

LINEAR LOW DENSITY POLYETHYLENE HF1832

Version: 1.02

Revision Date 2019/04/12

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**1.1 Product identifier**

Trade name	Linear Low Density Polyethylene HF1832
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1.2 Relevant identified uses of the substance or mixture and uses advised against

Use	raw material for industry Polymer
Uses advised against	

1.3 Details of the supplier of the safety data sheet

Company	Sasol Chemie GmbH & Co. KG Anckelmannsplatz 1 20537 Hamburg Germany
	Telephone: +49 40 63684-1000 Telefax: +49 40 63684-3700
Information (Product safety):	Telephone: + 49 (0) 23 65 - 49 47 05 Telefax: + 49 (0) 23 65 - 49 92 40
E-mail address	solvents.germany.msds@de.sasol.com

1.4 Emergency telephone number

Emergency telephone number	+44 (0)1235 239 670 (Europe, Israel, Africa, Americas) +44 (0)1235 239 671 (Middle East, Arabic African countries) +65 3158 1074 (Asia Pacific) +86 10 5100 3039 (China) +27 (0)17 610 4444 (South Africa) +61 (2)8014 4558 (Australia)
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SECTION 2: HAZARDS IDENTIFICATION**2.1 Classification of the substance or mixture****Classification (REGULATION (EC) No 1272/2008)**

Not a hazardous substance or mixture.

2.2 Label elements

Not a hazardous substance or mixture.

2.3 Other hazards

May form combustible dust - air mixtures.

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SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

This product is a mixture in the meaning of regulation (EC) 1907/2006.

COMPONENTS TO BE NAMED IN ACCORDANCE WITH REGULATION (EC) 1907/2006 AS WELL AS OTHER HAZARDOUS INGREDIENTS AND CONTAINED SUBSTANCES WITH WORK PLACE LIMIT VALUES**zinc oxide****content:** $\geq 0.1 - < 0.25 \%$ **component type:** Additive**EC-No.:** 215-222-5**Index-No.:** 030-013-00-7**CAS-No.:** 1314-13-2**REACH No.:** not available (quantity threshold for registration not reached)**Substance name (REACH / CLP):** Zinc oxide

Classification (Regulation (EC) No 1272/2008):	Aquatic Acute	1	H400
	Aquatic Chronic	1	H410

Substances for which maximum allowable workplace concentrations have been laid down**Ethylene, 1-hexene polymer****content:** $\geq 90 - \leq 100 \%$ **component type:** Active ingredient**EC-No.:****Index-No.:****CAS-No.:** 25213-02-9**REACH No.:** Not relevant (polymer)

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: FIRST AID MEASURES**4.1 Description of first aid measures****General advice**

No hazards which require special first aid measures.

If inhaled

If inhalation of melt processing fumes occurs, remove to fresh air. Remove from exposure, lie down. If breathing is irregular or stopped, administer artificial respiration. Monitor breathing, give oxygen if necessary. Consult a physician.

In case of skin contact

Wash off with plenty of water. Cool skin rapidly with cold water after contact with molten polymer. Do not peel polymer from the skin. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

Consult a physician. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person.

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

Symptoms: No information available.

Risks: Molten polymer can cause severe burns in contact with skin and eyes

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

Treatment: No information available.

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SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

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| Suitable extinguishing media | Water spray, Dry powder, Foam, Carbon dioxide (CO ₂) |
| Unsuitable extinguishing media | Do NOT use water jet. |

5.2 Special hazards arising from the substance or mixture

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|---|---|
| Specific hazards during firefighting | Dangerous gases or fumes may occur in case of fire. |
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5.3 Advice for firefighters

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|--|--|
| Special protective equipment for firefighters | Wear self-contained breathing apparatus for firefighting if necessary. |
| Further information | Standard procedure for chemical fires. |

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

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|-----------------------------|---|
| Personal precautions | Use personal protective equipment. |
| Special precautions | Knock down dust with water spray jet. Remove all sources of ignition. Pick up and arrange disposal without creating dust. |

6.2 Environmental precautions

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|----------------------------------|---|
| Environmental precautions | Do not flush into surface water or sanitary sewer system. |
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6.3 Methods and materials for containment and cleaning up

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| Methods for cleaning up | Sweep up or vacuum up spillage and collect in suitable container for disposal.
Molten form Allow to solidify, use mechanical handling equipment. |
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6.4 Reference to other sections

For personal protection see section 8.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

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| Advice on safe handling | Avoid spark promoters. Ground/bond container and equipment. These alone may be insufficient to remove static electricity.
Keep away from flames, such as a pilot light, and any object that sparks, such as an electric motor.
Avoid dust formation.
No sparking tools should be used.
Persons with a history of skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used. |
| Advice on protection against fire and explosion | Normal measures for preventive fire protection. |

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7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers	Store at room temperature.
Storage class (TRGS 510)	10-13: German Storage Class 10 to 13
Other data	Stable under normal conditions.

7.3 Specific end use(s)

Specific use(s)	This information is not available.
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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**8.1 Control parameters****COMPONENTS WITH WORKPLACE CONTROL PARAMETERS****National occupational exposure limits**

Control parameters / Substance name	Typ	Control parameters	Update	Basis
DUST, RESPIRABLE DUST	TWA	4 mg/m ³	12 2011	EH40 WEL
DUST, INHALABLE DUST	TWA	10 mg/m ³	12 2011	EH40 WEL

EUROPEAN OCCUPATIONAL EXPOSURE LIMITS

No data available

DERIVED NO EFFECT LEVEL (DNEL)**Substance name:** Ethylene, 1-hexene polymer

No data available

PREDICTED NO EFFECT CONCENTRATION (PNEC)**Substance name:** Ethylene, 1-hexene polymer

No data available

8.2 Exposure controls**PERSONAL PROTECTIVE EQUIPMENT**

Respiratory protection	No personal respiratory protective equipment normally required. In inadequately ventilated areas, where workplace limits are exceeded, where unpleasant odours exist or where dust, fibres and smoke occur, use self-contained breathing apparatus or breathing apparatus with a type P2 or P3 filter, in compliance with EN 143.
Hand protection	Coordinate hand protection with other chemicals used. Preventive hand protection is recommended., Use barrier cream regularly.

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Eye protection	Safety glasses
Skin and body protection	Wear suitable protective equipment.
Hygiene measures	Handle in accordance with good industrial hygiene and safety practice.
Protective measures	No special protective equipment required.

ENVIRONMENTAL EXPOSURE CONTROLS

Water	Do not flush into surface water or sanitary sewer system.
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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**9.1 Information on basic physical and chemical properties**

Physical state	solid; 20 °C; 1,013 hPa
Form	pellets
Colour	white
Odour	odourless
Odour Threshold	No valid method available
pH	No data available
Melting point/range	No data available
Boiling point/boiling range	No data available
Flash point	No data available
Evaporation rate	No data available
Flammability (solid, gas)	No data available
Lower explosion limit	No data available
Upper explosion limit	No data available
Vapour pressure	No data available
Relative vapour density	> 1
Density	0.915 - 0.919 g/cm ³ ; 20 °C
Water solubility	insoluble
Partition coefficient: n-octanol/water	not applicable (mixture)
Ignition temperature	No data available
Auto-ignition temperature	No data available
Viscosity, dynamic	; 20 °C Not applicable, Justification: Solid
Explosive properties	not expected based on structure and functional groups
Oxidizing properties	not expected based on structure and functional groups

9.2 Other data

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Additional advice	no data
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SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

Note	Stable at normal ambient temperature and pressure.
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10.2 Chemical stability

Note	No decomposition if stored and applied as directed.
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10.3 Possibility of hazardous reactions

Hazardous reactions	Hazardous decomposition products formed under fire conditions.
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10.4 Conditions to avoid

Conditions to avoid	Direct heating, dirt, chemical contamination, sunlight, UV or ionising radiation.
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10.5 Incompatible materials to avoid

Materials to avoid	None known.;
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10.6 Hazardous decomposition products

Hazardous decomposition products	No decomposition if used as directed.
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Thermal decomposition	No decomposition if used as directed.
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SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects**Acute toxicity**

Acute oral toxicity	Ethylene, 1-hexene polymer: LD50 : > 2,000 mg/kg The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy). Test substance: polyethylene Based on available data, the classification criteria are not met.
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Acute inhalation toxicity	Ethylene, 1-hexene polymer: No data available
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Acute dermal toxicity	Ethylene, 1-hexene polymer: No data available
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Skin corrosion/irritation

Skin irritation	Ethylene, 1-hexene polymer: Rabbit: slightly irritating The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy). Test substance: polyethylene Based on available data, the classification criteria are not met.
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Serious eye damage/eye irritation**Eye irritation**

Ethylene, 1-hexene polymer:
Rabbit: slightly irritating
The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy).
Test substance: polyethylene
Based on available data, the classification criteria are not met.

Respiratory or skin sensitisation**Sensitisation**

Ethylene, 1-hexene polymer:
No data available

Germ cell mutagenicity**Genotoxicity in vitro**

Ethylene, 1-hexene polymer:
No data available

Genotoxicity in vivo

Ethylene, 1-hexene polymer:
No data available

Carcinogenicity**Carcinogenicity**

Ethylene, 1-hexene polymer:
The product or substance does not contain constituents listed as a carcinogen.

Reproductive toxicity**Reproductive toxicity**

Ethylene, 1-hexene polymer:
This information is not available.

STOT - single exposure**Remarks**

Ethylene, 1-hexene polymer:
This information is not available.

STOT - repeated exposure**Remarks**

Ethylene, 1-hexene polymer:
This information is not available.

Aspiration hazard**Aspiration toxicity**

Ethylene, 1-hexene polymer:
No data available

Toxicological information

Ethylene, 1-hexene polymer:
No data available

SECTION 12: ECOLOGICAL INFORMATION**12.1 Toxicity****Toxicity to fish**

Ethylene, 1-hexene polymer:
No data available

Toxicity to fish - Chronic toxicity

Ethylene, 1-hexene polymer:
No data available

Toxicity to daphnia and other aquatic invertebrates

Ethylene, 1-hexene polymer:
No data available

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Toxicity to daphnia and other aquatic invertebrates - Chronic toxicity	Ethylene, 1-hexene polymer: No data available
Toxicity to aquatic plants	Ethylene, 1-hexene polymer: No data available
Toxicity to bacteria	Ethylene, 1-hexene polymer: No data available
Toxicity to soil dwelling organisms	Ethylene, 1-hexene polymer: No data available
Toxicity to terrestrial flora	Ethylene, 1-hexene polymer: No data available
Toxicity for other terrestrial non-mammalian fauna	Ethylene, 1-hexene polymer: No data available
12.2 Persistence and degradability	
Biodegradability	Ethylene, 1-hexene polymer: This material is not expected to be biodegradable.
12.3 Bioaccumulative potential	
Bioaccumulation	Ethylene, 1-hexene polymer: No data available
12.4 Mobility in soil	
Mobility	Ethylene, 1-hexene polymer: No data available
12.5 Results of PBT and vPvB assessment	
Results of PBT assessment	This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.
Results of PBT assessment	Ethylene, 1-hexene polymer: No data available
12.6 Other adverse effects	
General advice	Ethylene, 1-hexene polymer: Aquatic toxicity is unlikely due to low solubility. Wildlife may ingest plastic pellets or bags which while not toxic, may physically block the digestive system which can cause death

SECTION 13: DISPOSAL CONSIDERATIONS**13.1 Waste treatment methods**

Product	Can be incinerated, when in compliance with local regulations.
waste code of the European Union: EWC	A waste code in accordance with the European Waste Catalogue (EWC) may not be assigned to this product since it admits of a classification only when the consumer uses it for some purpose. The waste code must be determined in agreement with the regional waste disposal authority or company.

SECTION 14: TRANSPORT INFORMATION

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14.1 UN number

ADR	Not dangerous goods
RID	Not dangerous goods
ADN	Not dangerous goods
IMDG	Not dangerous goods
ICAO/IATA	Not dangerous goods

14.2 Proper shipping name

ADR	Not dangerous goods
RID	Not dangerous goods
ADN	Not dangerous goods
IMDG	Not dangerous goods
ICAO/IATA	Not dangerous goods

14.3 Transport hazard class

ADR	Not dangerous goods
RID	Not dangerous goods
ADN	Not dangerous goods
IMDG	Not dangerous goods
ICAO/IATA	Not dangerous goods

14.4 Packing group

ADR	Not dangerous goods
RID	Not dangerous goods
ADN	Not dangerous goods
IMDG	Not dangerous goods
ICAO/IATA	Not dangerous goods

14.5 Environmental hazards

ADR	Environmentally hazardous	no
RID	Environmentally hazardous	no
ADN	Environmentally hazardous	no
IMDG	Marine pollutant	no
ICAO/IATA	Environmentally hazardous	no

14.6 Special precautions for user

Not classified as dangerous in the meaning of transport regulations.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Remarks No information available.

SECTION 15: REGULATORY INFORMATION**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****NATIONAL/OTHER REGULATIONS**

Legislation on the control of Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on

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**major-accident hazards
involving dangerous
substances**

the control of major-accident hazards involving dangerous substances.
list entry in the directive:: Not applicable

NOTIFICATION STATUS

Switzerland. Consolidated Inventory	CH INV	listed (product or constituents are listed)
US. Toxic Substances Control Act	TSCA	listed (product or constituents are listed)
Canada. Canadian Environmental Protection Act (CEPA). Domestic Substances List (DSL)	DSL	listed (product or constituents are listed)
Australia. Industrial Chemical (Notification and Assessment) Act	AICS	listed (product or constituents are listed)
Japan. Kashin-Hou Law List	ENCS (JP)	listed (product or constituents are listed)
Japan. Industrial Safety & Health Law (ISHL) List	ISHL (JP)	listed (product or constituents are listed)
Korea. Existing Chemicals Inventory (KECI)	KECI (KR)	listed (product or constituents are listed)
Philippines. The Toxic Substances and Hazardous and Nuclear Waste Control Act	PICCS (PH)	listed (product or constituents are listed)
China. Inventory of Existing Chemical Substances (IECSC)	INV (CN)	listed (product or constituents are listed)

Please note: the names and CAS numbers which are used for this product in the stated inventories may deviate from the information which is listed in chapter 3.

15.2 Chemical safety assessment**Ethylene, 1-hexene polymer**

A Chemical Safety Assessment is not required for this substance (exempted from obligation to register).

SECTION 16: OTHER INFORMATION**Full text of H-Statements referred to under sections 2 and 3.**

H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

Safety datasheet sections which have been updated:

15. Regulatory information

Further information:

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

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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.
This safety datasheet only contains information relating to safety and does not replace any product information or product specification.

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

ADN	Accord européen relatif au transport international des marchandises dangereuses par voie de navigation intérieure
ADR	Accord européen relatif au transport international des marchandises Dangereuses par Route
AICS	Australian Inventory of Chemical Substances
ANSI	American National Standards Institute
ASTM	American Society of Testing and Materials (US)
BCF	Bioconcentration factor
CLP	Regulation on Classification, Labelling and Packaging of Substances and Mixtures
DIN	Deutsches Institut für Normung
DNEL	Derived No-Effect Level
DSL	Domestic Substances List
EC...	Effect concentration ... %
ENCS	Existing Notified Chemical Substances (Japan)
EWC	European Waste Catalogue
IATA	International Air Transport Association
IBC	Intermediate Bulk Container
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods
IMO	International Maritime Organization
ISHL	Industrial Safety and Health Law (Japan)
ISO	International Organization for Standardization
IUAPC	International Union of Pure and Applied Chemistry
KECI	Korea Existing Chemicals Inventory
LC...	Lethal Concentration, ...%
LD...	Lethal Dose, ...%
MARPOL	International Convention for the Prevention of Pollution From Ships
NDSL	Non-Domestic Substances List
NOAEL	no observable adverse effect level
NOEL/NOEC	No Observed-effect level/concentration
NZIoC	New Zealand Inventory of Chemicals
OECD	Organisation for Economic Co-operation and Development
PBT	persistent, bioaccumulative, toxic
PICCS	Philippine Inventory of Chemicals and Chemical Substances
PNEC	Predicted No-Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Règlement concernant le transport international ferroviaire de marchandises dangereuses
TG	Test Guideline
TRGS	Technische Regeln für Gefahrstoffe
TSCA	Toxic Substances Control Act
vPvB	very persistent, very bioaccumulative
WGK	Wassergefährdungsklasse