

SAFETY DATA SHEET**EL16 - All colour**

According to Appendix D, OSHA Hazard Communication Standard 29 CFR §1910.1200

1. Identification**Product identifier****Product name** EL16 - All colour**Recommended use of the chemical and restrictions on use****Application** Printing ink.**Uses advised against** No specific uses advised against are identified.**Details of the supplier of the safety data sheet****Supplier** Electra Polymers Ltd
Roughway Mill
Tonbridge
Kent TN11 9SG
UK

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Fax: +44 1732 811119

Emergency telephone number**Emergency telephone** +44 (0)1732 811 118 (08.30 - 17.00 GMT)**2. Hazard(s) identification****Classification of the substance or mixture****Physical hazards** Not Classified**Health hazards** Skin Irrit. 2 - H315 Skin Sens. 1 - H317**Environmental hazards** Aquatic Chronic 2 - H411**Human health** The product contains small amounts of organic solvents. Considered to be a low inhalation hazard at normal workplace temperatures.**Environmental** The product contains a substance which is toxic to aquatic organisms and which may cause long-term adverse effects in the aquatic environment.**Label elements****Pictogram****Signal word** Warning**Hazard statements** H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H411 Toxic to aquatic life with long lasting effects.

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Precautionary statements	<p>P261 Avoid breathing vapor/spray.</p> <p>P264 Wash contaminated skin thoroughly after handling.</p> <p>P272 Contaminated work clothing must not be allowed out of the workplace.</p> <p>P273 Avoid release to the environment.</p> <p>P280 Wear protective gloves/protective clothing/eye protection/face protection.</p> <p>P302+P352 If on skin: Wash with plenty of water.</p> <p>P321 Specific treatment (see medical advice on this label).</p> <p>P332+P313 If skin irritation occurs: Get medical advice/attention.</p> <p>P333+P313 If skin irritation or rash occurs: Get medical advice/attention.</p> <p>P362+P364 Take off contaminated clothing and wash it before reuse.</p> <p>P391 Collect spillage.</p> <p>P501 Dispose of contents/container in accordance with national regulations.</p>
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Contains EPOXY PHENOL NOVOLAK RESIN

WHMIS Label D2 Materials causing other toxic effects.

Other hazards

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

3. Composition/information on ingredients

Mixtures

EPOXY PHENOL NOVOLAK RESIN	30-60%
CAS number: 28064-14-4	
Classification	
Skin Irrit. 2 - H315	
Eye Irrit. 2 - H319	
Skin Sens. 1 - H317	
Aquatic Chronic 2 - H411	
2-(2-BUTOXYETHOXY)ETHANOL	10-30%
CAS number: 112-34-5	
Classification	
Eye Irrit. 2 - H319	
2-BUTOXYETHYL ACETATE	5-10%
CAS number: 112-07-2	
Classification	
Acute Tox. 4 - H312	
Acute Tox. 4 - H332	

The Full Text for all Hazard Statements are Displayed in Section 16.

Composition comments The Data Shown is in accordance with the latest EC Directives.

4. First-aid measures

Description of first aid measures

General information Get medical attention if any discomfort continues. Treat symptomatically.

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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.

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.

Indication of immediate medical attention and special treatment needed

Notes for the doctor	No specific recommendations.
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5. Fire-fighting measures

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.

Special hazards arising from the substance or mixture

Specific hazards	No unusual fire or explosion hazards noted.
Hazardous combustion products	Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors.
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.

6. Accidental release measures

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.
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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.
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Methods and material for containment and cleaning up

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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.

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

7. Handling and storage

Precautions for safe handling

Usage precautions Avoid inhalation of vapors 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.

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.

Specific end uses(s)

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

8. Exposure Controls/personal protection

Control parameters

Occupational exposure limits

2-(2-BUTOXYETHOXY)ETHANOL

Long-term exposure limit (8-hour TWA): ACGIH 10 ppm 67.5 mg/m³ inhalable fraction and vapor

2-BUTOXYETHYL ACETATE

Long-term exposure limit (8-hour TWA): ACGIH 20 ppm

Short-term exposure limit (15-minute): ACGIH

ACGIH = American Conference of Governmental Industrial Hygienists.

2-(2-BUTOXYETHOXY)ETHANOL (CAS: 112-34-5)

DNEL Industry - Inhalation; Short term : mg/m³ Industry - Dermal; Long term : 20 mg/kg/day Industry - Inhalation; Long term : 67.5 mg/m³

PNEC - Fresh water; 1 mg/l - Marine water; 0.1 mg/l - Sediment; 4 mg/kg - Soil; 0.4 mg/kg

2-BUTOXYETHYL ACETATE (CAS: 112-07-2)

Ingredient comments WEL = Workplace Exposure Limits

DNEL Industry - Inhalation; Long term systemic effects: 133 mg/m³ Industry - Inhalation; Short term systemic effects: 775 Industry - Inhalation; Short term local effects: 333 mg/m³ Industry - Dermal; Long term systemic effects: 102 mg/kg/day Industry - Dermal; Short term systemic effects: 102 mg/kg/day

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PNEC

- Fresh water; .304 mg/l - Marine water; .0304 mg/l - Intermittent release; .56 mg/l
 - STP; 90 mg/l - Sediment (Freshwater); 2.03 mg/kg - Sediment (Marinewater);
 .203 mg/kg - Soil; .68 mg/kg

Exposure controls

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

Use engineering controls to reduce air contamination to permissible exposure level. Do not eat, drink or smoke when using this product. Wash hands at the end of each work shift 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.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Appearance	Paste.
Color	Various colors.
Odor	Mild.
Odor threshold	Not determined.
pH	Not determined.
Melting point	Not determined.
Initial boiling point and range	Not determined.
Flash point	88°C Estimated value.
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.

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Vapour pressure	Not determined.
Vapour density	Not determined.
Relative density	1.3 @ 20 deg C @ °C Estimated value.
Bulk density	Not determined.
Solubility(ies)	Not determined.
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 oxidizing.
Comments	Information given is applicable to the product as supplied.
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.

10. Stability and reactivity

Reactivity	There are no known reactivity hazards associated with this product.
Stability	Stable at normal ambient temperatures and when used as recommended.
Conditions to avoid	Keep away from heat, sparks and open flame. Avoid exposure to high temperatures or direct sunlight.
Materials to avoid	Strong alkalis. Strong oxidizing agents. Strong acids.
Hazardous decomposition products	Thermal decomposition or combustion products may include the following substances: Acrid smoke or fumes. Oxides of nitrogen. Oxides of carbon.

11. Toxicological information**Information on toxicological effects****Acute toxicity - oral**

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

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Acute toxicity - dermal

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

ATE dermal (mg/kg) 12,669.45

Acute toxicity - inhalation

Notes (inhalation LC₅₀) Based on available data the classification criteria are not met.

ATE inhalation (gases ppm) 51,829.58

ATE inhalation (vapours mg/l) 126.69

ATE inhalation (dusts/mists mg/l) 17.28

Skin corrosion/irritation

Animal data No information available.

Human skin model test No information available.

Extreme pH Based on available data the classification criteria are not met.

Serious eye damage/irritation

Serious eye damage/irritation Causes serious eye irritation.

Respiratory sensitisation

Respiratory sensitisation Based on available data the classification criteria are not met.

Skin sensitisation

Skin sensitisation Sensitizing.

Germ cell mutagenicity

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.

Carcinogenicity

Carcinogenicity Based on available data the classification criteria are not met. Does not contain any substances known to be carcinogenic.

Reproductive toxicity

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.

Specific target organ toxicity - single exposure

STOT - single exposure Based on available data the classification criteria are not met.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Based on available data the classification criteria are not met.

Aspiration hazard

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 vapor concentrations.

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Inhalation	No specific health hazards known. May cause respiratory system irritation.
Ingestion	No specific health hazards known. May cause discomfort if swallowed.
Skin Contact	No specific health hazards known. May cause irritation.
Eye contact	No specific health hazards known. Irritating to eyes.
Acute and chronic health hazards	May cause skin sensitization or allergic reactions in sensitive individuals.
Route of entry	Inhalation Skin absorption Ingestion. Skin and/or eye contact
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-BUTOXYETHOXY)ETHANOL

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 2,410.0

Species Mouse

ATE oral (mg/kg) 2,410.0

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 2,764.0

Species Mouse

ATE dermal (mg/kg) 2,764.0

2-BUTOXYETHYL ACETATE

Specific target organ toxicity - repeated exposure

STOT - repeated exposure LOAEL 94 mg/kg, Oral, Rat

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.

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.

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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-BUTOXYETHOXY)ETHANOL

Acute toxicity - fish LC50, 96 hours, 96 hours: > 100 mg/l, Leuciscus idus (Golden orfe)

Acute toxicity - aquatic invertebrates EC50, 48 hours, 48 hours: > 100 mg/l, Daphnia magna

Acute toxicity - aquatic plants IC50, 72 hours, 72 hours: > 50 mg/l, Freshwater algae

2-BUTOXYETHYL ACETATE

Acute toxicity - fish LC50, 96 hours, 96 hours: 22 mg/l, Pimephales promelas (Fat-head Minnow)
LC50, 96 hours, 96 hours: 28 mg/l, Onchorhynchus mykiss (Rainbow trout)
REACH dossier information.
REACH dossier information.

Acute toxicity - aquatic invertebrates EC50, 48 hours, 48 hours: 37 mg/l, Daphnia magna
EC50, 48 hours, 48 hours: 180 mg/l, Daphnia magna
REACH dossier information.
REACH dossier information.
EC50, 48 hours: 37mg/l mg/l, Daphnia magna

Acute toxicity - aquatic plants EC50, 72 hours, 72 hours: > 500 mg/l, Freshwater algae
EC50, 72 hours, 72 hours: 520 mg/l, Freshwater algae
REACH dossier information.
REACH dossier information.
IC50, 72 hours: >500mg/l mg/l, Algae

Acute toxicity - microorganisms EC20, 30 min, 30 minutes: 900 mg/l, Activated sludge
REACH dossier information.

Acute toxicity - terrestrial Not available.

Chronic toxicity - fish early life stage Not available.

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

Chronic toxicity - aquatic invertebrates Not available.
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Persistence and degradability

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

Phototransformation Not determined.

Stability (hydrolysis) Not determined.

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Biodegradation	Not determined.
Biological oxygen demand	Not determined.
Chemical oxygen demand	Not determined.

Ecological information on ingredients.2-BUTOXYETHYL ACETATE

Persistence and degradability	The product is biodegradable.
Phototransformation	No information required. - : REACH dossier information.
Stability (hydrolysis)	No information required. REACH dossier information.
Biodegradation	Degradation (%) water - Degradation (%) 88: 28 days REACH dossier information. water - Degradation (%) 97: 7 days REACH dossier information. water - Degradation (%) 90: > 6.5 days REACH dossier information. The substance is readily biodegradable.

Bioaccumulative potential

Bio-Accumulative Potential	Not determined.
Partition coefficient	Not determined.

Ecological information on ingredients.2-BUTOXYETHYL ACETATE

Bio-Accumulative Potential	REACH dossier information.
Partition coefficient	log Pow: 1.51 REACH dossier information.

Mobility in soil

Adsorption/desorption coefficient	Not determined.
Henry's law constant	Not determined.
Surface tension	Not determined.

Ecological information on ingredients.2-BUTOXYETHYL ACETATE

Surface tension	Not available.
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Results of PBT and vPvB assessment

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

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Results of PBT and vPvB assessment This substance is not classified as PBT or vPvB according to current EU criteria.

Other adverse effects

Other adverse effects None known.

13. Disposal considerations**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.

14. Transport information**UN Number**

UN No. (DOT) 3082

UN No. (IMDG) 3082

UN No. (ICAO) 3082

UN proper shipping name

Proper shipping name (DOT) Environmentally hazardous substance, liquid, n.o.s.

Proper shipping name (IMDG) Environmentally hazardous substance, liquid, n.o.s.

Proper shipping name (ICAO) Environmentally hazardous substance, liquid, n.o.s.

Transport hazard class(es)

IMDG Class 9

ICAO class/division 9

Transport labels**Packing group**

DOT pack group III

IMDG packing group III

ICAO packing group III

Environmental hazards

Environmentally Hazardous Substance

**Special precautions for user**

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Not available.

EmS F-A, S-F

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

15. Regulatory information**16. Other information**

Issued by	HS&E Manager.
Revision date	6/8/2015
Revision	8
Supersedes date	5/20/2015
Hazard statements in full	H312 Harmful in contact with skin. H315 Causes skin irritation. H317 May cause an allergic skin reaction. H319 Causes serious eye irritation. H332 Harmful if inhaled. H411 Toxic to aquatic life with long lasting effects.
NFPA - flammability hazard	Burns only if pre-heated. (1)
NFPA - health hazard	Irritation, minor residual injury. (1)
NFPA - instability hazard	Normally stable. (0)
NFPA - special hazard	N/A
ACA HMIS Health rating.	Slight hazard. (1)
ACA HMIS Physical hazard rating.	Normally stable. (0)
ACA HMIS Personal protection rating.	N/A.
ACA HMIS Flammability rating.	Burns only if pre-heated. (1)

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.