Regulatory Data Sheet (RDS)

Tricolene[®] LMDPE Linear Medium Density Polyethylene



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Revised Date: January 27, 2023

Tricolene[®] LMDPE

Linear Low Density Polyethylene

Type of Product	References
Tricolene® Butene LMDPE	
Tricolene [®] Hexene LMDPE	Tricolene [®] MDF12938, Tricolene [®] MDF03937, Tricolene [®] MDF2942, Tricolene [®] MDHR4939U, Tricolene [®] MDHR5935U
Tricolene [®] Octene LMDPE	

TRICON ENERGY LTD. confirms that prime grades mentioned above comply with the following regulations, according to the latest information provided by our suppliers:

United States Food Regulations (FDA)

The grades and the additives incorporated in it comply with the Food and Drug Administration (FDA) regulation: **CFR Title 21, 177.1520: Olefin Polymers**:

PE Resin	FDA Clearance 21 CFR 177.1520	Specifications 21 CFR 177.1520	Conditions of Use 21 CFR 176.170(c) Table 2
Tricolene [®] Butene LMDPE	(a)(3)(i)(c)(1)	(c)(3.2a)	A-H
Tricolene [®] Hexene LMDPE	(a)(3)(i)(a)(2)	(c)(3.2a)	A-H
Tricolene [®] Octene LMDPE	(a)(3)(i)(a)(1)	(c)(3.2a)	A-H

https://www.fda.gov/regulatory-information/search-fda-guidance-documents/guidance-industry-preparation-premarketsubmissions-food-contact-substances-chemistry

Canada Food Contact Regulations - HPFB

A "Letter of No Objection" for these products has been approved by by Health Canada's Health Products and Food Branch (HPFB). These products may be used in food contact applications such as bottles, food pails, caps, films, and casings under and at the temperature of 212 °F (100 °C) for all types of food. https://www.canada.ca/en/health-canada/services/food nutrition/legislation-guidelines/guidance-documents/information-requirements-food-packaging-submissions.html



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Mercosur Food Contact Regulations - MERCOSUR

These listed resins comply with the relevant requirements of the resolutions published by Common Market Group - Grupo Mercado Comun (MERCOSUR):

- GMC Nº 03/92 General provisions for food contact materials
- GMC Nº 56/92 General provisions for plastic materials
- GMC Nº 02/12 and their amendment GMC N° 19/21 Positive List of Monomers, Other Starting Substances, and Polymers Authorized for the Preparation of Plastic Containers and Equipment in Contact with Food.
- GMC N° 32/07 and their amendment GMC N° 39/19 Positive list of additives for preparing plastic materials and polymeric coatings that come into contact with food. https://normas.mercosur.int/public/normativas

Brazil Food Contact Regulations - ANVISA

These listed resins comply with the relevant requirements of the resolutions published by The National Health Surveillance Agency (ANVISA):

- RDC Nº 91/2001 General provisions for food contact materials
- RDC Nº 105/1999 General provisions for plastic materials and their amendment RDC Nº 589/2021
- RDC Nº 56/2012 and their amendment RDC Nº 589/2021 Positive list of monomers, other initiating substances, and polymers authorized for the preparation of packaging and plastic equipment in contact with food.
- RDC Nº 326/2019 Positive list of additives intended for elaborating plastic materials and polymeric coatings in contact with food and provides other arrangements.

https://www.gov.br/anvisa/pt-br

https://www.gov.br/anvisa/pt-br/assuntos/regulamentacao/legislacao/bibliotecas-tematicas/bibliotecas-tematicas

European Union Food Contact Regulations - EU

The composition of the listed resins complies with the European Union's food contact regulations, including the Framework Regulation (EC) N° 1935/2004 and Regulation (EU) N° 10/2011, and amendments up to Regulation (EU) 2020/1245.

The monomers and additives used to produce those products are listed in the Union List of Authorized Substances of **Regulation (EU) N°10/2011**.

These resins do not have monomers that are regulated with Specific Migration Limits (SML).

These resins contain one or more additives that are regulated with an SML, but all grades comply with the requirement of Overall Migration Limit (OML) of 60 mg/kg as mentioned in **EC Regulation N°10/2011.**



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PE Resin	Chemical Name	CAS #	SML
Tricolene [®] hexene LMDPE	1-hexene	0000592-41-6	3 mg/kg
Tricolene [®] octene LMDPE	1-octene	0000111-66-0	15 mg/kg
All Tricolene [®] LMDPE	Octadecyl 3-(3,5-di-tert-butyl-4- hydroxyphenyl) propionate	2082-79-3	6 mg/kg

Dual Use Additives

These resins do not have dual additives listed on **Regulation (EC) N° 1333/2008**: Food Additives and/or **Regulation (EU) N° 1334/2008**: Flavourings https://eur-lex.europa.eu/eli/reg/2011/10/oj

China Food Contact Regulations – NHC

Regarding the requirements outlined in the following Standards from the National Health Commission of The People's Republic of China (NHC) that apply to the grades referenced above:

1)National Standard of the People's Republic of China **GB4806.1-2016**, National Food Safety Standard on General Safety Requirements of Food Contact Materials and Articles.

2)National Standard of the People's Republic of China **GB4806.6-2016**, National Food Safety Standard on Plastic Resins for Food Contact.

3)National Standard of the People's Republic of China **GB9685-2016**, National Food Safety Standard on Use of Additives in Food Contact Materials and Articles.

4)National Standard of the People's Republic of China **GB31603-2015**, National Food Safety Standard on General Hygienic Practice for Production of Food Contact Materials and Its Products. http://en.nhc.gov.cn/index.html



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Japan Food Contact Regulation - MHLW

These listed resins comply with the relevant requirements of the resolutions published by Japanese Ministry of Health, Labor and Welfare (MHLW) according to **Positive List (PL) System for Food-Contact Materials (FCM) used in the Manufacture of Food-Contact Utensils, Containers, and Packaging (UCP)** of the amended **Food Sanitation Act**:

Appendix 1, Table 1(1): Base Polymer (Plastics) List. These listed resins are ethylene copolymers (CAS Number 25087-34-7, 25213-02-9) and ethylene homopolymers (CAS Number 9002-88-4) with Reference No 1206, Serial No 1, Synthetic Resin Group 2, all types of food, and maximum temperature III, Reference No 982, Serial No 1, Synthetic Resin Group 5, all types of food, and maximum temperature III, and Reference No 985, Serial No 4, Synthetic Resin Group 5, all types of food, and maximum temperature III, respectively.

https://www.mhlw.go.jp/stf/seisakunitsuite/bunya/kenkou_iryou/shokuhin/kigu/index_00003.html https://www.mhlw.go.jp/content/000638979.xlsm

• Appendix 1, Table 2: These listed resins have additives that meet the requirements of Table 2. https://www.mhlw.go.jp/stf/seisakunitsuite/bunya/kenkou_iryou/shokuhin/kigu/index_00003.html https://www.mhlw.go.jp/content/000635348.xlsx

Good Manufacturing Practices, GMP

This product is produced following good manufacturing practices (GMP) as outlined in:

- Europe: EU Regulation N° 2023/2006
- USA: 21 CFR 174.5.
- China: **GB 31603-2015**

https://eurlex.europa.eu/search.html?scope=EURLEX&text=2023%2F2006&lang=en&type=quick&qid=16751307508 https://www.ecfr.gov/current/title-21/chapter-I/subchapter-B/part-174



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Chemical Inventories

All the components of those products are listed on the following inventories:

CANADA	Domestic Substances List (DSL)
PEOPLE'S REPUBLIC OF CHINA	Inventory of Existing Chemical Substances
EUROPEAN UNION	All necessary components have been registered or pre-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 (NZIoCS)
PHILIPPINES	Philippine Inventory of Chemicals and Chemical Substances (PICCS)
TAIWAN	Taiwan Chemical Substance Inventory (TCSI)
UNITED STATES	Toxic Substances Control Act (TSCA) Chemical Inventory

Restriction of Hazardous Substances – RoHS

These products comply with the standards established by **EU Directive 2002/95** (RoHS 1), **EU Directive 2011/65** (RoHS 2) as amended by **EU Directive 2017/2102** and **EU Directive 2019/1846** and **EU Directive 2015/863** (RoHS 3). This product does not contain/contains less than the maximum levels of the following restricted substances (Heavy Metals, Flame Retardants, and Phthalates):

- Lead (Pb): < 1000 ppm
- Mercury (Hg): < 100 ppm
- Cadmium (Cd): < 100 ppm
- Hexavalent Chromium: (Cr VI) < 1000 ppm
- Polybrominated Biphenyls (PBB): < 1000 ppm
- Polybrominated Diphenyl Ethers (PBDE): < 1000 ppm
- Bis(2-Ethylhexyl) phthalate (DEHP): < 1000 ppm
- Benzyl butyl phthalate (BBP): < 1000 ppm
- Dibutyl phthalate (DBP): < 1000 ppm
- Diisobutyl phthalate (DIBP): < 1000 ppm

https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32011L0065&qid=1675108353506 https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32015L0863&qid=1675107935072



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The coalition of Northeastern Governors (CONEG) - Toxics in Packaging Clearinghouse (TPCH) - US

Producers do not intentionally add lead, mercury, cadmium, or hexavalent Chromium to these products. Thus, these products do not contain incidental levels of lead, mercury, cadmium or hexavalent Chromium greater than 100 parts per million (ppm) in compliance with **CONEG Model Legislation (Model Toxics in Packaging Legislation).** Last update: *February 2021*

https://www.coneg.org/who-we-are/about-coneg/ https://toxicsinpackaging.org/model-legislation/ https://toxicsinpackaging.org/model-legislation/model/

Waste Electrical and Electronic Equipment (WEEE)

EU Directive 2012/19 on WEEE: Selective waste treatment (Annex VII). None of the materials or components listed in Annex VII are intentionally added or used in the formulation of this product with the following exception: hydrocarbons (HC). These products are hydrocarbons; however, liquid hydrocarbons are not present in this product.

https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32012L0019&qid=1675110476181

Packaging and Packaging Waste

To these products is not intentionally added lead, mercury, cadmium, or hexavalent Chromium. Thus, these products do not contain incidental lead, mercury, cadmium, or hexavalent Chromium greater than 100 parts per million (ppm). This product is potentially recyclable as described in **European Directive 94/62/EC**. *https://eur-lex.europa.eu/eli/dir/1994/62/oj*

<u>Consumer Product Safety Improvement Act of 2008 (H.R. 4040) – Consumer</u> <u>Product Safety Commission - US</u>

These products do not contain lead and phthalates. It, therefore, complies with the relevant sections of the **Consumer Product Safety Improvement Act of 2008 (H.R. 4040)**. https://www.cpsc.gov/Regulations-Laws--Standards/Statutes/The-Consumer-Product-Safety-Improvement-Act

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

These products, as shipped, do 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's Proposition 65**. Last update: *January 27, 2023 https://oehha.ca.gov/proposition-65/proposition-65-list*



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Ozone-Depleting Chemicals, ODS- Clean Air Act - Montreal Protocol

These products are not manufactured with any of **US EPA's** Class I or Class II Ozone Depleting Chemicals (ODC) or the ODCs listed under the **Montreal Protocol** or the Ozone Depleting Substances listed in Annexes I & II of **EU Regulation 1005/2009** of September 16, 2009.

These products do 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)

Chemical Name	CAS #
Chlorofluorocarbons (CFCs)	n/a
Halon.	9036-80-0
Carbon Tetrachloride (CCl4)	56-23-5
Methyl Chloroform (CH3CCl3)	67-66-3
Hydrobromofluorocarbons (HBFCs)	n/a
Hydrochlorofluorocarbons (HCFCs), including HCFC 141 b (1,1-Dichloro- 1-fluoroethane), HCFC 142 b (Chloro-1,1-difluoroethane) or HCFC 22	1717-00-6, 75-68-3,
Methyl Bromide (CH3Br)	74-83-9
Bromochloromethane (CH2BrCl)	74-97-5

https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32009R1005&qid=1675126690999

https://eur-lex.europa.eu/EN/legal-content/summary/montreal-protocol-on-substances-that-deplete-the-ozone-layer.html



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Safety of Toys

<u>Europe</u>: As for compliance of the above product with the requirements set out in Annex II "Particular Safety requirements" - Paragraph III - of the **Directive 2009/48/EC**, the following can be declared:

- This polymer is a preparation that is not classified according to the criteria set out in Annex I of Regulation 1272/2008.
- Allergenic fragrances, as listed in Annex II.III.11 are not intentionally used in this polymer.
- Nitrosamines and nitrosable substances are not intentionally used in this polymer.
- The following metallic elements, referred to in the European Norm EN 71-3:2013 (Safety of toys Part 3: Migration of certain elements) are not intentionally used in above products. Although those products are not routinely tested for their presence, based on product composition knowledge these metallic elements are not expected to be present: Aluminium, Antimony, Arsenic, Barium, Boron, Cadmium, Chromium (III), Chromium (VI), Cobalt, Copper, Lead, Manganese, Mercury, Nickel, Selenium, Strontium, Tin, Organic tin, Zinc

As regards the European Norm **EN 71-9:2005+A1:2007** ("Safety of Toys - Part 9: Organic Chemical Compounds - Requirements"), the requirements established by the European Commission for the substances listed in the following "Limit tables" address the risks presented by organic compounds in polymeric toy materials used in toys and toy components:

- Table 2B Colourants
- Table 2C Primary aromatic amines
- Table 2D Monomers (migration) (See note 1)
- Table 2E Solvents (migration)
- Table 2F Solvents (inhalation)
- Table 2H Preservatives (other than wood preservatives) (See note 1)
- Table 2I Plasticizers (migration)

These substances are not intentionally used in these products. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32009L0048&qid=1675127541539

Brazil: These products are not formulated with antimony, arsenic, barium, boron, cadmium, chromium (III), chromium (VI),cobalt, copper, mercury, nickel, selenium, strontium or tin. However, these products have not been tested and assessed according to the criteria for approval of the Brazilian Regulation **NBR NM 300-3**: **2011** - Safety of toys - Part 3: Migration of certain elements.

https://www.gov.br/inmetro/pt-br/acesso-a-informacao/perguntas-frequentes/avaliacao-da conformidade/brinquedos/qualversao-das-normas-tecnicas-eu-devo-utilizar-na-implementacao-do-regulamento-para-brinquedos



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Phthalates in Toys and Childcare Articles

Certain dangerous substances and preparations (phthalates in toys and childcare articles). No phthalates, including:

Chemical Name	CAS #
Butyl benzyl phthalate (BBP)	85-68-7
Dimethyl terephthalate (DMT)	120-61-6
Di-iso-decyl phthalate (DIDP)	26761-40-0
Dimethyl phthalate (DMP)	131-11-3
Di-n-hexyl phthalate (DnHP)	84-75-3
Bis(2-methoxyethyl) phthalate	117-82-8
Diheptyl phthalate (DHP)	3648-21-3
N-pentyl-isopentylphthalate	776297-69-9
Dipentyl phthalate	131-18-0
Di-isobutyl phthalate (DIBP)	84-69-5
Di-isononyl phthalate (DINP)	28553-12-0
Diethyl phthalate (DEP)	84-66-2
Di-n-octyl phthalate (DnOP)	117-84-0
Dibutyl phthalate (DBP)	84-74-2
Dipropyl phthalate	131-16-8
Di(2-ethylhexyl)phthalate (DEHP)	117-81-7
Isobutyl ethyl phthalate	94491-96-0

These products, therefore, meet the requirements of the Consumer Product Safety Improvement Act of 2008 and **EU Directive 2005/84/EC**

https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex:32005L0084

FDA - 21 CFR Parts 175, 176, 177, and 178 - May 20, 2022

https://www.fda.gov/food/food-ingredients-packaging/phthalates-food-packaging-and-food-contactapplications#:~:text=Phthalates%20are%20not%20authorized%20to,have%20been%20abandoned%20by%20industry. https://www.federalregister.gov/documents/2022/05/20/2022-10531/indirect-food-additives-adhesives-and-componentsof-coatings-paper-and-paperboard-components

Plasticizers

Plasticizers such as sebacates, adipates, terephthalates, dibenzoates, gluterates, azelates, epoxidized soybean oil (ESBO) are not intentionally added to this product.

Genetically Modified Organisms, GMO

Substances derived from Genetically Modified Organisms (GMO) are not intentionally added in this product. https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:32009L0041



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Genotoxic Substances

Substances that interact with DNA and may subsequently induce mutations are not intentionally added in these products.

Animal-Derived Materials (ADM) - Transmissible/Bovine Spongiform

Encephalopathy (BSE/TSE)

No animal-derived materials are used in the manufacture or formulation of these products. These products can be considered free from bovine spongiform encephalopathy (BSE) and other transmissible spongiform encephalopathies (TSE).

https://www.fda.gov/animal-veterinary/compliance-enforcement/bovine-spongiform-encephalopathy https://www.fda.gov/food/cfsan-constituent-updates/fda-announces-final-rule-bovine-spongiform-encephalopathy https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32001R0999&qid=1675135192884

Animal- Derived Substances - Kosher

No animal-derived materials are used in the manufacture or formulation of this product and as such no materials of porcine/pigs, fish, shellfish, rabbits, reptiles, blood, or derived from blood are used. No grape, grape-derived, ethanol, or ethanol-derived materials are used. Our suppliers have not made any efforts to certify these PE resins as Kosher or in compliance with Kosher guidelines. https://www.kashrusmagazine.com/

Animal- Derived Substances - Halal

No animal-derived materials are used in the manufacture or formulation of this product and as such no materials of ruminant animals (bovine/cattle, caprine/goat, ovine/sheep), non-ruminant animals (humans, insects, fish, porcine, poultry), blood, or derived from blood are used. No ethanol, ethanol-derived materials or fermented materials are used in the manufacture of this product. Our suppliers have not made any efforts to certify these PE resins as Halal or in compliance with Halal guidelines. *https://www.ushalalcertification.com/*



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<u>Allergens</u>

The allergens listed on Annex II of **Regulation (EU) No 1169/2011** and below are not intentionally added in this product:

- Cereals containing gluten, namely: wheat, rye, barley, oats, spelt, kamut or their hybridized strains, and products thereof
- Crustaceans and products thereof
- Eggs and products thereof
- Fish and products thereof
- Peanuts and products thereof
- Soybeans and products thereof
- Milk and products thereof (including lactose)
- Nuts, namely: almonds (Amygdalus communis L.), hazelnuts (Corylus avellana), walnuts (Juglans regia), cashews (Anacardium occidentale), pecan nuts (Carya illinoinensis (Wangenh.) K. Koch),
- Brazil nuts (Bertholletia excelsa), pistachio nuts (Pistacia vera), macadamia or Queensland nuts (Macadamia ternifolia), and products thereof
- Celery and products thereof
- Mustard and products thereof
- Sesame seeds and products thereof
- Sulphur dioxide and sulphites at concentrations of more than 10 mg/kg or 10 mg/L
- Lupin and products thereof
- Mollusks and products thereof

https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32011R1169&qid=1675128727186

Substances of Very High Concern, SVHC

These products do not contain Substances of Very High Concern (SVHC) as listed on the candidate list published by **ECHA**. These products do not contain substances restricted under **EU Regulation N° 1907/2006** - **REACH Annex XVII** (Restricted Substances List) and amendments or subject to authorization under Annex XIV (Authorization List).

Last update: January 17, 2023.

https://echa.europa.eu/-/echa-adds-nine-hazardous-chemicals-to-candidate-list https://echa.europa.eu/candidate-list-table https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32006R1907&qid=1675640634709



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Cosmetic Products

The following substances, as such, are not intentionally used or added:

- "Substances prohibited in cosmetic products" as listed in Annex II from EU Regulation N° 1223/2009 on cosmetic products of November 30, 2009.
- "Substances which cosmetic products must not contain except subject to the restrictions laid down" as listed in Annex III of EU Regulation N° 1223/2009 on cosmetic products, including amendments up to and including Commission EU Regulation N° 2022/135 of January 31, 2022.

In any case, **EC Regulation N° 1223/2009** does not apply to these products when they are used as raw materials for manufacturing cosmetic containers. *https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=celex%3A32009R1223*

Nanomaterials

These products are not nanomaterials and do not contain any intentionally added functional nanoparticles: **EU Regulation N° 2015/2283** on novel foods and **EU Regulation N° 1223/2009** on cosmetic products *https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32015R2283&qid=1675179634267*

Conflict Minerals

Neither tantalum, tin, gold, and tungsten nor the minerals associated with these metals (Columbite-Tantalite, Cassiterite, Gold, or Wolframite) are not intentionally added to these products because these mentioned substances are not necessary for their production. **EU Regulation 2017/821, and US Dodd–Frank Consumer Protection Act, section 1502.**

https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32017R0821 https://www.sec.gov/opa/Article/2012-2012-163htm---related-materials.html https://www.congress.gov/bill/111th-congress/house-bill/4173/text

Bisphenols Compounds

These products are not manufactured or formulated with the following bisphenol compounds, including but not limited to BPA, BPB, BPC, BPE, BPF, BPH, BPS, and BPZ. Our suppliers do not intentionally add BFDGE, BADGE, and NOGE to the composition of their products.:

Bisphenol Type	CAS #
Bisphenol A (BPA)	80-05-7
Bisphenol B (BPB)	77-40-7
Bisphenol F (BPF)	620-92-8
Bisphenol S (BPS)	80-09-1
Bisphenol-F-diglycidyl ether (BFDGE)	2095-03-6
Bisphenol-A-diglycidyl ether (BADGE)	1675-54-3
Novolac Glycidyl Ethers (NOGE)	158163-01-0
Tetrabromobisphenol-A	79-94-7



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As these substances are not intentionally added, our suppliers do not test for these substances in our products. **EC Regulation 1895/2005** of November 18, 2005 on the restriction of use of certain epoxy derivatives in materials and articles intended to come into contact with food. https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX%3A32005R1895

Endocrine Disruptors (Eds) or Endocrine Disruptor Chemicals (EDCs)

An endocrine disruptor is a compound have been shown to possess endocrine-disrupting properties with an ability to interfere in the actions of many hormones and to contribute to human health problems. Much of the reported disruptive activity has been in relation to the action of estrogens, androgens, and thyroid hormones, and concerns have been raised for adverse consequences on female and male reproductive health, thyroid function, metabolic alterations, brain development/function, immune responses, and development of cancers in hormone-sensitive tissues. These compounds for now are Bisphenol A (BPA), Dioxins, Atrazine, Phthalates, Perchlorate, Fire Retardants, Lead, Arsenic, Mercury, Perfluorinated Chemicals (PFCs) Organophosphate Pesticides and Glycol Ethers such as 2-butoxyethanol (EGBE) and methoxydiglycol (DEGME).

These compounds are not intentionally added to the manufacturing process of these products. The EU list is up to date at *April*, 2022.

https://edlists.org/the-ed-lists/list-i-substances-identified-as-endocrine-disruptors-by-the-eu

Our suppliers do not intentionally add alkylphenols or alkylphenol ethoxylates to these products, including Nonylphenol ethoxylates and Octylphenol ethoxylates.

Chemical Name	CAS #
Nonylphenol (NP)	25154-52-3
Nonylphenol Ethoxylate (NPE)	68412-53-3
Tris(nonylphenyl)phosphite (TNPP)	26523-78-4
Di(nonylphenyl)phenylphosphite (DNPP)	25417-08-7

TNPP (tris-nonylphenol phosphite) is an antioxidant widely used, however, now it is less used because a byproduct of TNPP is nonyl phenol (NP), generated by the hydrolysis of TNPP, which are considered to be endocrine disrupter.

Dyes, Colorants, Pigments, Fillers

These products are not manufactured or formulated with carbon black, dyes, inks, or pigments, including azo colorants and azodyes. Fillers such as Talc, Calcium Carbonate, Silica, and Fibers are not included in the composition of these products.



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Latex

Natural rubber latex (NRL), dry natural rubber (DRL), synthetic latex, or rubber that contains natural rubber are not intentionally added to the manufacturing process of these products.

Polycyclic Aromatic Hydrocarbons (PAHs)

Our suppliers do not intentionally add or use any of the following Polycyclic Aromatic Hydrocarbons (PAH) during the manufacturing of our products:

Polycyclic Aromatic Hydrocarbons (PAH)	CAS #
9H-Fluorene	86-73-7
Acenaphthene	83-32-9
Acenaphthylene	208-96-8
Anthracene	120-12-7
Benzo(a)anthracene	56-55-3
Benzo(a)pyrene	50-32-8
Benzo(b)fluoranthene	205-99-2
Benzo(e)pyrene	192-97-2
Benzo(ghi)perylene	191-24-2
Benzo(j)fluoranthene	205-82-3
Benzo(k)fluoranthene	207-08-9
Chrysene	218-01-9
Dibenzo(ah)anthracene	53-70-3
Indeno(1,2,3-cd) pyrene	193-39-5
Fluorene	86-73-7
Fluoranthene	206-44-0
Naphthalene	91-20-3
Pyrene	129-00-0
Phenanthrene	85-01-8

Increased incidences of lung, skin, and bladder cancers are associated with occupational exposure to PAHs. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32011R0835

Persistent Organic Pollutants (POPs) - International Stockholm Convention

Persistent Organic Pollutants (POPs) are substances which are highly stable in the natural environment, accumulate in the bodies of animals and are toxic.

Our suppliers comply with the provisions of **EU Regulation N° 2019/1021** of the European Parliament and of the Council of June 20, 2019, on persistent organic pollutants and all amendments up to **EU Regulation 2021/277** of December 16, 2020. Our suppliers do not intentionally add or use persistent organic pollutants (POPs) during the manufacture of this product.



Chemical Name	CAS #	Use
Tetrabromodiphenyl ether 1)	40088-47-9	Flame-retardant, enclosures, circuit boards
Pentabromodiphenyl ether 1)	32534-81-9	Flame-retardant, enclosures, circuit boards; industrial
Hexabromodiphenyl ether 1)	36483-60-0	Flame-retardant, enclosures, circuit boards
Heptabromodiphenyl ether 1)	68928-80-3	Flame-retardant, enclosures, circuit boards; industrial
Bis(pentabromophenyl) ether, Deca- bromodiphenyl ether (decaBDE) 1)	1163-19-5	Flame-retardant, enclosures, televisions, textiles, carpets
Perfluorooctane sulfonic acid and derivatives (PFOS)	Several	Many applications; printed circuit boards, water repellant /stain resistant coatings, textiles, leather, carpet, coatings and paint, adhesives, paper(board) and fire fighting foams
DDT	50-29-3	Pesticide
Chlordane	57-74-9	Pesticide, insecticide
Hexachlorocyclohexanes (HCH) including lindane	58-89-9	Pesticide, insecticide; unintentional by-product
Dieldrin	60-57-1	Agricultural; Pesticide
Endrin	72-20-8	Pesticide
Heptachlor	76-44-8	Pesticide, termiticide, wood treatment, underground cable boxes
Endosulfan	Several	Pesticide, insecticide
Hexachlorobenzene (HCB)	118-74-1	Solvent in pesticides, fungicide, fireworks, by-product industrial processes
Chlordecone	143-50-0	Pesticide
Aldrin	309-00-2	Pesticide, insecticide
Pentachlorobenzene (PeCB)	608-93-5	Industrial; fire-retardant; unintentional by-product
Polychlorinated biphenyls (PCB)	1336-36-3	Industrial; paints, kits, oils, electrical equipment, coolant fluids, insulating fluids, plasticisers
Mirex	2385-85-5	Insecticide, termiticide, flame-retardant
Toxaphene	8001-35-2	Pesticide
Hexabromobiphenyl (HBB) 1)	36355-01-8	Industrial, flame-retardant, electronic equipment
Hexabromocyclododecane (HBCDD)	Several	Flame-retardant, most commonly used for expanded polystyrene (EPS)
Hexachlorobutadiene (HCBD)	87-68-3	Industrial (by-product); solvents, synthetic rubbers
Pentachlorophenol and its salts and esters	87-86-5	Insecticide, herbicide, fungicides, leather and wood preservative. Residues can be found in textiles, leather, wood and paper in products.
Polychlorinated naphtalenes (PCN)	70776-03-3	Many industrial applications; capacitors, additives, cable insulators, preservatives
Alkanes C10-C13, chloro (short- chain chlorinated paraffins) (SCCP)	85535-84-8	Many applications; lubricants, metalworking, (artificial) leather, flame- retardants, softeners, plasticisers, sealants, coolants, paints, coatings



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Perfluorooctanoic acid (PFOA), its salts and PFOA-related compounds	335-67-1	Many applications for heat resistance and water/oil/dirt repellency; applied in textiles, fabrics, apparel, carpets, sealants, paper, cookware.
Dicofol	115-32-2	Pesticide

Exposure to POPs can lead to cancer, endocrine disruption, reproductive and immune dysfunction, and neurobehavioral and developmental disorders.

https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX%3A32019R1021 https://echa.europa.eu/en/list-of-substances-proposed-as-pops http://chm.pops.int/TheConvention/ThePOPs/AllPOPs/tabid/2509/Default.aspx https://search.epa.gov/epasearch/?querytext=POPs&areaname=&areacontacts=&areasearchurl=&typeofsearch=epa&res ult_template=&referer=https%3A%2F%2Fwww.epa.gov%2Fhome%2Fpage-not-found#/

Perfluoroalky and Polyfluoroalkyl Substances (PFASs)

Our suppliers do not intentionally add or use any of the following compounds during the manufacture of these products:

Chemical Name	CAS #
Perfluorooctanoic Acid (PFOA)	335-67-1
Perfluorooctane Sulfonate (PFOS)	1763-23-1
Ethyl perfluorooctane Sulfonamide	4151-50-2
Perfluoro-n-butyric Acid,	375-22-4
Perfluorooctane Sulfonamide	754-91-6
Pentafluoropropionic Acid/ Silver	422-64-0
pentafluoropropionic Acid	509-09-1
Perfluorononanoic Acid (PFNA)	375-95-1
Perfluoropentanoic Acid	2706-90-3
Perfluorodecane Sulfonate	126105-34-8
Perfluorohexane Sulfonic Acid (PFHxS)	355-46-4
Perfluorodecanoic Acid	335-76-2
Perfluoroheptanoic Acid	375-85-9
Perfluorododecanoic Acid	307-55-1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA) -"GenX Chemicals"	13252-13-6
HFPO-DA Ammonium Salt - "GenX Chemicals"	62037-80-3

A growing body of science has found that there are potential adverse health impacts associated with PFAS exposure, including liver damage, thyroid disease, decreased fertility, high cholesterol, obesity, hormone suppression and cancer. PFOS has been restricted in the EU under the EU's Persistent Organic Pollutants (POPs) Regulation.

https://comptox.epa.gov/dashboard/chemical-lists/PFASMASTER/ https://echa.europa.eu/hot-topics/perfluoroalkyl-chemicals-pfas



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Pesticides

These products are not intended for use as a pesticide and are not listed in the Annex "Active Substances Approved For Use In Plant Protection Products (i.e. fungicides, insecticides, plant growth regulators, rooting hormones, preserving plant products, herbicides, weed killers ...) of the Commission Regulation No 540/2011 implementing **Regulation (EC) No 1107/2009** as regards the list of approved active substances. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32009R1107

Halogenated Flame Retardants, HFR

Bromine, chlorine, fluorine and iodine, are the elements in the chemical group known as halogens. Halogenated flame retardants act directly on the flame, the core of the fire.

Flame retardants are found at increasing levels in household dust, human blood and breast milk, and wild animals. The chemicals are widely distributed in the outdoor environment with the highest concentrations in the Arctic and marine mammals.

Many halogenated flame retardants are found to be persistent, bioaccumalative and/or toxic (PBT). 'Persistent' means that the compounds do not break down into safer chemicals in the environment through time, probably, in the case of fire retardants, many years.'Bioaccumalative' means that the compounds accumulate in plants and animals and become more concentrated as they move up the food chain.

Most research into the effects on human health of fire retardants has concentrated on brominated FR. Chlorinated fire retardants are currently considered 'safer'.

Effects of brominated FR:

- No acute toxicity
- Chronic toxicity
 - Endocrine disruption effecting neurodevelopment and reproductive systems
 - Immune suppression
 - Carcinogencity

The following types of brominated flame retardants are not intentionally used by our suppliers in these products:

Brominated FR	CAS Number
Decabromodiphenyl ether (DecaBDE)	1163-19-5
All other Polybrominated diphenyl ethers (PBDE)	Various
Tetrabromobisphenol A (TBBP A)	79-94-7
Polybromobiphenyls (PBB)	59536-65-1
Hexabromocyclododecane (HBCDD)	3194-55-6
2,2-bis(bromomethyl)-1,3-propanediol (BBMP)	3296-90-0
Tris(1,3-dichloro-isopropyl) phosphate (TDCPP)	13674-87-8
Trixylyl phosphate (TXP)	25155-23-1
Tris(2,3,-dibromopropyl) phosphate (TRIS)	126-72-7
Tris(1-aziridinyl)phosphine oxide) (TEPA)	545-55-1



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Tris(2-chloroethyl)phosphate (TCEP)	115-96-8
Bis(2,3-dibromopropyl) phosphate (BDBPP)	5412-25-9

Global Automotive Declarable Substance List - GADSL

These products do not have any of the chemicals listed as Declarable or Prohibited on the Global Automotive Declarable Substance List at or above 0.1%. Last Update: January 1, 2020. https://www.gadsl.org/

Recycled Materials

No external sources of mechanical recycled postconsumer plastic materials are used in the manufacture of above products.

Microplastics

These products are delivered in pellet form, not powder form, to avoid contamination by microplastics.

Non-Intentionally Added Substances, NIAS

EU Commission Regulation N° 10/2011 notes that not all contaminants and reaction products of authorised monomers and additives can be listed in its Annex I. The identification of non-listed migrants may therefore not be an exclusion criterion in itself. However, a toxicological evaluation of these migrants needs to be performed.

The major fractions of NIAS in Polyolefins are the oligomers, which are unavoidably formed during polymerisation and cannot be removed. A recent joint study of polyolefin producers demonstrated that oligomers migrating from all types of polyolefins only consist of linear and branched alkanes (*Polyolefin oligomeric saturated hydrocarbons*, POSH) and alkenes (*Polyolefin Oligomeric Mono-unsaturated Hydrocarbons, POMH*), no cyclic or aromatic compounds were found. The toxicological assessment of such migrants concluded that they are sufficiently characterised by the existing overall migration limit.



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Absence of Substances and Chemicals

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

Chemical Name	CAS #
1,1,1-Trichloroethane	71-55-6
1,1,2,2-Tetrachloroethane	79-34-5
1,1,2-Trichloroethane	79-00-5
1,2-Dichloroethane	107-06-2
2-(2-Hydroxy-3,5-di-tert-butylphenyl) benzotriazole	3846-71-7
2,3,7 8-Tetrachlorodibenzo-para-dioxin	1746-01-6
2,2-bis(4-hydroxyphenyl) propane bis(2,3-epoxypropyl) ether (BADGE)	1675-54-3
2,4 and/or 2,6-Toluene diisocyanate	584-84-9; 91-08-7
2,4,6-tris(tert-butyl) phenol	732-26-3
2-Bromopropane	75-26-3
2-Ethoxyethanol and 2-Ethoxyethanol acetate	110-80-5;111-15-9
2-Ethoxy-1-propanol (β-isomer)	9089-47-5
2-Ethyl hexyl acrylate (2-EHA)	103-11-7
2-Methoxy-1-propanol	107-98-2
2-Methoxyethanol	109-86-4
2-Methoxyethanol Acetate	110-49-6
2-Naphtylamine + Salts	91-59-8
4-Aminodiphenyl	92-67-1
4-Nitrobiphenyl +Salts	92-93-3
4-Nitrotoluene	99-99-0
4,4-Tetramethyldiamino benzophenone (Michler's Ketone)	90-94-8
Abietic Acid	64-19-7
Acetylacetone	123-54-6
Acetyltributylcitrate	77-90-7
Acrylamide	79-06-1
Acrylonitrile or acrylonitrile co-polymers	107-13-1
Aldrin	309-00-2
Aminobiphenyl (4-) + Salts	92-67-1
Antimony Trioxide	1309-64-4
Aromatic Amines	n/a
Asbestos	1332-21-4
Azodicarbonamide (ADA)	123-77-3
Azo compounds	n/a
Benzene	71-43-2
Benzenamine, 2-ethyl-N-(2-ethylphenyl)-,(tripropenyl) derivs.	68608-77-5
Benzenamine, 4-(1,1,3,3-tetramethylbutyl)-N-[4-(1,1,3,3-tetramethylbutyl) phenyl]	15721-78-5
Benzenamine, 4-(1-methyl-1-phenylethyl)-N-[4-(1-methyl-1-phenylethyl) phenyl]	10081-67-1
Benzenamine, 4-nonyl-N-(4-nonylphenyl)	24925-59-5
Benzenamine, 4-octyl-N-(4-octylphenyl)	101-67-7
Benzenamine, 4-octyl-N-phenyl	4175-37-5



Benzenamine, ar-nonyl-N-(nonylphenyl)	36878-20-3
Benzenamine, ar-octyl-N-(octylphenyl)	26603-23-6
Benzenamine, ar-nonyl-N-phenyl-	27177-41-9
Benzamine, N-phenyl-, (tripropenyl) derivs.	68608-79-7
Benzenamine, N-phenyl-, reaction products with2,4,4-trimethylpentene	68411-46-1
Benzenamine, N-phenyl-, reaction products with isobutylene and 2,4,4- trimethylpentene	184378-08-3
Benzenamine, N-phenyl-, styrenated	68442-68-2
Benzidine (+ salts)	92-87-5
Benzothiazolinone (BIT)	2634-33-5
Biocides (Pesti-, Herbi-, Insecti-, Fungi-, Bactericides) and other Fumigants, including Kathon CG and Kepone	n/a
Bis(chloromethyl)ether (BCME)	542-88-1
Bromide/Bromine	7726-95-6, 24959-67-9
Butylated Hydroxytoluene (BHT)and Tertiary butylhydroquinone (TBHQ)	
Butylglycidylether (BGE)	2426-08-6
Butylated Hydroxyanisole (BHA)	25013-16-5
Cellulose Acetate	9004-35-7
Ceramic Fibers	n/a
Chlorine	7782-50-5
Chlorinated Paraffins, Chlorinated Hydrocarbons	63449-39-8
Chlorocresol (meta-) and (ortho-)	59-50-7
Chloroform	67-66-3
Clorodifluorometano	75-45-6
Chloromethylisothiazolinone (CIT)	26172-55-4
Chromic Acid	7738-94-5
Colophony (rosin) and its derivatives	8050-09-7
Creosote	8001-58-9
Cyanuric Acid	108-80-5
Deca-bromodiphenylether (DBDE)	1163-19-5
Dechlorane A	13560-88-9
Dimethyl di(hydrogenated tallow) ammonium chloride (DHTDMAC)	61789-80-8
Diacetyl	431-03-8
Dichloromethane	75-09-2
Dieldrin	60-57-1
Di(ethylhexyl) adipate (DEHA), diethyl hydroxyl amine (DEHA), or di(ethylhexyl)maleate (DEHM)	n/a
Dimethylformamide	68-12-2
Dimethylfumarate (DMF)	624-49-7
Difurans, Dioxins and Furans	n/a
Endrin	72-20-8
Epichlorohydrin	106-89-8
Ethylene Glycol	107-21-1
Ethylene Oxide	75-21-8
	10210



Epoxy derivatives listed in EU Directives 2002/16/EC and 1895/2005	n/a
Epoxidised Soybean Oil	8013-07-8
Formaldehyde - not intentionally added, but a known thermal degradation product of polyolefins under extreme conditions	50-00-0
Fragrances	n/a
Glycol Ethers (EGME, EGMEA, EGDME, EGEE, EGEEA, EGDME, DEGME, DEGDME, TEGDME, 1PG2ME and 1PG2MEA)	109-89-4;110-49-6 110-80-5; 110-71-4; 111- 1 5-9, 111-96-6; 111-77- 3; 112-49-2, 1589-47-5, 70657-70-4
Hexabromobiphenyls	36355-01-8
Heptachlor	76-44-8
Hexabromocyclododecane (HBCDD)	25637-99-4
Hexachlorobenzene	118-74-1
Hexachlorobutadiene	87-68-3
Hexafluoropropylene (HFP)	116-15-4
Hexamethylene-1,6-diisocyanate	822-06-0
Hydrobromofluorocarbons (HBFCs)	n/a
Hydrochlorofluorocarbons	n/a
Hydrofluoric Acid (HF)	7664-39-3
Hydrofluorocarbons (HFCs)	n/a
Indeno (1,2,3-cd) pyrene	193-39-5
Limonene	138-86-3
Methyl-di-p-phenylene isocyanate (MDI)	101-68-8; 9016-87-9
Melamine; Melamine Cyanuric acid	108-78-1; 37640-57-6
Methylbromide	74-83-9
Methylchloroform	71-55-6
Methylisothiazolinone (MIT)	2682-20-4
Methylenedianiline (4,4 ⁻ -)	101-77-9
Methylglycol	109-86-4
Michler's ketone · 4,4'-Bis(dimethylamino)-benzophenone	90-94-8
Mirex	2385-85-5
Mineral Oil Saturated Hydrocarbons (MOSH) or Mineral Oil Aromatic Hydrocarbons (MOAH)	n/a
N-butylbenzene	104-51-8
Nitrosamines, N-nitrosamines/N-nitrosamides	n/a
Organoarsenic Compounds	n/a
Ortho-anisidine	90-04-0
Organophosphate Flame Retardants (e.g. TCPP, TCEP, TDCP)	n/a
Organotin Compounds	n/a
Palm Oil, Coconut Oil and Palm Kerner Oil or its derivatives	n/a
Parabens (Methylparaben, Ethylparaben, Propylparaben, Butylparaben)	99-76-3; 120-47-8; 94- 13-3; 94-26-8
Pentachlorothiophenol	133-49-3



Phenol, isopropylated phosphate (3:1)	68937-41-7
Photoinitiators, including Benzophenone, hydroxybenzophenones, and 4-	
methylbenzophenone, and Isopropylthioxanthone (ITX)	119-61-9
Polybrominated Diphenyl Ethers (PBDEs) included: decaBDE, octaBDE, and pentaBDE	1163-19-5, 32536-52-0
Polychlorinated Bi-, Terphenyls and Naphthalenes: e.g. Pentachlorophenol [PCP], Phenyl-b-naphthylamine, Naphthylamine, Polychlorinatedbiphenyls [PCB] Polychlorinatednaphthalene [PCN] and Polychlorinatedterphenyls [PCT]	l, 135-88-6, 956-90-1
Radioactive Substances	n/a
Polycarbonate	25037-45-0
Polydimethylsiloxane (PDMS)	63148-62-9
Polystyrene	9003-53-6
Pyroxylin (Nitrocellulose)	9004-70-0
Polyacrylonitrile	25014-41-9
Primary Aromatic Amines (PAA)	n/a
Resorcinol	108-46-3
Semicarbazide	57-56-7
Silicon	7440-21-3
Silicone (silicone rubber, silicone oil)	63394-02-5; 63148-62-9
Strontium Chromate	7789-06-2
Styrene	100-42-5
Sulfonamides	n/a
Sulfur dioxide	7446-09-5
Sulfur hexafluoride	2551-62-4
Radioactive Substances	n/a
Tartrazine	1934-21-0
Tert -butyl Hydroquinone = Tertiary butylhydroquinone (TBHQ)	1948-33-0
Tetrachloroethylene	127-18-4
Tetrachlorophthalicanhydride (TCPA)	117-08-8
Thiocarbamide	62-56-6
Tetrahydrofuran	109-99-9
Thiocyanic acid (2-benzothiazolythiomethylester) (TCMTB)	21564-17-0
Thiram (TMTD)	137-26-8
Titanium Acetylacetonate (TAA)	17501-79-0
Toluidine (p- and o-)	106-49-0; 95-35-4
Toluene	108-88-3
Toxaphene	8001-35-2
Trichloroethylene	79-01-6
Triclosan o 5-chloro-2-(2,4-dichlorophenoxy) phenol	3380-34-5
Triglycerin	56090-54-1
UV-hardeners (e.g. ITX, Titanyl-acetylacetone)	5495-84-1, 14024-64-7
Vinyl Chloride Monomer (VCM) and Polyvinyl Chloride (PVC) or copolymers	75-01-4, 9002-86-2
Vinylidene Chloride	75-34-5
Vinylidene Fluoride (1,1-Difluoroethylene)	75-38-7

Regulatory Data Sheet (RDS)

Tricolene[®] LMDPE Linear Medium Density Polyethylene



Volatile Organic Compounds, VOC	n/a
Xylene	1330-20-7
Yellow phosphorous	12185-10-3