

## PRODUCT SAFETY DATA SHEET

PRODUCT: BRADITE EF91  
DATE OF ISSUE: APRIL 1997

REVISION NO: 001  
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### 1. IDENTIFICATION.

NAME: BRADITE EF91 TWIN-PACK SEMI-GLOSS EPOXY FINISH  
USE: FOR APPLICATION BY BRUSH, ROLLER AND SPRAY.  
MANUFACTURED BY: BRADITE LTD.  
Ogwen Valley Works, Bethesda,  
Gwynedd LL57 4YP, North Wales  
Telephone: 01248 600315  
Facsimile: 01248 602782

### 2. COMPOSITION/ INFORMATION ON INGREDIENTS.

Substances presenting a health hazard within the meaning of the Chemicals (Hazard Information and Packaging) Regulations 1993.

| NAME                                 | CONC.RANGE | SYMBOL LETTER | R-PHRASES (SEE SECT.16) |
|--------------------------------------|------------|---------------|-------------------------|
| Epichlorhydrin/<br>Bisphenol A Resin | 25 - 35%   | Xi            | 36/38, 43, 51/53        |
| Isobutanol                           | 0 - 10%    | Xn            | 10, 20                  |
| Xylene                               | 20 - 30%   | Xn            | 10, 20/21, 38           |
| Polyamide                            | 0 - 5%     | Xn            | 36/38, 43               |
| Amine Subs.Phenol                    | 0 - 5%     | Xn            | 22, 36/38               |

### 3. HAZARDS IDENTIFICATION

**FLAMMABLE  
HARMFUL  
CONTAINS XYLENE**

Section 11 may also refer.

### 4. FIRST AID MEASURES.

#### General

In all cases of doubt, or when symptoms persist, seek medical attention.  
Never give anything by mouth to an unconscious person.

#### Inhalation

Remove to fresh air, keep the patient warm and at rest. If breathing is irregular or stopped, administer artificial respiration. Give nothing by mouth. If unconscious, place in the recovery position and seek medical advice.

#### Eye Contact

Contact lenses should be removed. Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart, and seek medical advice.

#### Skin Contact

Remove contaminated clothing. Wash skin thoroughly with soap and water or use a proprietary skin cleaner. Do NOT use solvents or thinners.

#### Ingestion

If accidentally swallowed obtain immediate medical attention. Keep at rest. Do NOT induce vomiting.

### 5. FIRE FIGHTING MEASURES.

#### EXTINGUISHING MEDIA

Recommended: Alcohol Resistant Foam, Carbon Dioxide, Powder, Water Spray/ Mist.  
Not to be used: Water jet.

#### RECOMMENDATIONS

Fire will produce dense black smoke containing hazardous products of combustion (See Section 10). Exposure to decomposition products may be a hazard to health. Appropriate self-contained breathing apparatus may be required. Cool closed containers exposed to fire with water spray. Do not allow run-off from fire fighting to enter drains or water courses.

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### 6. ACCIDENTAL RELEASE MEASURES.

Exclude sources of ignition and ventilate the area. Exclude non-essential personnel. Avoid breathing vapours. Refer to protective measures listed in Sections 7 and 8. Contain and collect spillages with non-combustible absorbent materials, e.g. sand, earth, vermiculite, diatomaceous earth and place in a suitable container for disposal in accordance with the waste regulations (See Section 13). Do not allow to enter drains or water courses. Clean preferably with a detergent; avoid the use of solvents. If the product enters drains or sewers, the local water company should be contacted immediately; in the case of contamination of streams, rivers or lakes, the National Rivers Authority.

### 7. HANDLING AND STORAGE.

#### HANDLING

Vapours are heavier than air and may spread along floors. They may form explosive mixtures with air. Prevent the creation of flammable or explosive concentrations in air and avoid vapour concentrations higher than the Occupational Exposure Limits.

Additionally, the product should only be used in areas from which all naked lights and other sources of ignition have been excluded. Electrical equipment should be protected to the appropriate standard. Keep the container tightly closed. Exclude sources of heat, sparks and open flame. Non-sparking tools should be used.

Avoid skin and eye contact. Avoid inhalation of vapour and spray mist.

Smoking, eating and drinking should be prohibited in areas of storage and use.  
For Personal Protection, see Section 8.

Never use pressure to empty: the container is not a pressure vessel.

Always keep in containers made of the same material as the supply container.

Good housekeeping standards and regular removal of waste materials will minimise the risks of spontaneous combustion and other fire hazards.

#### STORAGE

Observe the label precautions. Store between 5°C and 25°C in a dry, well ventilated place away from sources of heat, ignition and direct sunlight. No smoking. Prevent unauthorised access. Containers which are opened should be properly re-sealed and kept upright to prevent leakage.

Store separately from oxidising agents and strongly alkaline and strongly acid materials.

### 8. EXPOSURE CONTROLS/ PERSONAL PROTECTION.

#### ENGINEERING MEASURES.

Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and general good extraction. If these are not sufficient to maintain concentrations of particulates and/or solvent vapours below the relevant occupational exposure limits, suitable respiratory protective equipment should be worn (See Protective Protection below).

#### EXPOSURE LIMITS

| SUBSTANCE      | OCCUPATIONAL EXPOSURE LIMITS |                       | NOTATIONS (3)   |                       |       |
|----------------|------------------------------|-----------------------|-----------------|-----------------------|-------|
|                | 8 Hr TWA (1)                 |                       | 15 Min Stel (2) |                       |       |
|                | ppm (4)                      | mg/m <sup>3</sup> (4) | ppm (4)         | mg/m <sup>3</sup> (4) |       |
| Isobutanol     | 50                           | 150                   | 75              | 325                   | (OES) |
| Epichlorhydrin | 0.5                          | 2                     | 1.5             | 6                     | (SEN) |
| Xylene         | 100                          | 435                   | 150             | 650                   | (SK)  |

#### NOTES

- (1) Long term exposure limit - 8 hour time weighted average  
(2) Short term exposure limit - 15 minute reference period  
(3) "Sk" indicates a risk of absorption through the skin.

- "Sen" indicates a respiratory sensitiser.  
(4) "OES" indicates an Occupational Exposure Standard.

"MEL" indicates a Maximum Exposure Limit.

OELS are taken from the current version of EH40, except those marked "SUP", which are assigned by the supplier of the substance.

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### PERSONAL PROTECTION

All PPE, including RPE, used to control exposure to hazardous substances must be selected to meet the requirements of the COSHH Regulations.

#### RESPIRATORY PROTECTION.

Air-fed respiratory protective equipment should be worn when this product is sprayed if the exposure of the sprayer or other people nearby cannot be controlled to below the occupational exposure limit and engineering controls and methods cannot reasonably be improved.

#### HAND PROTECTION

When skin exposure may occur, advice should be sought from glove suppliers on appropriate types. Barrier creams may help to protect exposed areas of skin but are not substitutes for full physical protection. They should not be applied once exposure has occurred.

#### EYE PROTECTION

Eye protection designed to protect against liquid splashes should be worn.

#### SKIN PROTECTION

Cotton or cotton/ synthetic coveralls are normally suitable. Grossly contaminated clothing should be removed and the skin washed with soap and water or a proprietary skin cleaner.

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### 9. PHYSICAL AND CHEMICAL PROPERTIES.

|                       |                 |                      |
|-----------------------|-----------------|----------------------|
| Physical State.       | Viscous Liquid  |                      |
| Flash Point           | 26°C            | Method: Closed Cup   |
| Viscosity             | 6.0 / 8.0 poise | Method: Cone & Plate |
| Specific Gravity      | 1.44 / 1.50     | Method: Weight Cup   |
| Vapour Density        | Heavier         | Than Air.            |
| Lower Explosion Limit | 1.1             | per cent             |
| Solubility in water:  | Immiscible      | per cent             |

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### 10. STABILITY AND REACTIVITY

Stable under the recommended storage and handling conditions (See Section 7).

In a fire, hazardous decomposition products such as smoke, carbon monoxide, carbon dioxide and oxides of nitrogen may be produced.

Keep away from oxidising agents and strongly alkaline and strongly acidic materials to prevent the possibility of exothermic reaction.

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### 11. TOXICOLOGICAL INFORMATION

Exposure to organic solvent vapours may result in adverse health effects such as irritation of the mucous membrane and the respiratory system and adverse effects on the renal and central nervous systems. Symptoms include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness. Repeated or prolonged contact with the product may lead to removal of natural fats from the skin resulting in non-allergic contact dermatitis and absorption through the skin. Splashes in the eyes may cause irritation and reversible local damage.

Ingestion may result in the following effects: sore throat, abdominal pain, drowsiness, nausea, vomiting and diarrhoea. Other effects may be described for exposure to vapours.

Based on the properties of the epoxy constituent and considering toxicological data or similar preparations, this preparation may be a skin sensitiser and an irritant. It contains low molecular epoxy constituents which are irritating to eyes, mucous membrane and skin.

Repeated skin contact may lead to irritation and to sensitisation, possibly with cross-sensitisation to other epoxies.

Skin contact with the preparation and exposure to spray mist and vapour should be avoided.

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### 12. ECOLOGICAL INFORMATION

The product contains high-boiling poly-cyclic aromatic hydrocarbons some of which are under suspicion of carcinogenic or mutagenic activity. It contains volatile components which evaporate from poorly locked drums. High concentrations are toxic to aquatic life.

The product should not be allowed to enter drains or water courses or be deposited where it can affect ground or surface waters.

The Air Pollution Control requirements of regulations made under the Environmental Protection Act may apply to the use of this product.

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### 13. DISPOSAL CONSIDERATIONS

Do not allow into drains or water courses or dispose of where ground or surface waters may be affected.

Wastes, including emptied containers, are controlled wastes and should be disposed of in accordance with regulations made under the Control of Pollution Act and the Environmental Protection Act.

Using the information provided in this safety data sheet, advice should be obtained from the Waste Regulation Authority whether the Special Waste Regulations apply.

### 14. TRANSPORT INFORMATION

THIS PRODUCT IS NOT CLASSIFIED AS DANGEROUS FOR CARRIAGE

|                         |                     |                        |                             |
|-------------------------|---------------------|------------------------|-----------------------------|
| Domestic Road/Rail      | Class               | Trade Designation      |                             |
|                         | Packing Group       | SI Number              |                             |
| Sea                     | Class               | 3                      | Proper Shipping Name. Paint |
|                         | Packing Group       | 111                    | UN Number 1263              |
|                         | 30 litres and below | Main Risk              |                             |
|                         | Over 30 litres      | Sub Risk               |                             |
|                         | Marine Pollutant    | Yes                    |                             |
| Air                     | EmS                 | 3-05                   | MFAG 310                    |
|                         | Class               | Proper Shipping Name:  |                             |
|                         | Packing Group       | UN (or IATA ID) Number |                             |
|                         | 30 litres and below | Main Risk              |                             |
|                         | Over 30 litres      | Sub Risk               |                             |
| International Road/Rail | Class               | Chemical Name          |                             |
|                         | Item Number         | UN Number              |                             |
|                         | Packing Group       | Main Risk              |                             |
|                         |                     | Sub Risk               |                             |

### 15. REGULATORY INFORMATION

The product is classified and labelled for supply in accordance with the Chemicals (Hazard Information and Packaging) Regulations as follows:

**FLAMMABLE**  
**HARMFUL**  
**CONTAINS XYLENE**

The information contained in this safety data sheet does not constitute the user's own assessment of workplace risks as required by other health and safety legislation. The provisions of the Health and Safety at Work etc. Act and the Control of Substances Hazardous to Health Regulations apply to the use of this product at work.

### 16. OTHER INFORMATION.

Text of R phrases listed in Section 2.

|       |   |
|-------|---|
| 10    | Flammable   |
| 20/21 | Harmful by Inhalation and in contact with skin  |
| 22    | Harmful if swallowed  |
| 36/38 | Irritating to eyes and skin   |
| 43    | May cause sensitisation by skin contact.  |
| 51/53 | Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. |

The information contained in this safety data sheet is provided in accordance with the requirements of the Chemicals (Hazard Information and Packaging) Regulations.

The product should not be used for purposes other than those shown in Section 1 without first referring to the supplier and obtaining written handling instructions. As the specific conditions of use are outside the supplier's control, the user is responsible for ensuring that the requirements of relevant legislation are complied with.

The information contained in this safety data sheet is based on the present state of knowledge and current national legislation. It provides guidance on health, safety and environmental aspects of the product and should not be construed as any guarantee of technical performance or suitability for particular applications.

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**Further information and advice can be found in:**

|  |                           |
|--|---------------------------|
| The Control of Substances Hazardous to Health Regulations 1988 | (SI 1988: 1657)           |
| The Manual Handling Operations Regulations 1992                | (SI 1992: 2793)           |
| Storage of Flammable Liquids in Containers,                    | HS (G) 51                 |
| The Environmental Protection (Duty of Care) Regulations 1992   | (SI 1992: 2839)           |
| Storage of Packaged Dangerous Substances                       | HS (G) 71                 |
| Surveillance of People Exposed to Health Risks At Work         | (ISBN 0 11 885574 3) HMSO |

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