

Printing date 19.02.2022

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*** SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifier**

- Trade name: **FLEXIRENE**
- Registration number: Not applicable
- Chemical name: LINEAR LOW DENSITY POLYETHYLENE (LLDPE).
- (e-)SDS code: 11522

1.2 Relevant identified uses of the substance or mixture and uses advised against

- Application of the substance / the mixture: Production of various plastic final applications.
- Uses advised against: Not determined.

1.3 Details of the supplier of the safety data sheet

- Manufacturer/Supplier: versalis S.p.A.
Piazza Boldrini, 1
I-20097 San Donato Milanese (MI)
N° telefono: +39 02 520 1
- E-mail address of the competent person responsible for the SDS: e-mail: SDS.versalis@versalis.eni.com
- 1.4 Emergency telephone number:** S.E.T. (24h): Italy 800 452 661; other countries +39 (0) 362512868.

SECTION 2: Hazards identification**2.1 Classification of the substance or mixture**

- Classification according to Regulation (EC) No 1272/2008: Based on the requirements of the CLP Regulation, the product is not classified.

2.2 Label elements

- Hazard pictograms: Not applicable
- Signal word: Not applicable
- Hazard statements: Not applicable

2.3 Other hazards

- Results of PBT and vPvB assessment: This substance / mixture is not a PBT applying the criteria of REACH Regulation, Annex XIII.
- PBT: This substance / mixture is not a vPvB applying the criteria of REACH Regulation, Annex XIII.
- vPvB:

SECTION 3: Composition/information on ingredients**3.2 Chemical characterisation: Mixtures**

- Description: Mixture, composed of a copolymer and of substances below the applicable classification limits or not dangerous.
Copolymer: Ethylene-1 Butene, CAS 25087-34-7.
- Dangerous components: Not applicable

SECTION 4: First aid measures**4.1 Description of first aid measures**

- General information: No special measures required.

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· After inhalation:	(Contd. from page 1) Dust or gas/vapours released by heat: move the affected person away from the contaminated area into fresh air; seek medical assistance.
· After skin contact:	In case of contact with melted material, cool down with cold water and seek medical assistance. Do not remove the product that solidified on skin. Treat as a burn.
· After eye contact:	Rinse opened eye for several minutes under running water.
· After swallowing:	No specific measure requested in case of ingestion. If needed seek medical assistance.
· 4.2 Most important symptoms and effects, both acute and delayed	No further relevant information available.
· 4.3 Indication of any immediate medical attention and special treatment needed	No further relevant information available.

SECTION 5: Firefighting measures

· 5.1 Extinguishing media	
· Suitable extinguishing agents:	Water, water spray, foam, dry chemicals, carbon dioxide.
· For safety reasons unsuitable extinguishing agents:	Not applicable.
· 5.2 Special hazards arising from the substance or mixture	Combustion Products: Carbon dioxide, carbon monoxide (when starved of air / oxygen), and possible unburned hydrocarbons. Overheating/pyrolysis may evolve vapours made up of monomers, low molecular weight polymers and their oxidation products.
· 5.3 Advice for firefighters	
· Protective equipment:	Wear suitable protective clothing (helmet, goggles, fire resistant gloves, boots) and protect respiratory organs (self contained breathing apparatus).
· Additional information	The product is combustible. Cool endangered receptacles with water spray.

SECTION 6: Accidental release measures

· 6.1 Personal precautions, protective equipment and emergency procedures	Do not walk on granules to avoid slipping.
· 6.2 Environmental precautions:	Do not allow product to reach sewage system or any water course.
· 6.3 Methods and material for containment and cleaning up:	Collect mechanically. Reuse if possible or dispose of as required by national and local regulations (see section 13).
· 6.4 Reference to other sections	See Section 7 for information on safe handling. See Section 8 for information on personal protection equipment. For information on disposal of contaminated material, see section 13. No dangerous substances are released.

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SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**

Powder formation by abrasion must be avoided during handling and transportation, especially when unloading; if such formation occurs, the powder must be eliminated immediately.
During the processing of the product, avoid inhalation of fumes or powders, by providing good ventilation of the workroom and, if necessary, by a suitable exhaust system.
- Information about fire - and explosion protection: Avoid dispersion of dust in air to reduce potential for ignition or explosion.
- **7.2 Conditions for safe storage, including any incompatibilities**
 - Storage:

Earth storage silos as precautionary measure against the static electricity build-up.
 - Requirements to be met by storerooms and receptacles:

Not required.
 - Information about storage in one common storage facility:

In storage and working areas avoid pellets spilling as a possible cause of slipping.
Store out of direct sunlight, in well ventilated, cool and dry place.
Product should be stored in a safe manner, to avoid danger from unstable or damaged packaging units (octabins/bags/boxes on pallet). In particular, stacking of packaged units can be dangerous to warehouse personnel.
 - Further information about storage conditions:

No further relevant information available.
- **7.3 Specific end use(s)**

SECTION 8: Exposure controls/personal protection

- Additional information about design of technical facilities:

No further data; see item 7.
- **8.1 Control parameters**
- Ingredients with limit values that require monitoring at the workplace:

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **8.2 Exposure controls**
- General protective and hygienic measures:

Traces of monomers and other volatile substances may be given off during processing, particularly at unusually high processing temperatures.
Work rooms must be provided with adequate ventilation and exhaust equipment to collect dust and gas/vapours that may be evolved during the conversion.
Ensure good ventilation / exhaustion at the workplace.
- Suitable technical controls
· Personal protection measures

The personal protective equipment will vary according to the possible exposure and danger of working conditions.
In normal conditions masks with antidust filters should be available for use when requested.
- Respiratory protection:

Protective gloves
Safety glasses
Standard work clothes.
No information available
- Protection of skin
- Protection of hands:
- Eye/face protection:
- Other:
- Thermal dangers

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- Limitation and supervision of exposure into the environment
- No information available.

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· General Information

· Appearance:

Form: Granulate

Colour: White

· Odour: Odourless

· Odour threshold: Not determined.

· pH-value: Not applicable.

· Change in condition

Melting point/freezing point: >100 °C

Initial boiling point and boiling range: Undetermined.

· Flash point: Not applicable.

· Ignition temperature: ~ 340 °C

· Explosive properties: Product does not present an explosion hazard.

· Explosion limits:

Lower: Not determined.

Upper: Not determined.

· Vapour pressure: Not applicable.

· Density at 20 °C: 0.91-0.94 g/cm³

· Bulk density at 20 °C: 400-600 kg/m³

· Vapour density: Not applicable.

· Solubility in / Miscibility with water:

Insoluble.

· Viscosity:

Dynamic: Not applicable.

Kinematic: Not applicable.

· 9.2 Other information

No further relevant information available.

SECTION 10: Stability and reactivity

· 10.1 Reactivity

The product does not participate to dangerous reactions if stored and handled as prescribed/indicated

· 10.2 Chemical stability

· Thermal decomposition:

Prevent the formation of noxious gases and vapours by using the advised conversion conditions.

Prolonged exposure to temperatures above 250°C may cause resin degradation.

Stable in the normal storage conditions.

· 10.3 Possibility of hazardous reactions

No dangerous reactions known.

· 10.4 Conditions to avoid

No further relevant information available.

· 10.5 Incompatible materials:

Avoid the contact with oxidising substances.

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· **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

SECTION 11: Toxicological information

· **11.1 Information on toxicological effects**

- Acute toxicity Based on available data, the classification criteria are not met.
- Primary irritant effect: Based on available data, the classification criteria are not met.
- Skin corrosion/irritation Based on available data, the classification criteria are not met.
- Serious eye damage/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.
- CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction) No evidence of these effects has been reported.
- Germ cell mutagenicity Based on available data, the classification criteria are not met.
- Carcinogenicity Based on available data, the classification criteria are not met.
- 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.

SECTION 12: Ecological information

- **12.1 Toxicity**
- Aquatic toxicity: No further relevant information available.
- **12.2 Persistence and degradability** The product is essentially a high molecular weight polymer, not regarded as ecotoxic.
- Other information: The product is a non biodegradable polymer.
- **12.3 Bioaccumulative potential** Does not accumulate in organisms
- **12.4 Mobility in soil** No further relevant information available.
- **12.5 Results of PBT and vPvB assessment**
- PBT: This substance / mixture is not a PBT applying the criteria of REACH Regulation, Annex XIII.
- vPvB: This substance / mixture is not a vPvB applying the criteria of REACH Regulation, Annex XIII.
- **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- Recommendation The same safety considerations that apply to the product as it is, apply to scraps/waste as well.
Residues should be disposed of as required by national and local regulations.
After suitable treatment (cleaning, grinding, etc.), the product can be safely re-used, as is or mixed with fresh material, when this is compatible with the intended final application.
The incineration must be done under approved conditions, possibly with energy recovery and only at suitable facilities equipped with a scrubber for the treatment of fumes before their release into the atmosphere.
- Uncleaned packaging:
- Recommendation Disposal must be made according to official regulations.

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· Recommended cleansing agents: Not applicable.

SECTION 14: Transport information

- **14.1 UN-Number**
 - ADR/RID/ADN, ADN, IMDG, IATA
 - **14.2 UN proper shipping name**
 - ADR/RID/ADN, ADN, IMDG, IATA
 - **14.3 Transport hazard class(es)**
 - ADR/RID/ADN, ADN, IMDG, IATA
 - Class
 - **14.4 Packing group**
 - ADR/RID/ADN, IMDG, IATA
 - **14.5 Environmental hazards:**
 - Marine pollutant:
 - **14.6 Special precautions for user**
 - **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code**
 - Transport/Additional information:
 - UN "Model Regulation":
- Not applicable
- Not applicable
- Not applicable
- Not applicable
- No
- Not applicable.
- Not applicable.
- The product is not classified as dangerous for transportation according to the following regulations: ADR/ RID, IMO, IATA.
- Not applicable

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
 - National regulations:
 - Regulations of the European Union
 - **15.2 Chemical safety assessment:**
- Not applicable
- Not applicable
- Assesment not required.

SECTION 16: Other information

- Department issuing SDS:
 - Abbreviations and acronyms:
 - * Data compared to the previous version altered.
- QHSE/PRST
- ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
- RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
- IMDG: International Maritime Code for Dangerous Goods
- IATA: International Air Transport Association
- GHS: Globally Harmonised System of Classification and Labelling of Chemicals
- EINECS: European Inventory of Existing Commercial Chemical Substances
- ELINCS: European List of Notified Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- PBT: Persistent, Bioaccumulative and Toxic
- vPvB: very Persistent and very Bioaccumulative
- Data and information contained in this Safety Data Sheet are based on our available knowledge at the last revision date. No guarantee can be given as to the sufficiency of any safety measures contained in this Safety Data Sheet, nor can it be assumed that other or additional measures may not be required under particular or exceptional circumstances. The user must

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make sure of the fitness and completeness of the information,
according to the specific use they want to do.

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