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Updated: January 14, 2026

Marlex® Polyethylene Appendix to PROs:

Substances and Chemicals

None of the following substances are intentionally used as additives or raw materials in the manufacture of Marlex® Polyethylene.

- Abietic acid
- Acetyltributylcitrate (ATBC); Tributyl 2-(acetyloxy)propane-1,2,3-tricarboxylate (CAS RN® 77-90-7)
- Acrolein (CAS RN® 107-02-8)
- Acrylamide (CAS RN® 79-06-1) or n-methylolacrylamide (CAS RN® 924-42-5)
- Acrylonitrile, acrylonitrile co-polymers, or Polyacrylonitrile (PAN)
- Adipates
- Aflatoxin and Mycotoxin; or derivates 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) and the Food Allergy Safety, Treatment, Education, and Research (FASTER) Act of 2021 [US] such as: peanuts, tree nuts, milk or whey, eggs, soybeans, sesame, fish, shellfish.
- Alpha Methyl Styrene (AMS; CAS No® 98-83-9)
- Aminoethylethanolamine; 2-(2-aminoethyl) ethanolamine (CAS RN® 111-41-1)
- 1-Amino-2-propanol (CAS RN® 78-96-6)
- Ammonium fluoride ((NH4)F; CAS RN® 12125-01-8)
- Anthraquinone (CAS RN® 84-65-1)
- Antibiotics (e.g. Beta lactam or antibiotics other than beta lactam)
- Antimicrobial and anti-fungal additives for packaging protection not used
- Aromatic amines
- Arsenic (CAS RN® 7440-38-2) or arsenic related compounds
- Aziridine; Azacyclopropane (CAS RN® 151-56-4)
- Artificial Sweeteners (e.g. aspartame)
- Arylamines
- Asbestos
- 5-(4'-(azidomethyl)- 5-(4'-(azidomethyl)-[1,1'-biphenyl]-2-yl)-1H-tetrazole [1,1'-biphenyl]-2-yl)-1H-tetrazo
- Azo and azoxyalkyl compounds (e.g. Azodicarbonamide; azo amines)
- Barium
- Barium sulfate (CAS RN® 7727-43-7) BaSO4
- Benzalkonium chloride (BAC; CAS RN® 63449-41-2)

- 1,2-Benzenedicarboxylic acid, mixed decyl and hexyl and octyl diesters (CAS RN® 68648-93-1)
- 1,2-Benzenedicarboxylic acid, di-C6-10-alkyl esters (CAS RN® 68515-51-5)
- 1,2 Benzenedicarboxylic acid, di-C8-10-branched alkyl esters, C9-rich (DINP; CAS RN® 68515-48-0)
- 1,2-benzenedicarboxylic acid, di-C9-11-branched alkyl esters, C10-rich(DIDP; CAS RN® 68515-49-1)
- 1,2 Benzenedicarboxylic acid, di-C11-14 branched alkyl esters C-13 rich (CAS RN® 68515-47-9)
- 1,2-benzenedicarboxylic acid, dipentylester, branched and linear (CAS RN® 84777-06-0)
- Benzopentaphene (CAS RN® 189-55-9)
- Benzophenone (CAS RN® 119-61-9)
- Benzophenone compounds: e.g. 2,4-dihydroxybenzophene, benzophenone-1 (BP-1; CAS RN® 131-56-6); benzophenone-3 (BP-3; oxybenzone; CAS RN® 131-57-7); 4,4'-dihydroxy benzophenone (CAS RN® 611-99-4); 4-Methylbenzophenone (4-MBP; CAS RN® 134-84-9); 4-hydroxybenzophenone (4HBP; CAS RN® 1137-42-4)
- Benzoyl chloride (CAS RN® 98-88-4)
- beta-CARYOPHYLLENE (CAS RN® 87-44-5)
- Biphenyl-4,4'-diol; 4,4'-Dihydroxybiphenyl (CAS RN® 92-88-6)
- 2,2-Bis(4-hydroxyphenyl)propane bis(2,3-epoxypropyl) ether; synonym: Bisphenol A diglycidyl ether (BADGE) CAS® Number 1675-54-3, 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 (CAS RN® 80-05-7), BPAF, BPB (CAS RN® 77-40-7), BPC, BPE, BPF (CAS RN® 620-92-8), BPH, BPM (CAS RN® 13595-25-0) BPS (CAS RN® 80-09-1), and BPZ, or the Bisphenol analogues as listed by Canada CEPA Section 71/Appendix A (181 substances). (EU) 2024/3190; (EU) 2018/213 bisphenol substances not used.
- Bromine (CAS RN® 7726-95-6) and related compounds
- Brominated or halogenated flame retardants
- 1-Bromopropane (CAS RN® 106-94-5)
- Buckwheat
- Butylated Hydroxyanisole (BHA; CAS RN® 25013-16-5), and Tertiary butylhydroquinone (TBHQ; CAS RN® 1948-33-0)
- Carbohydrates
- Carbon disulphide; Carbon disulfide (CAS RN® 75-15-0)
- Catechol, also known as pyrocatechol or 1,2-dihydroxybenzene (CAS RN® 120-80-9)
- Cellulose
- Cerium (Ce) or cerium compounds
- Chloroethylene; Vinyl chloride (CAS RN® 75-01-4)
- Chlorofluorocarbons (CFC), hydrochlorofluorocarbons (HCFC), hydrofluorocarbons (HFC)
- Chlorinated flame retardants, (e.g. CAS RN® 13560-89-9, 135821-74-8, 135821-03-3)
- Chlorinated paraffins (short chain, medium chain, or long chain)
- Chlorinated polyvinyl chloride (CPVC; CAS RN® 68648-82-8)
- Chlorobenzenes: e.g. 1,2-Dichlorobenzene (CAS RN® 95-50-1), 1,3-Dichlorobenzene (CAS RN® 541-73-1), 1,4-Dichlorobenzene (CAS RN® 106-46-7), 1,2,4-Trichlorobenzene (CAS RN® 120-82-1),

1,2,4,5-Tetrachlorobenzene (CAS RN® 95-94-3), Pentachlorobenzene (CAS RN® 608-93-5), Hexachlorobenzene (CAS RN® 118-74-1)

- Chloroprene monomer (CAS RN® 126-99-8) and Polychloroprene (CAS RN® 9010-98-4)
- Chloropropanols: 1,3-Dichloropropanol (1,3-DCP; CAS RN® 96-23-1); 3-Monochloropropandiol (3-MCPD; CAS RN® 96-24-2)
- Cholecalciferol (CAS RN® 67-97-0)
- Cobalt (CAS RN® 7440-48-4)
- Colophony (e.g. wood rosin, gum rosin, tree rosin or yellow rosin CAS RN® 8050-09-7)
- Cyanogen (CAS RN® 460-19-5)
- Cyanuric acid; 1,3,5-Triazinane-2,4,6-trione (CAS RN® 108-80-5; dihydrate 6202-04-6)
- Decabromodiphenyl ether (DecaBDE; DBDE; CAS RN® 1163-19-5)
- Dechlorane Plus™ flame retardant; (DP); 1,2,3,4,7,8,9,10,13,13,14,14-dodecachloro-1,4,4a,5,6,6a,7,10,10a,11,12,12a-dodecahydro-1,4,7,10-dimethanodibenzo[*a*,*e*]cyclooctene; Bis(hexachlorocyclopentadieno)cyclooctane (CAS RN® 13560-89-9; CAS RN® 135821-03-3; CAS RN® 135821-74-8) EU POPs 2025/1930; EU SVHC
- Dibenzo[b,def]chrysene; dibenzo[a,h]pyrene (CAS RN® 189-64-0)
- Dibutan-1-yl(dichloro)stannane (CAS RN® 683-18-1)
- Dibutyl Adipate (DBA; CAS RN® 105-99-7)
- Dibutyldithiocarbamate; N,N-dibutyldithiocarbamate (CAS RN® 22296-18-0)
- Dichloroacetic acid (DCA) CAS RN® 79-43-6
- 1,2-Dichlorobenzene; o-Dichlorobenzene (oDCB; CAS® No 95-50-1)
- 4,4′-Dichlorodiphenyl sulfone; DCDPS; 1,1′-Sulfonylbis(4-chlorobenzene); Bis(4-chlorophenyl) sulphone; (CAS RN® 80-07-9)
- 2,4-Dichlorophenol (CAS RN® 120-83-2)
- Di(ethylhexyl) adipate (DEHA), diethyl hydroxyl amine (DEHA), or di(ethylhexyl)maleate (DEHM)
- 2,6-Diisopropyl Naphthalene (DIPN; CAS RN® 24157-81-1)
- 4,4'-bis(dimethylamino)-4"-(methylamino)trityl alcohol (with ≥ 0,1 % of Michler's ketone or Michler's base) (CAS RN® 561-41-1)
- 3,3′-dimethyl-4,4'diaminodiphenylmethane (CAS RN® 838-88-0)
- 3,4-Dimethylbenzonitrile (CAS RN® 22884-95-3)
- N,N-Dimethylethanolamine CAS RN® 108-01-0
- Dimethylfumarate (DMF; CAS RN® 624-49-7; C6H8O4) or methyl fumarate or mono-methyl fumerate (CAS® 2756-87-8; C5H6O4)
- Dimethyl phenyl carbinol/ α,α-Dimethylbenzyl alcohol/ 2-phenyl-2propanol (CAS RN® 617-94-7)
- 2-2'-Dimethoxy-2-phenylacetophenone (CAS RN® 24650-42-8)
- Dinitrogen oxide (CAS RN® 10024-97-2)
- Dioxins or furans; or derivatives of these substances
- Diphenylguanidine; DPG; Melaniline; N,N'-Diphenylguanidine; 1,3-Diphenylguanidine; (CAS RN® 102-06-7)
- Dithiocarbamates
- Divinyl adipate (CAS RN® 4074-90-2)
- 1-Dodecene (CAS RN® 112-41-4)

- Endocrine disruptors e.g. Alkylphenol ethoxylate (APE), Nonylphenol ethoxylate (NPE), Octylphenol ethoxylate (OPE).
- Epichlorohydrin (CAS RN® 106-89-8)
- Epoxidized Soybean Oil
- Epoxy derivatives listed in EU Directives 2002/16/EC and 1895/2005
- Epoxy Silanes
- Ethanol, 2,2'-iminobis-, N-(C13-15-branched and linear alkyl) derivs. (CAS RN® 97925-95-6)
- 2-Ethoxyethanol (CAS® Number 110-80-5) or 2-Methoxyethanol (CAS RN® 109-86-4)
- 2-Ethylanthraquinone (CAS RN® 84-51-5)
- Ethyl cyanoacrylate (CAS RN® 7085-85-0)
- Ethyl 4-dimethylaminobenzoate (EDAB; CAS RN® 10287-53-3)
- Ethylhexyl 4-(dimethylamino)benzoate (EHDAB; CAS RN® 21245-02-3)
- 2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (CAS RN® 15571-58-1)
- 4-Ethylocta-3-enenitrile (CAS RN® 29127-85-3)
- FDA Banned Food Additives: benzophenone, ethyl acrylate, eugenyl methyl ether, myrcene, pulegone, pyridine, styrene
- Flavors
- Fluazifop-butyl (CAS RN® 69806-50-4)
- Fluorescent Whitening Agent
- Fragrances
- Fungicides, preservatives (for the purpose of preserving food in packaging), or fumigants
- Gasoline, natural (CAS RN® 8006-61-9)
- Genetically modified organisms (GMO)
- Glycerin or glycerol (CAS RN® 56-81-5)
- Glycidyl fatty acid esters or glycidyl silanes
- Glycidyl methacrylate; Oxiran-2-ylmethyl methacrylate (CAS RN® 106-91-2)
- Glyoxal; 1,2-Ethanedione (CAS RN® 107-22-2)
- Glyphosphate (CAS RN® 107-83-6)
- Graphene
- Herbicides
- Hexabromocyclododecane (HBCDD; CAS® RN 3194-55-6), EU 2016/293 POPs
- Hexachlorobutadiene (HCBD; CAS RN® 87-68-3)
- Hexachlorobenzene (HCB; CAS RN® 118-74-1)
- Hexachlorocyclohexane (Lindane, CAS RN® 58-89-9; EU POP substance)
- Hexadecyltrimethoxysilane (CAS RN® 16415-12-6)
- Homosalate; Salicylic Acid 3,3,5-Trimethylcyclohexyl Ester (CAS RN® 118-56-9)
- Human materials, derivatives of human materials, blood or blood products
- Hydroquinone; 1,4-dihydroxybenzene (CAS RN® 123-31-9)
- 4-hydroxybenzophenone (4HBP; CAS RN® 1137-42-4); *see benzophenone compounds* not used.
- 1-Hydroxycyclohexyl phenyl ketone (CAS RN® 947-19-3)
- Iodopropynyl butylcarbamate (IPBC); 3-iodo-2-propynyl-butylcarbamate (CAS RN® 55406-53-6)

- 2-isobutoxyethanol (CAS RN® 4439-24-1)
- Isobutylacetate (CAS RN® 110-19-0) & n-butyl acetate (CAS RN® 123-86-4)
- Isocyanates
- Isopentyl Pentyl Phthalate a.k.a N-pentyl-isopentylphthalate (nPIPP); 1,2-Benzenedicarboxylic Acid 1-(3-Methylbutyl) 2-pentyl Ester (CAS RN® 776297-69-9)
- Isophorone (CAS RN® 4098-71-9)
- Isoprene (CAS RN® 78-79-5)
- Isopropylthioxanthone (CAS RN® 75081-21-9); 9H-Thioxanthen-9-one,2-(1-methylethyl)-; 2-Isopropylthioxanthone 2-ITX; CAS RN® 5495-84-1); 4-ITX CAS RN®
- Isothiazolinones: Benzisothiazolinone (CAS RN® 2634-33-5), Methylchloroisothiazolinone (CAS RN® 26172-55-4), Methylisothiazolinone (CAS RN® 2682-20-4); (CAS RN® 55965-84-9)
- Lactose (CAS RN® 63-42-3)
- Lanthanides
- Latex (Natural rubber latex, dry natural rubber, or synthetic latex)
- Lignin
- Lindane (Hexachlorocyclohexane, CAS RN® 58-89-9; EU POP substance)
- Lithium hydroxide monohydrate (CAS RN® 1310-66-3)
- Maleic Anhydride; Furan-2,5-dione; 2,5-Furanedione (CAS RN® 108-31-6)
- Manganese
- Manganese dichloride (CAS RN® 7773-01-5)
- Melamine (CAS RN® 108-78-1)
- 2-Mercaptobenzothiazole (2-MBT); Benzothiazolethiol C6H4SNCSH (CAS RN® 149-30-4)
- Mercury
- Methacrylate; 2-methylprop-2-enoate (CAS RN® 18358-13-9)
- Methanesulfonic acid (CAS RN® 75-75-2)
- Methyl acetate (CAS RN® 79-20-9)
- 4-Methylbenzylidene camphor; 1,7,7-trimethyl-3-[(4-methylphenyl)methylene]-bicyclo[2.2.1]heptan-2-one; 4-MBC (CAS RN® 36861-47-9)
- Methyl bromide; Bromomethane (CAS RN® 74-83-9)
- Methyldibromo Glutaronitrile (CAS RN® 35691-65-7)
- Methyl ethyl ketone (MEK); Methyl isobutyl ketone (MIBK; CAS RN® 108-10-1)
- Methylenedianiline (CAS RN® 101-77-9)
- Methylmercuric chloride (CAS® No 115-09-3)
- Methyl Methacrylate (MMA); Methyl 2-methylprop-2-enoate (CAS RN® 80-62-6)
- Michler's ketone; N,N,N',N'-Tetramethyl-4,4'-diaminobenzophenone; Bis[4-(dimethylamino)phenyl]methanone (CAS RN® 90-94-8)
- Microorganisms, yeast, mold, or bacteria not intentionally contained
- Methyl fumarate or mono-methyl fumerate (CAS RN® 2756-87-8; C5H6O4)
- Monoethanolamine (CAS RN® 141-43-5)
- Monomethyl-dichloro-diphenyl methane
- Monosodium Glutamate (MSG; CAS RN® 142-47-2)
- Naphthalene (CAS RN® 91-20-3)

- Nitrites, Nitrates, Nitrosamines, Nitrosamines impurities: see section below
- Nitrocellulose (CAS RN® 9004-70-0)
- p-Nitrochlorobenzene (CAS RN® 100-00-5)
- Nitrofurazone (CAS RN® 59-87-0)
- N-ethyl pyrrolidone (NEP; RN® 2687-91-4)
- N-ethyl toluene sulfonamide (NETSA; RN® 8047-99-2)
- N-methyl-2-pyrrolidone; N-Methylpyrrolidone (NMP; CAS RN® 872-50-4)
- Nonyl phenol (NP; CAS RN® 25154-52-3)
- Nonyl phenol & Octyl phenol ethoxylates
- N-vinyl-2-pyrrolidone (CAS RN® 88-12-0)
- Octabromobiphenyl ether; Octabromodiphenyl ethers (Octa-BDE; CAS RN® 32536-52-0)
- 2-Octyl cyanoacrylate (CAS RN® 133978-15-1)
- Octocrilene; Octocrylene (CAS RN® 6197-30-4)
- Octylphenols
- Optical brighteners
- Organotin compounds
- Organophosphate Halogenated Flame Retardants (HFRs; e.g. Dechlorane Plus™ flame retardant, Tetrabromobisphenol A (TBBPA), polybrominated diphenyl ethers (PBDEs))
- Oxo-degradable additives, oxo-degradable plastics, or pro-oxidative additives
- Oxygen scavengers (to protect packaged food)
- Ozone-depleting chemicals; EU 2024/590; 2024/573 not applicable
- Parabens e.g. butyl paraben (CAS RN® 94-26-8), ethyl paraben (CAS RN® 120-47-8), methyl paraben (CAS RN® 99-76-3), propyl paraben (CAS RN® 94-13-3)
- Pentabromobiphenyl ether; Pentabromodiphenyl ethers (Penta-BDE; CAS RN® 32534-81-9)
- Pentachlorophenol (PCP; CAS RN® 87-86-5) See (EU) 2021/277 POPs
- Pentachlorothiophenol (PCTP; CAS RN® 133-49-3)
- 2,4-pentanedione (CAS RN® 123-54-6)
- Perchlorates
- Perchloroethylene (CAS RN® 27-18-4)
- Pesticides, Herbicides and fungicides (e.g. Hexachlorocyclohexane CAS RN® 58-89-9)
- Phenol-Formaldehyde Resin (CAS RN® 9003-35-4)
- Phenol, isopropylated phosphate (3:1); Tris(isopropylphenyl) phosphate (PIP; CAS RN® 68937-41-7)
- 2-phenylphenol (CAS RN® 90-43-7)
- Photoinitiators, including: benzophenone, hydroxybenzophenone, and 4-methylbenzophenone, and Isopropylthioxanthone (ITX)
- Phthalates, orthopthalates (see Phthalates section in PRO document and below)
- Phthalimide (CAS RN® 85-41-6)
- Plasticizers; including, but not limited to the 25 plasticizers (phthalates) listed on the FDA rule published in Federal Register on May 20, 2022 or Tricresyl Phosphate (TCP; CAS RN® 1330-78-5)
- Polyaminopropyl biguanide (PHMB; CAS RN® 27083-27-8)
- Polybrominated Diphenyl Ethers (PBDEs) included: decaBDE, octaBDE, and pentaBDE
- Polycarbonates

- Polychlorinated and Polybrominated Biphenyls (PCBs and PBBs)
- Polychlorinated and Polybrominated Terphenyls (PCTs and PBTs)
- Polychloronaphthalene (CAS RN® 70776-03-3)
- Polychloroprene (CAS RN® 9010-98-4)
- Polycyclic aromatic hydrocarbons (PAH), also called polyaromatic hydrocarbons
- Polyethylene terephthalate (PET; CAS RN® 25038-59-9)
- Polyethylene terephthalate glycol-modified (PET-G)
- Poly(glycolic acid) (PGA; PGA barrier; CAS RN® 26009-03-0)
- Polyhydroxyalkanoates (PHAs) polyesters produced by microorganisms/bacterial fermentation
- Polylactic Acid, Polylactic Acid as a rigid structure (CAS RN® 26100-51-6)
- Polystyrene or expanded Polystyrene (CAS RN® 9003-53-6) or other polymeric foam materials as shock absorbers (e.g. Expanded Polypropylene, Expanded Polyethylene, or Expanded Vinyl Acetate)
- Poly(trimethylene 2,6-naphthalate) (PTN; PTN barrier; CAS RN® 28779-81-9)
- Polyurethane
- Polyvinyl acetate (CAS RN® 9003-20-7)
- Polyvinyl Alcohol
- Polyvinyl Chloride (CAS RN® 9002-86-2; PVC)
- Polyvinylidene chloride a.k.a. Polyvinylidene Dichloride (PVDC; CAS® Number 9002-85-1) or copolymers
- Propanedinitrile, 2-[[4-[[2-(4-cyclohexylphenoxy)ethyl]ethylamino]-2-methylphenyl]methylene]- (CHDP; CHPD; (CAS RN® 54079-53-7)
- Propiconazole (CAS RN® 60207-90-1)
- Propylidene Phthalide (CAS RN® 17369-59-4)
- Quizalofop-P-tefuryl (ISO); (+/-) tetrahydrofurfuryl (R)-2-[4-(6-chloroquinoxalin-2-yloxy)phenyloxy]propionate (CAS RN® 200509-41-7)
- Radioactive Substances: No radiation sources are used to alter the product characteristics.
- Rare earth minerals: Samarium, Gadolinium, Terbium, Dysprosium, Lutetium, Scandium, and Yttrium
- Recycled materials (i.e. No post-consumer recycled materials utilized)
- Regenerated cellulose
- Resorcinol; Benzene-1,3-diol (CAS RN® 108-46-3)
- Rice plant derived substances
- Selenium
- Semicarbazide (CAS RN® 57-56-7)
- Silicic acid, sodium salt; Sodium siliconate (CAS RN® 108-78-1)
- Sodium antimonate (CAS RN® 15432-85-6)
- Sodium bromide (CAS RN® 7647-15-6)
- Sodium fluoride (CAS RN® 7681-49-4)
- Sodium hydrosulfide (CAS RN® 16721-80-5)
- Sodium nitrite (CAS RN® 7632-00-0)
- Sodium sulfide (CAS RN® 1313-82-2)

- Sodium tetraborate (CAS RN® 1330-43-4)
- Sorbitol (CAS RN® 50-70-4)
- Stannous chloride; tin (II) chloride (CAS® Number 7772-99-8, 10025-69-1 (dihydrate))
- Starch (CAS RN® 9005-25-8)
- Sugars (sucrose, glucose/dextrose, fructose, lactose, galactose, maltose)
- Styrene (CAS® Number 100-42-5)
- Sulfonamides
- Terephthaloyl dichloride (CAS RN® 100-20-9)
- Tert-butyl methyl ether (TBME; CAS RN® 1634-04-4)
- 4-tert-butylphenol (CAS RN® 98-54-4)
- Tertiary butylhydroquinone (TBHQ; CAS RN® 1948-33-0)
- 2,2',4,4'-tetrabromodiphenyl ether; (BDE-47 CAS RN® 40088-47-9; 5436-43-1)
- Tetrachloroethylene; Perchloroethylene (CAS RN® 127-18-4)
- 2,3,7,8-Tetrachloro dibenzo p-dioxin (TCDD; CAS RN® 1746-01-6)
- 2,3,7,8 Tetrachloro dibenzo p-furan (TCDF; CAS RN® 51207-31-9)
- 1-Tetradecene (CAS RN® 1120-36-1)
- Tin & tin substances e.g. Tributyl tin (CAS RN® 688-73-3), Trioctyl tin (CAS RN® 869-59-0), Triphenyl tin (CAS RN® 892-20-6); dioctyltin bis(2-ethylhexylmercaptoacetate) (CAS RN® 15571-58-1)
- Trimethylolpropane triacrylate (TMPTA) CAS RN® 15625-89-5
- Titanium Acetylacetonate (CAS RN® 17501-79-0)
- Titanium diisopropoxide bis(acetylacetonate) (RN® 17927-72-9)
- 1,1,1-Trichloroethane (CAS® No 71-55-6)
- Trichloroethylene (CAS RN® 79-01-6)
- Trichlorethyl phosphate; tris(2-chloroethyl) phosphate (TCEP; CAS RN® 115-96-8)
- Triclosan (2,4,4'-trichloro-2'-hydroxydiphenylether), Triclocarban
- Triethanolamine; 2,2',2''-nitrilotriethanol (CAS RN® 102-71-6)
- Trimellitate (e.g. Trimethyl trimellitate CAS RN® 2459-10-1, Tris-2-ethylhexyl trimellitate CAS RN® 3319-31-1)
- 2,2,4-Trimethyl-1,3-pentanediol diisobutyrate (TXIB; CAS RN® 6846-50-0)
- Triphenyl phosphate (TPP; CAS RN® 115-86-6)
- Tris(1,3-dichloro-2-propyl) phosphate (TDCPP; CAS RN® 13674-87-8)
- 2,4,6-tris(tert-butyl)phenol; 2,4,6-Tri-tert-butylphenol (2,4,6-TTBP) (CAS RN® 732-26-3)
- Tris-Nonylphenol Phosphite (TNPP) (CAS RN® 26523-78-4)
- Vinyl acetate (CAS RN® 108-05-4)
- Vinylidene chloride (Dichloroethene), Vinyl Chloride Monomer (VCM; Chloroethylene CAS RN® 75-01-4), Polyvinyl Chloride (CAS® Number 9002-86-2; PVC), Polyvinylidene Dichloride (PVDC) or copolymers
- Zinc Chloride (CAS RN® 7646-85-7)
- Zinc di(acetate); Zinc acetate (CAS RN® 557-34-6)
- Zinc Diethyldithio Carbonate
- Zinc Diphenylguanidine

Nitrosamine related substances

To the best of our knowledge the manufacture of this product does not intentionally use nitrosamine or any of the following substances:

- HNO2 (Nitrous Acid), HNO3 (Nitric Acid)
- Nitrosamines, Nitrosamines impurities: N-nitrosodimethylamine (NDMA), N-Nitrosodiethylamine (NDEA), N-diisopropylnitrosoamine (NDIPA), N-ethyl-N-isopropylnitrosoamine (NEIPA); or nitrosating reagent NaNO2
- Nitrites, Nitrates (e.g. NaNO2 (Sodium Nitrite))
- NO (Nitric Oxide) e.g. as impurity in HNO3 for nitration reactions
- Nitrosyl halides (e.g. ClNO, BrNO)
- Dinitrogen trioxide (N2O3), Dinitrogen tetraoxide (N2O4)
- Organic nitrites (e.g. t-BuONO)
- NH2OH (Hydroxylamine)
- Ozone
- Chloramines; Nitroso (nitrite, nitrate, chloroamine) reagents
- Trimethylamine, diethylamine, triethylamine, Hunig's base, piperidine
- Azide reagents
- N-Methyl-2-pyrrolidone (NMP)
- Tributyltin chloride CAS RN® 1461-22-9
- Nitrocellulose
- Dimethylacetamine/ N,N-dimethylacetamide (DMA) or Diethylacetamide (DEA),
- N-Nitroso-N-methyl-4-aminobutyric acid (NMBA)
- N-nitrozodiizopropyloamine (DIPNA, CAS® 601-77-4), N-nitrozoetyloizopropyloamine (EIPNA)
- Triethylamine, Diethylamine, Monoethylamine, Diethanolamine, Trimethylamine, Dimethylamine
- Tributylamine (TBA), Dibutylamine
- Diisopropylethylamine (DIPEA)
- N-Methylmorpholine (NMM)
- Tetra Butyl Ammonium Bromide (TBAB)
- 2-Mercapto benzo thiozole (2-MBT; CAS RN® 149-30-4)

Phthalates

No phthalates (a.k.a. phthalate esters), including di-(2-ethylhexyl) phthalate (DEHP), dibutyl phthalate (DBP; CAS RN® 84-74-2), 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; CAS RN® 84-66-2) 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. The 25 plasticizers (phthalates) listed on FDA rule published in Federal Register on May 20, 2022, are not used in Marlex® Polyethylene.

Other phthalates not used: ortho-phthalate, di-n-butyl phthalate, bis(2-methoxyethyl) phthalate (DMEP) CAS RN® 117-82-8., n-pentyl-isopentylphthalate CAS RN® 776297-69-9, Di-n-pentyl phthalate CAS RN® 131-18-0, Diisopentylphthalate CAS RN® 605-50-5, Diallyl phthalate CAS RN® 131-17-9; benzyl butyl phthalate (BBP)

CAS RN® 85-68-7; dioctyl phthalate (DOP) CAS RN® 117-84-0.; Diisooctyl phthalate (DIOP CAS RN® 27554-26-3)

Clean Air

This product does not intentionally contain ozone depleting substances, including those listed in Regulation (EC) No 1005/2009 or Class I or Class II Ozone-Depleting substances regulated by the US Clean Air Act (CAA Section 602).

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

None of the following Poly- and perfluoroalkyl substances (PFAS) substances are used in the formulation of Marlex® Polyethylene:

- PFAS as listed by the National Defense Authorization Act for Fiscal Year 2020 (NDAA) for TRI and through 2025 reporting year (196 substances) to EPA or per EU 2019/1021, 2020/784, 2021/115, and 2021/1297.
- Perfluorooctanoic Acid (PFOA) CAS RN® 335-67-1 and related compounds.
- Perfluorooctane Sulfonate (PFOS) CAS RN® 1763-23-1 and related compounds.
- Perfluorobutane Sulfonic Acid (PFBS) CAS RN® 375-73-5 and related compounds.
- Perfluorohexanoic Acid (PFHxA); Undecafluorohexanoic acid; Perfluorocaproic acid CAS RN® 307-24-4 and related compounds.
- Perfluorohexane sulfonic acids (PFHxS) CAS RN® 355-46-4], its salts, and related compounds: EU 2023/1608
- Hexafluoropropylene Oxide Dimer Acid (HPFO-DA) (“Gen-X”) CAS RN® 13252-13-6, 62037-80-3
- Perfluorobutanoic Acid (PFBA) CAS RN® 375-22-4 and related compounds.
- Perfluoroheptanoic Acid (PFHpA) CAS RN® 375-85-9 and related compounds.
- Perfluorononanoic Acid (PFNA) CAS RN® 375-95-1 and related compounds.
- Perfluorodecanoic Acid (PFDA) CAS RN® 335-76-2 and related compounds.
- Perfluorododecanoic acid (PFDoA) CAS RN® 307-55-1 and related compounds.
- Perfluoroundecanoic Acid (PFUnDA) CAS RN® 2058-94-8 and related compounds.
- Perfluorotridecanoic Acid (PFTrDA) CAS RN® 72629-94-8 and related compounds.
- Perfluorotetradecanoic Acid (PFTDA) CAS RN® 376-06-7 and related compounds.
- Polytetrafluoroethylene (PTFE) CAS RN® 9002-84-0 not contained on purpose.
- CAS RN® 307-24-4 and related compounds.
- 2-(N-Ethylperfluorooctanesulfonamido)acetic acid; N-Ethyl perfluorooctanesulfonamidoacetic acid; Glycine, N-ethyl-N-[(heptadecafluorooctyl)sulfonyl]- CAS RN® 2991-50-6 and related compounds.

- 2-(N-Methylperfluorooctanesulfonamido)acetic acid; Glycine, N-[(1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluorooctyl)sulfonyl]-N-methyl-; Glycine, N-[(heptadecafluorooctyl)sulfonyl]-N-methyl-; (Me-PFOSA-AcOH; NMeFOSAA) CAS RN® 2355-31-9 and related compounds.
- Perfluoropentanoic acid; Perfluorovaleric acid (PFPeA) CAS RN® 2706-90-3 and related compounds.
- Perfluorodecane sulfonic acid; henicosafluorodecanesulphonic acid; (PFDS) CAS RN® 335-77-3
- Perfluorononanesulfonic acid (PFNS) CAS RN® 68259-12-1 and related compounds.
- Perfluoroheptanesulfonic acid (PFHpS) CAS RN® 375-92-8 and related compounds.
- Perfluorononanesulfonic acid (PFPeS) CAS RN® 2706-91-4 and related compounds.
- Perfluorooctanesulfonamide (PFOSA) CAS RN® 754-91-6 and related compounds.
- Heptadecafluorodecanesulphonic acid; 1H,1H,2H,2H-Perfluorodecanesulphonic acid CAS RN® 39108-34-4 and related compounds.
- 2-(PERFLUOROHEXYL)ETHANE-1-SULFONIC ACID; 6:2 fluorotelomer sulfonic acid (6:2 FTSA) CAS RN® 27619-97-2 and related compounds.
- 6:2 fluorotelomer acrylate; (6:2 FTAc) (CAS RN® 17527-29-6) a.k.a. 3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluorooctyl prop-2-enoate and related compounds.
- Perfluorohexanesulphonic acid; 3,3,4,4,5,5,6,6,6-Nonafluoro-1-hexanesulfonic Acid; 4:2 FTS; 3,3,4,4,5,5,6,6,6-Nonafluorohexane-1-sulfonic Acid; CAS RN® 757124-72-4 and related compounds.
- N-Methylperfluorooctanesulfonamidoethanol CAS RN® 24448-09-7 and related compounds.
- Perfluorocarboxylic acids, (e.g. C9-C14 PFCAs linear and branched), their salts, and related substances per (EU) 2021/1297.
- Pentafluoropropionic acid; Pentafluoropropionate (PFPrA) CAS RN® 422-64-0

Microparticles (a.k.a. microplastics) (EU) 2023/2055

On September 27, 2023, the European Commission adopted an amendment to Regulation (EC) No 1907/2006, known as REACH (Registration, Evaluation, Authorization, and Restriction of Chemicals), specifically addressing the intentional addition of microplastics. This amendment, Commission Regulation (EU) 2023/2055, is listed as Entry 78 in REACH Annex XVII and focuses on the restriction of synthetic polymer microparticles, commonly referred to as microplastics.

Marlex® Polyethylene, supplied as plastic pellets, meets the definition of synthetic polymer microparticles under condition (b)(i). While the regulation imposes restrictions on the market placement of these microparticles as outlined in Paragraph 1 of the "Conditions of restrictions," it also provides an exemption. According to Paragraph 4(a), the restrictions do not apply to synthetic polymer microparticles intended for use at industrial sites. This exemption is relevant to CPChem Marlex® Polyethylene when used at industrial sites.

To understand how this regulation affects your company's products, please refer to the EU Entry 78 regulation available through the following links:

Entry 78: https://echa.europa.eu/documents/10162/a5eaa862-fa4d-2e18-f5a5-3bda98e09ee7

Full regulation: Commission Regulation (EU) 2023/2055 amending Annex XVII to Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorization, and Restriction of Chemicals (REACH) as regards synthetic polymer microparticles. : Commission Regulation (EU) 2023/… of 25 September 2023 amending Annex XVII to Regulation (EC No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) as regards synthetic polymer microparticles)

Regulatory or Industry Lists

To the best of our knowledge this product 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 2016/293, EU 2019/1021, EU 2021/115, 2020/784, 2021/277, EU 2023/1608 (PFHxS) and EU 2025/1930 Bis(hexachlorocyclopentadieno)cyclooctane, (CAS RN® 13560-89-9; a.k.a. Dechlorane Plus™ flame retardant) substances not used.
  - Listing of POPs in the Stockholm Convention
  - List of substances subject to POPs Regulation - ECHA (europa.eu)
- 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
- Persistent, Bioaccumulative, and Toxic (PBT) substances as restricted under US Code of Federal Regulations title 40, part 751, subpart E– "Regulation of Certain Chemical Substances and mixtures under section 6 of The Toxic Substances Control Act" (TSCA): also see substances not used: Decabromodiphenyl ether (DecaBDE); Phenol, isopropylated phosphate (3:1) (PIP (3:1)); 2,4,6-Tris(tert-butyl)phenol (2,4,6-TTBP); Hexachlorobutadiene (HCBD); and Pentachlorothiophenol (PCTP)
- 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 in the Japan Class I Specified Chemical list not used.
  - J-CHECK(English) (nite.go.jp)

Polyolefin Oligomeric Saturated Hydrocarbons (POSH)

Small amounts of oligomers are produced in the polyolefin process. Although lower molecular weight hydrocarbons are more readily removed, higher molecular weight hydrocarbons are reasonably anticipated to be present.

EU Medical Device Regulation (EU) 2017/745

(EU) 2017/745 is not applicable to Marlex® Polyethylene. See statements in this appendix or the respective Marlex® Polyethylene PRO documents on phthalates, endocrine disrupting chemicals (EDC) and the respective SDS for the carcinogenic, mutagenic, or toxic to reproduction ('CMR') statement. These statements apply to the resin, as sold by CPChem, and the statements are not for molded articles and/or articles or pellets containing colorants, pigments, processing aids added during subsequent extrusion or conversion processes.

CMRs: See EU SDS for statement on Regulation (EC) RN 1272/2008 of the European Parliament and of the Council or US SDS section 2.

See SDS for medical application statement via this link:
https://www.cpchem.com/what-we-do/product-finder

"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 tissue 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."

Other information

Country of origin (COO): Contact your Customer Account Coordinator (CAC), Customer Service Representative (CSR) or sales person.

Only Representative (OR) Services: Contact your sales representative.

ISO 9000/ Quality: https://www.cpchem.com/what-we-do/solutions/polyethylene/polyethylene-resources

CMRs: See EU SDS for statement on Regulation (EC) RN 1272/2008 of the European Parliament and of the Council or US SDS section 2.

US EPA SARA: See SDS

Animal Testing: See Link (*click link for Animal Testing Policy*)

SDS Product Finder: Enter SDS product name or number
https://www.cpchem.com/what-we-do/product-finder

California act: https://www.cpchem.com/california-transparency-supply-chains-act-disclosure-sb657
California Transparency in Supply Chains Act (CPSIA)

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 its affiliates, do not make, and expressly

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