Industrially biodegradable.

12.3 Bio accumulative potential

No information available.

12.4 Mobility in soil

No information available.

12.5 Results of PBT and vPvB assessment

This substance is not considered to be persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB).

12.6 Other adverse effects

No information available..

13. Disposal considerations

13.1 Waste treatment methods

Waste from residues / unused products

Dispose of in accordance with local regulations.

Contaminated Packaging

Empty containers should be taken to an approved waste handling site for recycling or disposal.

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14. Transport information

Product has been classified as being non-dangerous substance according to transport regulations ADR, RID, IMDG, IATA/ICAO

- 14.1 UN number**
Not applicable
- 14.2 UN proper shipping name**
Not applicable
- 14.3 Transport hazard class(es)**
Not applicable
- 14.4 Packing Group**
Not applicable
- 14.5 Environmental hazards**
No additional data is available
- 14.6 Special precautions for user**
No data available
- 14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**
Not evaluated

15. Regulatory information

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
Restrictions on use: None
Other Regulations : No information available
- 15.2 Chemical Safety Assessment**
No information available.

16. Other information

Information is referenced from other manufacturers.

For abbreviations and acronyms, see: ECHA Guidance on information requirements and chemical safety assessment, chapter R.20 (Table of terms and abbreviations).

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006 and Regulation (EC) No. 2015/830. Label element according to Regulation (EC) No 1272/2008.

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.