

Safety data sheet

The document drafted on a voluntary basis is not required under Article 31 of Regulation (EC) No 1907/2006

Printing date 31.05.2021

Version number 3

Revision: 31.05.2021

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) Phone: +39 02 520 1
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E-mail address of the competent person responsible for the SDS:	e-mail: SDS.versalis@versalis.eni.com
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1.4 Emergency telephone number:	CHEMTREK UK (24h) (+44) 870-8200418
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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

Labelling according to Regulation (EC) No 1272/2008

Hazard pictograms	Not applicable
Signal word	Not applicable
Hazard statements	Not applicable

2.3 Other hazards

Results of PBT and vPvB assessment
PBT:

This substance / mixture is not a PBT applying the criteria of REACH Regulation, Annex XIII.

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vPvB: This substance / mixture is not a vPvB applying the criteria of REACH Regulation, Annex XIII. (Contd. from page 1)

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Description: Mixture, composed of a copolymer and of substances below the applicable classification limits or not hazardous.
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.
After inhalation: 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: Water with full jet

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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 by mechanical means.

Dispose of the material collected according to regulations.

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.

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.

Handling:

Information about fire - and explosion protection:

Avoid dispersion of dust in air to reduce potential for ignition or explosion.

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7.2 Conditions for safe storage, including any incompatibilities

Storage:

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

Information about storage in one common storage facility:

Not required.

Further information about storage conditions:

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.

7.3 Specific end use(s)

No further relevant information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Additional information about design of technical facilities:

No further data; see item 7.

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.

Suitable technical controls
Personal protection measures

Ensure good ventilation / exhaustion at the workplace.

The personal protective equipment will vary according to the possible exposure and danger of working conditions.

Respiratory protection:

In normal conditions masks with antidust filters should be available for use when requested.

Protection of skin

Protection of hands:

Protective gloves

Eye/face protection:

Safety glasses

Other:

Standard work clothes.

Thermal dangers

No information available

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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:	Weak, characteristic
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/m ³
Vapour density	Not applicable.

Solubility in / Miscibility with water: Insoluble.

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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.

10.6 Hazardous decomposition products:

The product, when involved in a fire, release fumes made up of water, carbon dioxide, carbon monoxide (when starved of oxygen) and other combustion products.

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:

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.

Additional toxicological information:

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.

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STOT-repeated exposure
Aspiration hazard

Based on available data, the classification criteria are not met.
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* SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity:

The product is essentially a high molecular weight polymer, not regarded as ecotoxic.

12.2 Persistence and degradability

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. 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.

Recommended cleansing agents:

Not applicable.

* SECTION 14: Transport information

14.1 UN-Number

ADR/RID/ADN, ADN, IMDG, IATA

Not applicable

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14.2 UN proper shipping name

ADR/RID/ADN, ADN, IMDG, IATA

Not applicable

14.3 Transport hazard class(es)

ADR/RID/ADN, ADN, IMDG, IATA

Class

Not applicable

14.4 Packing group

ADR/RID/ADN, IMDG, IATA

Not applicable

14.5 Environmental hazards:

Marine pollutant:

No

14.6 Special precautions for user

Not applicable.

14.7 Transport in bulk according to Annex II of

Marpol and the IBC Code

Not applicable.

* SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulations:

Not applicable

Regulations of the European Union

Not applicable

15.2 Chemical safety assessment:

Assessment not required.

* SECTION 16: Other information

Department issuing SDS:

QHSE/SIPR

Abbreviations and acronyms:

ADR: Accord relatif au transport international 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

Sources

- 1) NIOSH - Registry of Toxic Effects of Chemical Substances
- 2) WEAST - Handbook of Chemistry and Physics
- 3) INRS - Fiches toxicologiques
- 4) A.C.G.I.H. - Documentation of the Threshold Limit Values

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- 5) ITI - Toxic and Hazardous Industrial Chemicals Safety Manual
- 6) BREThERICK - Handbook of Reactive Chemical Hazards
- 7) NIOSH/OSHA - Pocket Guide to Chemical Hazards
- 8) PATTY - Industrial Hygiene and Toxicology
- 9) SAX - Dangerous Properties of Industrial Materials
- 10) ILO - Encyclopedia of Occupational Health and Safety
- 11) NATIONAL TOXICOLOGY PROGRAM (NTP) - Annual Report on Carcinogens
- 12) NTP - Review of current DHHS, DOE, and EPA-Research related to Toxicology - FY
- 13) IARC - Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Humans
- 14) NIOSH/OSHA - Occupational Health Guidelines for Chemical Hazards
- 15) CCTN - Commissione Consultiva Tossicologica Nazionale - Ministero della Sanità - Roma
- 16) MERCK & Co. - The Merck Index
- 17) VERSCHUEREN K. - Handbook of Environmental Data on Organic Chemicals
- 18) EPA - Chemical Emergency Preparedness Program - Interim Guidance - Chemical profiles
- 19) Marrubini, Laurenzi, Uccelli: Intossicazioni acute
- 20) LENGA - The SIGMA-ALDRICH Library of Chemical Safety Data
- 21) INRS - Réaction Chimiques Dangereuses
- 22) DUTCH CHEMICAL INDUSTRY ASSOCIATION - Chemical Safety Sheets
- 23) NFPA - "National Fire Codes"
- 24) Perry's Chemical Engineers' Handbook
- 25) Producer's data

* Data compared to the previous version altered.

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