



Elementum Additive for water based Paints

Elementum Paint Additive for water based paints Technical Data Sheet (TDS)

Description: Roof Tile Clear Coat is a very high Hydrophobic Aerogel and Acrylic Emulsion Polymer formulation. Due to its hydrophobic character Roof Tile Clear Coat (ERTCC) provides remarkable resistance to water and excellent insulative properties. It shows excellent resistance to efflorescence from fresh cement substrate and high resistance to mould, algae, alkali and soiling.

Applications: Its versatility makes it suitable for a wide variety of applications, like insulative coatings for cementitious, clay, wood, steel, stone etc. substrates with a high wear resistance.

Skin? It is a revolutionary paint matrix which contains highly reflective and massively durable heat reflective platelets and glass microspheres. The paint matrix creates a solvent free, water repellent, yet breathable "skin".

Just like human skin the layer is flexible, water repellent, breathable, anti-soiling and it allows the building to moderate temperature solvent free composite. It contains microscopic Glass Spheres and Micro reflectors (aerogels). It is highly elastic, approx. 130%

Buildings are like living organisms they breathe, move and are exposed to harsh elements ERTCC keeps the roofs of a building dry, therefore preventing heat loss through thermal conduction and evaporative cooling. The reflective characteristics of the paint significantly reduces heat gain from solar warming in summertime.

Additional Attributes

This unique technology offers additional benefits.

- . Free of allergenic solvents, POP s and plasticisers
- . Wet abrasion resistance to DIN- 13300
- .High opacity to DIN -13300
- . Crack bridging elasticity
- . Rejects soiling agents and algae
- . Powerful adhesion to a wide range of substrates
- . Flame retardant to B1-DIN 4105
- .Extremely high solar light reflection, up to 98%*
- .UV, weather and aging resistant
- .Absorption of all VOC's, CO₂ etc., Act like a tree
- .Excellent bonding to most substrates and easy to apply.

* Level of solar reflection varies depending on the colour of the paint 98%= white base coat

In winter

In winter the main heat gain results from the warmth remaining within the house.

Factory roof coating

98% heat reflection on a metal roof massively reduces the internal temperature of the factory. Imacivity ability through heat off even after 18 year test still shows 85% effective. This results in significant reduction in air conditioning costs.

- Coating the roof of a house
- Asset protection
- Aesthetic enhancement

- Keep the building cool [n summer and warmer in winter.

Key Benefits

Highly water repellent Breathable and non-breathable variants High elasticity and crack coverage UV and weathering resistant Rejects soiling, fungal and algae growth Abrasion resistant and colour fast Easy to apply with roller or spray (in 27 colours) Suitable for almost all standard building substrates Enhances building insulation in winter. It has high levels of solar reflection which dramatically reduces AC costs. Fire retardant.

Shelf life 5 years un-opened

Uses

- Condensation Control
- Insulating storage tanks (water, chemical, fuel)
- Roofing new and old, flat or inclined
- Ceilings and interior walls to stop heat from escaping
- Floors (under floor heating under tubing)
- Cold storage (freezers, reefer units)
- Ice rinks, indoor swimming pools
- Refrigerated Trucks
- Delivery Vans (UPS)
- [Over studs, ceilings and roofing to block and prevent heat gain or loss](#)

Walls interior, exterior, both internal and exterior walls can be coated. Paints are available in any colour

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Tests and certifications

1. Exterior insulation against Solar Radiation – benefit comparable to R19
2. Guarded hot box: ASTM C236
3. Blocks 99,8% of infrared/up to 72% sound blockage
4. Flame spread rate test: ASTM E84; 0 smoke, 0 flame
5. Class “A” flame spread
6. UV and salt spray resistance ASTM 5894 5 000 hours
7. Flexibility ASTM E1737 180° bent passed
8. Adhesion ASTM D4541
9. Perm Rating ASTM E96; 8,8 average
10. Abrasion resistance ASTM D4060; 3 000 cycles
11. Resistance to salt spray 2 000 hours
12. Resistance to wind driven rain ASTM E514

Physical Data

- Solids: By weight 70%/by volume 54% (+/- 2%)
- 30 – 60 min tack free at 21°C.
- Overcoat only after 2 hours at 21°C
- Full Cure 21 days.
- Lead and chromate free.
- Cures by evaporation.
- Shelf life: up to 5 years if unopened under appropriate conditions.
- VOC level: 67, 2 grams/litre.
- Viscosity: 3000 – 4000 Cp.
- pH: 8, 5 to 9, 0.

- 300 microns wet/229 microns dry
- Max application temperature 65°C.
- Min application temperature -5°C.

Safety Precautions

Take all appropriate safety measures. Refer to Safety Data Sheet.

Limitation of liability: The information in this data sheet is based upon tests that we believe to be accurate and is intended for guidance only. Dry Tech Aerogels have no control over either quality or condition of the substrate affecting the use of the product, therefore Dry Tech Aerogels does not accept any liability arising from loss, injury or damage resulting from such use for the contents of this data sheet.