

# CreteSafe B-250®

WATERPROOFING AND PROTECTION FOR CONCRETE SURFACES AND ICF'S

Liquid Rubber CreteSafe B-250® is a water based elastomeric bitumen membrane applied as a dual fluid system forming an 'instant-set' coating. When cured this coating functions as a high quality, protective membrane providing excellent protection for concrete surfaces from water penetration, salt or other chemical attack. When cured the membrane is highly elastic and will bridge small cracks that appear in the concrete on settling and is seamless and fully adhered to the surface so no water can get behind the coating. Liquid Rubber CreteSafe B-250® is cold applied using an airless dual pump applicator for safety and efficiency.

CreteSafe B-250® is a heavy-duty membrane used wherever concrete needs to be protected from the effects of water, salt or chemical damage both above and below grade. CreteSafe B-250® will not degrade in sunlight. Applications include concrete poured and block foundations, retaining walls, tunnel liners, parking deck structures, concrete water and wastewater containment tanks and ICF (insulated concrete forms).

CreteSafe B-250® is a water based, environmentally safe alternative to conventional hot applied bitumen or solvent based protective coatings and easier to use than pre-formed plastic sheeting. CreteSafe B-250® provides excellent waterproofing and chemical resistance through a highly flexible seamless membrane that resists cracking and aging. CreteSafe B-250® is unaffected by a wide range of mild acids, alkalis, salts and other inorganic chemicals. Unlike adhesive applied sheet membranes, CreteSafe B-250® prevents tracking of water underneath the membrane, providing superior protection.

- FREE OF FLAMMABLE SOLVENTS
- NON-TOXIC
- NO VOC'S
- LOW ODOUR & WATER BASED

PHYSICAL PROPERTIES (Liquid)	
PROPERTY	TYPICAL RESULTS
Colour	Brown to black
Specific gravity (liquid) g/cm³	Approx. 1.0
Odour	None
Volatile Organic Compound	Contains no solvents
% solids (wt)	60 - 63%
Viscosity (sec)	20 - 25
pH	10 - 12

PERFORMANCE DATA (Cured membrane)	
PROPERTY	TYPICAL RESULTS
Colour	Black
Specific gravity, g/cm³	Approx. 1.0
Chemical resistance	Resists salt water and most inorganic solutions
Impact Resistance CGSB 37-GP-56@23C, J	19.5
Impact Resistance CGSB 37-GP-56@-10C, J	27.1
Water tightness after impact	Passed (no leakage)
Accelerated Weathering (Xenon arc)	No deterioration of the film,
ASTM G 155, D 412, 250 hrs	>90% retention of original tensile strength
Tensile Strength ASTM D 412, kPa (psi)	150 (22)
Elongation, %	>1300%
Recovery ASTM D 412, %	90%
Hardness, Durometer 00	76 - 78
Hardness, Shore A	15 - 17
Hardness, Shore D	3 - 4
Adhesion to concrete ASTM C 907, kPa (psi)	348 (50), cohesive failure
Puncture resistance CGSB 37-GP-56	Passed (no punctures)
Sag flow CGSB 37.58-M86	None
Water absorption, CGSB 37-GP-56M, %	1.83
Crack bridging ASTM C 1305(B), -20°C for	No visible cracks
70 cycles(unaged), 30 cycles(aged)	No visible cracks
Low temperature flexibility	Pass (-20°C)
Abrasion resistance ASTM F 1677	Good - very good
Water vapor permeance ASTM E 96 ng/Pa.s.m² (gr/h-ft²)	6.57 (0.33)
Dielectric strength kV/mm (V/mil)	14.2 (360)

## APPLICATION

CreteSafe B-250® is spray applied using equipment and training provided by Liquid Rubber.

CreteSafe B-250® should be applied to a dry surface, free of dirt, debris, oil or grease and should not be applied when the ambient temperature is below 5°C, or rain is expected within 24 hrs of application. For best results apply in multiple thin coats. Prime coat of CreteSafe A-Prime® may be applied to open or course concrete surfaces prior to the instant setting application.

CreteSafe B-250® is applied between 0.4-0.7 m²/litre, depending on the required membrane thickness. Typically, the product is non-tacky in one minute and is largely cured within 48 hrs. Liquid Rubber CreteSafe B-250® does not require a protection board to be used and backfilling can begin immediately or as per regional regulations. A crew can apply 500-700m² of membrane per day.

## LIMITATIONS

Liquid Rubber CreteSafe B-250® should not be applied when the ambient temperature is below 5°C. The uncured membrane may be damaged if frozen and should not be applied to wet or frozen surfaces or directly prior to rain. Some surface base coat materials such as coal tar are unsuitable for use with CreteSafe B-250®. Please consult technical service with any questions.

## CAUTION

For industrial use only. Keep out of reach of children. Avoid storage below 5°C. Please consult the Material Safety Data Sheet before using CreteSafe B-250®.

CreteSafe B-250® is mildly alkaline. When applying this product observe normal safety precautions, wear gloves, eye protection and other suitable protective equipment. For further information please consult the product MSDS.

## TECHNICAL SERVICE

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COVERAGE				
Cured Membrane		Coverage		
Mils	mm	ft²/gal	ft²/litre	m²/litre
40	1.00	30	7.93	0.74
80	2.00	15	3.96	0.37
120	3.00	10	2.64	0.24

**MSDS MATERIAL SAFETY DATA SHEET****SECTION 1 MATERIAL IDENTIFICATION**TRADE NAME: LIQUID RUBBER CreteSafe B-250<sup>®</sup> MATERIAL USE: Protective Coating

CHEMICAL FAMILY: Water suspension of petroleum derived hydrocarbons (polymer modified emulsified asphalt) and inert fillers.

T.D.G. CLASSIFICATION: NON REGULATED

WHIMIS CLASSIFICATION: NON REGULATED

**SECTION II COMPOSITION, INFORMATION ON INGREDIENTS**

COMPONENT	CAS#	% (BY MASS)	LC50 (ppm) (rat inhal)	LD50 (mg/kg) (rat oral)
Complex mixture of bitumens	9072-35-9	40-70	n/a	n/a
Anionic surfactants	143-19-1	0.5-2.0	n/a	n/a
Water	7732-18-5	30-60	n/a	n/a
Polymer dispersion	9010-98-4	5-25		

**SECTION III PHYSICAL PROPERTIES**

Odour and appearance: Brown liquid, slight resinous odour. - Odour threshold: n/a - Specific gravity: 1.00 (approx.)

Coefficient of water/oil distribution: n/a - Vapour pressure (mm Hg): 17 @20°C (water) - Boiling point: 100°C (water) - Freezing point: 0°C

pH: 7-13 - Vapour density (air = 1): &gt;1 - Evaporation rate (nBuAcetate = 1): &lt;1 - Volatiles %: 40-60 (water) - Solubility in water: partially soluble

**SECTION IV FIRE & EXPLOSION DATA**

Means of extinction: n/a - Sensitivity to mechanical impact/static discharge: n/a - Flash point (method): n/a (non-combustible)

Upper flammable limits % : n/a - Lower flammable limits % : n/a - Auto-ignition temperature: n/a - Special fire fighting instructions: n/a

Unusual fire and explosion hazards: Product will not burn but may splatter if temperature exceeds the boiling point of water.

**SECTION V REACTIVITY DATA**

Chemical stability: Stable - Incompatible materials: Will react with alkaline sensitive materials such as acids and certain metals. Do not store in aluminum containers or mix with aluminum implements.

Hazardous decomposition products: Avoid heating above 200°C. At elevated temperatures hazardous vapours can be released, including carbon monoxide, hydrogen chloride, organic acids and aldehydes. - Hazardous polymerization: Will not occur.

**SECTION VI HEALTH INFORMATION**

Exposure limit: n/a - Inhalation: n/a - Skin: Adhesion - Eyes: Adhesion, irritation. - Ingestion: Blockage of digestive and/or respiratory tract.

Chronic effects: n/a

**EMERGENCY AND FIRST AID PROCEDURES**

Inhalation: n/a

Skin: This is an alkaline product. If splashed on the skin immediately wash thoroughly with fresh water. If the product has dried on the skin massage the area with medical grade mineral oil, baby oil or edible oil, then wash with soap and water. If irritation persists seek medical attention.

- Eyes: Flush thoroughly with fresh water for at least ten minutes. Seek medical attention.

Ingestion: DO NOT INDUCE VOMITING. Seek medical attention.

**SECTION VII SPILL PROCEDURES**

In the event of a spill: Dike and contain, transfer to containers for recovery or disposal. Keep out of sewers.

Waste disposal method: Follow federal, provincial and local regulations regarding disposal.

**SECTION VIII SPECIAL PROTECTION**

Respiratory protection: n/a - Ventilation: n/a - Protective gloves: Recommended - Eye protection: safety glasses/splash goggles recommended

- Other protective equipment: Long sleeves, loose clothing recommended.

**SECTION IX SPECIAL PRECAUTIONS**

Storage and handling conditions: Keep containers tightly closed when not in use. KEEP FROM FREEZING.

Special shipping information: Not regulated by the Transportation of Dangerous Goods Regulations.

**TECHNICAL SERVICE**

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