

IR-REFLECTING PIGMENTS TINTING SOLUTIONS FOR SUSTAINABLE FAÇADE COATINGS



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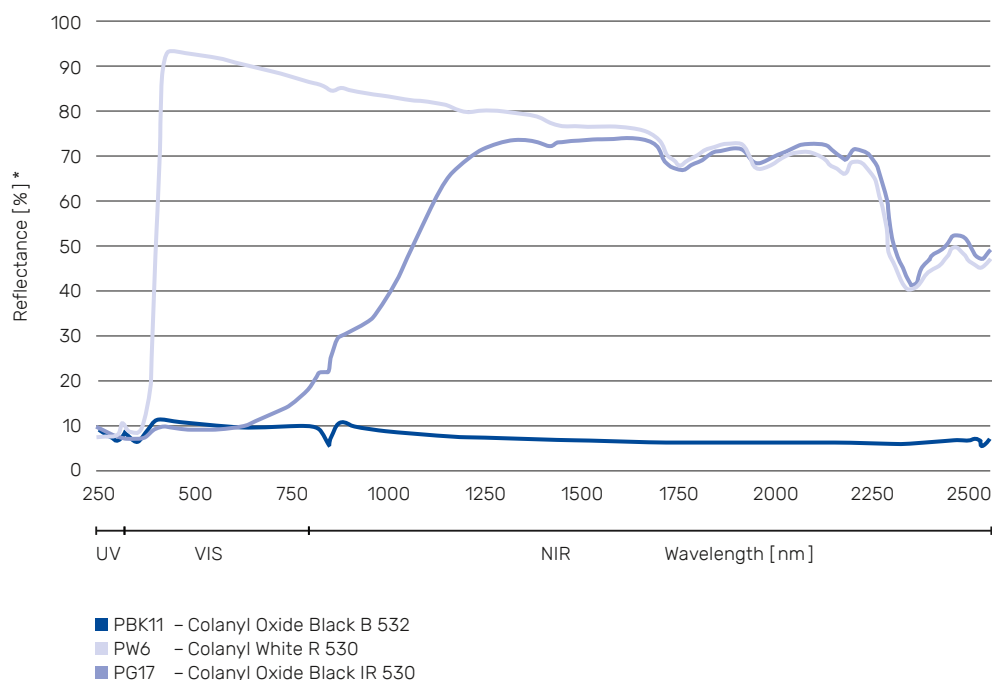
Dark surfaces absorb sunlight much better than light surfaces and heat up immediately. The target of modern IR-reflective pigments is to maximize the solar reflectivity of a coated surface and to minimize heat and its negative effects on the substrate.

IR-reflectance is achieved by the physical back-scattering of radiation through the pigment particles. Solar radiation comprises not only the visible spectrum of wavelength range (400 to 700 nm), but also the ultraviolet UV (< 400 nm) and near infrared NIR (700 to 2500 nm). NIR dominates the overall irradiated solar energy by more than 50 %. This property can be defined as Total Solar Reflectance (TSR) in 250 nm–2500 nm.

The majority of inorganic pigments have intrinsic properties which contribute to IR-reflectance. It is more beneficial to choose pigments according to their TSR value to optimize heat reflection performance.




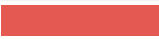








The most significant results can be achieved by replacing iron oxide black or carbon black with optimized IR-reflecting Pigment Green 17, which coloristically behaves like a traditional black. This is available as a ready to use aqueous pigment preparation, known as Colanyl Oxide Black IR 530.

Heubach has captured the IR-benefits by selecting a range of preparations suitable for exterior façade coatings to complement the unique properties of Colanyl Oxide Black IR 530.



* According to Heubach internal test method
»Testing of Solar Reflective Preparations and ASTM G 173 in mass tone«



PRODUCT NAME	COLOUR INDEX	PIGMENT CONTENT %	TSR VALUE * %	WEATHERING FASTNESS**
 COLANYL® OXIDE YELLOW BV 531	Pigment Yellow 184	65	75	5
 HOSTATINT™ OXIDE ORANGE Z 530	Pigment Yellow 216	68	64	5
 COLANYL OXIDE YELLOW R 532	Pigment Yellow 42	64	53	5
 COLANYL SCARLET GO 533	Pigment Red 168	36	60	5
 COLANYL OXIDE RED G 531	Pigment Red 101	65	55	5
 COLANYL OXIDE RED B 531	Pigment Red 101	70	42	5
 COLANYL OXIDE BLUE COR 531	Pigment Blue 28	62	46	5
 HOSTATINT OXIDE GREEN CO 532	Pigment Green 50	65	35	5
 COLANYL OXIDE GREEN G 531	Pigment Green 17	75	38	5
 HOSTATINT OXIDE BLACK B 532	Pigment Black 26	70	21	5
 COLANYL OXIDE BLACK IR 530	Pigment Green 17	70	34	5
 COLANYL WHITE R 530	Pigment White 6	65	85	5

* According to Heubach internal test method »Testing of solar reflective preparations and ASTM G 173 in mass tone«

** One year exposition in Central Europe; assessment against grey scale (DIN EN ISO 105-A02) in mass tone

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