

**SAFETY DATA SHEET****ED5500 - 10 Ohm**

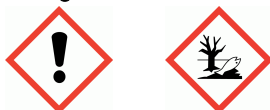
According to Regulation (EC) No 1907/2006, Annex II, as amended.

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier****Product name** ED5500 - 10 Ohm**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** Eye Irrit. 2 - H319**Environmental hazards** Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410**Human health**

The product contains organic solvents. Considered to be a low inhalation hazard at normal workplace temperatures. Causes serious eye irritation. Causes skin irritation. May cause skin sensitisation or allergic reactions in sensitive individuals.

**Environmental**

The product contains a substance which is toxic to aquatic organisms and which may cause long-term adverse effects in the aquatic environment.

**2.2. Label elements****Pictogram****Signal word**

Warning

**Hazard statements**H319 Causes serious eye irritation.  
H410 Very toxic to aquatic life with long lasting effects.

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<b>Precautionary statements</b>	<p>P273 Avoid release to the environment.</p> <p>P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.</p> <p>P337+P313 If eye irritation persists: Get medical advice/ attention.</p> <p>P391 Collect spillage.</p> <p>P501 Dispose of contents/ container in accordance with national regulations.</p>
<b>Supplementary precautionary statements</b>	<p>P264 Wash contaminated skin thoroughly after handling.</p> <p>P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p>

### 2.3. Other hazards

This product does not contain any substances classified as PBT or vPvB.

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

<b>SILVER</b>	<b>10-30%</b>
CAS number: 7440-22-4                      EC number: 231-131-3                      REACH registration number: 01-2119555669-21-XXXX  M factor (Acute) = 1                      M factor (Chronic) = 1	
<b>Classification</b>	
Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410	

<b>2-(2-BUTOXYETHOXY)ETHANOL</b>	<b>10-30%</b>
CAS number: 112-34-5                      EC number: 203-961-6                      REACH registration number: 01-2119475104-44-XXXX	
<b>Classification</b>	
Eye Irrit. 2 - H319	

<b>ISOPROPYL ALCOHOL</b>	<b>&lt;1%</b>
CAS number: 67-63-0                      EC number: 200-661-7	
<b>Classification</b>	
Flam. Liq. 2 - H225 Eye Irrit. 2 - H319 STOT SE 3 - H336	

<b>BUTANOL-norm</b>	<b>&lt;1%</b>
CAS number: 71-36-3                      EC number: 200-751-6	
<b>Classification</b>	
Flam. Liq. 3 - H226 Acute Tox. 4 - H302 Skin Irrit. 2 - H315 Eye Dam. 1 - H318 STOT SE 3 - H335, H336	

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<b>PHENOL</b>	<b>&lt;1%</b>
CAS number: 108-95-2	EC number: 203-632-7
<b>Classification</b>	
Acute Tox. 3 - H301	
Acute Tox. 3 - H311	
Acute Tox. 3 - H331	
Skin Corr. 1B - H314	
Eye Dam. 1 - H318	
Muta. 2 - H341	
STOT RE 2 - H373	
<b>FORMALDEHYDE</b>	<b>&lt;1%</b>
CAS number: 50-00-0	EC number: 200-001-8
<b>Classification</b>	
Acute Tox. 3 - H301	
Acute Tox. 3 - H311	
Acute Tox. 3 - H331	
Skin Corr. 1B - H314	
Eye Dam. 1 - H318	
Skin Sens. 1 - H317	
Carc. 2 - H351	
STOT SE 3 - H335	

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

#### **SECTION 4: First aid measures**

##### **4.1. Description of first aid measures**

<b>General information</b>	Get medical attention if any discomfort continues. Treat symptomatically.
<b>Inhalation</b>	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.
<b>Ingestion</b>	Do not induce vomiting. Get medical attention if any discomfort continues.
<b>Skin contact</b>	Wash skin thoroughly with soap and water. Get medical attention if irritation persists after washing. Take off contaminated clothing and wash it before reuse.
<b>Eye contact</b>	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**

<b>General information</b>	Treat symptomatically.
<b>Inhalation</b>	No specific symptoms known. May cause respiratory irritation.
<b>Ingestion</b>	No specific symptoms known. May cause irritation.
<b>Skin contact</b>	May cause skin irritation.
<b>Eye contact</b>	Causes serious eye irritation.

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

<b>Notes for the doctor</b>	No specific recommendations.
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### 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.

#### 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)

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**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

##### SILVER

Long-term exposure limit (8-hour TWA): WEL 0.1 mg/m<sup>3</sup>

##### 2-(2-BUTOXYETHOXY)ETHANOL

Long-term exposure limit (8-hour TWA): WEL 10 ppm 67.5 mg/m<sup>3</sup>

Short-term exposure limit (15-minute): WEL 15 ppm 101.2 mg/m<sup>3</sup>

##### ISOPROPYL ALCOHOL

Long-term exposure limit (8-hour TWA): WEL 400 ppm 999 mg/m<sup>3</sup>

Short-term exposure limit (15-minute): WEL 500 ppm 1250 mg/m<sup>3</sup>

##### BUTANOL-norm

Long-term exposure limit (8-hour TWA): WEL

Short-term exposure limit (15-minute): WEL 50 ppm 154 mg/m<sup>3</sup>

Sk

##### PHENOL

Long-term exposure limit (8-hour TWA): WEL 2 ppm 7.8 mg/m<sup>3</sup>

Short-term exposure limit (15-minute): WEL 4 ppm 16 mg/m<sup>3</sup>

Sk

##### FORMALDEHYDE

Long-term exposure limit (8-hour TWA): WEL 2 ppm 2,5 mg/m<sup>3</sup>

Short-term exposure limit (15-minute): WEL 2 ppm 2,5 mg/m<sup>3</sup>

WEL = Workplace Exposure Limit

Sk = Can be absorbed through skin.

Sk = Can be absorbed through the skin.

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

##### DNEL

Industry - Inhalation; Short term : mg/m<sup>3</sup>

Industry - Dermal; Long term : 20 mg/kg/day

Industry - Inhalation; Long term : 67.5 mg/m<sup>3</sup>

##### PNEC

- Fresh water; 1 mg/l

- Marine water; 0.1 mg/l

- Sediment; 4 mg/kg

- Soil; 0.4 mg/kg

#### 8.2. Exposure controls

##### Protective equipment



##### Appropriate engineering controls

Provide adequate general and local exhaust ventilation.

##### Eye/face protection

Wear eye protection.

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<b>Hand protection</b>	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).
<b>Other skin and body protection</b>	Wear apron or protective clothing in case of contact.
<b>Hygiene measures</b>	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.
<b>Respiratory protection</b>	No specific requirements are anticipated under normal conditions of use.
<b>Environmental exposure controls</b>	Residues and empty containers should be taken care of as hazardous waste according to local and national provisions. Avoid the spillage or runoff entering drains, sewers or watercourses. Spillages or uncontrolled discharges into watercourses must be reported immediately to the Environmental Agency or other appropriate regulatory body.

### SECTION 9: Physical and Chemical Properties

#### 9.1. Information on basic physical and chemical properties

<b>Appearance</b>	Liquid.
<b>Colour</b>	Black.
<b>Odour threshold</b>	Not determined.
<b>pH</b>	Not determined.
<b>Melting point</b>	Not determined.
<b>Initial boiling point and range</b>	Not determined.
<b>Flash point</b>	> 60°C
<b>Evaporation rate</b>	Not determined.
<b>Evaporation factor</b>	Not determined.
<b>Flammability (solid, gas)</b>	Not determined.
<b>Upper/lower flammability or explosive limits</b>	Not determined.
<b>Other flammability</b>	Not determined.
<b>Vapour pressure</b>	Not determined.
<b>Vapour density</b>	Not determined.
<b>Relative density</b>	Not determined.
<b>Bulk density</b>	Not determined.
<b>Solubility(ies)</b>	Not determined.
<b>Partition coefficient</b>	Not determined.
<b>Auto-ignition temperature</b>	Not determined.
<b>Decomposition Temperature</b>	Not determined.
<b>Viscosity</b>	Kinematic viscosity > 20.5 mm <sup>2</sup> /s.
<b>Explosive properties</b>	Not considered to be explosive.

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<b>Explosive under the influence of a flame</b>	No
<b>Oxidising properties</b>	The mixture itself has not been tested but none of the ingredient substances meet the criteria for classification as oxidising.
<b>Comments</b>	Information given is applicable to the product as supplied.
<b>9.2. Other information</b>	
<b>Other information</b>	None.
<b>Refractive index</b>	Not determined.
<b>Particle size</b>	Not applicable.
<b>Molecular weight</b>	Not applicable.
<b>Volatility</b>	Not determined.
<b>Saturation concentration</b>	Not determined.
<b>Critical temperature</b>	Not determined.
<b>Volatile organic compound</b>	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 LD<sub>50</sub>)**                Based on available data the classification criteria are not met.

##### Acute toxicity - dermal

**Notes (dermal LD<sub>50</sub>)**            Based on available data the classification criteria are not met.

##### Acute toxicity - inhalation

**Notes (inhalation LC<sub>50</sub>)**        Based on available data the classification criteria are not met.

##### Skin corrosion/irritation

**Animal data**                      No information available.

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<b>Human skin model test</b>	No information available.
<b>Extreme pH</b>	Based on available data the classification criteria are not met.
<b><u>Serious eye damage/irritation</u></b>	
<b>Serious eye damage/irritation</b>	Causes serious eye irritation.
<b><u>Respiratory sensitisation</u></b>	
<b>Respiratory sensitisation</b>	Based on available data the classification criteria are not met.
<b><u>Skin sensitisation</u></b>	
<b>Skin sensitisation</b>	Based on available data the classification criteria are not met.
<b><u>Germ cell mutagenicity</u></b>	
<b>Genotoxicity - in vitro</b>	Based on available data the classification criteria are not met.
<b>Genotoxicity - in vivo</b>	Based on available data the classification criteria are not met.
<b><u>Carcinogenicity</u></b>	
<b>Carcinogenicity</b>	Based on available data the classification criteria are not met. Does not contain any substances known to be carcinogenic.
<b><u>Reproductive toxicity</u></b>	
<b>Reproductive toxicity - fertility</b>	Based on available data the classification criteria are not met. Does not contain any substances known to be toxic to reproduction.
<b>Reproductive toxicity - development</b>	Based on available data the classification criteria are not met. Does not contain any substances known to be toxic to reproduction.
<b><u>Specific target organ toxicity - single exposure</u></b>	
<b>STOT - single exposure</b>	Based on available data the classification criteria are not met.
<b><u>Specific target organ toxicity - repeated exposure</u></b>	
<b>STOT - repeated exposure</b>	Based on available data the classification criteria are not met.
<b><u>Aspiration hazard</u></b>	
<b>Aspiration hazard</b>	Based on available data the classification criteria are not met.
<b>General information</b>	The product contains organic solvents. Extensive use of the product in areas with inadequate ventilation may result in the accumulation of hazardous vapour concentrations.
<b>Inhalation</b>	No specific health hazards known. May cause respiratory system irritation.
<b>Ingestion</b>	No specific health hazards known. May cause discomfort if swallowed.
<b>Skin contact</b>	May cause skin irritation.
<b>Eye contact</b>	Causes serious eye irritation.
<b>Acute and chronic health hazards</b>	Irritation of eyes and mucous membranes.
<b>Route of exposure</b>	Inhalation Skin absorption Skin and/or eye contact Ingestion
<b>Target organs</b>	No specific target organs known.
<b>Medical symptoms</b>	Symptoms following overexposure may include the following: Allergic rash. May cause discomfort if swallowed.
<b>Medical considerations</b>	May cause allergic contact eczema.



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**SECTION 12: Ecological Information**

**Ecotoxicity** The product contains a substance which is very toxic to aquatic organisms and which may cause long-term adverse effects in the aquatic environment.

**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.

**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.

**12.3. Bioaccumulative potential**

**Bioaccumulative potential** Not determined.

**Partition coefficient** Not determined.

**12.4. Mobility in soil**

**Adsorption/desorption coefficient** Not determined.

**Henry's law constant** Not determined.

**Surface tension** Not determined.

**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.

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### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

<b>General information</b>	Waste is classified as hazardous waste.
<b>Disposal methods</b>	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

#### 14.1. UN number

<b>UN No. (ADR/RID)</b>	3082
<b>UN No. (IMDG)</b>	3082
<b>UN No. (ICAO)</b>	3082
<b>UN No. (ADN)</b>	3082

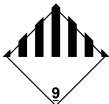
#### 14.2. UN proper shipping name

<b>Proper shipping name (ADR/RID)</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CONTAINS SILVER)
<b>Proper shipping name (IMDG)</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CONTAINS SILVER)
<b>Proper shipping name (ICAO)</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CONTAINS SILVER)
<b>Proper shipping name (ADN)</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CONTAINS SILVER)

#### 14.3. Transport hazard class(es)

<b>ADR/RID class</b>	9
<b>ADR/RID classification code</b>	M6
<b>ADR/RID label</b>	9
<b>IMDG class</b>	9
<b>ICAO class/division</b>	9
<b>ADN class</b>	9

#### Transport labels



#### 14.4. Packing group

<b>ADR/RID packing group</b>	III
<b>IMDG packing group</b>	III
<b>ADN packing group</b>	III
<b>ICAO packing group</b>	III

#### 14.5. Environmental hazards

**ED5500 - 10 Ohm****Environmentally hazardous substance/marine pollutant****14.6. Special precautions for user**

<b>EmS</b>	F-A, S-F
<b>ADR transport category</b>	3
<b>Hazard Identification Number (ADR/RID)</b>	90

**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**

<b>National regulations</b>	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.
<b>EU legislation</b>	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). Dangerous Preparations Directive 1999/45/EC. Dangerous Substances Directive 67/548/EEC.
<b>Health and environmental listings</b>	None of the ingredients are listed.
<b>Authorisations (Title VII Regulation 1907/2006)</b>	No specific authorisations are known for this product.
<b>Restrictions (Title VIII Regulation 1907/2006)</b>	No specific restrictions on use are known for this product.

**15.2. Chemical safety assessment**

No chemical safety assessment has been carried out.

**SECTION 16: Other information**

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**Classification procedures according to Regulation (EC) 1272/2008** : Calculation method.

**Issued by** HS&E Manager.

**Revision date** 06/02/2018

**Revision** 1

**SDS number** 20692

**Hazard statements in full**

- H225 Highly flammable liquid and vapour.
- H226 Flammable liquid and vapour.
- H301 Toxic if swallowed.
- H302 Harmful if swallowed.
- H311 Toxic in contact with skin.
- H314 Causes severe skin burns and eye damage.
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H318 Causes serious eye damage.
- H319 Causes serious eye irritation.
- H331 Toxic if inhaled.
- H335 May cause respiratory irritation.
- H336 May cause drowsiness or dizziness.
- H341 Suspected of causing genetic defects.
- H351 Suspected of causing cancer.
- H373 May cause damage to organs through prolonged or repeated exposure.
- H400 Very toxic to aquatic life.
- H410 Very toxic 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.