

# Polytherm AC

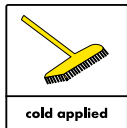
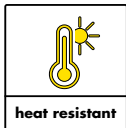
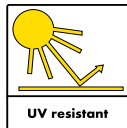
## Highly efficient, energy-saving flexible coating

Water-based pure acrylic resin proving efficient thermal protection for the entire structure.



### CHARACTERISTICS

- ▶ Durable & provides high degree heat insulation properties
- ▶ Very high emittance & reflectance properties
- ▶ Excellent dirt pick-up resistance over longer period of time
- ▶ Reduced thermal conductance and heat gain thereby by increasing energy efficiency
- ▶ Outstanding adhesion over a variety of substrates
- ▶ Waterproofing & resistance to blistering
- ▶ Low VOC & non-toxic
- ▶ UV protection
- ▶ Washable



### DESCRIPTION

Polytherm AC is water-based pure acrylic resin proving efficient thermal protection for the entire structure. Polytherm AC is non-toxic, washable & environment friendly forming a seamless membrane that resist many harsh chemicals & bridges hairline cracks. Polytherm AC has high emittance & reflectance as well as a very low conductivity value which reduce thermal shock & heat penetration thereby keeping roofs much cooler in hot summer weather. They offer UV protection & display excellent dirt pick-up resistance and retain their flexibility long after ageing.

### FIELDS OF APPLICATION

- roofs, terraces, balconies, domes, etc.
- sandwich panels, corrugated sheets
- refurbishing coating works on minerals surfaced waterproofing membranes
- concrete facades

### ENVIRONMENTAL INFORMATION

Contributes toward satisfying LEED® v4 requirements of the SS Credit- Heat Island Reduction and the EQ Credit- Low-emitting Materials (for the VOC content)

### APPLICATION INSTRUCTIONS

The application temperature should be between 5°C to 45°C. Application procedures may vary slightly depending upon site conditions. The general recommended guidelines for the application of the coating system is as follows:



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1

### Surface preparation

All the surfaces must be cleaned and made free of dust, dirt, moss, oil, grease and other loose particles. This can be achieved by grit/sand/shot blasting. As a minimum, vigorous wire brushing should be employed. All pot holes and surface defects shall be repaired with a suitable concrete repair mortar from the Polycrete\* range.

### Priming

Polytherm AC does not require priming and can directly be applied onto the surface. In case of highly porous surface, a priming coat is recommended to seal the pores and stabilize the surface. The primer coat can be produced on site by diluting Polytherm AC 1 to 1 with water. Apply the primer coat @ 5m<sup>2</sup>/L and allow to dry.

### Mixing

Polytherm AC is a single component product but stir the contents of the pail thoroughly prior to application to remove any sediment. A slow speed drill and suitable paddle mixer shall be used to avoid the formation of bubbles.

### Application

Once stirred, Polytherm AC should be immediately applied either by brush, roller or industrial sprayer. It is recommended that coating be applied in a minimum of two coats. Should not be applied if relative humidity exceeds 95%. Each subsequent coat shall be applied only after the previous coat dries off completely. After application the

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coating must be back rolled to reduce surface irregularities and improve bonding.

### COVERAGE

0.8L/m<sup>2</sup>/coat for 500μ DFT.  
[minimum recommended thickness is 1 mm DFT and can be achieved in two coats.]

### CLEANING & DISPOSAL

Clean all equipment & tools using fresh water & flush mineral spirits through spray equipment to prevent rusting. All disposal practices must be in compliance with all local laws and regulations.

### STORAGE & SHELF LIFE

Store in a cool, dry place and keep away from all sources of heat and sunlight. In tropical climates, store in air condition rooms. The shelf life is up to 12 months in unopened condition and if stored as per recommendations. Excessive exposure to sunlight, humidity and UV will result in the deterioration of the quality of the product and reduce its shelf life.

### SUPPLY

Polytherm AC 20L pail

### HEALTH & SAFETY

As with all construction chemical products, caution should always be exercised. Protective clothing such as gloves and goggles should be worn. Treat any splashes to the skin or eyes with fresh water immediately. Should any of the products be accidentally swallowed, do not induce vomiting, but call for medical assistance immediately. For safe handling information on this product, please refer to the Material Safety Data Sheet (MSDS).

## TECHNICAL PROPERTIES

PROPERTIES	VALUES	TEST STANDARDS
Color	White [Other colors on request]	
Form	Viscous liquid -	
Density, [g/cc]	1.3±0.05	ASTM D 1475
Solids content, [%]	63±2	ASTM D 2369/ ASTM D 1644
Tensile strength, [N/mm <sup>2</sup> ]	1.5	ASTM D 2370
Elongation, [%]	>300	ASTM D 2370
UV resistance @ 1000hrs	Passes	ASTM G 156
Tensile strength after UV ageing @ 1000hrs, [N/mm <sup>2</sup> ]	2.0	ASTM D 2370
Elongation after UV ageing @ 1000hrs, [%]	200	ASTM D 2370
Water swelling resistance, [%]	<8	ASTM D 471
Adhesion [Dry] - concrete / steel, [pli]	>3	ASTM C 794, ASTM D 903
Adhesion [wet] - concrete / steel, [pli]	> 2	ASTM C 794, ASTM D 903
Tear resistance, [lbf/in]	> 80	ASTM D 624
Water vapor transmission, [g/m <sup>2</sup> /h]	<2	ASTM E 96
Solar reflectance, [%]	>80	BS EN 410
Emissivity, [%]	>85	BS EN 12898
VOC, [g/L]	≤50	ASTM D 3960/ ASTM D 2369
Re-coat interval, [hrs]	6	-
Standard compliance		ASTM D 6083

All values given are subject to 5-10% tolerance

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of +23°C and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed. The information contained herein, particularly recommendations for the handling and use of our products, is based on our professional experience. As materials and conditions may vary with each intended application, and thus are beyond our sphere of influence, we strongly recommend that in each case sufficient tests are conducted to check the suitability of our products for their intended use. Legal liability cannot be accepted on the basis of the contents of this data sheet or any verbal advice given, unless there is a case of wilful misconduct or gross negligence on our part. This technical data sheet supersedes all previous editions relevant to this product.