



Product Regulatory Overview (PRO) Marlex® 5428 Polyethylene

Product Manufacturer

Chevron Phillips Chemical Company LP

Chemical Inventories

All the components of this product are listed on

AUSTRALIA: Australian Inventory of Industrial Chemicals (AIIC)

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). Registration number(s) shown on the EU SDS are specific for CPChem entities

SWITZERLAND: Exemptions from the obligation to notify/register

JAPAN: Existing & New Chemical Substances (ENCS) Inventory

KOREA: Existing Chemicals List (ECL): A substance(s) in this product was not registered, notified to be registered, or exempted from registration by CPChem according to K-REACH regulations. Importation or manufacture of this product is still permitted provided the Korean Importer of Record has themselves notified the substance

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

NEW ZEALAND: Inventory of Chemical Substances (NZIoC)

TAIWAN: Taiwan Chemical Substance Inventory (TCSI) On the inventory or in compliance with the inventory. Further registrations may apply.

UNITED STATES: On or in compliance with the active portion of the 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.

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 regulation 21 CFR 177.1520(c)2.2. The resin may be used in the manufacture of articles or components of articles intended for use in contact with nonalcoholic foods at use conditions B-H as defined in Table 2, 21 CFR 176.170(c). A further requirement is that the food contact surface comprising this resin may not exceed a thickness of 4.4 mils.

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

European Union (EU) Food Contact

The monomer(s) and the additive(s) of this resin are listed in Annex I, Commission Regulation (EU) No 10/2011 on plastic materials and articles intended to come into contact with food and all its Amendments. The monomer(s) and the additive(s) do not have restriction(s) and specification(s) in Column 10 of Table 1, Annex I of Commission Regulation (EU) No 10/2011.



Product Regulatory Overview (PRO) Marlex® 5428 Polyethylene

For full compliance, an overall migration limit of 10 mg/dm² and a specific migration limit (SML) apply to the final article intended to come into contact with food.

Based on the use amount and assuming 100% migration from a packaging article into food, and default plastics packaging factor of 6 decimeters squared of package area holding 1 kg food, SML compliance without testing would be up to 0.014 cm (= 5.6 mils) thickness of an article fully made of this resin only.

This product meets the restriction(s) on the substances in Table 1, Annex II of Commission Regulation (EU) No 10/2011 amended by Commission Regulation (EU) 2020/1245 when an article thickness is up to 5.6 mils. Primary aromatic amines are not intentionally used as additives or raw materials in the manufacture of this product.

This product does not contain intentionally added substance that would be expected to migrate from resin exceeding 0.00015 mg/kg in food or food simulant to cause genotoxic effect.

This product does not contain food additive(s) or flavoring(s) that would be a concern in food per Regulation (EC) No 1333/2008 or Regulation (EC) No 1334/2008.

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 GMP Regulation (EC) No 2023/2006.

Canada Food Contact

A "Letter of No Objection" for this product has been approved by Health Canada. This product may be used in direct contact with all types of food in packaging applications such as bottles, food pails, caps, films, and casings at a maximum temperature of 100°C. KS14020702

Japan Food Contact

Japanese Ministry of Health, Labor and Welfare (MHLW) published a formal Positive List (PL) System for food-contact materials (FCM) used in the manufacture of food-contact utensils, containers, and packaging (UCP).

- This product is an ethylene homopolymer (CAS number 9002-88-4). It is listed on Table 1(1) Base Polymers (Plastics) as 40 Polyethylene, Ref No 985, Serial No 4, Synthetic Resin Group 5, all types of food, and maximum temperature III.
- Additive(s) in this product are all listed on Table 2 Additives, and meet the maximum use limit(s). Not to be used in the articles coming into contact with alcoholic beverage.

Mercosur Food Contact

The monomer(s) of this resin are listed in Mercosur /GMC/Res. N° 02/12 and its modification GMC/Res. N° 19/21.

The additive(s) in this product are listed in Mercosur/GMC/Res. N° 39/19.



Product Regulatory Overview (PRO) Marlex® 5428 Polyethylene

GMC Res. No. 20/21, "Modification of GMC Resolution No. 56/92 General Provisions for plastic containers and equipment in contact with food," is applicable to a final article.

Brazil Food Contact

The monomer(s) of this resin are listed in Anvisa RDC 56/2012 and RDC No 589.

The additive(s) of this resin are listed in Anvisa RDC 326/2019.

RESOLUTION - DRC NO. 589, DE 20 DECEMBER 2021 Article 2 is applicable to a final article.

U.S. Pharmacopeia (USP)

This product has not been tested under any United States Pharmacopoeia guidelines.

European Pharmacopoeia (EUP)

This product has not been tested under any European Pharmacopoeia guidelines.

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

Regulation 1223/2009 is not applicable to this product that is used as a raw material for manufacturing cosmetic containers.

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 (ADM)/ BSE/TSE

The manufacture of this product involves the use of one process chemical that may contain low (ppm levels) of an animal-derived material (ADM). However, based on vendor-supplied information, this ADM ingredient can be considered free from risk of bovine spongiform encephalopathy (BSE) and other transmissible spongiform encephalopathies (TSE) as the vendor is required to follow rigorous regulatory guidelines such as FDA 21 CFR 189 and 700 and EU 98/16/EC; these include actions such as control of the origin of the raw materials as well as using rigorous hydrolysis processing with high temperature and pressure. In addition, the manufacturing process of the Marlex® grade itself involves the use of high temperatures and extremely high pressures.

Plant/ Vegetal Materials

This product utilizes a substance that is derived from a vegetal source.

USDA

The USDA recognizes FDA statements provided by material suppliers for food packaging.

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. See following link for latest review date per most recent Prop 65 update.

<https://www.cpchem.com/who-we-are/environment-health-safety-security/regulatory-information>
(SELECT Prop 65 Update)



Product Regulatory Overview (PRO) Marlex® 5428 Polyethylene

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)

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:

- Directive (EU) 2017/2102, 2015/863, 2011/65/EU and 2002/95/EC (RoHS)
- China RoHS directive SJ/T 11363-2006
- 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

ICHs: Elemental Impurities and Residual Solvents

This product as shipped, does not intentionally use the metals described in the ICH Harmonized Guideline for Elemental Impurities Q3D dated 22 March 2019 (including Cd, Pb, As, Hg, Co, V, Ni, Ti, Au, Pd, Ir, Os, Rh, Ru, Se, Ag, Pt, Li, Sb, Ba, Mo, Cu, Sn, Cr).

ICH/Q3C "Impurities: Guideline for Residual Solvents" is about the requirements for pharmaceuticals and as such is not applicable to polyethylene pellets.

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.



Product Regulatory Overview (PRO) Marlex® 5428 Polyethylene

European Chemicals Agency (ECHA) Substances of Concern

This product does not contain in a concentration above 0.1% w/w any Substances of Very High Concern (SVHC) as listed on the candidate list published by ECHA as of *dated in the link below*. This product does not contain substances restricted under REACH Annex XVII (Restricted Substances List) or subject to authorization under REACH Annex XIV (Authorization List).

<https://www.cpchem.com/who-we-are/environment-health-safety-security/regulatory-information>
(SELECT MARLEX® PE)

Canadian Environmental Protection Act (CEPA) “Challenge” Substances

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

Nanomaterial

This product is not a nanomaterial and does not contain any intentionally added functional nanoparticles.

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.

PFAS

Poly- and perfluoroalkyl substances (PFAS) or Perfluorinated Chemicals or Compounds (PFC) are not used in the formulation of this product. See Appendix for additional information.

Regulatory or Industry Lists

To the best of our knowledge, this product as shipped meets the following requirements as being within stipulated limits as listed as of this date:

- Stockholm Convention Persistent Organic Pollutants (POPs): Directive 850/2004/EC, EU 2019/1021 and 2020/78 substances not used.
- Rotterdam Convention Prior Informed Consent (PIC) substances Annex III substances not used: <http://www.pic.int/TheConvention/Chemicals/AnnexIIIChemicals/tabid/1132/language/en-US/Default.aspx>
- Substances in the Japan Class I Specified Chemical list not used.
- Substances defined as Persistent, Bioaccumulating, Toxic (PBT) or very Persistent very Bioaccumulating (vPvB) per EU not used.
- US Lacey Act, EU Timber Regulation 995/2010; FLEGT or CITES licenses: This requirement is not applicable to polyethylene pellets, this product does not utilize timber or timber products.

Substances and Chemicals

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

- Abietic acid
- Acrylamide



Product Regulatory Overview (PRO) Marlex® 5428 Polyethylene

- Acrylonitrile, acrylonitrile co-polymers, or Polyacrylonitrile (PAN)
- Aflatoxin and Mycotoxin; or derivatives of these substances
- 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, and US FDA Food Allergen Labeling and Consumer Protection Act of 2004 (FALCPA) such as: peanuts, tree nuts, milk, eggs, wheat gluten, soybeans, sesame, fish and shellfish
- Aromatic amines
- Asbestos
- Azo and azoxyalkyl compounds (e.g. Azodicarbonamide)
- Benzophenone
- 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 (e.g. as defined by Biocidal Products Regulation (BPR) 528/2012 and 334/2014).
- Bisphenol compounds, including but not limited to: BPA, BPAF, BPB, BPC, BPE, BPF, BPH, BPS, and BPZ
- Brominated or halogenated flame retardants
- Butylated Hydroxyanisole (BHA), and Tertiary butylhydroquinone (TBHQ)
- Chlorofluorocarbons (CFC), hydrochlorofluorocarbons (HCFC), hydrofluorocarbons (HFC)
- Chlorinated paraffins, Chlorinated hydrocarbons
- Colophony (also known as wood rosin, gum rosin, tree rosin or yellow rosin CAS No.® 8050-09-7)
- Colorants, dyes or pigments e.g. Green 7 CAS No.® 1328-53-6, Green 36, Pigment Red 104 CAS No.® 12656-85-8, Yellow #5, CI Pigment Yellow 34 CAS No.® 1344-37-2, Yellow 138 CAS No.® 14302-13-7, Violet 23 CAS No.® 215247-95-3; EU resolution AP(89) not applicable, colorants not contained
- Cyanuric acid
- Di(ethylhexyl) adipate (DEHA), diethyl hydroxyl amine (DEHA), or di(ethylhexyl)maleate (DEHM)
- Dimethylfumarate (DMF)
- Dioxins or furans; or derivatives of these substances
- Dyes: See Colorants
- Endocrine disruptors e.g. Alkylphenol ethoxylate (APE), Nonylphenol ethoxylate (NPE), Octylphenol ethoxylate (OPE); EPA Tier 1 Screening List, EU Medical Directive Restrictions (MDR), EU ECHA ED Screening List
- Epoxy derivatives listed in EU Directives 2002/16/EC and 1895/2005
- Epoxidized Soybean Oil
- FDA Banned Food Additives: benzophenone, ethyl acrylate, eugenyl methyl ether, myrcene, pulegone, pyridine, styrene
- Formaldehyde (for additional information related to aldehydes and processing see the SDS)
- Fungicides, preservatives (for the purpose of preserving food in packaging), or fumigants
- Genetically-modified organisms (GMO)
- Halogens



Product Regulatory Overview (PRO) Marlex® 5428 Polyethylene

- Human materials, derivatives of human materials, blood, blood plasma, or blood products
- Iron (Fe)
- Isocyanates
- Melamine
- Methyl bromide
- Microorganisms, yeast, or bacteria not intentionally contained
- Natural rubber latex, dry natural rubber, or synthetic latex
- Nitrites, Nitrates, Nitrosamines, Nitrosamines impurities: N-nitrosodimethylamine (NDMA), N-Nitrosodiethylamine (NDEA), N-diisopropylnitrosoamine (NDIPA), N-ethyl-N-isopropylnitrosoamine (NEIPA); or nitrosating reagent NaNO₂.
- Nitrocellulose
- Nonyl phenol (NP)
- Optical brighteners
- Organotin compounds
- Ozone-depleting chemicals
- Palm oil or derivatives of palm oil
- Parabens (e.g. ethyl paraben, propyl paraben, butyl paraben)
- Perchlorates
- Pesticides, fungicides, and rodenticides
- 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)
- Radioactive Substances: No radiation sources are used to alter the product characteristics.
- Recycled materials (i.e. No post-consumer recycled materials utilized.)
- Silicone a.k.a. Polydimethylsiloxane (PDMS) or Silicone Oil CAS No.® 63148-62-9 not intentionally contained
- Siloxanes not intentionally contained
- Sulfonamide
- Titanium dioxide; TiO₂ (CAS RN® 13463-67-7)
- Triclosan (2,4,4'-trichloro-2'-hydroxydiphenylether), Triclocarban
- Tris-Nonylphenol Phosphite (TNPP)
- Vinylidene chloride (Dichloroethene), Vinyl Chloride Monomer (VCM), Polyvinyl Chloride (PVC), Polyvinylidene Dichloride (PVDC) or copolymers

Marlex® Polyethylene PRO Appendix

For additional information, please see the following link.

<https://www.cpchem.com/who-we-are/environment-health-safety-security/regulatory-information>
(SELECT "Appendix: MARLEX® Polyethylene")



Product Regulatory Overview (PRO) Marlex® 5428 Polyethylene

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 does not make, and expressly disclaims, 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>