

SurfaceCool™ Cool-Roof®

Description

SurfaceCool™ Cool-Roof® is 100% Acrylic Polymer and all-acrylic latex polymer developed specifically to help improve wet and dry adhesion for protective elastomeric roof coatings .

Cool-Roof® provides excellent durability and dirt pickup resistance, helping to reduce the darkening of light-colored roof coatings over time for long-term energy efficiency .

Also (**Cool-Roof®**) having Glass Bubbles a density of 0.20 g/cc and an isostatic crush strength of 500 psi. These general purpose spheres have a good strength-to-density ratio and are designed for use in a variety of shallow water (e.g up to 2,000 feet of sea water) buoyancy applications, as well as emulsion explosives.

Cool-Roof® Glass Bubbles is a low-density soda-lime-borosilicate glass filler. Shows low alkalinity, high strength, and power film permeability. Offers uniform sheen, high-build/low-slump and higher filler loading .

The Glass Bubbles are engineered hollow glass spheres made from water-resistant and chemically-stable soda-lime borosilicate glass , Cool-Roof are water and oil resistant, providing better utility in underwater applications .

Additionally, they are non-combustible and non-porous, so they do not absorb resin; and their low alkalinity makes this product compatible with most resins while providing a stable viscosity and a long shelf life.



Cool-Roof® Glass Bubbles is also used in solar reflective coatings for roofs, exterior walls, mobile phones, caravans, refrigerated storage warehouses and refrigerated trucks.

Cool-Roof® Exhibits chemical inertness, exterior solar reflectivity, low thermal conductivity, low dielectric constant, and easier washability. Recommended for oil & gas outdoor storage tanks, steel roof, concrete roof / walls, GPR / water tanks & tankers, and steel Warehouses.

Cool Roof also are applicable for architectural, anti-condensation and industrial paints & coatings like maintenance coatings for bridges, truck under-carriages & other exposed metal structures and epoxy floor coatings.

	Test type	Standard	Result
Products Test & Certificates	Solar Reflectance Index (SRI)	ASTM E 1980 : 01	109 -110 - 111 (DCL)
	Thermal conductivity	ASTM C518 - 02	0.07 W/mK
	VOC Content	BS EN ISO 11890-2 : 2013	< 0.1 g/l
	Flammability	ASTM D1230-10	None
	Fire Resistance	ASTM E84	Class A
	Neutral SALT Spray test	ISO 9 227:2017	Pass
	Corrosion Category	ISO 12944-2	C4 High & C5 Medium
	Degree of Corrosion & Delamination	ISO 4628-8	Corrosion grade 1 Delamination grade 1
	Neutral SALT Spray test – Cracking	ISO 4728-4	0S(0)
	Pull of adhesion strength	ASTM D454-17	2.23 N/mm2
	Heavy metals	ICP-AES/WLIP-028	<0.05 PPM
		ISO 3856-2	<0.1 PPM
	ISO 3856-7	<0.1 PPM	



Appearance:	Liquid
Colour:	White
Typical Properties:	
Active Ingredients:	83.60%
Density at 20 C°	0.93 kg/Litre
SRI:	110 – 111 (DCL)
VOCS	<0.1gr/L (DCL)
Heavy Metals	None (DCL)
Fire Resistance	Class A (ASTM E84)
Max. Tensile Strength:	0.85 (MPa)
Average Elongation:	143%
Water Vapor Permeance:	23.1 Perms
Variable Permeability:	Breath water vapor when dry and block water migration when saturated
Break Stress:	109 psi
Flammability:	Non-flammable

Properties One-compound liquid-applied

Main Applications:

- Concrete roofs
- Metal roofs
- Composite roofs (GRP, etc)

Application Airless sprayer or roller Surfaces must be free of dust, laitance, grease and any other contaminant that may affect adhesion. Use of high water or air pressure is recommended as a rule

Storage / Packing Store at minimum 0 Deg C - maximum 30 Deg C (do not freeze) , 18.93 Liter .

- High solar reflectivity, which reduces roof surface temperatures, helping prolong roof life and reduce energy costs.
- Low Thermal Conductivity 0.07 W / m.k
- Decreasing roof temperature, which may extend roof service life.
- Increasing the life of roof sheets from UV degradation and corrosion.
- Reduce local air temperatures and reduce the internal humidity less than 50 % .
- Lower peak electricity demand, which can help prevent power outages up 25% .
- Reduce power by reducing cooling energy use in building .
- UV light resistance.
- Low-temperature flexibility down to 10°C .
- Dirt pickup resistance.
- Low toxicity and odor.
- Excellent adhesion a variety of substrates such as concrete, metal and asphaltic surfaces.
- Tensile strength and elongation.
- Easy application by spray, brush or roller, resulting in low installation costs.

Case Study – Dubai

Summer duration during Aug outside was temperature 42°C - Shelter Sandwich panel surface temperature was reduced by refracting , dissipating of the heat and by reducing internal temperature 8°C .

