


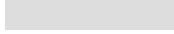
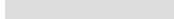
Material Safety Data Sheet

1. Product & Company Identification

| Item no. | Product |
|----------|------------------------|
| 2885750 | Filament PLA-ST, black |
| 2885751 | Filament PLA-ST, white |
| 2885776 | Filament PLA-ST, grey |

| | |
|-----------------------|---------------------------------------|
| Manufacturer: | Conrad Electronic SE |
| Address: | Klaus-Conrad-Str. 1, D-92240 Hirschau |
| Telephone: | +49 (0) 9604 / 40 - 8988 |
| Date of issue: | 15.10.2022 |

2. Hazards Identification

| | Min | Max | |
|--------------|-----|---|--------------|
| Flammability | 1 |  | 0 = Minimum |
| Toxicity | 0 |  | 1 = Low |
| Body Contact | 0 |  | 2 = Moderate |
| Reactivity | 1 |  | 3 = High |
| Chronic | 0 |  | 4 = Extreme |

GHS classification:

Not Applicable

GHS Label elements:

Not Applicable

SIGNAL WORD:

Not Applicable

3. Composition/Information on Ingredients

| Ingredient Name | CAS No. | EC No. | Content (%) |
|--------------------|------------|--------|-------------|
| Poly (DL- lactide) | 51063-13-9 | -- | 77 |
| ACR | -- | -- | 20 |
| CaCO ₃ | -- | -- | 3 |
| PLA Masterbatches | -- | -- | 6-8 |

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4. First Aid Measures

INGESTION

- Immediately give a glass of water.
- First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.

EYE

If this product comes in contact with the eyes:

- Wash out immediately with water.
- If irritation continues, seek medical attention.
- Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

SKIN

If skin or hair contact occurs:

- Flush skin and hair with running water (and soap if available).
- Seek medical attention in event of irritation.

Inhalation

- If fumes, aerosols or combustion products are inhaled, remove from contaminated area.
- Other measures are usually unnecessary.

Indication of any immediate medical attention and special treatment needed

- Treat symptomatically.

5. Fire Fighting Measures

EXTINGUISHING MEDIA

- Foam.
- Dry chemical powder.
- BCF (where regulations permit).
- Carbon dioxide.

FIRE FIGHTING

- Alert Fire Brigade and tell them location and nature of hazard.
- Wear breathing apparatus plus protective gloves.
- Prevent, by any means available, spillage from entering drains or water courses.
- Use water delivered as a fine spray to control fire and cool adjacent area.

FIRE/EXPLOSION HAZARD

- Combustible solid which burns but propagates flame with difficulty.
- Organic powders when finely divided over a range of concentrations regardless of particulate size or shape and suspended in air or some other oxidizing medium may form explosive dust-air mixtures and result in a fire or dust explosion (including secondary explosions).

FIRE INCOMPATIBILITY

- Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc.as ignition may result

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6. Accidental Release Measures

MINOR SPILLS

- Generally not applicable.

MAJOR SPILLS

- Generally not applicable.

Personal Protective Equipment advice is contained in Section 8 of the SDS.

7. Handling and Storage

PROCEDURE FOR HANDLING

- Limit all unnecessary personal contact.
- Wear protective clothing when risk of exposure occurs.
- Use in a well-ventilated area.
- Avoid contact with incompatible materials.
- Store in original containers.
- Keep containers securely sealed.
- Store in a cool, dry, well-ventilated area.

SUITABLE CONTAINER

- Polyethylene or polypropylene container.
- Check all containers are clearly labelled and free from leaks.
- Packing as recommended by manufacturer.

STORAGE INCOMPATIBILITY

- Avoid contamination of water, foodstuffs, feed or seed.
- Avoid reaction with oxidising agents

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8. Exposure Controls, Personal Protection

EXPOSURE CONTROLS

Appropriate engineering controls

Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard.

Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection.

The basic types of engineering controls are:

Process controls which involve changing the way a job activity or process is done to reduce the risk.

Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment.

Personal protection



Eye and face protection

- Safety glasses with side shields
- Chemical goggles.
- Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task.

Skin protection

See Hand protection below

Hands/feet protection

The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice.

Suitability and durability of glove type is dependent on usage.

Body protection

See Other protection below

Other protection

- Overalls.
- P.V.C. apron.
- Barrier cream.

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9. Physical and Chemical Properties

Information on basic physical and chemical properties

| | |
|---|------------------------------|
| Odour | Odorlessness |
| Form | Solid |
| Melting Range (°C) | No data |
| Boiling Range (°C) | No data |
| Flash Point (°C) | No data |
| Decomposition Temp (°C) | No data |
| Autoignition Temp (°C) | No data |
| Upper Explosive Limit (%) | No data |
| Lower Explosive Limit (%) | No data |
| Volatile Component (%vol) | No data |
| Solubility in water (g/L) | Insoluble in water |
| p H (1% solution) | No data |
| p H (as supplied) | No data |
| Print Temp (°C) | 190-220 |
| Bed Temp(°C) | No heating/ (50-70) |
| Density(g/cm ³) | 1.21 |
| Heat Distortion Temp | (°C ,0.45MPa) 50 |
| Melt Flow Index | (g/10min) 10 (190°C//2.16kg) |
| Tensile Strength (MPa) | 35 |
| Elongation at Break (%) | 90 |
| Flexural Strength (MPa) | 40 |
| Flexural Modulus (MPa) | 1300 |
| IZOD Impact Strength (kJ/m ²) | 55 |

10. Stability and Reactivity

Reactivity

See section 7

Chemical Stability

- Unstable in the presence of incompatible materials.
- Product is considered stable.
- Hazardous polymerisation will not occur.

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11. Toxicological Information

Information on toxicological affects

Acute Toxicity

LD/LC50 values relevant for classification

No data.

Primary irritant effect

On the skin

No data.

On the eyes

No data.

Inhaled

No data.

Sensitization

No data.

12. Ecological Information

Ecotoxicity

| Ingredient | Persistence: Water/Soil | Persistence: Air | Bioaccumulation | Mobility |
|--------------------|-------------------------|-------------------|-------------------|-------------------|
| Poly (DL- lactide) | No data available | No data available | No data available | No data available |
| ACR | No data available | No data available | No data available | No data available |
| CaCO ₃ | No data available | No data available | No data available | No data available |

13. Disposal Considerations

Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked.

A Hierarchy of Controls seems to be common - the user should investigate:

- Reduction
- Reuse
- Recycling
- Disposal (if all else fails)

This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use.

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14. Transport Information

Labels Required

Marine Pollutant: NO

NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS: ADR, IATA, IMDG, ADN

15. Regulatory Information

International:

Canada: DSL/NDSL: Included on the Canadian Domestic Substance List.

Canada: WHMIS: Not a controlled product.

Europe: Not classified as dangerous according to Directive 1272/2008/EC.

UN: Does not appear on the Dangerous Goods List.

Federal(U.S.):

EPA: Not regulated.

OSHA: Not hazardous under the criteria of Occupational Safety and Health Standard 29 CFR 1910 Subpart Z.

State:

CA: Proposition 65: Does not contain chemicals known to the State of California to cause cancer or reproductive toxicity.

16. Other Information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.