



Product Regulatory Overview (PRO) Marlex® HHM 5502BN High Density Polyethylene

Product Manufacturer

Chevron Phillips Chemical Company LP
Saudi Polymers Company (SPCo)

Chemical Inventories

All the components of this product are listed on

AUSTRALIA: Australian Inventory of Chemical Substances (AICS)

CANADA: Domestic Substances List (DSL)

PEOPLE'S REPUBLIC OF CHINA: Inventory of Existing Chemical Substances (IECSC)

EUROPEAN UNION: All necessary components have been registered according to Regulation (EU) No. 1907/2006 (REACH)

SWITZERLAND: Exemptions from the obligation to notify/register

JAPAN: Existing & New Chemical Substances (ENCS) Inventory

KOREA: Existing Chemicals List (ECL)

NEW ZEALAND: Inventory of Chemical Substances (NZIoC)

PHILIPPINES: Philippine Inventory of Chemicals and Chemical Substances (PICCS)

TAIWAN: Taiwan Chemical Substance Inventory (TCSI)

UNITED STATES: Toxic Substances Control Act (TSCA) Chemical Inventory

Food Contact

It is the responsibility of the packaging converter or food packager to verify that the finished article meets both the technical and regulatory requirements of the intended application.

European Union (EU) Food Contact

The monomer(s) and the additive(s) of this resin are listed in Commission Regulation (EU) No 10/2011 on plastic materials and articles intended to come into contact with food and all its Amendments.

This product was tested for the overall and specific migration compliance per Commission Regulation (EU) No 10/2011. The tested sample thickness was 3.175 mm (125 mils). The surface-to-volume ratio was 1 dm² sample immersed in 1dl simulant. For measuring the overall migration level, this product was tested with 3% acetic acid for 10 days at 40°C, with 50% ethanol for 10 days at 40°C, and with olive oil for 10 days at 40°C. For measuring the specific migration level, this product was tested with 3% acetic acid for 10 days at 60°C, with 50% ethanol for 10 days at 60°C, and with olive oil for 10 days at 60°C. This product complies with the overall migration limit (OML) and specific migration limits (SML).

This product does not contain any dual-use additive per Regulation (EC) No 1333/2008 and its Amendments.

This product meets the requirements of Framework Regulation (EC) No 1935/2004 on materials and articles intended to come into contact with food.

This product is produced in accordance with good manufacturing practice (GMP) as outlined in EU GMP Regulation (EC) No 2023/2006.



Product Regulatory Overview (PRO) Marlex® HHM 5502BN High Density Polyethylene

Swiss Food Contact

The monomer(s) and the additive(s) of this resin are listed in SR 817.023.21 Regulation on materials and articles intended to come into contact with food Annex 2.

This product was tested for the overall and specific migration compliance per Commission Regulation (EU) No 10/2011. The tested sample thickness was 3.175 mm (125 mils). The surface-to-volume ratio was 1 dm² sample immersed in 1dl simulant. For measuring the overall migration level, this product was tested with 3% acetic acid for 10 days at 40°C, with 50% ethanol for 10 days at 40°C, and with olive oil for 10 days at 40°C. For measuring the specific migration level, this product was tested with 3% acetic acid for 10 days at 60°C, with 50% ethanol for 10 days at 60°C, and with olive oil for 10 days at 60°C. This product complies with the overall migration limit (OML) and specific migration limits (SML).

This product does not contain any food additive per SR 817.023.31.

Germany BfR Recommendations

This product meets the requirements on catalyst residues and residual decomposition products in German BfR Recommendations on Food Contact Materials III Polyethylene.

U.S. FDA Food Contact

This product meets the requirements for polyolefin resins intended for food packaging applications as described in the FDA olefin polymer regulations 21 CFR 177.1520(c) 3.2a. The resin may be used in contact with all types of food as defined in Table 1, 21 CFR 176.170(c) and at use conditions B-H as defined in Table 2, 21 CFR 176.170(c).

This product is produced in accordance with good manufacturing practices (GMP) as outlined in 21 CFR 174.5.

Canada Food Contact

A "Letter of No Objection" for this product has been approved by Health Canada. This product may be used as a food-contact article such as bottle, food pail, cap, and casing under and at the temperature of 212 °F (100 °C). KS07061804

Brazil Food Contact

The monomer(s) and the additive(s) of this product are listed in Brazilian Legislation ANVISA Resolution No. 105 (May19th, 1999) Annex II and Annex III.

For full compliance, a total migration limit applies to the final article intended to come into contact with food. This product has not been tested for the purpose of complying with Brazilian food contact regulations.

China Food Contact

This polyethylene resin is an ethylene and hexene copolymer, and is listed on GB 4806.6-2016 "Standard on food-contact use plastic resin" Appendix A Table A.1, as No 101, CAS 25213-02-9. The monomer 1-hexene has SML 3 mg/kg.



Product Regulatory Overview (PRO) Marlex® HHM 5502BN High Density Polyethylene

The additive(s) of this resin are all listed on GB 9685-2016 “Standard on the uses of additives in food contact materials and articles”, and meet the corresponding allowed maximum use levels.

A representative grade of this product family was tested and calculated for specific migration compliance per GB 4806.6-2016 and GB 9685-2016. The tested sample thickness was 3.175 mm (125 mils). The surface-to-volume ratio was 1 dm² sample to 100 ml simulant.

For measuring the specific migration level, this product was tested with olive oil for 10 days at 60°C. This product met the specific migration limit (SML). With food simulants of 4% acetic acid for 10 days at 60°C and 10% ethanol for 10 days at 60°C, the specific migration levels would be expected to be lower than the level measured in olive oil for 10 days at 60°C

This resin meets the requirements of GB 4806.6-2016.

This resin meets the requirements of GB 4806.1-2016 General safety requirements for food contact materials and articles.

This resin is produced in accordance with good manufacturing practice (GMP) as outlined in GB 31603-2015 General hygiene standard on manufacturing food contact materials and articles.

U.S. Pharmacopeia (USP)

This product meets the standards set by the United States Pharmacopoeia USP 39 <87> Biological Reactivity Tests, in Vitro.

This product meets the standards set by the United States Pharmacopoeia USP 26 <88> Biological Reactivity Tests, in Vivo - Class VI-70°C Plastic.

This product meets the standards set by the United States Pharmacopoeia USP 39 <661.1> Plastic Materials of Construction – *Identification, Physicochemical, Extractable Metals, and Plastic Additives tests.*

European Pharmacopoeia (EUP)

This product meets the requirements of European Pharmacopoeia 3.1.3. the 9.4th edition “Polyolefins” materials used for the manufacture of containers.

This product meets the requirements of European Pharmacopoeia 3.1.5 the 9.4th edition “Polyethylene with Additives for Containers for Parenteral Preparations and for Ophthalmic Preparations.”

Drug Master File (DMF)

This product is listed in U.S. FDA Type III Drug Master File 1016.

This product is listed in Health Canada Drug Master File 9389.

Regulation 1223/2009 of 2009-11-30 on Cosmetic Products

Regulation 1223/2009 is not applicable to this product. This product is not defined in the regulation as a cosmetic product, and it does not contain any substances listed as prohibited in cosmetic products.



Product Regulatory Overview (PRO) Marlex® HHM 5502BN High Density Polyethylene

EU Classification and Labeling

This product is not a dangerous substance according to Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures.

Animal-Derived Materials / Kosher / Halal

No animal-derived materials are used in the manufacture or formulation of this product. This product can be considered free from bovine spongiform encephalopathy (BSE) and other transmissible spongiform encephalopathies (TSE). Chevron Phillips Chemical Company has not made any efforts to certify its Polyethylene resins as Kosher/Halal or in compliance with Kosher/Halal guidelines.

California's Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65)

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.

Consumer Product Safety Improvement Act of 2008 (H.R. 4040)

This product does not contain lead and phthalates. It therefore complies with the relevant sections of the Consumer Product Safety Improvement Act of 2008 (H.R. 4040).

Clean Air

This product does not contain any ozone depleting substances, including those listed in Regulation (EC) No 1005/2009.

This product does not contain any of the following substances regulated by the Clean Air Act:

- Class I or Class II Ozone-Depleting Substances (CAA Section 602)
- Hazardous Air Pollutants (CAA Section 112)
- Accidental Release Prevention Substances (CAA Section 112(r))
- Volatile Organic Chemicals (CAA Section 111)

Heavy metals, RoHS, WEEE, Waste packaging, CONEG

No heavy metals (i.e., antimony, arsenic, barium, cadmium, chromium, lead, mercury, selenium, or silver) are purposely added to this product in quantities that would violate governmental guidelines. The summation of lead, cadmium, mercury, and hexavalent chromium in this product is less than 20 ppm. No polybrominated biphenyls (PBB), polybrominated diphenyl ethers (PBDE), Deca Brominated Diphenyl Ethers (Deca BDE), or phthalates are intentionally added to this product. This product therefore meets the relevant requirements of the following Directives or Regulations:

- 2015/863/EU, 2011/65/EU and 2002/95/EC (RoHS)
- 2002/96/EC and 2012/19/EU (WEEE)
- 2000/53/EC (ELV)
- 94/62/EC, 2005/20/EC, and 2013/2/EU (Packaging Waste Directive)
- USA CONEG Regulation / Model Toxics in Packaging Legislation
- California Toxics in Packaging Prevention Act



Product Regulatory Overview (PRO) Marlex® HHM 5502BN High Density Polyethylene

Toys

This product complies with the requirements of ASTM F963, EN 71-3, EN71-9, EU Directives 2005/84/EC and 2009/48EC.

Phthalates

No phthalates, including di-(2-ethylhexyl) phthalate (DEHP), dibutyl phthalate (DBP), benzyl butyl phthalate (BBP), diisononyl phthalate (DINP), diisodecyl phthalate (DIDP), di-n-octyl phthalate (DNOP), diisobutyl phthalate (DIBP), dimethyl phthalate (DMP), and diethyl phthalate (DEP) are intentionally added to this product. This product therefore meets the requirements of the Consumer Product Safety Improvement Act of 2008 and EU Directive 2005/84/EC.

European Chemicals Agency (ECHA) Substances of Concern

This product does not contain any Substances of Very High Concern (SVHC) as listed on the candidate list published by ECHA as of 15 January 2019. This product does not contain substances restricted under REACH Annex XVII (Restricted Substances List) or subject to authorization under REACH Annex XIV (Authorization List).

Canadian Environmental Protection Act (CEPA) “Challenge” Substances

This product does not contain any high priority chemical substances listed on the “Challenge” Substance Batches as issued by CEPA.

Nanomaterial

This product is not a nanomaterial.

Conflict Minerals

Neither tantalum, tin, gold, and tungsten, nor the minerals associated with these metals (Columbite-Tantalite, Cassiterite, Gold, or Wolframite) are intentionally added to this product. These substances are not necessary to the production of this product.

Absence of Substances and Chemicals

None of the following substances are used as additives or raw materials in the manufacture of this product:

- Abietic acid
- Acrylamide
- Acrylonitrile or acrylonitrile co-polymers
- Alkylphenols
- Alkylphenol Ethoxylates, including nonylphenol ethoxylate and octylphenol ethoxylate
- Allergens, including but not limited to those listed in EU Regulation 1169/2011, Directives 2000/13/EC, 2003/89/EC, and Section B.01.010.1 (1) of Canadian Regulation C.R.C., c. 870 such as: peanuts, tree nuts, milk, eggs, wheat gluten, soybeans, fish and shellfish
- Aromatic amines
- Asbestos
- Azo compounds



Product Regulatory Overview (PRO) Marlex® HHM 5502BN High Density Polyethylene

- 2,2-Bis(4-hydroxyphenyl)propane bis(2,3-epoxypropyl) ether (BADGE), Bis (hydroxyphenyl)methane bis(2,3-epoxypropyl) ether (BFDGE), and/or Novolac glycidyl ethers (NOGE)
- Biocides
- Bisphenol compounds, including but not limited to: BPA, BPB, BPC, BPE, BPF, BPH, BPS, and BPZ
- Brominated or halogenated flame retardants
- Butylated Hydroxytoluene (BHT), Butylated Hydroxyanisole (BHA), and Tertiary butylhydroquinone (TBHQ)
- Chlorofluorocarbons (CFC), hydrochlorofluorocarbons (HCFC), hydrofluorocarbons (HFC)
- Chlorinated paraffins, Chlorinated hydrocarbons
- Colorants or pigments
- Cyanuric acid
- Di(ethylhexyl) adipate (DEHA), diethyl hydroxyl amine (DEHA), or di(ethylhexyl)maleate (DEHM)
- Dimethylfumarate (DMF)
- Dioxins or furans
- Endocrine disruptors
- Epoxy derivatives listed in EU Directives 2002/16/EC and 1895/2005
- Epoxidised Soybean Oil
- Formaldehyde
- Fungicides or fumigants
- Genetically-modified organisms (GMO)
- Halogens
- Melamine
- Methyl bromide
- Mineral Oil Saturated Hydrocarbons (MOSH) or Mineral Oil Aromatic Hydrocarbons (MOAH)
- Natural rubber latex, dry natural rubber, or synthetic latex
- Nonyl phenol (NP)
- Organotin compounds
- Ozone-depleting chemicals
- Parabens
- Poly- and perfluoroalkyl substances (PFAS), as perfluorooctanoic acid (PFOA) and perfluorooctane sulfonate (PFOS)
- Pesticides and fungicides
- Photoinitiators, including: benzophenone, hydroxybenzophenone, and 4-methylbenzophenone, and Isopropylthioxanthone (ITX)
- Plasticizers
- Polycyclic aromatic hydrocarbons (PAH), also called polyaromatic hydrocarbons
- Polybrominated Diphenyl Ethers (PBDEs) included: decaBDE, octaBDE, and pentaBDE
- Polycarbonates
- Polychlorinated and Polybrominated Biphenyls (PCBs and PBBs)
- Polychlorinated and Polybrominated Terphenyls (PCTs and PBTs)



Product Regulatory Overview (PRO) Marlex® HHM 5502BN High Density Polyethylene

- Polydimethylsiloxane (PDMS)
- Radioactive Substances
- Recycled materials
- Silicone
- Sulfonamides
- Triclosan (2,4,4'-trichloro-2'-hydroxydiphenylether), Triclocarban
- Tris-Nonylphenol Phosphite (TNPP)
- Vinyl Chloride Monomer (VCM) and Polyvinyl Chloride (PVC) or copolymers

It is the responsibility of the customer to check compliance of the final articles with the relevant legislative and applicable regulatory requirements including their restrictions.

Disclaimer: *Before using this product, the user is advised and cautioned to make its own determination and assessment of the safety and suitability of the product for the specific use in question and is further advised against relying on the information contained herein as it may relate to any specific use or application. It is the ultimate responsibility of the user to ensure that the product is suited and the information is applicable to the user's specific application. Chevron Phillips Chemical Company LP and Saudi Polymers Company (SPCo), do not make, and expressly disclaim, all warranties, including warranties of merchantability or fitness for a particular purpose, regardless of whether oral or written, express or implied, or allegedly arising from any usage of any trade or from any course of dealing in connection with the use of the information contained herein or the product itself. The user expressly assumes all risk and liability, whether based in contract, tort or otherwise, in connection with the use of the information contained herein or the product itself. Further, information contained herein is given without reference to any intellectual property issues, as well as federal, state or local laws which may be encountered in the use thereof. Such questions should be investigated by the user.*

Additional information on the health and safety aspects of our product is listed in the SDS of the product.

Address: Chevron Phillips Chemical Company LP, 10001 Six Pines Drive, The Woodlands, TX 77380
Website: <http://www.cpchem.com/en-us/ehs/pages/productregulatoryoverviews.aspx>

Saudi Polymers Company, P.O. Box 11221, Jubail Industrial City, Saudi Arabia 31961