TYRIL™ 790 Crystone Styrene-Acrylonitrile Resin

Product Information

Allergens

To the best of our knowledge, there are no raw materials, including additives, that have their origin in peanuts, soybeans, milk, eggs, fish, shellfish, tree nuts, and/or wheat or gluten. This evaluation is based on information provided by our raw material and additive suppliers. Therefore, although we believe this product to be free of the specified known allergy stimulating food substances, we cannot guarantee this.

Animal Derived Components

To the best of our knowledge, this product is not intentionally manufactured or formulated with ingredients of animal origin.

Conflict Minerals

Trinseo does not use conflict minerals in manufacturing its products. Conflict minerals are not necessary to the "functionality or production" of our products. Based on the information we have to date, we are not aware of any conflict minerals sourced from the DRC or adjoining countries in our supply chain.

Global Chemical Inventory Compliance

This product is a mixture, all of the ingredients are on or not required to be listed on the following Global Inventories: Australia - AICS (Australia Inventory of Chemical Substances), Canada - DSL (Domestic Substances List), China - IECSC (Inventory of Existing Chemical Substances in China), Europe - EINECS (European Inventory of Existing Chemical Substances)/ELINCS (European List of Notified Chemical Substances), Japan - ENCS (Existing and New Chemical Substances), Japan - ISHL (Industrial Safety and Health Law), Korea - KECL (Korean Existing Chemicals List), New Zealand - NZLoC (New Zealand Inventory of Chemicals), Philippines - PICCS (Philippine Inventory of Chemicals and Chemical Substances) and U.S. - TSCA (Toxic Substances Control Act).

Heavy Metals & CONEG

The heavy metals Cadmium, Lead, Mercury and Hexavalent Chromium are not used in the formulation of this material.

Samples, representative of the above named product have been analysed for the presence of above named elements. These substances could not be detected. The sensitivity of the methods used for the analysis is 5 ppm.

Persistent Organic Pollutants (POPs)

In response to your request for information regarding chemicals listed by the Stockholm Convention on Persistent Organic Pollutants (POPs Treaty), the above mentioned product is not manufactured or formulated with the below substances which are currently listed in Annex A, B and C on the following website: http://chm.pops.int/Convention/ThePOPs/tabid/673/language/en-US/Default.aspx.

- Aldrin
- Alpha hexachlorocyclohexane
- Beta hexachlorocyclohexane
- Chlordane
- Chlordecone
- DDT

- Dieldrin
- Endrin
- Heptabromodiphenyl ether
- Heptachlor
- Hexabromobiphenyl
- Hexabromodiphenyl ether
- Hexachlorobenzene (HCB)
- Lindane
- Mirex
- Pentabromodiphenyl ether
- Pentachlorobenzene
- Perfluorooctane sulfonic acid, its salts
- Perfluorooctane sulfonyl fluoride
- Polychlorinated biphenyls (PCB)
- Polychlorinated dibenzofurans (PCDF)
- Polychlorinated dibenzo-p-dioxins (PCCD)
- Technical endosulfan and its related isomers
- Tetrabromodiphenyl ether
- Toxaphene

Substances/Compounds

This product is not intentionally manufactured or formulated with the below substances or compounds; however, we do not analyze for these specific substances or compounds.

• Asbestos

• Azo colorants containing certain amines

− o-anisidine (CAS # 90-04-0)

− 2-naphthylamine (CAS # 91-59-8)

− 3,3'-dichlorobenzidine (CAS # 91-94-1)

− Biphenyl-4-ylamine (CAS # 92-67-1)

− Benzidine (CAS # 92-87-5)

− o-toluidine (CAS # 95-53-4)

− 4-chloro-o-toluidine (CAS # 95-69-2)

− 4-methyl-m-phenylenediamine (CAS # 95-80-7)

− o-aminoazotoluene (CAS # 97-56-3)

− 5-nitro-o-toluidine (CAS # 99-55-8)

− 4,4'-methylene-bis-(2-chloroaniline) (CAS # 101-14-4)

− 4,4'-methylenedianiline (CAS # 101-77-9)

− 4,4’-oxidianiline (CAS # 101-80-4)

− 4-chloroaniline (CAS # 106-47-8)

− 3,3’-dimethoxybenzidine (CAS # 119-90-4)

− 3,3’-dimethylbenzidine (CAS # 119-93-7)

− 6-methoxy-m-toluidine (CAS # 120-71-8)

− 2,4,5-trimethylaniline (CAS # 137-17-7)

− 4,4'-thiodianiline (CAS # 139-65-1)

− 4-methoxy-m-phenylenediamine (CAS # 615-05-4)

− 4,4’-methylenedi-o-toluidine (CAS # 838-88-0)

− 4-amino azobenzene (CAS # 60-09-3)

− A mixture of: disodium (6-(4-anisidino)-3-sulfonato-2-(3,5-dinitro-2-oxidophenylazo)-1-naphtholato)(1-(5-chloro-2-oxidophenylazo)-2-naphtholato)chromate(1-); trisodium bis(6-(4-anisidino)-3-sulfonato-2-(3,5-dinitro-2-oxidophenylazo)-1-naphtholato)-chromate(1-)

• Organostannic compounds

− Dibutyltin (DBT)

− Dioctyltin (DOT)

− Tributyltin oxide (TBTO)

− Tributyltin (TBT)

− Triphenyltin (TPT)

• Phthalates

− Butyl benzyl phthalate (BBP) (CAS # 85-68-7)

− Dibutylphthalate (DBP) (CAS # 84-74-2)

− Bis(2-ethylhexyl) phthalate (DEHP) (CAS # 117-81-7)

− Di-iso-decyl phthalate (DIDP) (CAS # 68515-49-1, 26761-40-0)

− Di-isononyl phthalate (DINP) (CAS # 28553-12-0, 68515-48-0)

− Di-n-octyl phthalate (DnOP) (CAS # 117-84-0)

− Diisobutyl phthalate (DIBP) (CAS # 84-69-5)

− Di-n-hexyl phthalate (DNHP) (CAS # 84-75-3)

− 1,2-Benzenedicarboxylic, di-C6-8-branched alkyl esters,C7-rich (DIHP) (CAS # 71888-89-6)

− 1,2-Benzenedicarboxylic, di-C7-11-branched and linear alkyl esters (DHNUP) (CAS # 68515-42-4)

− Bis(2-methoxyethyl) phthalate (DMEP) (CAS # 117-82-8)

- n-Pentyl-isopentylphthalate (CAS # 84777-06-0)
- Di-n-pentyl phthalate (DPP) (CAS # 131-18-0)
- Diisopentylphthalate (DIPP) (CAS # 605-50-5)

• Monomethyl-dibromo-diphenyl methane bromobenzylbromotoluene, mixture of isomers (DBBT) (CAS# 99688-47-8)
• Monomehtyl-dichloro-diphenyl methane (Ugilec 121)
• Monomethyl-tetrachloro-diphenyl methane (Ugilec 141) (CAS # 76253-60-6)
• Polychlorinated biphenyls (PCBs)
• Polychlorinated terphenyls (PCTs)
• Tris(aziridinyl)phosphinoxide (TEPA) (CAS# 545-55-1)
• Tris (2,3-dibromopropyl) phosphate (TRIS) (CAS# 126-72-7)
• Tris (aziridinyl) phosphinoxide (CAS # 545-55-1)
• Tri-o-cresyl phosphate (CAS # 78-30-8)
• Tris(2-chloroethyl) phosphate (CAS # 115-96-8)
• Tris (1,3-dichloro-2-propyl) phosphate (CAS # 13674-87-8)
• Tris(2-chloro-1-methylethyl) phosphate (CAS # 13674-84-5)
• Polycyclic Aromatic Hydrocarbons (PAHs)

- Acenaphthylene (CAS # 208-96-8)
- Acenaphthene (CAS # 83-32-9)
- Anthracene (CAS # 120-12-7)
- Benzo[a]anthracene (CAS # 56-55-3)
- Benzo[a]phenanthrene or chrysene (CAS # 218-01-9)
- Benzo[a]pyrene (CAS # 50-32-8)
- Benzo[b]fluoranthene (CAS # 205-99-2)
- Benzo[e]pyrene (CAS # 192-97-2)
- Benzo[g,h,i]perylene (CAS # 191-24-2)
- Benzo[j]fluoranthene (CAS # 205-82-3)
- Benzo[k]fluoranthene (CAS # 207-08-9)
- Benzo[j,k]fluorene or fluoranthene (CAS # 206-44-0)
- Dibenzo[a,h]anthracene (CAS # 53-70-3)
- Fluorene (CAS # 86-73-7)
- Indeno[1,2,3-cd]pyrene (CAS # 193-39-5)
- Naphthalene (CAS # 91-20-3)
- Phenanthrene (CAS # 85-01-8)

− Pyrene (CAS # 129-00-0)
• Dimethylfumarate (DMF) (CAS # 624-49-7)
• Pentachlorophenol (PCP) (CAS # 87-86-5)
• 1,2,4-Trichlorobenzene
• Formaldehyde (CAS # 50-00-0)
• Lead and its compounds
• Ozone depleting substances (ODS)
• Perfluorooctane sulfonates (PFOS) and PFOS salts
• Perfluorooctanic acid (PFOA) and esters
• Sulfur hexafluoride
• Polychlorinated and polybrominated dioxins and furans
• Radioactive substances
• Polychlorinated naphthalenes
• Short-chain chlorinated paraffins,C10-13 (SCCPs)
• Nonylphenols and Nonylphenol ethoxylates
• Antimony and its compounds
• Antimony trioxide
• Arsenic and its compounds
• Beryllium and beryllium oxide
• Nickel and its compounds
• Brominated flame retardants
• Chlorinated flame retardants
• Polyvinyl chloride (PVC) and PVC blends
• Fluorinated greenhouse gases
− Perfluorocarbon (PFC)
− Hydrofluorocarbon (HFC)
− Sulfuric fluoride (CAS # 2551-62-4)
• Hexabromocyclododecane (HBCDD)
• Natural Rubber Latex (CAS # 9006-04-6)
• 2-(3',5'-Di-tert-butyl-2'-hydroxyphenyl)benzotriazole (CAS# 3846-71-7)
• Perchlorates
• Bisphenol-A (CAS # 80-05-7)

North America Regulations

FDA Food Contact Status

Food Additive Regulation 21 CFR 181.32 provides for the use of acrylonitrile copolymers, such as this resin, as articles or components of articles intended for use in contact with food with certain prescribed conditions. An important condition is that tests be performed using the finished food-contact article in order to determine acrylonitrile monomer extraction.

In the case of styrene-acrylonitrile copolymers for repeated-use, the limitation for acrylonitrile extraction for finished food-contact articles is 0.003 mg/square inch when extracted at a time equivalent to initial batch usage utilizing food-simulating solvents and temperatures appropriate to the intended conditions of use.

Trinseo has conducted extraction studies using laboratory test specimens exposed to food simulating solvents. We have concluded that this resin will comply with 21 CFR 181.32(a)(3)(ii) when used in rigid and semi-rigid food-contact articles at temperatures below 212° F.

The uses cited above are subject to good manufacturing practices and any limitations, which are part of the regulations. The regulations should be consulted for complete details.

Europe Regulations

CMR Substances

To the best of our knowledge, this product in the form as supplied by Trinseo does not contain substances classified as carcinogenic, mutagenic or toxic for reproduction of category 1A, 1B or 2 according to the criteria of Regulation (EC) No. 1272/2008, above the threshold concentrations defined in sections 3.5.3.1, 3.6.3.1 and 3.7.3.1 of Annex I.

We kindly remind you that for information on the components of our products and their concentration, you can refer to the Safety Data Sheet (SDS) and the Sales Specification. Any hazardous constituent at or above 1% (by weight) and any special hazardous substance with a lower reporting threshold (e.g. substances classified as carcinogens of category 1 and 2 in Europe) will appear in the ingredients section of the SDS for these products as required. If you are not sure that you are in possession of the latest version of a European Safety Data Sheet for the product(s) of interest to you, please contact the Trinseo Customer Information Group at CIG@trinseo.com.

94/62/EC Packaging and Packaging Waste

EU-Directive 94/62/EC on packaging and packaging waste, “Essential re-quirements”, including updates (Directive 2015/720/EU of 29 April 2015), enacted in the EU Member States, requires that packaging placed on the market conforms to a number of essential requirements. This information is provided in order to support the assessment of the conformity of materials and components used in packaging.

1 - Heavy metals (Article 11)

The heavy metals lead, cadmium, mercury and hexavalent chromium have not been intentionally added to the above mentioned resins. Representative samples have been analysed for the presence of above named elements. These substances could not be detected. The sensitivity of the methods used for the analysis is 5 ppm. The above named product complies with the concentration levels of heavy metals specified in Article 11, item 1 of this EU-Directive.

2 - Essential Requirements (Article 9, Annex II)

The above named resin is manufactured such that the essential requirements of Annex II which relate to the composition of materials used for the manufacture of packaging can be met. Clean and uncontaminated waste from this resin can be recovered in the form of material recycling. The resin is suited for energy recovery.

Recovery of these polymers via composting or biodegradation is not possible.

2000/53/EC End of Life Vehicle

The EU Directive 2000/53/EC (as amended by 2013/28/EU on 17 May 2013) lays down measures which aim, as a first priority, at the prevention of waste from vehicles and, in addition, at the reuse, recycling and other forms of recovery of end-of life vehicles and their components so as to reduce the disposal of waste.

This product is not formulated with lead, mercury, cadmium or hexavalent chromium. We do not routinely analyse for these heavy metals, nor are they known to be present above the reporting threshold.

REGULATION (EC) No 1005/2009 Ozone Depleting Substances

This product is not formulated with ozone depleting substances as defined in Annex I and II of REGULATION (EC) No 1005/2009 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 September 2009. (as amended by Commission Regulation (EU) No 744/2010 of 18 August 2010 and Commission Regulation (EU) No 1087/2013 and 1088/2013 of 4 November 2013).

EU Toy Directive 2009/48/EC

The DIRECTIVE 2009/48/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 18 June 2009 on the safety of toys (Amended by: Commission Regulation (EU) No 84/2014 of 30 June 2014) is applicable for toys. This product is a polymer resin, which is not directly covered by this legislation.

The only relevant part for resin producer is Annex II section III. Chemical Properties and Appendix B Classification of Substances and Mixtures.

The product is not classified as described in Appendix B.

The product does not containing Substances as listed in Annex II section III section 11, 12 and 13.

EU Food Contact

The composition of this product complies with the requirements for use in contact with food according to the COMMISSION REGULATION (EU) No 10/2011. Contact us to obtain a detailed food contact compliance letter for this product. Such a letter covers the food contact status in the various European Countries and in addition gives information about the imposed migration requirements.

REACH

For information regarding REACH and SVHC (Substances of Very High Concern), please contact FTNSTPS@trinseo.com.

REACH Annex XVII

To the best of our knowledge this product is not intentionally manufactured or formulated with the compounds or substances listed in Annex XVII, Restrictions on the Manufacture, Placing on the market and Use of certain dangerous substances, mixtures and articles, of REGULATION (EC) No 1907/2006 as amended (including Commission Regulation (EU) 326/2015 of 02 March 2015).

For information on the components of our product(s) and their concentration, please refer to the Safety Data Sheet (SDS) and the Sales Specification. Hazardous constituents will be listed in the Composition Section of the SDS for this product if present at levels of 1% or above (by weight), or at any lower levels as required by applicable legislation (including but not limited to carcinogens, mutagens, reproductive toxicants and sensitizers). In addition, consult the Hazardous Decomposition Products section of the SDS and the Sales Specification for further information.

Trinseo does not routinely analyze for additional materials that are not listed in the SDS or Sales Specification.

RoHS

To the best of our knowledge, this product is not intentionally manufactured or formulated with the following substances listed in Article 4(1) of the EU Directive 2011/65/EC (RoHS (last amended by COMMISSION DELEGATED DIRECTIVE (EU) 1028/2016 and 1029/2016 of April 19, 2016)):

- Heavy metals (like cadmium, hexavalent chromium, lead and mercury)
- Polybrominated Biphenyls (PBB)
- Polybrominated Diphenyl Ethers (PBDE)
- Bis(2-ethylhexyl) phthalate (DEHP)
- Butyl benzyl phthalate (BBP)
- Dibutyl phthalate (DBP)
- Diisobutyl phthalate (DIBP)

Therefore, this product is in compliance with the requirements of Article 4.1 of the EU Directive 2011/65/EC.

WEEE

Directive 2012/19/EU, requires that the formation of waste from electric and electronic equipment is reduced and properly managed.

This statement is intended to provide information on our product(s) so that you may assess the consequences of these directives on the E&E articles you manufacture and place on the EU market, or materials you supply to the affected industry.

Directive 2012/19/EU on WEEE: Selective treatment of the waste (Article 8 and Annex VII).

Article 8 requires that the waste management schemes (to be) set up by the producers, individually or collectively, ensure that the waste will be selectively treated for materials and components of the E&E waste in line with the requirements of Annex VII.

None of the following substances listed in Annex VII are intentionally added or used in formulation of the above mentioned resin(s):

- Asbestos
- Brominated flame retardants
- Chlorofluorcarbons (CFC), hydrochlorofluorcarbons (HCFC), hydrofluorcarbons (HFC), hydrocarbons (HC)
- Mercury
- Polychlorinated biphenyls,
- Radioactive substances
- Refractory ceramic fibres

TRINSEO™

PRODUCT STEWARDSHIP

Trinseo and its affiliated companies have a fundamental concern for all who make, distribute, and use their products and for the environment in which we live. This concern is the basis for our Product Stewardship philosophy by which we assess the safety, health, and environmental information on our products so that appropriate steps may be taken to protect employee and public health and our environment. The success of our product stewardship program rests with each and every individual involved with Trinseo products – from the initial concept and research, to manufacture, use, sale, disposal, and recycle of each product.

CUSTOMER NOTICE

Customers are responsible for reviewing their manufacturing processes and their applications of Trinseo products from the standpoint of human health and environmental quality to ensure that Trinseo products are not used in ways for which they are not suitable. Trinseo personnel are available to answer questions and to provide reasonable technical support. Trinseo product literature, including safety data sheets, should be consulted prior to the use of Trinseo products. Current safety data sheets are available from Trinseo.

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Trinseo requests that customers refer to Trinseo's Medical Application Policy http://www.trinseo.com/medical.htm before considering the use of Trinseo products in medical applications. The restrictions and disclaimers set forth in that policy are incorporated by reference.

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