

Octa Shield HIC

Elastomeric Insulation and Waterproof Coating System - Liquid Applied

DESCRIPTION:

Octa Shield HIC Elastomeric Insulation and Waterproof Coating is an emulsion of high grade acrylic resins in water combine with ceramic micro-spheres. It dries by evaporation to yield a tough, velvety, non-yellowing, water repellent surface with exceptional abrasion resistance and ultra-violet light stability.

The Octa Shield HIC is an innovative roofing and waterproofing system combining strength, lightweight protection and integral heat insulation. On application it becomes a seamless, continuous monolithic membrane impervious to adverse weather conditions, airborne contaminants, and extreme temperature fluctuations.

The ceramic micro-spheres in Octa Shield HIC coating are pure sodium borosilicate, and are less than 100 micron in diameter. Each closed cell acts as an efficient insulator. Once applied, water evaporates from the Octa Shield HIC aqueous acrylic emulsion and the hollow ceramic spheres approach each other, eventually touch, and then fuse into a continuous membrane.

Octa Shield HIC is designed to keep the structure cool and additionally works as a phenomenal waterproofing applicant. Octa Shield HIC employs the space age technology that stays to perform and becomes a seamless, continuous monolithic membrane impervious to adverse weather conditions and resist extreme temperature. These ceramic microspheres are similar to those used in the insulating ceramic tiles used on the NASA space shuttles.

Octa Shield HIC exterior insulation and waterproofing systems effectively dissipates and reflects solar radiation back into the atmosphere, resulting in an impressive reduction of solar loading.

Octa Shield HIC differ from other methods of insulation as it has a unique formula that takes advantage of the laws of Physics. Octa Shield HIC provides a durable thermal barrier. The insulating hollow ceramic beads incorporated in our formula behave much like glass, however much more effective. Octa Shield HIC dissipates heat. Within 10 seconds of heating the borosilicate ceramic beads with a blow torch, they can be handled safely with bare hands. This means that over 2000°C of heat has been dissipated in less than 10 seconds. The hollow ceramic microspheres reflective quality affects the warming phenomenon called "Mean Radiant Temperature", where heat waves

from a source such as direct sunlight cause a person to feel warmer even though the actual air temperature is no different between shade and sunny location. It is the molecular friction within the skin, which makes the body feel warmer in the presence of direct sunlight, the same with structural buildings, by using Octa Shield HIC, the thermostats can be set lower, resulting in lesser energy consumption of the Air Conditioning system.

Octa Shield HIC uses special acrylic elastomeric resins, the resins are engineered to suspend the ceramic microspheres, providing excellent adhesion to most surfaces, excellent high tensile strength, waterproofing property, and withstands the most extreme weather conditions.

USES

- Insulation and waterproofing of horizontal or sloped exposed concrete roofs
- Thermal and waterproof barrier between intermediate floors
- External insulation and waterproof coating around water tanks
- Insulation and rust proofing of metal roofs, shades
- Reflective coating for black top surfaces
- Insulation coating for cold storage

FEATURES

- Waterproofs roofs, even low sloped and horizontal surfaces
- High degree of puncture resistance due to its outstanding tensile strength
- Exceptional elongation characteristics
- Absolute bond-ability to a wide variety of substrates
- Stability under an extreme range of temperature fluctuations
- High resistance to atmospheric pollution
- High resistance to UV degradation
- Expanding while wet and shrinking while dry, helps keep the moisture out and improve efficiency of the system
- Non-toxic in liquid or cured form, environmentally cleaner, eliminating noxious fumes
- Drastically reduces the possibility of roof leaks caused by thermal shock and reduces maintenance costs accordingly
- Temperature reduction of up to 45%
- Reduces roof degradation by up to 80%

- Water borne abrasion resistant
- Non-hazardous, cold applied
- No special Primer required
- The resins and ceramics make a noticeable reduction from outside noise especially on metal roofs
- Accepts foot traffic

TECHNICAL DATA

- | | |
|-------------------------------------|-----------------------|
| • Base | acrylic emulsion |
| • Insulation Additive | ceramic micro-spheres |
| • Colour | white |
| • Elongation at Break | 242% at 25°C |
| • Tensile Strength | 406 psi |
| • Accelerated Weathering 1500 Hours | pass |
| • Flammability | non flammable liquid |
| • Solubility in Water | soluble |
| • Relative Density | 0.95 - 1.10 |
| • Flash Point | none |

PRECAUTIONS FOR USE

- Engineering Controls: avoid heating product
- Ventilation: use in well ventilated area or use local exhaust
- Personal Protection: normal working clothes covering arms and legs, eyewash facility and emergency shower. Avoid repeated or prolonged personal contact.
- Wear eye goggles and pvc gloves
- Use with adequate ventilation when applying by spray and mist and vapour is generated. Therefore use of an approved respirator is recommended
- Do not take internally. Avoid contact with eyes. If the product does come in contact with eyes, flush immediately with water and contact physician for medical attention. Avoid prolonged contact with skin.

STORAGE

Octa Shield HIC should be stored under shade in cool dry conditions maintaining a storage temperature of 25°C, preferably. Avoid storage in extreme temperatures. Keep away from freezing.

PACKING & SHELF LIFE

Octa Shield HIC is supplied in 16 liter buckets. The shelf life is 12 months when stored as directed.

SPREAD RATE

As a standard Octa Shield HIC should be applied at the rate of 0.50 liter per square meter per coat.

PRIMER

When a primer has to be applied to the surface, prepare a solution by mixing 1 part sweet water and 1 part Octa Shield HIC and apply by roller or brush at the rate of 1 liter primer to 5 square meters of surface.

No primer is required on metal surfaces, such as sheet metal roofs, etc.

APPLICATION

Octa Shield HIC can be applied by airless spray equipment or by brush or roller. It should be applied evenly without build-up. Two coats are recommended at the rate of 0.50 liter per square meter to a total wet film thickness of 500 microns (0.5mm).

In irregular conditions more product shall be required per square meter depending upon the roughness of the substrate to obtain an average thickness of 0.50mm.

Octa Shield HIC can be applied to the following type of substrates for insulation, waterproofing and/or rust proofing:

- Concrete
- Cement sand plaster & block walls
- Non-glazed ceramic tiles
- Asbestos sheets
- All clean metals including galvanized sheet roofs
- Unpolished stone
- Sprayed and hardened polyurethane sheets and surfaces

Apart from insulating and waterproofing roofs Octa Shield HIC can also be used as an exterior wall coating. The application of Octa Shield HIC coating on exterior walls specially facing the sun in hot weather will insulate and waterproof the walls resulting energy savings. In cold weather this coating will act as a barrier against the ingress of low temperature through the walls.

Octa Shield HIC can also be used as an interior coating. The coating will act as a barrier against temperature loss. In warm weather ceiling and walls of a room treated using Octa Shield HIC will stay cool for a longer period after the air conditioning system has been switched off compared to an interior not treated with Octa Shield HIC. Alternatively the treated interiors in cold weather will remain warmer for a longer period of time after the heating system is switched off compared to untreated interiors.

METHOD STATEMENT

Since conditions differ from project to project it is recommended that Engineers & Applicators obtain a particular method statement depending upon the nature of structure from our technical department.

EQUIPMENT CLEANING

Use soap and warm water to clean tools and equipment. Rinse with clean fresh water. Dried Octa Shield HIC is extremely hard to remove and will render soft equipment such as rollers or brushes unusable.