



# BITUMEN EMULSION

ISSUE DATE: PBE / 2008-0703

**CAN BE APPLIED BY  
BRUSH OR SPRAY**

**CONFORMS TO  
BS 3690 & BS 3945**

**DRIES TO AN IMPERMEABLE  
DAMP-PROOF MEMBRANE**

## **DESCRIPTION:**

A brown thixotropic, cold applied Bitumen emulsion with 10% added rubber dispersion, curing to form an impermeable, flexible and waterproof barrier to the passage of moisture and damp. PALACE BITUMEN EMULSION is designed for use as a waterproofing barrier membrane and tanking compound for use on exterior profiles of concrete and brick foundations, retaining walls and bridge abutments to provide protection from the ingress of groundwater damp and the sulphate salts carried within. Apart from construction applications BITUMEN EMULSION is also widely used as a damp-proof membrane for vertical and horizontal applications around supporting walls, and as a "sandwich" membrane between layers of concrete and screed, which may constitute a solid ground floor structure. BITUMEN EMULSION complies with the requirements of BS 3960:1970 for adhesives based on Bitumen and complies with the requirements for the British Standard Code of Practice CP 102: 1973 for use as a membrane to protect buildings against water from the ground.

## **PREPARATION:**

Ensure the surface is thoroughly clean and free from loose deleterious matter or poorly bound surface coatings. Damaged or cracked masonry should be repaired with a suitable repair render or screed before priming of the surface or straight application can begin. Ideally the more porous concrete or masonry substrates, such as asbestos sheet, or concrete blocks should be lightly dampened before receiving a priming coat mixed from 1 part water to 1 part BITUMEN EMULSION and spread evenly across the application zone to reduce suction. Allow the primer coat to dry before proceeding with application of the neat product. Concrete floor slabs, cured castings or brickwork structures in good condition need not be primed, but will benefit from being dampened prior to treatment.

## **APPLICATION:**

BITUMEN EMULSION can be coated across a primed surface using a soft bristled brush or rubber squeegee, ideally as an alternating two-coat treatment to achieve a sufficiently robust and complete damp-proof membrane. In external applications avoid treatment when exposure to rainfall is likely within 24 hours of painting out, as BITUMEN EMULSION can be slow to dry out in humid and cool conditions and care should be taken to protect the film from contact with water until it has fully dried. The Dark brown colour associated with the liquid BITUMEN EMULSION will become dark black as the membrane begins to dry out and fully cure.

## **PHYSICAL PROPERTIES:**

A Water based rubberised Bitumen emulsion.

Specific Gravity – 1.01 +/- 0.02

Solids Content - 62.0 +/- 1.0%

Application Temperature range: 5°C to 35°C, on suitably prepared and protected surfaces.

Drying Time – up to 24 hours depending upon surrounding temperature and humidity.

## **COVERAGE:**

Depends upon the texture and porosity of the surface to be coated. Generally on smooth level, non-porous surfaces, BITUMEN EMULSION will cover at between 1.2 to 1.5 square metres per litre, per coat, however porous surfaces such as un-primed concrete or a worn screed will cover at a rate of only about 0.9 to 1.0 square metres per litre.

## **STORAGE & PACKAGING:**

BITUMEN EMULSION is supplied in 1 litre; 2.5 litre; 5 litre & 25 litre cans and has a storage life of up to 12 months if stored in dry, sealed frost-free conditions, ideally at temperatures between 10°C up to 25°C..

Consult the BITUMEN EMULSION material safety data sheet for advice on handling and safety procedures. Should further more specific technical information be required, contact the Palace Technical helpline on 0151 486 6101.

The information provided by this Technical data sheet is given in good faith and is to the best of our current knowledge true and accurate. However it is given without guarantee, as conditions of use and workmanship involved are both beyond our control. All information supplied is subject to the company's terms and conditions of sale, copies of which are available on request.

PALACE CHEMICALS Ltd; Speke Hall Industrial Estate; Speke; Liverpool; L24 4AB  
Tel: 0151 486 6101 – Fax: 0151 448 1982  
e-mail [technical@palacechemicals.co.uk](mailto:technical@palacechemicals.co.uk)

**ALA AL L**

Speke Hall Industrial Estate; Speke; Liverpool L24 4AB  
 Tel; 0151 486 6101; Fax 0151 448 1982; e-mail [technical@palacechemicals.co.uk](mailto:technical@palacechemicals.co.uk)

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| <p><b>BITUMEN EMULSION</b></p>   |   |   |  |
| An aqueous dispersion of oxidised bitumen; Potassium Hydroxide (<2%) and Potassium/Calcium Carbonate   |   | NON-HAZARDOUS<br>Not classified under the CHIP regulations  |  |
| <p>Avoid working in confined areas. If inhaled, remove to fresh air and seek medical attention. If irritation or breathing difficulties persist, seek medical attention.</p>   | <p>Wash off skin with warm soapy water. The product will not cause immediate irritation, but prolonged and unattended contact should be avoided</p> | <p>Clean out mouth with copious volumes of water. Do not induce vomiting. Seek prompt medical attention and show this data sheet.</p> | <p>Irrigate thoroughly for 15 minutes with clean running water or a boric saline eye wash bottle. Seek medical attention should eye irritation persist or become inflamed.</p> |
| NOT APPLICABLE - This product is a NON-FLAMMABLE water based dispersion  |   |   |  |
| Absorb spillages on sand, sawdust or absorbent granules and confine residues in a clearly marked sealed container for disposal in accordance with Local Authority regulations for low-hazard aqueous bitumen emulsions. Provide plenty of ventilation if spillage occurs within a confined room or area. |   |   |  |
| Store in sealed, clearly marked containers either as a concentrate or in its diluted form. Keep out of reach of children in a cool well-ventilated environment – Protect from frost, heat and direct sunlight. Keep in sealed plastic containers to prolong product life.                                |   |   |  |
| <p>Good ventilation is required otherwise use an organic vapour filtered face mask in confined spaces.</p>   | <p>Wear 17" long elbow length latex rubber (chlorinated) or nitrile gloves approved to EN 374 &amp; EN 420 with a BTT rating of &gt; 4 hrs.</p>     | <p>BS 2092 Goggles should be worn for all applications to help prevent accidental face/eye contact</p>                                | <p>A disposable PVC apron should be worn on top of overalls, however if the fabric becomes contaminated these should be laundered immediately.</p>                             |

**SAFETY DATA SHEET No. 79**

**BITUMEN EMULSION**

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| <p>Appearance – Brown viscous liquid.<br/>                 Miscibility – Water only or partially in oils.<br/>                 Ph – 9.0 – 11.0<br/>                 Density – 1.01<br/>                 Odour – Distinctive ammonia type smell.<br/>                 Viscosity &lt; 2500cps.</p>   | <p>Flammability - n/a<br/>                 Explosive limits - n/a<br/>                 Vapour pressure - negligible</p> |
| <p>Storage in frost affected conditions (&lt;5°C) or at elevated temperatures (&gt;35°C) will affect the performance stability of the product, and lead to separation of the emulsion. However there are no known adverse/unsafe reactions should this product be inadvertently contaminated, although the product will be adversely affected by Strong acids.</p>   |   |
| <p>LD50 (oral rat) – &lt; 1000mg/kg for aqueous BITUMEN based emulsions on rats.<br/>                 May cause irritation of the upper digestive tract and mouth should ingestion occur.</p>  |   |
| <p>Acute toxicity: ingestion<br/>                 Irritation: Eye contact</p>  | <p>Sensitisation: n/a<br/>                 Mutagenicity: n/a</p>  |
| <p>Carcinogenicity: n/a<br/>                 Reproductive toxicity: n/a</p>  |   |
| <p>The product is only sparingly biodegradable and is toxic to aquatic organisms.<br/>                 Ecotoxicity – Acute fish toxicity – LC50-48hrs fish &gt; 1000mg/Kg.<br/>                 Slowly Biodegradable in both fresh and salt water.</p>   |   |
| <p>Dispose according to Local Authority regulations for aqueous, low hazard emulsion based building chemicals. Do not dispose in any watercourse.</p>  |   |
| <p>Not subject to CPL / ADR restrictions<br/>                 When transporting overseas, classify as IMO Class 3.3 – Marine pollutant.</p>  |   |
| <p>Irritating in contact with mucous membranes. If swallowed do not induce vomiting, seek medical advice and show this data sheet. Wear suitable protective clothing - see PPE.<br/>                 The use of this product at work will be subject to an assessment in accordance with the 1994 COSHH regulations.</p>   |   |
| <p>The information supplied in this safety data sheet is intended to assist in the use of the above product without risk to safety and health and is based on current knowledge and experience of the associated physico-chemical hazards. The data does not signify any warranty with regard to the product's properties. This information may be used to assist in formulating a COSHH risk assessment if applied at work.</p> |   |