MATERIAL SAFETY DATA SHEET

RECIFLEX

Thermoplastic Polyurethane elastomer made from 100% recycled sources.

1. Product and company identification

1.1. Trade name

Reciflex

1.2. Company details

Recreus Industries S.L.,
C/El Envelope, F13-F14. Pol. Ind. Finca Lacy
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2. Hazards identification

Classification of the substance or mixture:

The product does not require a hazard warning label in accordance with GHS criteria

Hazards not otherwise classified. No specific dangers known, if the regulations/notes for storage and handling are considered.

3. Composition/information on ingredients

THERMOPLASTIC POLYURETHANE ELASTOMER TPU MIXTURE

Under the referenced regulation, this product does not contain any components classified for health hazards above the relevant cut off value.

4. First-aid measures

- **General instruction:** Change clothes impregnated with the product.
- **In case of inhalation:** Supply fresh air. In case of disturbances, consult a doctor.
- **After inhalation of decomposition products**, breathe fresh air, rest, seek medical help.
- **In case of skin contact:** Wash with soap and water. Visit your doctor if irritation continues skin.
- **After contact with molten products**, cool rapidly with cold water. No skin separating the solidified product. Call a doctor immediately.

- **In case of eye contact:** Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor. Remove contact lenses, if present and easy. Continue rinsing.
- **If swallowed:** Rinse mouth and drink plenty of water. Do not induce vomiting. Consult the doctor in case of persistent symptoms.

5. Firefighting measures

- Hazardous thermal decomposition: Burning releases carbon monoxide, carbon dioxide, oxides of nitrogen and traces of hydrogen cyanide. In the event of fire and/or explosion do not breathe fume.
- Suitable extinguishing media: Water, Foam, Dry chemical.
- Firemen must wear self-contained breathing apparatus.
- Do not allow contaminated extinguishing water to enter the soil, groundwater or surface waters.

6. Measures in case of accidental release

6.1. Personal precautions

- Protective equipment and emergency procedures
- Avoid dust formation.
- Do not breathe dust.
- Keep away from sources of ignition.
- Avoid eye contact.
- Danger of slipping on spilled product or pouring.

6.2. Environmental cautions

Do not discharge into drains/surface water/groundwater.

6.3 Methods and Materials for containment and cleaning up

Allow to solidify, pick up mechanically. Dispose of the material collected according to regulations.

7. Handling and storage

Handling

Adequate ventilation and if necessary, effective exhaust must be provided at the workplace of fused deposition modeling process.

Provided good ventilation and/or local exhaust systems are used, the Workplace Exposure Limit(s) stated in Chapter 8 should not be exceeded. Dust must be removed by effective exhaust ventilation.

Storage

Keep the container tightly closed and dry. Storage temperature: < 40 °C

8. Exposure controls/personal protection

Ventilation

During fused deposition modeling operations, use with ventilation adequate to reduce levels of air contaminants below that which may cause personal injury or illness. Local exhaust ventilation that removes air contaminants from the breathing zone is prefered. General, mechanical, or dilution ventilation may be suitable.

Respiratory protection

In case of dust formation use respiratory equipment with filter type particle filter P1 according to EN 143.

Hand protection

Suitable materials for safety gloves; EN 374-3: polyvinyl chloride - PVC (>= 0.5 mm). Contaminated and/or damaged gloves must be changed.

Eye protection

Wear eye/face protection.

Skin and body protection

Wear suitable protective clothing.

Further protective measures

Do not breathe dust/vapor. Grease skin.

9. Physical and chemical properties

Appearance:	black
Odor:	Odorless
Odour Threshold:	NA
PH:	NA
Boiling Point (° C):	NA
Melting point (° C):	220-240°C
Softening point (° C):	NA
Evaporation Rate:	NA

Properties Flammable / Explosive:	NA
Vapor pressure / vapor density:	NA
Relative density:	1.00-1.22
Solubility:	NA
Octanol/water partition:	NA
Auto-ignition temperature:	NA
Decomposition temperature:	NA
Viscosity:	NA
Other properties:	NA

10. Stability and reactivity

Reactivity

Non-applicable

Chemical stability

Thermal decomposition/conditions to be avoided:

- No decomposition with storage and proper handling.
- Avoid impact, friction, heat, sparks, and electrostatic charges.

Possibility of dangerous reactions: Non-applicable.

Conditions to be avoided: No further relevant information.

Incompatible materials: Strong oxidants.

Strong decomposition products

- Irritant gases/vapours
- Toxic gases/vapours
- Smoke
- Carbon monoxide (CO) and carbon dioxide (CO_2) emissions

11. Toxicological information

Inhalation: Non-irritating to the respiratory system.

Ingestion: Not hazardous in normal industrial use.

Skin: Non-irritating. Molten polymer will adhere to skin causing deep thermal burns.

Eyes: May cause physical abrasion in contact with eyes. Molten polymer will cause serious

Additional information: According to our experience and information the product has no harmful effects on health if properly handled. Medical conditions aggravated by overexposure. Data available do not indicate that there are medical conditions that are generally recognized as being aggravated by exposure to this substance/product

12. Ecological information

Ecotoxicity

There is a high probability that the product is not acutely harmful to aquatic organisms. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Persistence and degradability

This solid water-insoluble polymeric is expected to be inert in the environment. Surface degradation is expected with exposure to sunlight. Appreciable biodegradation is not expected.

Additional ecological information

Adsorbable organically-bound halogen (AOX): This product contains no organically-bound halogen.
Other ecotoxicological advice: The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

13. Disposal considerations

Dispose in accordance with applicable international, national and local laws, ordinances and statutes. For disposal within the EC, the appropriate code according to the European Waste Catalogue (EWC) should be used. Incinerate in a licensed facility. Do not discharge substance/product into sewer system. Dispose of in a licensed facility.

After containers have been emptied as thoroughly as possible (e.g. by pouring, scraping or draining until "drip-dry"), they can be sent to an appropriate collection point to set the framework of the existing take-back scheme of the chemical industry. Containers must be recycled in compliance with national legislation and environmental regulations.

The product has been obtained from recycled material which is subjected to a themal process that gradually degrades the material. Therefore, it should only be recycled about 4-5 times.

After appropriate treatment it can be remelted and reprocessed into new moulded articles. Mechanical recycling is only possible if the material has been selectively retrieved and can be fully segregated according to type.

14. Transport information

Not regulated.

15. Regulatory information

Not regulated.

16. Other information

The data is based on the current state of knowledge, but it is not a guarantee of the product features and it is not legally valid in a contractual relationship.

Disclaimer

Is under responsibility of the 3d printer parts manufacturer or end user the compliance of the plastic object, for the specific use, with the overall migration limit, the specific migration limit and other restrictions. Do not hesitate to contact our technical service for explanations, advising and for any other need.