

HIGH DENSITY POLYETHYLENE HD5208 FL

Version: 1.01

Revision Date 2019/11/08

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

| | |
|-------------------|--|
| Trade name | High Density Polyethylene HD5208 FL |
|-------------------|--|

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

| | |
|-----------------------------|--|
| Use | Industrial use raw material for industry Agricultural food industry |
| 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) |
|-----------------------------------|--|

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

Forms slippery/greasy layers with water.

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SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

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

CHEMICAL CHARACTERIZATION**Ethylene, 1-hexene polymer****component type:** Active ingredient**EC-No.:****Index-No.:****CAS-No.:** 25213-02-9**REACH No.:** Not relevant (polymer)**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**

No hazardous ingredients

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. |
|---|--------------------------------------|

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

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Suitable extinguishing media Water spray, Dry powder, Foam, Carbon dioxide (CO2)

Unsuitable extinguishing media Do NOT use water jet.

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting Dangerous gases or fumes may occur in case of fire.

5.3 Advice for firefighters

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**

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. Forms slippery/greasy layers with water.

6.2 Environmental precautions

Environmental precautions Do not flush into surface water or sanitary sewer system.

6.3 Methods and materials for containment and cleaning up

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.

6.4 Reference to other sections

For personal protection see section 8.

SECTION 7: HANDLING AND STORAGE**7.1 Precautions for safe handling**

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.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers Store at room temperature.

Other data Stable under normal conditions.

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7.3 Specific end use(s)

Specific use(s) This information is not available.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**8.1 Control parameters****COMPONENTS WITH WORKPLACE CONTROL PARAMETERS****National occupational exposure limits**

No data available

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. |
| 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

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Water Do not flush into surface water or sanitary sewer system.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**9.1 Information on basic physical and chemical properties**

| | |
|---|---|
| Physical state | solid; 20 °C; 1,012 hPa |
| Form | flakes, Pastilles |
| Colour | white |
| Odour | odourless |
| Odour Threshold | No valid method available. |
| pH | No data available |
| Melting point/range | 110 - 167 °C |
| 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 | 0.92 - 0.97 g/cm ³ ; 23 °C |
| Water solubility | insoluble |
| Partition coefficient: n-octanol/water | not applicable (mixture) |
| Ignition temperature | No data available |
| Auto-ignition temperature | 340 °C |
| Viscosity, dynamic | Not applicable, Justification: Solid |
| Viscosity, kinematic | Not applicable |
| Explosive properties | not expected based on structure and functional groups |
| Oxidizing properties | not expected based on structure and functional groups |

9.2 Other data

Additional advice no data

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.

10.3 Possibility of hazardous reactions

Hazardous reactions Hazardous decomposition products formed under fire conditions.

10.4 Conditions to avoid

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

10.5 Incompatible materials to avoid

Materials to avoid None known.;

10.6 Hazardous decomposition products

Hazardous decomposition products No decomposition if used as directed.

Thermal decomposition No decomposition if used as directed.

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.

Acute inhalation toxicity Ethylene, 1-hexene polymer:
No data available

Acute dermal toxicity Ethylene, 1-hexene polymer:
No data available

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.

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

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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

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:

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| | |
|---|--|
| | 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

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

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| | |
|-----------|---------------------|
| 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 major-accident hazards involving dangerous substances | Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances. list entry in the directive:: Not applicable |
|---|---|

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NOTIFICATION STATUS

| | | |
|---|------------|---|
| Switzerland. Consolidated Inventory (based on EU-EINECS and EU-NLP) | CH INV | listed (product or constituents are listed) |
| Canadian Domestic Substances List (DSL) | DSL | listed (product or constituents are listed) |
| Australia Inventory of Chemical Substances (AICS) | AICS | listed (product or constituents are listed) |
| Japan. ENCS - Existing and New Chemical Substances Inventory | ENCS (JP) | listed (product or constituents are listed) |
| Japan. ISHL - Inventory of Chemical Substances | ISHL (JP) | listed (product or constituents are listed) |
| Korea. Korean Existing Chemicals Inventory (KECI) | KECI (KR) | listed (product or constituents are listed) |
| Philippines Inventory of Chemicals and Chemical Substances (PICCS) | PICCS (PH) | listed (product or constituents are listed) |
| China. Inventory of Existing Chemical Substances in China (IECSC) | IECSC | listed (product or constituents are listed) |
| Taiwan Chemical Substance Inventory (TCSI) | TCSI | listed (product or constituents are listed) |
| United States TSCA Inventory | TSCA | 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

Safety datasheet sections which have been updated:

- 3. Composition/information on ingredients
- 8. Exposure controls/personal protection
- 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 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.

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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 |