SAFETY DATA SHEET

Marlex® HHM 5502BN Polyethylene

Version 1.12 Revision Date 2025-11-20

MSDS number: AA00974-0000000121

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

Product Name	:	Marlex® HHM 5502BN Polyethylene
Material	:	1118573, 1127943, 1127844, 1124957, 1120264, 1120263, 1120262, 1120191, 1120190, 1018781, 1018783, 1079987, 1079986, 1079988, 1079981, 1079985, 1079984, 1025220, 1019346, 1018782, 1019345, 1019347, 1019348, 1019349, 1019350, 1018785, 1018784
Recommended use of the product	:	Manufacture of plastics products
Restrictions on use	:	This material should not be used for purposes other than the identified uses in section 1 without expert advice.
Address	:	Chevron Phillips Chemical Company LP 9500 Lakeside Blvd. The Woodlands, TX 77381
Address	:	CHEVRON PHILLIPS CHEMICALS ASIA PTE. LTD. C/O DONG WOO CORPORATION #B-2601,JEONGJAIL-RO, BUNDANG-GU,SEONGNAMI-SI, GYEONGGI-DO,13557 SOUTH KOREA Telephone no.: +612-9186-1132

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 (+612 9186 1132) China: 0532 8388 9090
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

EUROPE: BIG +32.14.584545 (phone) or +32.14583516 (telefax)
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Bulgaria: +359 2 9154 233
Croatia: +3851 2348 342 (24 hours/day, 7 days/week)
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Italy: POISON CENTER MILAN – Azienda Ospedaliera Niguarda Ca` Grande Tel. +39 02 66101029; POISON CENTER ROME – Policlinico “Agostino Gemelli”, Servizio di tossicologia clinica Tel. +39 06 3054343; POISON CENTER ROME – Ospedale Pediatrico Bambino Gesù Tel. +39 06 68593726;POISON CENTER ROME – Policlinico “Umberto I” Tel. +39 06 4997 8000; POISON CENTER FOGGIA – Azienda Ospedaliera Universitaria Riuniti Tel. +39 0881 732326; POISON CENTER NAPLES – Azienda Ospedaliera “Antonio Cardarelli” Tel. +39 081 7472870; POISON CENTER FLORENCE – Azienda Ospedaliera universitaria Careggi Tel. +39 055 7947819; POISON CENTER PAVIA – IRCCS Fondazione Salvatore Maugeri Tel. +39 0382 24444; POISON CENTER BERGAMO – Azienda Ospedaliera “Papa Giovanni XXIII” Tel. 800 883 300; POISON CENTER VERONA – Azienda Ospedaliera Universitaria integrata Tel. 800 011 858;
Latvia: State Fire and Rescue Service, phone number: 112; Toxicology and Sepsis Clinic Poisoning and Drug Information Center, Hipokrāta 2, Riga, Latvia, LV-1038, phone number +371 67042473. (24 hours.)
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Portugal: CIAV phone number: +351 800 250 250
Romania: +40213183606
Slovakia: +421 2 5477 4166
Slovenia: Phone number: 112
Spain: National Emergency Telephone Number of Spanish Poison Centre: +34 91 562 04 20 (24 hours/day, 7 days/week)
Sweden: 112 – ask for Poisons Information

Organization that prepared the SDS	:	Product Safety and Toxicology Group
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Website	:	www.CPChem.com
Appointees	:	회사명: 리이치24시코리아㈜. 주소: 서울특별시 강남구 강남대로 94길 34,4층 전화: +82-02-6245-1610

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 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.

SECTION 2: Hazards identification

Hazard classification

Standards for classification and labeling of chemical substances and material safety data sheet (ministry of employment and labor public notice No. 2023-9)

Classification

Not a hazardous substance or mixture.

Warning label elements including precautionary statements

Not a hazardous substance or mixture.

Other hazards which do not result in classification : None

SECTION 3: Composition/information on ingredients

Common name	Synonyms	CAS-No.	Concentration	KECI Number
Polyethylene Hexene Copolymer	1-Hexene, polymer with ethene	25213-02-9	99 % - 100%	KE-13670

SECTION 4: First aid measures

In case of eye contact	:	In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
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.
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.
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.
Unsuitable extinguishing media	:	Do NOT use water jet.
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

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 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.

Secure storage

Requirements for storage areas and containers	:	Keep in a dry place. Keep in a well-ventilated place.
Uses advised against	:	This material should not be used for purposes other than the identified uses in section 1 without expert advice.

Advice on common storage	:	Do not store together with oxidizing and self-igniting products.
Specific Use	:	Manufacture of plastics products

SECTION 8: Exposure controls/personal protection

Chemical exposure standards, biological exposure standards, etc.

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. A positive pressure, air-supplying respirator may be appropriate if there is potential for uncontrolled release, aerosolization, 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

Physical state	:	solid
Color	:	Opaque
Odor	:	Mild to no odor

Odor Threshold	:	No data available
pH	:	Not applicable
Pour point	:	No data available
Melting point/freezing point		90-140°C (194-284°F)
Initial boiling point and boiling range	:	Not applicable
Flash point	:	No data available
Evaporation rate	:	Not applicable
Flammability (solid, gas)	:	No data available
Lower explosion limit	:	Not applicable
Upper explosion limit	:	Not applicable
Vapor pressure	:	Not applicable
Solubility	:	negligible
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.
Vapor density	:	Not applicable
Partition coefficient: n-octanol/water	:	No data available
Autoignition temperature	:	No data available
Decomposition temperature	:	Low molecular weight hydrocarbons, alcohols, aldehydes, acids and ketones can be formed during thermal processing.
Viscosity, kinematic	:	Not applicable
Solubility in other solvents	:	No data available
Viscosity, dynamic	:	Not applicable
Particle size		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

Hazardous reactions : Hazardous reactions: None known.

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

Information on exposure routes

Marlex® HHM 5502BN Polyethylene
Acute oral toxicity : Presumed Not Toxic

Marlex® HHM 5502BN Polyethylene
Acute inhalation toxicity : Presumed Not Toxic

Marlex® HHM 5502BN Polyethylene
Acute dermal toxicity : Presumed Not Toxic

Marlex® HHM 5502BN Polyethylene
Skin corrosion or irritation : No skin irritation

Marlex® HHM 5502BN Polyethylene
Eye corrosion or irritation : No eye irritation

Marlex® HHM 5502BN Polyethylene
Respiratory Sensitization : No data available

Marlex® HHM 5502BN Polyethylene
Skin sensitization Did not cause sensitization on laboratory animals.

Specific Target Organ Toxicity (Single Exposure)

Not classified due to data which are conclusive although insufficient for classification.

Specific Target Organ Toxicity (Repeated Exposure)

Not classified due to data which are conclusive although insufficient for classification.

Marlex® HHM 5502BN 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

Ecological Toxicity

Toxicity to fish : Not applicable

Toxicity to daphnia and other aquatic invertebrates : No data available

Toxicity to algae : No data available

Persistence and degradability Persistence and degradability	:	Result: This material is not expected to be readily biodegradable.
Bioaccumulative	:	Does not bioaccumulate.
Mobility	:	The product is insoluble and floats on water.
Results of PBT assessment	:	Not available
Other adverse effects	:	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.

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.

UN Number	:	not regulated
UN Product Shipping Name	:	Not regulated as a dangerous good
Hazard Class	:	
Packing Group	:	Not applicable
Marine Pollutant	:	Not applicable

Special Safety Measures on Mode of Transport	:	No data available

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.

IATA (INTERNATIONAL AIR TRANSPORT ASSOCIATION)

NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

ADR (AGREEMENT ON DANGEROUS GOODS BY ROAD (EUROPE))

NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

RID (REGULATIONS CONCERNING THE INTERNATIONAL TRANSPORT OF DANGEROUS GOODS (EUROPE))

NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

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.

Other information	**:**	**Not applicable**

Maritime transport in bulk according to IMO instruments

SECTION 15: Regulatory information

National legislation

Regulation under the Occupational Safety and Health Act
A Material Safety Datasheet (MSDS) for this product is not required according to article 41 of the ISHA.

Regulation		Chemical name	Threshold limits
Harmful Substances Prohibited from Manufacturing	:	Not applicable	
Harmful Substances Required Permission for Manufacture	:	Not applicable	

Act on the Registration and Evaluation, etc. of Chemical Substances, Chemicals Control Act

Regulation		Chemical name	Threshold limits
Toxic Chemicals	:	Not applicable	
Prohibited Chemicals	:	Not applicable	
Restricted Chemicals	:	Not applicable	
Toxic Release Inventory	:	Not applicable	

Dangerous Substances Safety Management Act

Dangerous Substances Safety Management Act	:	Not applicable

Regulations by the Waste Management Act	:	Polyethylene Hexene Copolymer: Designated Waste

Regulations by other domestic and foreign laws

Europe REACH	:	This product is in full compliance according to REACH regulation 1907/2006/EC.
Switzerland CH INV	:	On the inventory, or in compliance with the inventory
United States of America (USA) TSCA	:	On or in compliance with the active portion of the TSCA inventory
Canada DSL	:	All components of this product are on the Canadian DSL
Australia AIIC	:	On the inventory, or in compliance with the inventory

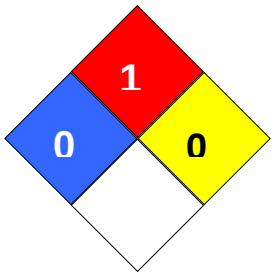
New Zealand NZIoC	:	On the inventory, or in compliance with the inventory
Japan ENCS	:	On the inventory, or in compliance with the inventory
Philippines PICCS	:	On the inventory, or in compliance with the inventory
Korea KECI	:	All substances in this product were registered, notified to be registered, or exempted from registration by CPChem through an Only Representative according to K-REACH regulations. Importation of this product is permitted if the Korean Importer of Record was included on CPChem's notifications or if the Importer of Record themselves notified the substances.
Taiwan TCSI	:	On the inventory, or in compliance with the inventory
China IECSC	:	On the inventory, or in compliance with the inventory

Other regulations : No data available

SECTION 16: Other information

Source of data	:	Korea. GHS based classification
Date of initial writing	:	2019-10-21
Revision number	:	1
Last revision date	:	2021-12-20

NFPA Classification : Health Hazard: 0
Fire Hazard: 1
Reactivity Hazard: 0



Other information
None.

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			
ACGIH	American Conference of Government Industrial Hygienists	LD50	Lethal Dose 50%
AIIC	Australian Inventory of Industrial Chemicals	LOAEL	Lowest Observed Adverse Effect Level
DSL	Canada, Domestic Substances List	NFPA	National Fire Protection Agency
NDSL	Canada, Non-Domestic Substances List	NIOSH	National Institute for Occupational Safety & Health
CNS	Central Nervous System	NTP	National Toxicology Program
CAS	Chemical Abstract Service	NZIoC	New Zealand Inventory of Chemicals
EC50	Effective Concentration	NOAEL	No Observable Adverse Effect Level
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%	ATE	Acute toxicity estimate