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

**Product information**
- **Product Name**: Marlex® 5104 Polyethylene
- **Material**: 1042390, 1044343, 1042394, 1040347, 1042392, 1044342, 1044344, 1040350, 1044345, 1042393, 1042391, 1044341

**Company**
- Chevron Phillips Chemical Company LP
- 10001 Six Pines Drive
- The Woodlands, TX 77380

**Emergency telephone:**

**Health:**
- 866.442.9628 (North America)
- 1.832.813.4984 (International)

**Transport:**
- CHEMTREC 800.424.9300 or 703.527.3887 (Int'l)
- Asia: CHEMWATCH (+61 2 9186 1132) China: 0532 8388 9090
- EUROPE: BIG +32.14.584545 (phone) or +32.14.583516 (telefax)
- Mexico CHEMTREC 01-800-681-9531 (24 hours)
- South America SOS: Cotec Inside Brazil: 0800.111.767 Outside Brazil: +55.19.3467.1600
- Argentina: +(54)-1159839431

**Responsible Department**: Product Safety and Toxicology Group
**E-mail address**: SDS@CPChem.com
**Website**: www.CPChem.com

MEDICAL APPLICATION CAUTION: Do not use this material in medical applications involving permanent implantation in the human body or permanent contact with internal body fluids or tissues.

Do not use this material in medical applications involving brief or temporary implantation in the human body or contact with internal body fluids or tissues unless the material has been provided directly from Chevron Phillips Chemical Company LP or its legal affiliates under an agreement which expressly acknowledges the contemplated use.

Chevron Phillips Chemical Company LP and its legal affiliates makes no representation, promise, express warranty or implied warranty concerning the suitability of this material for use in implantation in the human body or in contact with internal body fluids or tissues.
Marlex® 5104 Polyethylene

SECTION 2: Hazards identification

Classification of the substance or mixture
GHS Classification and Labeling: Follow GB 13690, GB 15258 and GB 30000.2 to GB 30000.29 (GHS 2011)

Emergency Overview

<table>
<thead>
<tr>
<th>Form: Pellets</th>
<th>Physical state: Solid</th>
<th>Color: Opaque</th>
<th>Odor: Mild to no odor</th>
</tr>
</thead>
</table>

Classification

Not a hazardous substance or mixture.

Labeling

Not a hazardous substance or mixture.

SECTION 3: Composition/information on ingredients

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No. / EINECS-No.</th>
<th>Concentration [wt%]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyethylene</td>
<td>9002-88-4</td>
<td>100</td>
</tr>
</tbody>
</table>

Contains no hazardous ingredients according to GHS.

SECTION 4: First aid measures

If inhaled: Move to fresh air in case of accidental inhalation of dust or fumes from overheating or combustion. If symptoms persist, call a physician.

In case of skin contact: If the molten material gets on skin, quickly cool in water. Seek immediate medical attention. Do not try to peel the solidified material from the skin or use solvents or thinners to dissolve it.

In case of eye contact: In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

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
Marlex® 5104 Polyethylene

Version 1.5

Revision Date 2017-06-29

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### 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).

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### 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.

SECTION 8: Exposure controls/personal protection

Ingredients with workplace control parameters

<table>
<thead>
<tr>
<th>CN</th>
<th>Ingredients</th>
<th>Basis</th>
<th>Value</th>
<th>Control parameters</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Nuisance Dust</td>
<td>OSHA Z-3</td>
<td>TWA</td>
<td>15 mg/m³</td>
<td>Total dust</td>
</tr>
<tr>
<td></td>
<td>Nuisance Dust</td>
<td>OSHA Z-3</td>
<td>TWA</td>
<td>5 mg/m³</td>
<td>(respirable dust)</td>
</tr>
</tbody>
</table>

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

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.

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 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.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

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

Safety data
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.

pH: Not applicable
Melting point/range: 90 - 140 °C (194 - 284 °F)

Melting point/freezing point: Not applicable

Initial boiling point and boiling range: Not applicable
Vapor pressure: Not applicable
Relative density: Not applicable
Density: 0.91 - 0.97 g/cm3
Water solubility: Negligible
Partition coefficient: n-octanol/water: No data available
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.

Chemical stability: This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

Possibility of hazardous reactions

Conditions to avoid: Avoid prolonged storage at elevated temperature.

Materials to avoid: Avoid contact with strong oxidizing agents.

Thermal decomposition: Low molecular weight hydrocarbons, alcohols, aldehydes, acids and ketones can be formed during thermal processing.

Hazardous decomposition products: 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.

Other data: No decomposition if stored and applied as directed.

SECTION 11: Toxicological information

**Marlex® 5104 Polyethylene**

Acute oral toxicity: Presumed Not Toxic

Acute inhalation toxicity: Presumed Not Toxic

Acute dermal toxicity: Presumed Not Toxic

Skin irritation: No skin irritation

Eye irritation: No eye irritation

Sensitization: Did not cause sensitization on laboratory animals.
Marlex® 5104 Polyethylene

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

SECTION 12: Ecological information

Ecotoxicity effects

Elimination information (persistence and degradability)

Bioaccumulation: Does not bioaccumulate.

Mobility: The product is insoluble and floats on water.

Biodegradability: This material is not expected to be readily biodegradable.

Ecotoxicology Assessment

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.

SECTION 13: Disposal considerations

The information in this SDS pertains only to the product as shipped. Use material for its intended purpose 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 bill of lading.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

SECTION 15: Regulatory information

Notification status
Europe  REACH: On the inventory, or in compliance with the inventory
United States of America (USA) TSCA: On the inventory, or in compliance with the inventory
Canada  DSL: On the inventory, or in compliance with the inventory
Australia  AICS: On the inventory, or in compliance with the inventory
New Zealand  NZIoC: On the inventory, or in compliance with the inventory
Japan  ENCS: On the inventory, or in compliance with the inventory
Korea  KECI: On the inventory, or in compliance with the inventory
Philippines  PICCS: On the inventory, or in compliance with the inventory
China  IECSC: On the inventory, or in compliance with the inventory
Further information

Legacy SDS Number : 240370

Significant changes since the last version are highlighted in the margin. This version replaces all previous versions.

The information in this SDS pertains only to the product as shipped.

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.

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

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACGIH</td>
<td>American Conference of Government Industrial Hygienists</td>
</tr>
<tr>
<td>LD50</td>
<td>Lethal Dose 50%</td>
</tr>
<tr>
<td>LOAEL</td>
<td>Lowest Observed Adverse Effect Level</td>
</tr>
<tr>
<td>NFPA</td>
<td>National Fire Protection Agency</td>
</tr>
<tr>
<td>NIOSH</td>
<td>National Institute for Occupational Safety &amp; Health</td>
</tr>
<tr>
<td>NTP</td>
<td>National Toxicology Program</td>
</tr>
<tr>
<td>NZIoC</td>
<td>New Zealand Inventory of Chemicals</td>
</tr>
<tr>
<td>NOAEL</td>
<td>No Observable Adverse Effect Level</td>
</tr>
<tr>
<td>NOEC</td>
<td>No Observed Effect Concentration</td>
</tr>
<tr>
<td>OSHA</td>
<td>Occupational Safety &amp; Health Administration</td>
</tr>
<tr>
<td>PEL</td>
<td>Permissible Exposure Limit</td>
</tr>
<tr>
<td>PICCS</td>
<td>Philippines Inventory of Commercial Chemical Substances</td>
</tr>
<tr>
<td>PRNT</td>
<td>Presumed Not Toxic</td>
</tr>
<tr>
<td>RCRA</td>
<td>Resource Conservation Recovery Act</td>
</tr>
<tr>
<td>STEL</td>
<td>Short-term Exposure Limit</td>
</tr>
<tr>
<td>SARA</td>
<td>Superfund Amendments and Reauthorization Act</td>
</tr>
<tr>
<td>TLV</td>
<td>Threshold Limit Value</td>
</tr>
<tr>
<td>TWA</td>
<td>Time Weighted Average</td>
</tr>
<tr>
<td>TSCA</td>
<td>Toxic Substance Control Act</td>
</tr>
<tr>
<td>UVCB</td>
<td>Unknown or Variable Composition, Complex Reaction Products, and Biological Materials</td>
</tr>
<tr>
<td>WHMIS</td>
<td>Workplace Hazardous Materials Information System</td>
</tr>
</tbody>
</table>

IARC, IECSC, ENCS, KECl, LC50

SDS Number: 1000000000548