

SAFETY DATA SHEET

ED8020

According to Regulation (EC) No 1907/2006, Annex II, as amended.

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name ED8020

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses Printing ink.

Uses advised against No specific uses advised against are identified.

1.3. Details of the supplier of the safety data sheet

Supplier Electra Polymers Ltd
 Roughway Mill,
 Roughway Lane
 Tonbridge
 Kent TN11 9SG
 UK
 Tel: +44 1732 811118
 Fax: +44 1732 811119
 sds@electrapolymers.com

1.4. Emergency telephone number

Emergency telephone +44 (0)1732 811 118 (08.30 - 17.00 GMT)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards Not Classified

Health hazards Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Skin Sens. 1 - H317

Environmental hazards Aquatic Chronic 3 - H412

2.2. Label elements

Pictogram



Signal word Warning

Hazard statements
 H315 Causes skin irritation.
 H317 May cause an allergic skin reaction.
 H319 Causes serious eye irritation.
 H412 Harmful to aquatic life with long lasting effects.

Precautionary statements
 P273 Avoid release to the environment.
 P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
 P333+P313 If skin irritation or rash occurs: Get medical advice/ attention.
 P337+P313 If eye irritation persists: Get medical advice/ attention.
 P362+P364 Take off contaminated clothing and wash it before reuse.

Contains Ethoxylated (3) trimethylolpropane triacrylate, 2,2-BIS(ACRYLOYLOXYMETHYL)BUTYL ACRYLATE, 2-HYDROXYETHYL METHACRYLATE, TRIPHENYL PHOSPHINE

ED8020

Supplementary precautionary statements

P261 Avoid breathing vapour/ spray.
 P264 Wash contaminated skin thoroughly after handling.
 P272 Contaminated work clothing should not be allowed out of the workplace.
 P302+P352 IF ON SKIN: Wash with plenty of water.
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P321 Specific treatment (see medical advice on this label).
 P332+P313 If skin irritation occurs: Get medical advice/ attention.
 P501 Dispose of contents/ container in accordance with national regulations.

2.3. Other hazards

This product does not contain any substances classified as PBT or vPvB. May cause skin sensitisation or allergic reactions in sensitive individuals.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

CRESOL NOVOLAC EPOXY ACRYLATE	10-30%
CAS number: —	
Classification Skin Irrit. 2 - H315 Eye Irrit. 2 - H319	
Ethoxylated (3) trimethylolpropane triacrylate	10-30%
CAS number: 28961-43-5 EC number: 500-066-5	
Classification Eye Irrit. 2 - H319 Skin Sens. 1 - H317	
2,2-BIS(ACRYLOYLOXYMETHYL)BUTYL ACRYLATE	10-30%
CAS number: 15625-89-5 EC number: 239-701-3 REACH registration number: 01-2119489896-11	
Classification Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Skin Sens. 1 - H317	
2-HYDROXYETHYL METHACRYLATE	1-5%
CAS number: 868-77-9 EC number: 212-782-2	
Classification Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Skin Sens. 1 - H317	

ED8020

2,6-di-tert-butyl-4-methylphenol 0.1-1%		
CAS number: 128-37-0	EC number: 204-881-4	REACH registration number: 01-2119555270-46-XXXX
M factor (Acute) = 1	M factor (Chronic) = 1	
Classification Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410		
TRIPHENYL PHOSPHINE 0.1-1%		
CAS number: 603-35-0		
Classification Acute Tox. 4 - H302 Skin Sens. 1 - H317 STOT RE 2 - H373		

The full text for all hazard statements is displayed in Section 16.

Composition comments The data shown are in accordance with the latest EC Directives.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information	Get medical attention if any discomfort continues. Treat symptomatically.
Inhalation	Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Get medical attention if any discomfort continues.
Ingestion	Do not induce vomiting. Get medical attention if any discomfort continues.
Skin contact	Wash skin thoroughly with soap and water. Get medical attention if irritation persists after washing. Take off contaminated clothing and wash it before reuse.
Eye contact	Remove contact lenses, if present and easy to do. Continue rinsing. Continue to rinse for at least 15 minutes. Get medical attention if irritation persists after washing.

4.2. Most important symptoms and effects, both acute and delayed

General information	Treat symptomatically.
Inhalation	No specific symptoms known. May cause respiratory irritation.
Ingestion	No specific symptoms known. May cause irritation.
Skin contact	Causes skin irritation. May cause sensitisation by skin contact.
Eye contact	Causes serious eye irritation.

4.3. Indication of any immediate medical attention and special treatment needed

Notes for the doctor No specific recommendations.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Extinguish with foam, carbon dioxide, dry powder or water fog.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.

ED8020

5.2. Special hazards arising from the substance or mixture

Specific hazards	None.
Hazardous combustion products	Thermal decomposition or combustion products may include the following substances: Oxides of carbon. Toxic gases or vapours.

5.3. Advice for firefighters

Protective actions during firefighting	No specific firefighting precautions known.
Special protective equipment for firefighters	Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions	Wear protective clothing as described in Section 8 of this safety data sheet. No smoking, sparks, flames or other sources of ignition near spillage.
-----------------------------	--

6.2. Environmental precautions

Environmental precautions	Do not discharge into drains or watercourses or onto the ground. Avoid the spillage or runoff entering drains, sewers or watercourses. Contain spillage with sand, earth or other suitable non-combustible material.
----------------------------------	--

6.3. Methods and material for containment and cleaning up

Methods for cleaning up	Eliminate all sources of ignition. No smoking, sparks, flames or other sources of ignition near spillage. Provide adequate ventilation. Absorb spillage with non-combustible, absorbent material. Collect and place in suitable waste disposal containers and seal securely.
--------------------------------	--

6.4. Reference to other sections

Reference to other sections	Wear protective clothing as described in Section 8 of this safety data sheet. For waste disposal, see Section 13.
------------------------------------	---

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions	Avoid inhalation of vapours and spray/mists. Wear protective clothing, gloves, eye and face protection.
Advice on general occupational hygiene	Good personal hygiene procedures should be implemented. Do not eat, drink or smoke when using this product. Wash after use and before eating, smoking and using the toilet. Remove contaminated clothing and protective equipment before entering eating areas.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions	Keep away from heat, sparks and open flame. Store in tightly-closed, original container. Protect from freezing and direct sunlight.
Storage class	Miscellaneous hazardous material storage.

7.3. Specific end use(s)

Specific end use(s)	The identified uses for this product are detailed in Section 1.2.
----------------------------	---

SECTION 8: Exposure Controls/personal protection

8.1. Control parameters

Occupational exposure limits

2,6-di-tert-butyl-4-methylphenol

ED8020

Long-term exposure limit (8-hour TWA): WEL 10 mg/m³

WEL = Workplace Exposure Limit

Ethoxylated (3) trimethylolpropane triacrylate (CAS: 28961-43-5)

DNEL Industry - Dermal; Long term systemic effects: 0.8 mg/m³

2,2-BIS(ACRYLOYLOXYMETHYL)BUTYL ACRYLATE (CAS: 15625-89-5)

DNEL Industry - Dermal; Long term systemic effects: 0.8 mg/kg/day
 Industry - Inhalation; Long term systemic effects: 16.2 mg/m³
 Professional - Dermal; Long term systemic effects: 0.48 mg/kg/day
 Professional - Inhalation; Long term systemic effects: 4.9 mg/m³
 Professional - Oral; Long term systemic effects: 1.39 mg/kg/day

PNEC - Fresh water; 0.00147 mg/l
 - Marine water; 0.000147 mg/l
 - Intermittent release; 0.0147 mg/l
 - Sediment; 0.0062 mg/kg
 - Soil; 0.0043 mg/kg
 - STP; 6.25 mg/l

2-HYDROXYETHYL METHACRYLATE (CAS: 868-77-9)

DNEL Industry - Dermal; systemic effects: 1.3 mg/m³
 Industry - Inhalation; systemic effects: 4.9 mg/m³
 Consumer - Dermal; systemic effects: 0.83 mg/m³
 Consumer - Inhalation; systemic effects: 2.9 mg/m³
 Consumer - Oral; systemic effects: 0.83 mg/m³

PNEC - Fresh water; 0.482 mg/l
 - Marine water; 0.482 mg/l
 - STP; 10 mg/l
 - Intermittent release; 1 mg/l
 - Sediment (Freshwater); 3.79 mg/kg
 - Sediment (Marinewater); 3.79 mg/kg
 - Soil; 0.476 mg/l

2,6-di-tert-butyl-4-methylphenol (CAS: 128-37-0)

DNEL Industry - Inhalation; Long term systemic effects: 5.8 mg/m³
 Consumer - Inhalation; Long term systemic effects: 1.74 mg/m³
 Industry - Dermal; Long term systemic effects: 8.3 mg/kg/day
 Consumer - Dermal; Long term systemic effects: 5 mg/kg/day

PNEC - Soil; 1.04 mg/kg
 - STP; 100 mg/l
 - Sediment; 1.29 mg/kg
 - Marine water; 0.0004 mg/l
 - Intermittent release; 0.004 mg/l
 - Fresh water; 0.004 mg/l

8.2. Exposure controls

ED8020

Protective equipment



Appropriate engineering controls

Provide adequate general and local exhaust ventilation.

Eye/face protection

Wear eye protection.

Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. Wear protective gloves made of the following material: Butyl rubber. Nitrile rubber. Neoprene. Polyvinyl chloride (PVC). Laminate of polyethylene and ethylene vinyl alcohol (PE/EVOH).

Other skin and body protection

Wear apron or protective clothing in case of contact.

Hygiene measures

Do not eat, drink or smoke when using this product. Use engineering controls to reduce air contamination to permissible exposure level. Wash after use and before eating, smoking and using the toilet. Provide eyewash station. Wash contaminated clothing before reuse.

Respiratory protection

No specific requirements are anticipated under normal conditions of use.

Environmental exposure controls

Residues and empty containers should be taken care of as hazardous waste according to local and national provisions. Prevent spillage entering a watercourse or sewer, contaminating soil or vegetation. If this is not possible notify police and appropriate authorities immediately.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid.
Colour	Blue.
Odour threshold	Not determined.
pH	Not determined.
Melting point	Not determined.
Initial boiling point and range	Not determined.
Flash point	Not determined.
Evaporation rate	Not determined.
Evaporation factor	Not determined.
Flammability (solid, gas)	Not determined.
Upper/lower flammability or explosive limits	Not determined.
Other flammability	Not determined.
Vapour pressure	Not determined.
Vapour density	Not determined.
Relative density	Not determined.
Bulk density	Not determined.
Solubility(ies)	Not determined.

ED8020

Partition coefficient	Not determined.
Auto-ignition temperature	Not determined.
Decomposition Temperature	Not determined.
Viscosity	Kinematic viscosity > 20.5 mm ² /s.
Explosive properties	Not considered to be explosive.
Explosive under the influence of a flame	No
Oxidising properties	The mixture itself has not been tested but none of the ingredient substances meet the criteria for classification as oxidising.
Comments	Information given is applicable to the product as supplied.
<u>9.2. Other information</u>	
Other information	None.
Refractive index	Not determined.
Particle size	Not applicable.
Molecular weight	Not applicable.
Volatility	Not determined.
Saturation concentration	Not determined.
Critical temperature	Not determined.
Volatile organic compound	Not determined.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity There are no known reactivity hazards associated with this product.

10.2. Chemical stability

Stability Stable at normal ambient temperatures and when used as recommended.

10.3. Possibility of hazardous reactions

10.4. Conditions to avoid

Conditions to avoid Keep away from heat, sparks and open flame. Avoid exposure to high temperatures or direct sunlight.

10.5. Incompatible materials

Materials to avoid Strong alkalis. Strong oxidising agents. Strong acids.

10.6. Hazardous decomposition products

Hazardous decomposition products Thermal decomposition or combustion products may include the following substances: Acrid smoke or fumes. Oxides of nitrogen. Oxides of carbon.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

Notes (oral LD₅₀) Based on available data the classification criteria are not met.

Acute toxicity - dermal

ED8020

Notes (dermal LD₅₀)	Based on available data the classification criteria are not met.
<u>Acute toxicity - inhalation</u>	
Notes (inhalation LC₅₀)	Based on available data the classification criteria are not met.
<u>Skin corrosion/irritation</u>	
Animal data	No information available.
Human skin model test	No information available.
Extreme pH	Based on available data the classification criteria are not met.
<u>Serious eye damage/irritation</u>	
Serious eye damage/irritation	Causes serious eye irritation.
<u>Respiratory sensitisation</u>	
Respiratory sensitisation	Based on available data the classification criteria are not met.
<u>Skin sensitisation</u>	
Skin sensitisation	Sensitising.
<u>Germ cell mutagenicity</u>	
Genotoxicity - in vitro	Based on available data the classification criteria are not met.
Genotoxicity - in vivo	Based on available data the classification criteria are not met.
<u>Carcinogenicity</u>	
Carcinogenicity	Based on available data the classification criteria are not met. Does not contain any substances known to be carcinogenic.
<u>Reproductive toxicity</u>	
Reproductive toxicity - fertility	Based on available data the classification criteria are not met. Does not contain any substances known to be toxic to reproduction.
Reproductive toxicity - development	Based on available data the classification criteria are not met. Does not contain any substances known to be toxic to reproduction.
<u>Specific target organ toxicity - single exposure</u>	
STOT - single exposure	Based on available data the classification criteria are not met.
<u>Specific target organ toxicity - repeated exposure</u>	
STOT - repeated exposure	Based on available data the classification criteria are not met.
<u>Aspiration hazard</u>	
Aspiration hazard	Based on available data the classification criteria are not met.
General information	The product contains small amounts of organic solvents. Extensive use of the product in areas with inadequate ventilation may result in the accumulation of hazardous vapour concentrations.
Inhalation	No specific health hazards known. May cause respiratory system irritation.
Ingestion	No specific health hazards known. May cause discomfort if swallowed.
Skin contact	May cause sensitisation by skin contact.
Eye contact	Causes serious eye irritation.
Acute and chronic health hazards	May cause skin sensitisation or allergic reactions in sensitive individuals.

ED8020

Route of exposure	Inhalation Skin absorption Skin and/or eye contact Ingestion
Target organs	No specific target organs known.
Medical symptoms	Symptoms following overexposure may include the following: Allergic rash. May cause discomfort if swallowed.
Medical considerations	May cause allergic contact eczema.

Toxicological information on ingredients.**2,2-BIS(ACRYLOYLOXYMETHYL)BUTYL ACRYLATE****Acute toxicity - inhalation**

Notes (inhalation LC₅₀) Data lacking.

2-HYDROXYETHYL METHACRYLATE**Acute toxicity - oral**

Acute toxicity oral (LD₅₀ mg/kg) 5,000.0

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 5,000.0

2,6-di-tert-butyl-4-methylphenol**Acute toxicity - oral**

Acute toxicity oral (LD₅₀ mg/kg) 5,000.0

Species Rat

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 5,000.0

Species Rat

Carcinogenicity

IARC carcinogenicity IARC Group 3 Not classifiable as to its carcinogenicity to humans.

NTP carcinogenicity Reasonably anticipated to be a human carcinogen.

OSHA Carcinogenicity Not listed.

TRIPHENYL PHOSPHINE**Acute toxicity - oral**

Acute toxicity oral (LD₅₀ mg/kg) 700.0

Species Rat

ATE oral (mg/kg) 700.0

Acute toxicity - dermal

ED8020

Acute toxicity dermal (LD₅₀ 4,001.0 mg/kg)

Species Rabbit

ATE dermal (mg/kg) 4,001.0

Acute toxicity - inhalation

Acute toxicity inhalation (LC₅₀ dust/mist mg/l) 12.5

Species Rat

ATE inhalation (dusts/mists mg/l) 12.5

SECTION 12: Ecological Information

Ecotoxicity The product contains substances which are toxic to aquatic organisms and which may cause long-term adverse effects in the aquatic environment.

Ecological information on ingredients.

TRIPHENYL PHOSPHINE

Ecotoxicity The product does not contain organically bound halogen.

12.1. Toxicity

Acute aquatic toxicity

Acute toxicity - fish Not determined.

Acute toxicity - aquatic invertebrates Not determined.

Acute toxicity - aquatic plants Not determined.

Acute toxicity - microorganisms Not determined.

Acute toxicity - terrestrial Not determined.

Chronic aquatic toxicity

Chronic toxicity - fish early life stage Not determined.

Short term toxicity - embryo and sac fry stages Not determined.

Chronic toxicity - aquatic invertebrates Not determined.

Ecological information on ingredients.

2,2-BIS(ACRYLOYLOXYMETHYL)BUTYL ACRYLATE

Acute aquatic toxicity

Acute toxicity - fish Not determined.

Acute toxicity - aquatic invertebrates Not determined.
, : , Daphnia magna

ED8020

Acute toxicity - aquatic plants Not determined.
, : , Freshwater algae

2,6-di-tert-butyl-4-methylphenol**Acute aquatic toxicity**

LE(C)₅₀ 0.1 < L(E)C₅₀ ≤ 1

M factor (Acute) 1

Chronic aquatic toxicity

M factor (Chronic) 1

TRIPHENYL PHOSPHINE**Acute aquatic toxicity**

LE(C)₅₀ 0.1 < L(E)C₅₀ ≤ 1

Acute toxicity - fish LC₅₀, 96 hours: >10000 mg/l, Fish

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: >5 mg/l, Daphnia magna

12.2. Persistence and degradability

Persistence and degradability This product is not expected to be readily biodegradable.

Phototransformation Not determined.

Stability (hydrolysis) Not determined.

Biodegradation Not determined.

Biological oxygen demand Not determined.

Chemical oxygen demand Not determined.

Ecological information on ingredients.**2-HYDROXYETHYL METHACRYLATE**

Persistence and degradability The product is biodegradable.

TRIPHENYL PHOSPHINE

Persistence and degradability The product is not readily biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential Not determined.

Partition coefficient Not determined.

Ecological information on ingredients.**2-HYDROXYETHYL METHACRYLATE**

Bioaccumulative potential Bioaccumulation is unlikely to be significant because of the low water-solubility of this product.

ED8020

TRIPHENYL PHOSPHINE

Partition coefficient : >2.587

12.4. Mobility in soil

Adsorption/desorption coefficient Not determined.

Henry's law constant Not determined.

Surface tension Not determined.

Ecological information on ingredients.

TRIPHENYL PHOSPHINE

Mobility The product has poor water-solubility.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

12.6. Other adverse effects

Other adverse effects None known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information Waste is classified as hazardous waste.

Disposal methods Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority. Residues and empty containers should be taken care of as hazardous waste according to local and national provisions.

SECTION 14: Transport information

General The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).

14.1. UN number

Not applicable.

14.2. UN proper shipping name

Not applicable.

14.3. Transport hazard class(es)

No transport warning sign required.

14.4. Packing group

Not applicable.

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant

No.

14.6. Special precautions for user

Not applicable.

ED8020

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulations	Control of Substances Hazardous to Health Regulations 2002 (as amended). The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 (SI 2009 No. 1348) (as amended) ["CDG 2009"]. Health and Safety at Work etc. Act 1974 (as amended). Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, including amendments.
EU legislation	Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended). Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended).
Health and environmental listings	None of the ingredients are listed.
Authorisations (Title VII Regulation 1907/2006)	No specific authorisations are known for this product.
Restrictions (Title VIII Regulation 1907/2006)	No specific restrictions on use are known for this product.

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

Inventories

US - TSCA

All the ingredients are listed or exempt.

US - TSCA 12(b) Export Notification

None of the ingredients are listed or exempt.

SECTION 16: Other information

Classification procedures according to Regulation (EC) 1272/2008	: Calculation method.
Issued by	HS&E Manager.
Revision date	07/08/2018
Revision	7
Supersedes date	15/06/2017

ED8020

Hazard statements in full

H302 Harmful if swallowed.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.

H373 May cause damage to organs (Central nervous system) through prolonged or repeated exposure.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

H412 Harmful to aquatic life with long lasting effects.

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.