

MATERIAL SAFETY DATA SHEET

POLYMER RECYCLING LABS, S.L.

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POLYMER RECYCLING LABS, S.L. strongly recommends to read this MSDS, which contains relevant information regarding the characteristics of the material and the precautions to be followed during its use.

1. Product and company identification

1.1. Product identification

Substance: Recycled polyethylene

1.2. Recommended use of the product:

Raw material for the production of plastic articles.

1.3. Company identification:

POLYMER RECYCLING LABS, S.L.
B-74385840
C/ BATERÍAS DE COK, S/N
POLÍGONO INDUSTRIAL VALNALÓN
33930 LANGREO (ASTURIAS)
TLF: +34 984 991 053
E-mail: info@polynext.es

2. Hazards identification

2.1. Classification of the substance or the mixture

Classification according to Regulation (CE) 1272/2008:

Recycled polyethylene is not a hazardous substance according to Regulation (CE) 1272/2008.

2.2. Hazards

Contact with the eyes: Both as solid and as powder, the product may produce irritation or mechanical damage to the cornea. High temperatures may generate vapours to a concentration susceptible of causing eye irritation. Effects may include discomfort and redness.

Contact with the skin: Continued contact does not cause skin irritation. In normal processing conditions, the material is subjected to high temperatures in order to melt it; the contact with molten material may cause burns.

Absorption through the skin: There are no expected harmful effects by absorption through the skin.

Inhalation: It is not probable that a single exposure to the powder will cause harmful effects. Vapours generated during thermal processing may cause respiratory irritation.

Ingestion: Very low oral toxicity. No harmful effects are expected from ingestion of small amounts. It can cause an obstruction in case of ingestion.

3. Composition / Information on ingredients

Recycled polyethylene from post-consumer and/or post-industrial sources.

It may be coloured by means of organic and/or inorganic pigments. POLYMER RECYCLING LABS, S.L. does not use pigments classified as dangerous, but cannot guarantee the absence of traces of the latter due to the residual origin of the raw materials used.

4. First aid measures

General recommendations: People giving assistance must be aware of their own safety and use recommended individual protection equipment, according to section 8.

Eye contact: It is recommended to wash thoroughly with plenty of water. It may cause injuries by mechanical action.

Skin contact: In pelletized form it is harmless and can be easily removed. If the material is melted, do not use ice for cooling. Use iced water or a running stream instead. Do not try to remove the material from the skin, it could lead to severe tissue damage. Look for medical attention immediately.

Inhalation: Breathe fresh air if you have inhaled fumes from overheating or combustion of the material. If symptoms are present, seek medical advice.

Ingestion: If swallowed, look for medical attention. It may cause gastrointestinal blockage. Do not use laxatives. Do not provoke vomiting unless under medical supervision.

5. Fire fighting measures

5.1. Suitable extinguishing media

Water fog or sprayed water. Chemical powder fire extinguishers. CO₂ fire extinguishers. Foam.

5.2. Specific hazards derived from the substance

Hazardous combustion products: In case of fire, fumes may contain the original substance together with combustion products which may be toxic and/or irritating. Among others, carbon monoxide (CO) could be present.

Unusual fire and explosion hazards: Mechanical handling of the material, as in pneumatic transport, may generate combustible dust. Dust accumulation must be avoided in order to minimize explosion risks. This product emits dense smoke when burned in lack of oxygen.

5.3. Advice for fire-fighters

Fire fighting procedures: People must be kept away. The fire should be isolated and unnecessary access must be avoided. The surroundings must be cooled with water, if the material is melted, never use direct water jet on the flames. Use sprayed water or foam instead. For small fires, hand-held extinguishers could be used.

Especial protective equipment for fire-fighters: Use positive-pressure SCBA (Self-Contained Breathing Apparatus) and garments designed for fire fighting (helmet, coat, trousers, boots and gloves). If there is no available suitable clothing, work from a safe place, keeping a safe distance.

6. Measures against accidental release

Personal precautions, protective equipment and emergency procedures: There is risk of slipping if the material is spilled. Suitable safety equipment should be used.

Environmental precautions: The release of the material into the ground (holes, cracks, soil, etc.) or water (drains, groundwater, etc.) should be prevented. See section 12.

Containment and cleaning methods: Spilled material should be contained if possible. Collect the material by mechanical means and store it in suitable containers, properly identified. See section 13.

7. Handling and storage

7.1. Safety measures for handling

Provide proper air circulation. Keep away from sparks and heat sources. No smoking or fire lighting in handling and storage areas. Safety in handling involves tidiness and cleanliness, including dust control, in order to minimize risk of explosions for dust combustion. Electric equipment must be isolated and grounded. Dust can ignite by electric discharge. Prevent molten material to get in contact with the eyes, skin or garments. Avoid fume inhalation. See section 8.

7.2. Safe storage conditions, including possible incompatibilities.

Store following good manufacturing practices. It is recommended to store indoors, in a cool dry place. Avoid direct sunlight or ultraviolet light exposures.

8. Individual protection

8.1. Control parameters

There are no control parameters established for this substance.

8.2. Air circulation

Use extractive ventilation. Conventional ventilation should be sufficient for most of the operations, preventing vapour and fume accumulation, both in handling and processing.

8.3. Individual protection equipment

Eye protection: Safety glasses should be goggle-type or have side protection, according to EN 166 standard (or equivalent). There must be available water sources for eye washing.

Skin protection: The contact with the skin must be minimized. The use of safety gloves is recommended, although chemical protection gloves are not necessary. Gloves are meant for protection against mechanical injuries or thermal protection if needed. As for the rest of the body, garments do not require any especial characteristic.

9. Physical and chemical properties

Appearance

Physical form	Pellets
Colour	Batch-wise
Odour	Light. Characteristic of the material
Melting temperature	125-140 °C
Density	0.93 – 0.97
Solubility in water	Negligible
Decomposition temperature	400 °C approx.

NOTE: Data indicated in this section stands for typical values not to be construed as specifications.

10. Stability and reactivity

Reactivity: No data available.

Chemical stability: The product is stable

Possibility of polymerization: Not applicable

Conditions to be avoided: Sparks, flames, heat sources and oxidizing agents.

Hazardous decomposition products: Thermal decomposition or combustion will lead to different products depending on temperature, oxygen availability or substances in the surroundings. Fumes may be irritating and/or toxic, and may include carbon monoxide (CO).

11. Toxicological information

There are no available data, although it can be considered that:

- Ingestion of relevant amounts could lead to intestinal obstruction.
- Fumes generated during processing may cause irritation.
- Contact with skin and eyes may cause mechanical damage or burns if the material is hot or in molten state.
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12. Ecological information

12.1. Toxicity

Toxicity to fish. The product floats and is not soluble in water. Toxicity to aquatic organisms is not expected, but due to its pelletized form, it can be swallowed and lead to negative effects by mechanical action in fish and/or aquatic birds.

12.2. Biodegradability

The material is expected to be environmentally inert, with low biodegradation rate, although it would undergo photo-degradation under sunlight. In wastewater treatment plants, it is easily removed by mechanical separation.

12.3. Bioaccumulation

Due to its high molecular weight, its bioaccumulation is not expected.

12.4. Mobility in soil

In ground environment, it is expected to remain in the soil, while in aquatic one it floats.

13. Disposal considerations

13.1. For non-contaminated product

It can be disposed of by mechanical or chemical recycling, as well as by energy recovery. Its landfill disposal should be the last option, and may be not allowed in some countries. Prevent disposal through sewers, water streams or into the ground.

13.2. For contaminated product

A preliminary evaluation has to be done to assess the degree of contamination in order to choose the suitable disposal procedure, according to applicable regulations.

In case of doubt, get in contact with local competent organisms.

14. Information for transport

It is not classified as dangerous good for transport:

- Terrestrial
- Maritime
- Fluvial
- Aerial

It is allowed to send it by mail.

15. Regulatory information

REACH Regulation (CE) N° 1907/2006: Polymers are exempt of registry in REACH system. Additives: in case of their intentional use by POLYMER RECYCLING LABS, S.L., they are always pre-registered or exempt of registry. As for the unknown additives originally present in raw materials, there is no way to guarantee their regulatory status, due to their residual origin.

NOTE: *Aforementioned statements about the registry of the substance are given in good faith and believed to be accurate as of the day of publication/revision. Nevertheless, there is no guarantee given. It is the customer/user obligation to ensure his/her thorough understanding of the regulatory status of the product.*

16. Other information

The information presented in this MSDS is based in our current knowledge. Products are described for your safety, and no guarantee is given about material properties, or against an incorrect handling or inadequate protective measures.

POLYMER RECYCLING LABS, S.L. strongly recommends the study of this document. In case of doubt, look for professional advice related to the hazards associated with the substance

in order to understand the data presented in this document. It is the user's responsibility to ensure that his activities are according to legislation, as well as to provide safe use conditions.

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Please get in contact with us and ask for updated information.

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