



*Saves Past...
Protects Future...*



Monarch Industrial Products (I) Pvt. Ltd.

(An ISO 9001 : 2008, ISO 14001 : 2004 & OHSAS 18001 : 2007 Certified Company)

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Heat Reflective Coatings TM
zoProtect
Waterproofing | Energy Saving

Cost Saving solutions for

Repair & Maintenance of aging assets and Protection & Improvement of new assets

Buildings & Civil Infrastructure Maintenance for Civil & Project Engineering

- ▶ Waterproofing ▶ Heat Reflective Coatings ▶ Construction Admixture ▶ Adhesives & Sealants ▶ Surface Protective Coatings
- ▶ Repair, Rehabilitation & Strengthening ▶ Grouts & Anchors ▶ Floor Screeds & Toppings
- ▶ ESD - Anti Static/Dissipative/Conductive Floor Coatings ▶ Surface Treatments ▶ Road Maintenance Coatings

Maintenance, Repair & Overhaul (MRO) for Mechanical & Electrical Engineering

- ▶ Metal Reclamation Putties ▶ Maintenance Coatings ▶ Pipe Repair & Strengthening Kits ▶ Metal Epoxy Sticks ▶ Energy Saving Coatings
- ▶ Crusher Backing Compound ▶ Industrial Maintenance Aerosols ▶ Oil, Grease & Lubricants ▶ Self Fusing Insulation Tapes
- ▶ Emergency Maintenance Kits ▶ Anti Corrosive Coatings ▶ High Temperature Coatings ▶ Thermal Insulation Coatings
- ▶ Fire Retardant Coatings ▶ Hand Cleaners & Barrier Creams

HEAT / SOLAR REFLECTIVE COATINGS

All the materials used for construction of building absorb and transfer heat inside of the building all the day. In most countries, energy use in the buildings sector for heating / cooling represents about one third of the total energy consumption. Heat always flow from warmer side to cooler side and cooler to warmer side. 80% to 95% of heat gain during summer and about 70% of heat loss during winter transferred through the walls, ceilings and roofs of the building by way of conduction and radiation. The conventional insulation only slows down the rate of heat transfer which after saturation cannot stop radiant heat.

Monarch's OzoProtect Heat /Solar Reflective Coatings reflects up to 98% of heat back to its source. Monarch's OzoProtect specialized heat reflective coating containing high strength, low density hollow ceramic microspheres and /or glass microspheres keeps you cooler in the summer and warmer in the winter thereby reducing cooling cost during summer months and heating cost during winter months besides as impermeable waterproofing coating during monsoons. The load reduction of air conditioning or heater and corresponding electrical consumption saves energy cost up to 40% all round year. In non-air conditioned residential buildings, the improvement of indoor thermal comfort living conditions is achieved by decreasing the maximum temperatures for rooms such as kitchen and bathroom. The payback period is less than 6 months. OzoProtect significantly contributes to green building certification as Solar Reflectance Index (SRI) is 116 and prevention of global warming and pollution levels.



Application: Pathways, Roofs / Terraces, Walls / Parapet Walls, Balcony, Sunshade facade / Chajjas, Buildings, Roof Slabs, Green Buildings, Pet animals shed / shelters (like duckrearing shed, horse breeding shed, Poultry farming shed, Rabbit breeding shed, Cattle breeding shed), Mobile & Modular Homes
Hotels, Schools, Theater, Colleges, Apartments, Hospitals, Office Buildings, Shopping Malls, Restaurant, Warehouses, Air-Conditioned Building, Sintex water tanks and pipe lines - To prevent water heat up

Name	Code	Packsize	Description
Heat / Solar Reflective Coatings			
OzoProtect KR	11201	20 Kg	Kool Roof - Economical grade Acrylic Polymer based Heat Reflective Coatings, reduces Internal temperature of buildings
OzoProtect TC	11202	20 Kg	Thermo coat High Performance Heat / Solar Reflective Coatings for Walls and Roofs
OzoProtect SR	11203	20 Kg	Solar Reflective - Ultra High Performance using Acrylic Heat Reflective coating containing low density expanded thermoplastic microspheres with High SRI rating
OzoProtect EW	11204	20 Kg	Exterior Walls. - Acrylic Modified Emulsion paint

Green Buildings



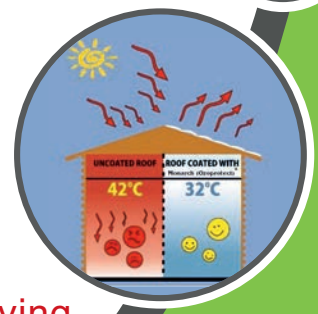
For Best Result :

- ❖ Apply immediately after water wash.
- ❖ Avoid application during peak hot conditions (12.00PM to 2.00PM)
- ☀ Reduction in Saturated Roof Temperature: 10 to 15°C
- ☀ Energy cost saving for Air-Conditioned Building : Upto 40%
- ☀ Solar Reflective Index (SRI) Value : 116

TYPICAL PROPERTIES

Description				Acrylic Based Heat Reflective Coating			
Sl.No.	Properties	Unit	Standard	OzoProtect KR	OzoProtect TC	OzoProtect SR	OzoProtect EW
1	Base			Water Base Acrylic System	Water Base Acrylic System	Water Base Acrylic System	Water Base Acrylic System
2	Color	~	ASTM D 1544	Pastel, Tint, Deep, Accent basses and brilliant White	Pastel, Tint, Deep, Accent basses and brilliant White	Pastel, Tint, Deep, Accent basses and brilliant White	Pastel, Tint, Deep, Accent basses and brilliant White
3	Specific Gravity	~	ASTM D 792	1.2	1.1	0.9	0.85
4	Viscosity	cps@25°C	ASTM D 1200-10	10-15	10-15	15-20	20-25
5	Mix Ratio	Parts by weight	Manual	Single	Single	Single	Single
6	pH Value	~	ASTM D 1293	6-7	6-7	6-7	6-7
7	Functional Cure	hrs	ASTM D 1640	24 hrs	24 hrs	24 hrs	24 hrs
8	Water Absorption	%	ASTM D 570	0.2	0.15	0.1	0.15
9	Solid Content	%	ASTM D 1353	40-50	50-55	50-55	50-60
10	Cured Hardness	shore D	ASTM D 2240	80	80	80	70
11	Bond Strength /Pull of Adhesion Strength	N/mm ²	ASTM D 4541	3	3.5	3.7	3.5
12	Solar Absorption	%	ASTM E 1549	0.156	0.148	0.135	0.186
13	Solar Reflectance	%	ASTM E 1549	0.862	0.88	0.915	0.83
14	Thermal Emittance	~	ASTM C 1371	0.89	0.913	0.921	0.885
15	Solar Reflective Index (SRI)	~	ASTM E1980	109	112	116	104
16	Thermal Conductivity @20°C	W/ m C	ASTM E 1125-04	0.1	0.09	0.06	0.12
17	Abrasion Resistance	No Cycles	ASTM D1044	5000	5000	5000	4000
18	Accelerated Weathering Test	hrs	ASTM G-155	1800	2000	2000	3000
19	Coverage	Kg/Sq.m/ Thick/ No .of Coats	~	0.36 Kg/Sq.Mtr/ 100 mic / 2 coats	0.36 Kg/Sq.Mtr/ 100 mic / 2 coats	0.476 Kg/Sq.Mtr/ 200 mic / 2 coats	0.167 kg/Sq.m/ 200 mic / 2 coats
20	Application Temperature	°C	~	0-35°C	0-35°C	0-35°C	0-35°C
21	Fungus Resistance	~	ASTM G21-13	No growth or discoloration	No growth or discoloration	No growth or discoloration	No growth or discoloration
22	Flame Spread Rate	~	ASTM E84	Nil	Nil	Nil	Nil

Triple Action Coatings



Application Master

Sl.No.	APPLICATION	OzoProtect KR	OzoProtect TC	OzoProtect SR	OzoProtect EW
1	Roofs, Terrace & Asbestos roofs	✓	✓		
2	Interior & Exterior walls				✓
3	Aluminium Sheet Roofs	✓	✓		
4	Commercial Buildings, Basements	✓	✓		
5	Ceilings				✓
6	Mobile Modular Homes, Sheds	✓	✓		
7	Syntax tanks / water tanks and pipe lines			✓	
8	Air Conditioning Ducts/Chillers			✓	
9	Galvanized Tin Sheet			✓	
10	Fabric embedded membrane, Wood & concrete		✓	✓	
11	Weather resistant membrane	✓	✓		
12	Walking decks&balconies.	✓	✓		
13	Stair ways&pool area	✓	✓		
14	Steam Pipelines, Solar heaters			✓	
15	Outdoor Container cabins/ pre-fabricated offices			✓	
16	Warehouses		✓		
17	Green Buildings	✓	✓	✓	✓
18	Refrigerated Cold storage Facilities		✓	✓	
19	Temperature Comfort Zones, Metal Buildings			✓	
20	Oil&gas Storage tanks, HVAC Systems			✓	
21	Controls Moisture Damage/Slip and Fall Accidents /Personnel Protection			✓	
22	Prevention of unhealthy biological growth				✓
23	Air-Conditioned Building, Commercial Buildings		✓	✓	
24	Condensation/Sweating corrosion			✓	
25	Corrosion Under Insulation (CUI)		✓	✓	
26	Prevention of fungus/algae growth			✓	✓
27	Mobile Homes		✓	✓	

Clientele List



Follow this simple steps for application procedures



Clean and Wash the Surface



Mix OzoProtect well, get to brushable consistency



Apply using a brush or roller



Apply two coats OzoProtect at 1-2 hours interval without dilution

www.summercoolpaints.net

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