

## SAFETY DATA SHEET

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### 1. IDENTIFICATION OF SUBSTANCE/PREPARATION & COMPANY/UNDERTAKING

Product Name: E-MAX Type II Unique Reference: EB29A1  
Application: Anti-Icing/De-icing Fluid  
Company: ELY CHEMICAL COMPANY  
Address: Lisle Lane, Ely, Cambridgeshire, CB7 4AS, England.  
Telephone: +44(0)1353 665881 Fax +44(0)1353 664623

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### 2. COMPOSITION/INFORMATION ON INGREDIENTS

A viscous aqueous solution containing mono propylene glycol and corrosion inhibitors. Contains no notifiable concentrations of component materials listed in Chemicals (Hazard Information and Packaging for Supply) Regulations 1994, Approved Supply List 6<sup>th</sup> Edition (Issue date 02.10.2000). Approved Supply List, 6<sup>th</sup> Edition, is based on Annex I to the Dangerous Substances Directive (67/548/EEC) and incorporates all adaptations up to the 26<sup>th</sup> ATP.

Principle active component

Monopropylene Glycol CAS No. 57-55-6, EC No. 200-338-0

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### 3. HAZARDS IDENTIFICATION

Possible eye irritation.

WGK I

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### 4. FIRST AID MEASURES

Summary of first aid is as follows:

**Inhalation:** Product is of low volatility and hence of low inhalation risk under normal operating conditions. If fumes or vapour are generated by excessive heat immediately remove from exposure. If person is overcome by fumes obtain EMERGENCY MEDICAL ATTENTION. Give artificial respiration if required.

**Skin Contact:** Remove contaminated clothing. Launder before re-use. Remove adhering matter and wash skin thoroughly with mild soap and water. Flush skin with lukewarm water.

**Eye contact:** Immediately flush eyes with water for 15 minutes while holding eyes open. If irritation persists seek medical attention.

#### 4. FIRST AID MEASURES Cont...

**Ingestion:** Obtain medical attention immediately if significant quantity ingested. Give lukewarm water if completely conscious but **DO NOT INDUCE VOMITING.**

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#### 5. FIRE FIGHTING MEASURES

**Suitable Extinguishing Media:** Water fog, Alcohol resistant foam, sand, carbon dioxide or dry powder.

**Special Exposure Hazards:** When heated the product will froth as the water component is driven off. The residual liquid may then ignite producing oxides of carbon.

**Special Protective Equipment for fire fighters:** Wear self-contained breathing apparatus.

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#### 6. ACCIDENTAL RELEASE MEASURES

**Personal Precautions:** Wear PVC or rubber gloves and chemical goggles or face mask.

**Environmental Precautions:** Viscosity of product will minimise any flow. Prevent entry to drains or sewers. Do not discharge undiluted product into natural waters without pretreatment.

**Methods for cleaning:** Scrape up any spilled material. Apply absorbent material (sand, sawdust or granules) to residue. Finally wash spillage area with water. **CAUTION:** Spilt gel may cause floors to become slippery.

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#### 7. HANDLING AND STORAGE

**Handling:** Avoid contact with eyes. Minimise skin contact by use of PVC or rubber gloves.

**Storage:** Store in sealed containers in covered storage areas.

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#### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Take measures to prevent** Contact with eyes and skin.

**Respiratory Protection:** Not required under normal conditions of use.

**Hand Protection:** Wear PVC or similar impervious gloves.

**Skin Protection:** Normal workwear longsleeved overalls are recommended. When de-icing/anti-icing aircraft use impervious suit.

**Eye Protection:** Face shield or chemical goggles are recommended, particularly if handling above head heights and are essential when de-icing/anti-

icing aircraft.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION Cont...

Occupational Exposure Limits: Propane –1, 2-diol is subject to an Occupational Exposure Standard of: (HSE EH40/2001) particulates 10mg/cu.m (8 hour Time Weighted Average).  
Total exposure (Vapour + particulates) : 474mg/cu.m 8 hour T.W.A.  
The viscosity of the product makes such a level unlikely to occur.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Clear/Hazy liquid.
Odour:	Mild odour.
pH:	7.0. – 8.0
Boiling Point/Range:	Initial boiling point 100°C.
Melting Point/Range	Not determined
Flash Point (°C)(PMCC):	Above 100°C
Solubility in water:	Miscible in all proportions.
Autoflammability *	Not determined
Explosive Properties*	Not determined
Oxidising Properties *	Not determined
Vapour Pressure *	Not determined
Relative Density *	1.03 - 1.05g/ml

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## 10. STABILITY AND REACTIVITY

Stability: Product is stable.

Conditions to Avoid: Open exposure to temperatures above 35°C when some evaporation of the water component may occur with time.

Materials to Avoid: Strong acids and strong oxidising agents.

Hazardous Decomposition Products: After the water component has been driven off, oxides of carbon.

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## 11. TOXICOLOGICAL INFORMATION

**Eye Contact:** Possible eye irritant.

**Skin Contact:** Prolonged or frequent contact may cause mild irritation.

**Ingestion:** Suppliers data for constituent raw materials (Rat, Oral LD50) indicates no significant hazard by this route.

**Inhalation:** Product is of low volatility and hence of low inhalation risk under normal operating conditions.

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## 12. ECOLOGICAL INFORMATION

### Elimination information.

Test Method: OECD 301A / ISO 7827  
Method of Analysis: DOC reduction  
Degree of elimination: > 70% (28 day)  
Evaluation: Readily biodegradable

### Behaviour and environmental fate.

At the concentrations expected to be released into the environment, not expected to have any adverse effects. Biodegradation will prevent a build up in the environment.

### Expected Ecotoxic effects based on results for similar products.

Toxicity to algae, EC50 (72hr)	>4000mg/l (Selenastrum capricomutum)
Toxicity to daphnae, EC50 (24hr)	> 999mg/l (Daphnia magna)
NOEC (24hr)	> 999mg/l (Daphnia magna)
Toxicity to fish, LC50 (96hr)	>1500mg/l (Oncorhynchus mykiss)

### Further ecological information.

COD value: circa 850mg O<sub>2</sub>/g  
BOD5 value: circa 500mg O<sub>2</sub>/g  
BOD20 value: circa 780mg O<sub>2</sub>/g

This product contains no organically bound halogen.  
Water Endangering Classification - WGK I (Self classification)

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### 13 DISPOSAL CONSIDERATIONS

Ensure conformity with local disposal regulations.

Likely residues/waste products: Chemically unchanged product, probably diluted with water owing to its action on snow and ice.

Safe Handling of any residues/waste product:

Undiluted product is best disposed of by incineration in a suitable licensed disposal facility.

Diluted material would be completely biodegradable in a suitable waste water treatment plant.

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### 14. TRANSPORT INFORMATION

Not regulated for transport.

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### 15. REGULATORY INFORMATION

Supply label information:

Label symbol	None
Risk phrase	None
Safety phrases	S25 Avoid contact with eyes.

Note: Actual label may not be as above if product was supplied some time previously or labelling is in transition period.

**NOTE: THIS DATA SHEET DOES NOT CONSTITUTE A USERS ASSESSMENT OF WORKPLACE RISK AS REQUIRED BY HSW ACT, COSHH, MANAGEMENT OF HEALTH AND SAFETY AT WORK REGULATIONS, OR OTHER HEALTH AND SAFETY LEGISLATION.**

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### 16. OTHER INFORMATION

WGK I (self classification)

Recommended uses and restrictions:

E-MAX is an aqueous viscous solution for use as an anti-icing/de-icing fluid, particularly with aircraft (AMS 1428C).

Sources of key data used to compile Safety Data Sheet:

Raw Material Suppliers Material Safety Data Sheets.

HSE EH40/2001 Occupational Exposure Limits (HSE)

Toxicity Test Report, Ilab Environmental Laboratory, Bergen, Norway

## **16. OTHER INFORMATION cont ....**

The information in this Safety Data Sheet is based on the present state of our knowledge and on current EC and National Laws, as users' working conditions are beyond our knowledge and control. The product is not to be used for purposes other than those specified under SECTION 1 without first obtaining written handling instructions. It is always the responsibility of the user to take all necessary steps in order to fulfil the demands laid down in local rules and legislation. The information in this Safety Data Sheet is meant as a description of the safety requirements of our product. However, although prepared with all due care, Ely Chemical Company provides no warranties, either expressed or implied, and assumes no responsibility for the accuracy or completeness of the data contained herein. Ely Chemical Company assumes no responsibility for any injury to vendor, end user or third party and it is the sole responsibility of the user to determine its suitability for any purpose. It is not to be considered as a guarantee of the products properties.

The information in this Safety Data Sheet is pursuant to:

- (a) The Chemicals (Hazard Information and Packaging for Supply) Regulations 2002.
- (b) Council Directive 92/32/EEC (03 N° L154,5-6-92.p1) amending the 7th time Council Directive 67/457/EEC (03 N° 196, 16-8-67.pl. (03/SE 1967, p234) in so far as these provisions relate to the classification, packaging and labelling of dangerous substances.
- (c) Council Directive 88/379/EEC (03 N° LI187, 16-7-88.p14) as amended by Commission Directive 90/492 EEC(03 N° L275 5-10-90 p35) on the classification ,packaging and labelling of dangerous preparations.
- (d) Council Directive 78/631/EEC (03 N° L204, 29-7-78 p13) on the classification, packaging and labelling of dangerous substances (pesticides); and
- (e) Commission Directive 91/115/EEC (03 N° L76 22-3-91 p35)on the system of specific information relating to dangerous preparations (Safety Data Sheets) except in so far as those directives relate to the provision of child resistant fastenings for certain packages containing dangerous substances and preparations.

Please ensure that it is passed to the appropriate person(s) in your company, who are capable of acting on the information.