



Shell Flintkote 3

Product Technical Data Sheet

Shell Flintkote 3 bitumen emulsion is a single-pack, non-fibrated and stable water-borne emulsion which cures to form a firm and flexible bitumen waterproofing membrane. **Shell Flintkote 3** is designed for use on horizontal and vertical surface. **Shell Flintkote 3** is suitable for use as waterproof membrane on concrete, asbestos cement, roofing felt, mastic asphalt, slates, tiles and metal surface.

Advantages

- Easy to apply by brush, trowel and sprayer.
- Forms a seamless and lap free membrane over the substrate.
- Water-based and non-toxic.
- Cures to form a flexible resilient waterproofing barrier over a wide range of temperatures.
- No flow or sagging of the film at elevated temperatures even on vertical surface.
- Excellent adhesion to the substrate prevents lateral migration of water underneath.
- Can be applied to damp surface without standing water such as green concrete surface.

Uses

Waterproofing:	Typical applications will include concrete roofs, asbestos cement roof, exposed metal roofs, rejuvenation of asphalt roof, retaining walls, external concrete walls, above-grade floor slabs, bathroom, kitchen, balconies and planter boxes. Also suitable for use as a non-toxic lining to water tanks.
Insulation:	Provides a vapour barrier for cold storage rooms, mushroom houses and similar installations. Suitable for application in food stores.
Concrete Protection:	To protect concrete from carbonation, spalling and sulphate attack.
Metal Protection:	As a protective coating against corrosion of pipes, structural steelworks and other metallic equipment.
Timber End Protection:	To seal the freshly cut timber surface to prevent excessive loss of water through tree wounds.

Standard Compliance

ASTM D1227-79 Type 3 American Standard For Emulsified Asphalt Used as protective Coating for Roofing

SS-133 Singapore Standard For Bitumen Emulsion For Roof Waterproofing

Specification Clause

Liquid applied bituminous waterproof membrane where shown on the drawings shall be **Shell Flintkote 3** Bitumen Emulsion obtained from Shell. It should be used in accordance with the Shell's current product data sheet.

Application Instructions

Surface Preparation

Surfaces shall be dry, clean, and free from dust, dirt, oil, grease, moss and loose material.

Priming

Porous surfaces such as concrete or brick should be primed with

- 1). A coat of 1:1 mixture of **Shell Flintkote 3** and water or
- 2). **Shell Flintkote PF-4 Bitumen Paint** or **Shell Flintkote Penetration Primer** at a coverage of 0.1-0.15 litre/m².

Allow to dry prior to **Shell Flintkote 3** application.

Metal surfaces must be primed with **Shell Flintkote PF-4 Bitumen Paint** or **Shell Flintkote Penetration Primer** at a coverage of 0.1-0.15 litre/m². Allow to dry prior to **Shell Flintkote 3** application.

Membrane Application

Stir the emulsion well before use. **Shell Flintkote 3** may be applied by roller, brush or spray for a minimum of 2 coats. Allow to dry between coats and apply each coat at right angles to the previous coat. **Shell Flintkote 3** normally cures within 24 hours of application. For maximum durability, the coating can be reinforced with **Shell Flintkote FG-4** open woven glass fabric or equivalent. Protect from rain and frost until cured.

For exposed surface subjected to direct sunlight, apply 2 coats of **Shell Flintkote Aluminium** or **Shell Flintkote Decoralt** on the cured membrane.

Coverage

Coverage rates will vary depending on the actual surface environment and application. The typical coverage is about 1.5 litres/m² for a 2 coats application.

Cleaning of Tools

Clean immediately after use with water. Use kerosene or white spirit if the material has dried. During work, place tools in water when not in use.

Storage

A minimum of 12 months in original sealed containers stored under cover at temperature between 5 °C and 40 °C. must be protected from freezing conditions.

Packing

Drum	x	200 liters
Pail	x	18 liters
Gallon	x	3.5 liters
Can	x	1 liters

Product Data Summary

Properties	Test	Typical Values
Colour, Wet		Brown
Colour, Dry		Black
Appearance		Thick, smooth cream
Solid Content		> 50%

Specific Gravity		1
Surface Drying Time		4-6 hours depending on temperature and humidity
Coverage		0.50-0.75 litre/m ² per coat
Flash point		Water-based, non-flammable
Heat Resistance, 100°C		No flow, sag or blistering
Water Vapour Transmission	ASTM E96	5 g/m ² /24 hours
Tensile Strength – Reinforced with FG4	ASTM D412	2 N/mm ²
Shore A Hardness – Reinforced with FG4	ASTM D2240	50
Crack Bridging – Reinforced with FG4	ASTM C836	Able to bridge 2 mm crack
Chemical and water resistance		Resistant to water, alcohol, most salt solutions, some dilute acids and alkalis. Not resistant to oil, solvents and some detergent solutions

Typical values may represent average values from sample tested.

Health and Safety

Flammability:

Non-flammable

Skin Contact:

Occasional contact is unlikely to have any adverse effect except on particularly sensitive skin. As a general precaution, avoid repeated or prolonged contact. Remove skin contamination when wet with water. Use a proprietary hand cleaner if the product has dried.

Eye Contact:

Unlikely to cause damage, no special precautions are necessary. However, as eyes are a sensitive area, contact should be avoided. In the event of accidental contact, irrigate immediately with plenty of water.

Shell Flintkote 3 is unlikely to present significant health and safety hazard when properly used in the recommended application, provided good standards of industrial and personal hygiene are maintained.

For further information, please contact:

<http://www.shell.com/bitumen>