Thermal Insulation

SEAL FLEX 003

Fluid Applied Borosilicate Roof and Wall Coatings

Product Information

An Innovative roof waterproofing technology combining strength, lightweight, protection and integral insulation.

The SEAL FLEX 003 is a fluid-applied borosilicate elastomeric roof mastic. Once in place the SEAL FLEX 003 roof system becomes a seamless, continuous monolithic membrane impervious to adverse weather conditions, airborne contaminants, and extreme temperature fluctuations. As shown by accelerated ageing tests, the SEAL FLEX 003 lasts' longer than conventional roofs. It is cold applied, so it is safer going on, and it is environmentally cleaner, eliminating poisonous fumes.

Special Features

- A high degree of puncture-resistance due to outstanding tensile strength
- Exceptional elongation
- Absolute bondability to a wide variety of substrates
- Stability under extreme temperature fluctuations
- Resistance to ageing & UV radiations
- Ease of application
- Space Age technology

The SEAL FLEX 003 is applied directly to certain clean, dry, in place substrates. These Include concrete, metal, etc. It offers an exclusive roofing formula featuring hollow borosilicate beads. These beads are an integral component in a material similar to the insulative and reflective lightweight coatings used on the NASA space shuttle.
This unique fluid applied borosilicate coating can be sprayed or rolled on to form a seamless monolithic seal over any size or shape roof. The SEAL FLEX 003 effectively dissipates and reflects solar radiation back into the atmosphere, resulting in an impressive reduction of solar loading.

- Variable permeability. The polymers used in the SEAL FLEX 003 expand when wet, offering unexcelled protection against damaging moisture penetration. The polymers shrink when dry, allowing any trapped moisture buildup to safely escape to the atmosphere.

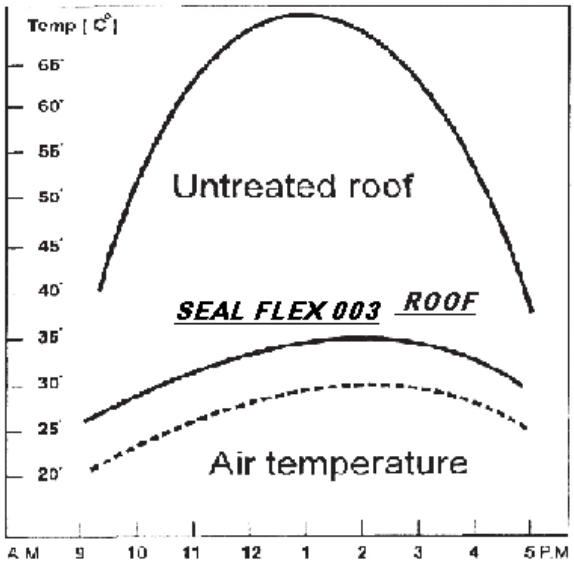
- Temperatures on the roof stay within 10 degrees of ambient air. This lowers temperatures under the roof by as much as 45 degrees. Proven temperature reductions of up to 40% are not unusual with a single application of SEAL FLEX 003. A SEAL FLEX 003 roof can pay for itself through energy savings by drastically reducing solar loading, a critical factor inn lowering air conditioning costs.

Effect of SEAL FLEX 003 on surface temperature

- Integral insulation

Borosilicates are a poor conductor of heat and is a far more effective insulator than the bulky materials generally used for this purpose. This makes the SEAL FLEX 003 Unsurpassed in its ability to dissipate heat.

The high performance SEAL FLEX 003 coating also insulates against roof expansion and contraction. This drastically reduces the possibility of roof leaks caused by thermal shock and reduces maintenance



costs accordingly.

- Hollow borosilicate beads: The magic behind SEAL FLEX 003.
The 8-10 microns spheres that make up the SEAL FLEX 003 are pure hollow borosilicates. Each closed cell-smaller in diameter than a human hair-acts as an efficient insulator.

Once applied, water evaporates from the SEAL FLEX 003 aqueous emulsion, and these hollow beads approach each other, eventually touch, then fuse into a continuous membrane the seamless SEAL FLEX 003. And since these spheres are over sixty two percent voids, the entire SEAL FLEX 003 roof system is very light in weight causing no concern of dead load to existing roofs.

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USES

Seal flex 003 can be used for virtually any roof application whether it is new construction or retrofit applications.

- Seal Flex 003 will bond to concrete, unprimed or galvanized metal, old asphalt surfaces and bituminous roofing felt.
- Apply directly... no mechanical fasteners or heat needed.

Other

- Labour Savings.
- Rapid set time.
- Lightweight.
- Superior flexibility at extremely low temperatures.
- Excellent elongation and recovery properties.

Technical Data

Tensile Strength,	ASTMD 412	615
Elongation at break,	ASTMD 41	200%
Permeability	ASTME 96	8.8 p
Water absorption	ASTMD471	<1%
Brittleness(-37°C)	ASTMD746	90pass
Heat aging	ASTMD 865	
Tensile strength	640psi	
Elongation at break	210 %	

Thermal Transmission	
At .127 mm thickness	
of Seal flex 003	ASTMC177
K-value	.0453 W/m.K
R- value	22m.K/W

Surface Preparation

- Concrete and cementitious substrates must be well compacte'd with a wood float type finish, be at least 28 days old and well dried.
- ! Wooden or metal panels to be firmly fixed in positions.
- ! TERRAZZO ROOF TILES: Clean and repair damaged joints. Remove all loose material.
- ! METAL ROOFS: Wire brush to remove moss, mildew and loose paint. Derust Corroded areas, then clean surfaces with a broom before priming.

Product Application

- ! Apply a prime coat diluting Seal flex 003 with 20% water.
- ! Primer must be completely dry.
- ! Apply Seal flex 003 by soft brush, roller or spray gun.
- ! For spraying Seal flex 003 may be slightly diluted with water. Too great a dilution may lead to sedimentation and blocking of spray gun.
- ! For water proofing and heat insulation.

  Apply two coats each at an approximate rate of 0.75 ltr. to 1 ltr. /m², depending upon the site requirement.
- ! For thermal insulation:- Apply two coats each at the rate of .250 ltr. to .375 ltr. /m².
- ! Where substantial movement is anticipated in the substructure, reinforce SOLAR SHIELD by incorporating a non-woven polyester scrim as part of a "Sandwich" membrane system. Lay this mesh in the wet first coat before application of subsequent coats.
- ! All detailing to pipes, upstands, drains, projected line etc. should be reinforced in this way.

Packaging

15 KG BUCKET

Technical Assistance

Technical assistance can be attained by contacting our local distributor or direct to us.

ARK CHEMICALS