

Marlex® 5561 Polyethylene

Version 3.4

Revision Date 2020-03-03

| Product Name Material Company Emergency telephone: Health: 866.442.9628 (North Ame 1.832.813.4984 (Internatio Transport: | : | Marlex® 5561 Polyethylene 1042507, 1040487, 1040490, 1042510, 1042505, 1042506, 1042509, 1042508, 1044445, 1044444, 1044443, 1044442, 1044441 Chevron Phillips Chemical Company LP 10001 Six Pines Drive The Woodlands, TX 77380 |
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| Emergency telephone: Health: 866.442.9628 (North Ame 1.832.813.4984 (Internatic Transport: | : | 10001 Six Pines Drive |
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| Asia: CHEMWATCH (+61) EUROPE: BIG +32.14.584 Mexico CHEMTREC 01-80 | onal 0 o 2 9 454 00-l c In | l) r 703.527.3887(int'l) 186 1132) China: 0532 8388 9090 •5 (phone) or +32.14583516 (telefax) 681-9531 (24 hours) nside Brazil: 0800.111.767 Outside Brazil: +55.19.3467.1600 |
| Responsible Department E-mail address Website | : | Product Safety and Toxicology Group SDS@CPChem.com www.CPChem.com |
| | | ION: Do not use this material in medical applications involving uman body or permanent contact with internal body fluids or tissues |
| human body or contact with ir | ntei s Ch | cal applications involving brief or temporary implantation in the rnal body fluids or tissues unless the material has been provided nemical Company LP or its legal affiliates under an agreement which ntemplated use. |
| express warranty or implied v | vari | pany LP and its legal affiliates makes no representation, promise, ranty concerning the suitability of this material for use in implantation with internal body fluids or tissues. |
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SECTION 2: Hazards identification

| Classification | : Combustible dust |
|--------------------------|---|
| Labeling | |
| Signal Word | : Warning |
| Hazard Statements | : May form combustible dust concentrations in air. While this product may not be a combustible dust as sold, further processing or handling may form combustible dust concentration in air. |
| Potential Health Effects | |
| Physical Hazards | : Pellets may cause a slip hazard on hard surfaces. Mechanical processing may form combustible dust concentrations in air and thermal processing at elevated temperatures may generate formaldehyde. |
| Inhalation | Repeated exposure to dust from this material may cause respiratory irritation. Fumes generated during thermal processing may cause irritation of the upper respiratory tract. |
| Skin | Contact with the skin is not expected to cause prolonged or significant irritation. Contact with the skin is not expected to cause an allergic response. If this material is heated, thermal burns may result from contact Thermal burns may include pain or feeling of heat, discolorations, swelling, and blistering. |
| Eyes | Contact with the eyes may cause irritation due to the abrasive action. Not expected to cause prolonged or significant eye irritation. Thermal burns may result if heated material contacts eye. |
| Ingestion | : Ingestion of this product is not a likely route of exposure. |
| Carcinogenicity: | |
| IARC | No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed |
| NTP | human carcinogen by IARC. No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP. |
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SECTION 3: Composition/information on ingredients

| Component | CAS-No. | Weight % |
|--------------|-----------|----------|
| Polyethylene | 9002-88-4 | 99 - 100 |

SECTION 4: First aid measures

| If inhaled | : Move to fresh air in case of accidental inhalation of dus fumes from overheating or combustion. If symptoms per call a physician. | |
|-------------------------|---|--------|
| In case of skin contact | : If the molten material gets on skin, quickly cool in water immediate medical attention. Do not try to peel the solid material from the skin or use solvents or thinners to disc | dified |
| In case of eye contact | : In the case of contact with eyes, rinse immediately with of water and seek medical advice. | plenty |
| If swallowed | : Do not induce vomiting without medical advice. | |

SECTION 5: Firefighting measures

| Flash point | : | No data available |
|--|---|--|
| Autoignition temperature | : | No data available |
| Suitable extinguishing media | : | Water. Water mist. Dry chemical. Carbon dioxide (CO2). Foam. If possible, water should be applied as a spray from a fogging nozzle since this is a surface burning material. The application of high velocity water will spread the burning surface layer. Avoid the use of straight streams that may create a dust cloud and the risk of a dust explosion. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. |
| Specific hazards during fire fighting | : | Risks of ignition followed by flame propagation or secondary explosions can be caused by the accumulation of dust, e.g. on floors and ledges. |
| Special protective equipment for fire-fighters | : | Use personal protective equipment. Wear self-contained breathing apparatus for firefighting if necessary. |
| Further information | : | This material will burn although it is not easily ignited. |
| Fire and explosion protection | : | Treat as a solid that can burn. Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard. |
| Hazardous decomposition products | : | Normal combustion forms carbon dioxide, water vapor and may produce carbon monoxide, other hydrocarbons and hydrocarbon oxidation products (ketones, aldehydes, organic |
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acids) depending on temperature and air availability. Incomplete combustion can also produce formaldehyde.

SECTION 6: Accidental release measures

| Personal precautions | : | Sweep up to prevent slipping hazard. Avoid breathing dust. Avoid dust formation. |
|---------------------------|---|--|
| Environmental precautions | : | Do not contaminate surface water. Prevent product from entering drains. |
| Methods for cleaning up | : | Clean up promptly by sweeping or vacuum. |
| Additional advice | : | Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). |

SECTION 7: Handling and storage

Handling

| Advice on safe handling | : | Use good housekeeping for safe handling of the product. Keep out of water sources and sewers. |
|---|---|---|
| | | Spilled pellets and powders may create a slipping hazard. |
| | | Electrostatic charge may accumulate and create a hazardous condition when handling this material. To minimize this hazard, bonding and grounding may be necessary, but may not by themselves be sufficient. At elevated temperatures (>350°F, >177°C), polyethylene can release vapors and gases, which are irritating to the mucous membranes of the eyes, mouth, throat, and lungs. These substances may include acetaldehyde, acetone, acetic acid, formic acid, formaldehyde and acrolein. Based on animal data and limited epidemiological evidence, formaldehyde has been listed as a carcinogen. Following all recommendations within this SDS should minimize exposure to thermal processing emissions. |
| Advice on protection against fire and explosion | : | Treat as a solid that can burn. Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard. |
| Storage | | |
| Requirements for storage areas and containers | : | Keep in a dry place. Keep in a well-ventilated place. |
| Advice on common storage | : | Do not store together with oxidizing and self-igniting products. |
| | | |
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SECTION 8: Exposure controls/personal protection

Ingredients with workplace control parameters

US

| Components | Basis | Value | Control parameters | Note |
|---------------|----------|-------|--------------------|-------------------|
| Nuisance Dust | OSHA Z-3 | TWA | 15 mg/m3 | Total dust |
| | OSHA Z-3 | TWA | 5 mg/m3 | (respirable dust) |
| | | | | |

Control as Particulate Not Otherwise Classified (PNOC). The ACGIH Guideline* for respirable dust is 3.0 mg/m3 and 10.0 mg/m3 for total dust. The OSHA PEL for respirable dust is 5.0 mg/m3 and 15.0 mg/m3 for total dust. * This value is for inhalable (total) particulate matter containing no asbestos and < 1.0% crystalline silica.

Engineering measures

Consider the potential hazards of this material (see Section 2), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

Personal protective equipment

| Eye protection : Use of safety glasses with side shields for solid handling is good industrial practice. If this material is heated, wear chemical goggles or safety glasses with side shields or a face shield. If there is potential for dust, use chemical goggles. Skin and body protection : At ambient temperatures use of clean and protective clothing is | Respiratory protection | : No respiratory protection is normally required. If heated material generates vapor or fumes that are not adequately controlled by ventilation, wear an appropriate respirator. Use the following elements for air-purifying respirators: Organic Vapor and Formaldehyde. Use a positive pressure, air- supplying respirator if there is potential for uncontrolled release, exposure levels are not known, or other circumstances where air-purifying respirators may not provide adequate protection. Dust safety masks are recommended when the dust concentration is excessive. |
|---|-------------------------------------|---|
| Skin and body protection | Eye protection | good industrial practice. If this material is heated, wear chemical goggles or safety glasses with side shields or a face |
| good industrial practice. If the material is heated or molten, wear thermally insulated, heat-resistant gloves that are able to withstand the temperature of the molten product. If this material is heated, wear insulated clothing to prevent skin contact if engineering controls or work practices are not adequate. | Skin and body protection | wear thermally insulated, heat-resistant gloves that are able to withstand the temperature of the molten product. If this material is heated, wear insulated clothing to prevent skin contact if engineering controls or work practices are not |
| SECTION 9: Physical and chemical properties | SECTION 9: Physical and cher | mical properties |

| Appearance | |
|---|--|
| Form Physical state Color Odor Odor Threshold | Pellets Solid Opaque Mild to no odor No data available |
| Safety data | |

| SAFETY | DATA | SHEET |
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| Flash point | : No data available |
| Lower explosion limit | : Not applicable |
| Upper explosion limit | : Not applicable |
| Autoignition temperature | : No data available |
| Thermal decomposition | : Low molecular weight hydrocarbons, alcohols, aldehydes, acids and ketones can be formed during thermal processing. |
| рН | : Not applicable |
| Melting point/range | : 90-140°C (194-284°F) |
| Freezing point | Not applicable |
| Initial boiling point and boiling | : Not applicable |
| range Vapor pressure | : Not applicable |
| Relative density | : Not applicable |
| Density | : 0.91 - 0.97 g/cm3 Please refer to the Technical Data Sheet (TDS) for more detailed information relating to the nominal physical properties, including density, of this polyethylene resin grade. |
| Water solubility | : Negligible |
| Partition coefficient: n- | : No data available |
| octanol/water Solubility in other solvents | : No data available |
| Viscosity, dynamic | : Not applicable |
| Viscosity, kinematic | : Not applicable |
| Relative vapor density | : Not applicable |
| Evaporation rate | : Not applicable |

SECTION 10: Stability and reactivity

Reactivity

: This material is considered non-reactive under normal ambient and anticipated storage and handling conditions of temperature and pressure.

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| Revision Date 2020-03- This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure. tions Hazardous reactions: None known. |
|--|
| : This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure. |
| |
| : Hazardous reactions: None known. |
| |
| : Avoid prolonged storage at elevated temperature. |
| : Avoid contact with strong oxidizing agents. |
| : Low molecular weight hydrocarbons, alcohols, aldehydes, acids and ketones can be formed during thermal processing. |
| : Normal combustion forms carbon dioxide, water vapor and may produce carbon monoxide, other hydrocarbons and hydrocarbon oxidation products (ketones, aldehydes, organic acids) depending on temperature and air availability. Incomplete combustion can also produce formaldehyde. |
| : No decomposition if stored and applied as directed. |
| nation |
| |
| : Presumed Not Toxic |
| : Presumed Not Toxic |
| : Presumed Not Toxic |
| : No skin irritation |
| : No eye irritation |
| : Did not cause sensitization on laboratory animals. |
| : This product contains POLYMERIZED OLEFINS. During thermal processing (>350°F, >177°C) polyolefins can release vapors and gases (aldehydes,ketones and organic acids) which are irritating to the mucous membranes of the eyes, mouth, throat, and lungs. Generally these irritant effects are all transitory. However, prolonged exposure to irritating off-gases |
| |

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can lead to pulmonary edema. Formaldehyde (an aldehyde) has been classified as a carcinogen based on animal data and limited epidemiological evidence.

| CTION 12: Ecological information of the second s | |
|---|---|
| | |
| Ecotoxicity effects | |
| Toxicity to fish | : Not applicable |
| Toxicity to daphnia and other aquatic invertebrates | : No data available |
| Biodegradability | : This material is not expected to be readily biodegradable. |
| Elimination information (persis | tence and degradability) |
| Bioaccumulation | : Does not bioaccumulate. |
| Mobility | : The product is insoluble and floats on water. |
| Results of PBT assessment | : Non-classified vPvB substance |
| Additional ecological information | : This material is not expected to be harmful to aquatic organisms., Fish or birds may eat pellets which may obstruct their digestive tracts. |
| Ecotoxicology Assessment | |
| Short-term (acute) aquatic hazard | : This product has no known ecotoxicological effects. |
| Long-term (chronic) aquatic hazard | : This product has no known ecotoxicological effects. |
| TION 13: Disposal considera | tions |
| The information in this SDS pe | ertains only to the product as shipped. |
| Use material for its intended p may meet the criteria of a haza | urpose or recycle if possible. This material, if it must be discarded |

may meet the criteria of a hazardous waste as defined by US EPA under RCRA (40 CFR 261) or other State and local regulations. Measurement of certain physical properties and analysis for regulated components may be necessary to make a correct determination. If this material is classified as a hazardous waste, federal law requires disposal at a licensed hazardous waste disposal facility.

SECTION 14: Transport information

The shipping descriptions shown here are for bulk shipments only, and may not apply to shipments in non-bulk packages (see regulatory definition).

Consult the appropriate domestic or international mode-specific and quantity-specific Dangerous Goods Regulations for additional shipping description requirements (e.g., technical name or names, etc.) Therefore, the information shown here, may not always agree with the bill of lading shipping description for the material. Flashpoints for the material may vary slightly between the SDS and the

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bill of lading.

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| US DOT (UNITED STATES DEPARTMENT OF TRANSPORTATION) NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY. | | | | | |
|--|--|--|--|--|--|
| IMO / IMDG (INTERNATIONAL MARITIME DANGEROUS GOODS) NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY. | | | | | |
| | AIR TRANSPORT ASSOCIATION) A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR Y THIS AGENCY. | | | | |
| | ANGEROUS GOODS BY ROAD (EUROPE)) A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR Y THIS AGENCY. | | | | |
| DANGEROUS GOODS (E | A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR | | | | |
| ADN (EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY INLAND WATERWAYS) NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY. | | | | | |
| | o Annex II of MARPOL 73/78 and the IBC Code | | | | |
| SECTION 15: Regulatory infor | mation | | | | |
| National legislation | | | | | |
| SARA 311/312 Hazards | : Combustible dust | | | | |
| CERCLA Reportable Quantity | : This material does not contain any components with a CERCLA RQ. | | | | |
| SARA 302 Reportable Quantity | : This material does not contain any components with a SARA 302 RQ. | | | | |
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| | | | | | |

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| SARA 302 Threshold Planning Quantity | : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302. |
| SARA 304 Reportable Quantity | : This material does not contain any components with a section 304 EHS RQ. |
| SARA 313 Components | : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313. |
| Clean Air Act | |
| Potential Class | oduct neither contains, nor was manufactured with a Class I or I ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR bpt. A, App.A + B). |
| This product does not contair Act Section 112 (40 CFR 61) | a any hazardous air pollutants (HAP), as defined by the U.S. Clean A |
| | a any chemicals listed under the U.S. Clean Air Act Section 112(r) for on (40 CFR 68.130, Subpart F). |
| This product does not contair Intermediate or Final VOC's (| any chemicals listed under the U.S. Clean Air Act Section 111 SOC 40 CFR 60.489). |
| US State Regulations | |
| Pennsylvania Right To Know | : No components are subject to the Pennsylvania Right to Know Act. |
| California Prop. 65 Components | : This product, as shipped, does not contain any carcinogens or reproductive toxins presently known by the State of California to cause cancer or reproductive toxicity at a level of exposure subject to the requirements of California Proposition 65. |
| Notification status Europe REACH Switzerland CH INV | This mixture contains only ingredients which have been registered according to Regulation (EU) No. 1907/2006 (REACH). On the inventory, or in compliance with the inventory On or in compliance with the active portion of the |
| United States of America (US | |

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| TSCA Canada DSI | _ | : All con | inventory nponents of this | s product are on the Canadian |
| Australia Al(New Zealand Japan ENCS Korea KECI | d NZIoC S | : On the : On the : A subs notified by CP Import permit | e inventory, or in stance(s) in this d to be register Chem accordin ation or manufa | n compliance with the inventory n compliance with the inventory n compliance with the inventory product was not registered, ed, or exempted from registration g to K-REACH regulations. acture of this product is still e Korean Importer of Record has ne substance. |
| Philippines I | PICCS | : On the | e inventory, or in | n compliance with the inventory |
| China IECS | C | : On the | e inventory, or in | n compliance with the inventory |
| Taiwan TCS | | : On the | e inventory, or in | n compliance with the inventory |
| TION 16: Ot | her information | | | |
| | | | _ | |
| NFPA Class | | alth Hazard: Hazard: 1 | 0 | |
| | | activity Haza | ard: 0 | |
| Further info | | | | |
| Legacy SDS | Number : 240 | 0370 | | |
| | | | | |
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SAFETY DATA SHEET

Version 3.4

Revision Date 2020-03-03

| EC50 | Effective Concentration 50% | NOEC | No Observed Effect Concentration |
|--------|---|-------|--|
| EGEST | EOSCA Generic Exposure Scenario Tool | OSHA | Occupational Safety & Health Administration |
| EOSCA | European Oilfield Specialty Chemicals Association | PEL | Permissible Exposure Limit |
| EINECS | European Inventory of Existing Chemical Substances | PICCS | Philippines Inventory of Commercial Chemical Substances |
| MAK | Germany Maximum Concentration Values | PRNT | Presumed Not Toxic |
| GHS | Globally Harmonized System | RCRA | Resource Conservation Recovery Act |
| >= | Greater Than or Equal To | STEL | Short-term Exposure Limit |
| IC50 | Inhibition Concentration 50% | SARA | Superfund Amendments and Reauthorization Act. |
| IARC | International Agency for Research on Cancer | TLV | Threshold Limit Value |
| IECSC | Inventory of Existing Chemical Substances in China | TWA | Time Weighted Average |
| ENCS | Japan, Inventory of Existing and New Chemical Substances | TSCA | Toxic Substance Control Act |
| KECI | Korea, Existing Chemical Inventory | UVCB | Unknown or Variable Composition, Complex Reaction Products, and Biological Materials |
| <= | Less Than or Equal To | WHMIS | Workplace Hazardous Materials Information System |
| LC50 | Lethal Concentration 50% | | |