



# SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:  
Regulation (EC) No. 1907/2006 as amended by Commission Regulation (EU) 2020/878  
and Regulation (EC) No. 1272/2008

Issuing Date 22-Nov-2022

Revision Date 20-Sep-2023

Revision Number 1.2

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1. Product identifier

**Product Code(s)** Flexus 2010, Flexus 2510, Flexus 2511, Flexus 3600, Flexus 7200XP, Flexus 9200, Flexus 9200SPH, Flexus 9211, Flexus 9211SPH, Flexus 9212XP, Flexus 9212XPSPH, Flexus 9213S, HF0131XP, HF2007, HF2207B5, HF2208S3, HF3712, HF3714XP, LL2600U, M2520, ML3601U, ML3602U, Proxess1509XP, Proxess1806S3, Proxess1809, Proxess2606, Proxess3310

**Product Name** Linear Low Density Polyethylene

**Synonyms** None

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

**Recommended use** Polymer preparations and compounds

**Uses advised against** No information available

### 1.3. Details of the supplier of the safety data sheet

#### Supplier

Braskem Netherlands BV  
Weena 238-240, 9th Floor Tower C  
NL - 3012NJ- Rotterdam, Netherlands  
Telephone: +31 10 798 5002

#### For further information, please contact

**E-mail address** polymer.compliance-europe@braskem.com

### 1.4. Emergency telephone number

**Emergency telephone** CHEMTREC: +1 703-741-5970 (24h)

**Emergency telephone - §45 - (EC)1272/2008**

**Europe** 112

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

**Regulation (EC) No 1272/2008**

This substance is classified as not hazardous according to regulation (EC) 1272/2008 [CLP].

### 2.2. Label elements

**Hazard statements**

Not classified

**Unknown acute toxicity**

- 100 % of the mixture consists of ingredient(s) of unknown acute oral toxicity.
- 100 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity.
- 100 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist).

**2.3. Other hazards**

Special danger of slipping by leaking/spilling product. Electrostatic charges may be generated during handling. Even with proper grounding and bonding, this material can still accumulate an electrostatic charge. If sufficient charge is allowed to accumulate, electrostatic discharge and ignition of flammable air-vapor mixtures may occur.

This substance does not meet the PBT/vPvB criteria of REACH, annex XIII

**Endocrine Disruptor Information** This product does not contain any known or suspected endocrine disruptors.

**SECTION 3: Composition/information on ingredients****3.1 Substances**

Not applicable

**3.2 Mixtures**

Chemical name	Weight-%	REACH registration number	EC No (EU Index No)	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Specific concentration limit (SCL)	M-Factor	M-Factor (long-term)
1-Hexene, polymer with ethene 25213-02-9	<100	No data available	No information available	[F]	-	-	-

[F] - Although non-hazardous, the manufacturer chooses to disclose the composition

**Full text of H- and EUH-phrases: see section 16**

**Acute Toxicity Estimate**

*If LD50/LC50 data is not available or does not correspond to the classification category, then the appropriate conversion value from CLP Annex I, Table 3.1.2, is used to calculate the acute toxicity estimate (ATEmix) for classifying a mixture based on its components*

This product does not contain candidate substances of very high concern at a concentration  $\geq 0.1\%$  (Regulation (EC) No. 1907/2006 (REACH), Article 59)

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

Remove to fresh air. Medical aid is necessary if symptoms appear to be an obvious consequence of inhalation.

**Eye contact**

Rinse thoroughly with plenty of water, also under the eyelids. Get medical attention if irritation develops and persists.

**Skin contact**

After contact with product or dust: Wash skin with soap and water. Get medical attention if irritation develops and persists. After contact with molten product, cool skin area rapidly with cold water. Removal of solidified molten material from skin requires medical assistance.

**Ingestion** Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Clean mouth with water and afterwards drink plenty of water.

#### **4.2. Most important symptoms and effects, both acute and delayed**

**Symptoms** Product dust may be irritating to eyes, skin and respiratory system.

#### **4.3. Indication of any immediate medical attention and special treatment needed**

**Note to doctors** Treat symptomatically.

### **SECTION 5: Firefighting measures**

#### **5.1. Extinguishing media**

**Suitable Extinguishing Media** CO2, dry chemical, dry sand, alcohol-resistant foam. Water spray or fog.

**Unsuitable extinguishing media** Do not use a solid water stream as it may scatter and spread fire.

#### **5.2. Special hazards arising from the substance or mixture**

**Specific hazards arising from the chemical** Avoid generation of dust. Fine dust dispersed in air may ignite. Powders, dusts, shavings, borings, turnings or cuttings may explode or burn with explosive violence.

#### **5.3. Advice for firefighters**

**Specific/special fire-fighting measures** Fires need to be assessed to determine appropriate protocols and safety measures for firefighting, including establishing safe zones, extinguishing media to be used, firefighter protection, and actions to control or extinguish the fire.

**Special protective equipment and precautions for fire-fighters** Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

### **SECTION 6: Accidental release measures**

#### **6.1. Personal precautions, protective equipment and emergency procedures**

**Personal precautions** Ensure adequate ventilation. Avoid generation of dust. Do not breathe dust. Avoid contact with eyes. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Take precautionary measures against static discharges.

**For emergency responders** Use personal protection recommended in Section 8.

#### **6.2. Environmental precautions**

**Environmental precautions** Do not allow into any sewer, on the ground or into any body of water.

#### **6.3. Methods and material for containment and cleaning up**

**Methods for containment** Prevent further leakage or spillage if safe to do so. Prevent dust cloud.

**Methods for cleaning up** Take up with inert, damp, non-combustible material using clean non-sparking tools and place into loosely covered plastic containers for later disposal. Pick up and transfer to properly labelled containers.

**Prevention of secondary hazards** Clean contaminated objects and areas thoroughly observing environmental regulations.

#### **6.4. Reference to other sections**

Reference to other sections See section 8 for more information See section 13 for more information

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

**Advice on safe handling** Handle in accordance with good industrial hygiene and safety practice. Ensure adequate ventilation. Avoid generation of dust. Do not breathe dust. Avoid contact with eyes. This product is a poor conductor of electricity and can become electrostatically charged. If sufficient charge is accumulated, ignition of flammable mixtures can occur. To reduce potential for static discharge, use proper bonding and grounding procedures. Airborne dusts are potentially explosive. Avoid significant deposits of material, especially on horizontal surfaces, which may become airborne and form combustible dust clouds and may contribute to secondary explosions. Handling and processing operations should be conducted in accordance with 'best practices' (e.g. NFPA-654).

**General hygiene considerations** Handle in accordance with good industrial hygiene and safety practice. Do not breathe dust. Do not eat, drink or smoke when using this product. Take off all contaminated clothing and wash it before reuse. Regular cleaning of equipment, work area and clothing is recommended.

### 7.2. Conditions for safe storage, including any incompatibilities

**Storage Conditions** Store in a cool, dry area away from potential sources of heat, open flames, sunlight or other chemicals.

**Storage class (TRGS 510)** LGK 11.

### 7.3. Specific end use(s)

**Specific use(s)** Polymer preparations and compounds. Industrial. Professional use.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

**Exposure Limits** This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

#### Biological occupational exposure limits

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies.

#### Derived No Effect Level (DNEL) - Workers

#### Derived No Effect Level (DNEL) - General Public

#### Predicted No Effect Concentration (PNEC)

### 8.2. Exposure controls

**Engineering controls** Showers  
Eyewash stations  
Ventilation systems.

**Personal protective equipment**

<b>Eye/face protection</b>	Wear safety glasses with side shields (or goggles). During hot processing: Tight sealing safety goggles. If there is a risk of contact: Face protection shield. Eye protection must conform to standard EN 166.
<b>Hand protection</b>	Heat resistant gloves are recommended when handling molten materials. Wear suitable gloves. Gloves must conform to standard EN 374.
<b>Skin and body protection</b>	Wear suitable protective clothing. During hot processing: Long sleeved clothing. Protective shoes or boots.
<b>Respiratory protection</b>	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required. The filter class must be suitable for the maximum contaminant concentration (gas/vapor/aerosol/particulates) that may arise when handling the product. Consult with an industrial hygienist to determine the appropriate respiratory protection for your specific use of this material.
<b>General hygiene considerations</b>	Handle in accordance with good industrial hygiene and safety practice. Do not breathe dust. Do not eat, drink or smoke when using this product. Take off all contaminated clothing and wash it before reuse. Regular cleaning of equipment, work area and clothing is recommended.
<b>Environmental exposure controls</b>	No information available.

**SECTION 9: Physical and chemical properties****9.1. Information on basic physical and chemical properties**

<b>Appearance</b>	Translucent Pellets
<b>Physical state</b>	Solid
<b>Colour</b>	White to off-white
<b>Odour</b>	No information available
<b>Odour threshold</b>	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
<b>Melting point / freezing point</b>		No data available
<b>Initial boiling point and boiling range</b>		No data available
<b>Flammability</b>		No data available
<b>Flammability Limit in Air</b>		
<b>Upper flammability or explosive limits</b>		No data available
<b>Lower flammability or explosive limits</b>		No data available
<b>Flash point</b>		No data available
<b>Autoignition temperature</b>	350 °C	
<b>Decomposition temperature</b>		No data available
<b>pH</b>		No data available
<b>pH (as aqueous solution)</b>		No data available
<b>Kinematic viscosity</b>		No data available
<b>Dynamic viscosity</b>		No data available
<b>Water solubility</b>	Insoluble in water	
<b>Solubility(ies)</b>	Xylene	
<b>Partition coefficient</b>		No data available
<b>Vapour pressure</b>		No data available
<b>Relative density</b>	0.906 - 0.941 g/cm <sup>3</sup>	
<b>Bulk density</b>		No data available
<b>Liquid Density</b>		No data available

Vapour density	No data available
Particle characteristics	
Particle Size	No data available
Particle Size Distribution	No data available

## 9.2. Other information

### 9.2.1. Information with regards to physical hazard classes

Not applicable

### 9.2.2. Other safety characteristics

No information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Reactivity None under normal use conditions.

### 10.2. Chemical stability

Stability Stable under normal conditions.

#### Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge None.

### 10.3. Possibility of hazardous reactions

Possibility of hazardous reactions Reacts strongly with fluorine.

### 10.4. Conditions to avoid

Conditions to avoid Dust formation. Excessive heat. Heating in air. If heated to more than 300°C, the product may form vapors or fumes which could cause respiratory tract irritation, coughing and shortness of breath. Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material.

### 10.5. Incompatible materials

Incompatible materials Aromatic solvents. Fluorine. Strong acids. Strong oxidising agents. Chlorinated solvents.

### 10.6. Hazardous decomposition products

Hazardous decomposition products Decomposition products depend on temperature, exposure to air, and the presence of other substances. Processing may release irritating fumes, olefinic and paraffinic compounds, carbon monoxide, and carbon dioxide. Potential thermal decomposition products include trace aldehydes (including formaldehyde), alcohols, organic acids, and hydrocarbons.

## SECTION 11: Toxicological information

### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

#### Information on likely routes of exposure

Product Information

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<b>Inhalation</b>	Specific test data for the substance or mixture is not available. Inhalation of dust in high concentration may cause irritation of respiratory system.
<b>Eye contact</b>	Specific test data for the substance or mixture is not available. Dust contact with the eyes can lead to mechanical irritation.
<b>Skin contact</b>	Specific test data for the substance or mixture is not available. Contact with dust can cause mechanical irritation or drying of the skin.
<b>Ingestion</b>	May cause irritation of the mouth, throat and stomach. Specific test data for the substance or mixture is not available. May be harmful if swallowed.

**Symptoms related to the physical, chemical and toxicological characteristics**

**Symptoms** None known.

**Acute toxicity****Numerical measures of toxicity**

Based on available data, the classification criteria are not met.

**Unknown acute toxicity**

100 % of the mixture consists of ingredient(s) of unknown acute oral toxicity.

100 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity.

100 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist).

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

<b>Skin corrosion/irritation</b>	No information available.
<b>Serious eye damage/eye irritation</b>	No information available.
<b>Respiratory or skin sensitisation</b>	No information available.
<b>Germ cell mutagenicity</b>	No information available.
<b>Carcinogenicity</b>	No information available.
<b>Reproductive toxicity</b>	No information available.
<b>STOT - single exposure</b>	No information available.
<b>STOT - repeated exposure</b>	No information available.
<b>Aspiration hazard</b>	No information available.

**11.2. Information on other hazards****11.2.1. Endocrine disrupting properties**

**Endocrine disrupting properties** This product does not contain any known or suspected endocrine disruptors.

**11.2.2. Other information**

**Other adverse effects** No information available.

## SECTION 12: Ecological information

### 12.1. Toxicity

**Ecotoxicity** Material in pellet or bead form may mechanically cause adverse effects if ingested by waterfowl or aquatic life.

### 12.2. Persistence and degradability

**Persistence and degradability** No information available.

### 12.3. Bioaccumulative potential

**Bioaccumulation** No information available.

### 12.4. Mobility in soil

**Mobility in soil** No information available.

### 12.5. Results of PBT and vPvB assessment

**PBT and vPvB assessment** No information available.

### 12.6. Endocrine disrupting properties

**Endocrine disrupting properties** This product does not contain any known or suspected endocrine disruptors.

### 12.7. Other adverse effects

**Other adverse effects** No information available.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

**Waste from residues/unused products** Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

**Contaminated packaging** Do not dispose of with household waste. Do not flush to sewer. Do not allow to enter into surface water or drains.

**Waste codes / waste designations according to EWC / AVV** According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. Waste codes should be assigned by the user based on the application for which the product was used.

## SECTION 14: Transport information

<b>IMDG</b>	Not regulated
<b>14.1 UN number or ID number</b>	Not regulated
<b>14.2 UN proper shipping name</b>	Not regulated
<b>14.3 Transport hazard class(es)</b>	Not regulated
<b>14.4 Packing group</b>	Not regulated
<b>14.5 Environmental hazards</b>	Not applicable
<b>14.6 Special Precautions for Users</b>	



**Special Provisions** None  
**14.7 Maritime transport in bulk according to IMO instruments** No information available

**RID** Not regulated  
**14.1 UN number** Not regulated  
**14.2 UN proper shipping name** Not regulated  
**14.3 Transport hazard class(es)** Not regulated  
**14.4 Packing group** Not regulated  
**14.5 Environmental hazards** Not applicable  
**14.6 Special Precautions for Users**  
**Special Provisions** None

**ADR** Not regulated  
**14.1 UN number or ID number** Not regulated  
**14.2 UN proper shipping name** Not regulated  
**14.3 Transport hazard class(es)** Not regulated  
**14.4 Packing group** Not regulated  
**14.5 Environmental hazards** Not applicable  
**14.6 Special Precautions for Users**  
**Special Provisions** None

**IATA** Not regulated  
**14.1 UN number or ID number** Not regulated  
**14.2 UN proper shipping name** Not regulated  
**14.3 Transport hazard class(es)** Not regulated  
**14.4 Packing group** Not regulated  
**14.5 Environmental hazards** Not applicable  
**14.6 Special Precautions for Users**  
**Special Provisions** None  
**Note:** None

**SECTION 15: Regulatory information**

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

**National regulations**

**France**

**Occupational Illnesses (R-463-3, France)**

Chemical name	French RG number
1-Hexene, polymer with ethene 25213-02-9	-

**Germany**

**Water hazard class (WGK)** non-hazardous to water (nwg)

**Netherlands**

**Water contaminating class (Netherlands)**

Chemical name	Netherlands - List of Carcinogens	Netherlands - List of Mutagens	Netherlands - List of Reproductive Toxins
1-Hexene, polymer with ethene	-	-	-

**European Union**

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents

at work.

**Authorisations and/or restrictions on use:**

This product does not contain substances subject to authorisation (Regulation (EC) No. 1907/2006 (REACH), Annex XIV) This product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

**Persistent Organic Pollutants**

Not applicable

**Ozone-depleting substances (ODS) regulation (EC) 1005/2009**

Not applicable

**International Inventories**

Contact supplier for inventory compliance status

**15.2. Chemical safety assessment**

**Chemical Safety Report**

No information available

**SECTION 16: Other information**

**Key or legend to abbreviations and acronyms used in the safety data sheet**

**Legend**

- ATE: Acute Toxicity Estimate
- SVHC: Substances of Very High Concern for Authorisation:
- PBT: Persistent, Bioaccumulative, and Toxic (PBT) Chemicals
- vPvB: Very Persistent and very Bioaccumulative (vPvB) Chemicals

**Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

- TWA TWA (time-weighted average) STEL STEL (Short Term Exposure Limit)
- Ceiling Maximum limit value \* Skin designation

Classification procedure	
Classification according to Regulation (EC) No. 1272/2008 [CLP]	Method Used
Acute oral toxicity	Calculation method
Acute dermal toxicity	Calculation method
Acute inhalation toxicity - gas	Calculation method
Acute inhalation toxicity - vapour	Calculation method
Acute inhalation toxicity - dust/mist	Calculation method
Skin corrosion/irritation	Calculation method
Serious eye damage/eye irritation	Calculation method
Respiratory sensitisation	Calculation method
Skin sensitisation	Calculation method
Mutagenicity	Calculation method
Carcinogenicity	On basis of test data
Reproductive toxicity	Calculation method
STOT - single exposure	Calculation method
STOT - repeated exposure	Calculation method
Acute aquatic toxicity	Calculation method
Chronic aquatic toxicity	Calculation method
Aspiration hazard	Calculation method

Ozone	Calculation method
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**Key literature references and sources for data used to compile the SDS**

U.S. Environmental Protection Agency ChemView Database  
European Food Safety Authority (EFSA)  
European Chemicals Agency (ECHA) Committee for Risk Assessment (ECHA\_RAC)  
European Chemicals Agency (ECHA) (ECHA\_API)  
EPA (Environmental Protection Agency)  
Acute Exposure Guideline Level(s) (AEGl(s))  
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act  
U.S. Environmental Protection Agency High Production Volume Chemicals  
Food Research Journal  
Hazardous Substance Database  
International Uniform Chemical Information Database (IUCLID)  
Japan GHS Classification  
Australian National Industrial Chemicals Notification and Assessment Scheme (NICNAS)  
NIOSH (National Institute for Occupational Safety and Health)  
National Library of Medicine's ChemID Plus (NLM CIP)  
National Toxicology Program (NTP)  
New Zealand's Chemical Classification and Information Database (CCID)  
Organisation for Economic Co-operation and Development Environment, Health, and Safety Publications  
Organisation for Economic Co-operation and Development High Production Volume Chemicals Programme  
Organisation for Economic Co-operation and Development Screening Information Data Set  
World Health Organization

**Issuing Date** 22-Nov-2022

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**This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006**

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**End of Safety Data Sheet**