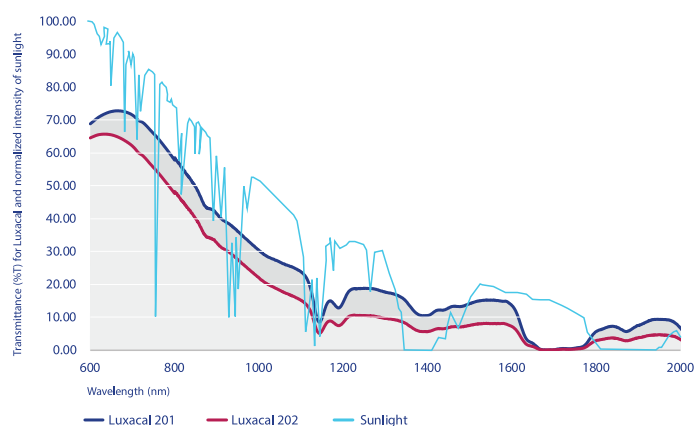


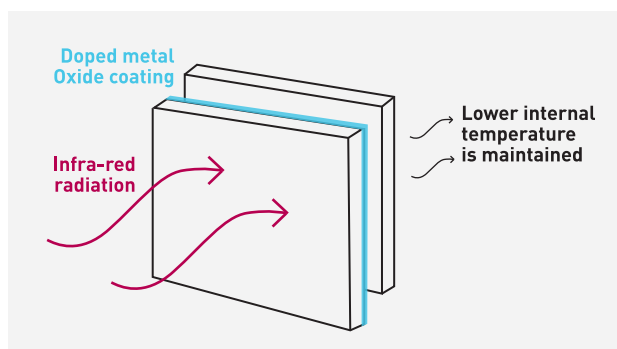
Luxacal™ Near Infrared Absorber

William Blythe has used its extensive expertise in hydrothermal synthesis to produce a range of nano-sized doped tungsten oxides that are ideal for selected applications in coatings and renewable energy. Absorption in the UV, visible and, most importantly, NIR can be controlled by varying the dopants and dopant ratios to deliver bespoke products to meet your individual needs. Materials in the Luxacal™ range have been optimised for high absorption in the near infrared region and high transmittance in the visible region making them ideal candidates for use in thermal control glazing applications. William Blythe has filed patents for products which have been designed to maximise NIR absorption while minimising absorption in the visible region.

Transmission Profiles of Luxacal™



William Blythe has carried out analysis on two materials within the Luxacal™ range and compared the transmittance to a normalised intensity of sunlight. Both materials show a high % transmittance in the visible region and low infrared transmittance, demonstrating their potential as selective infrared absorbers. It should be noted that both Luxacal™ materials were analysed in a dispersion of toluene which has total absorption bands between 1640 nm and 1790 nm. Data was obtained at a 0.01% loading of active material.



Doped tungsten oxide coatings in double glazing are able to absorb near infra-red radiation. This leads to a reduction in infra-red radiation passing through the glazing & therefore helps to maintain lower internal temperatures

Key features:

- Optimised for high absorption of infrared and low absorption in the visible region
- Product has no hazard classification
- Can be used to produce stable dispersions of the nano-powder
- Fine control over dopants allows for bespoke product tailoring where required
- REACH registered material

WILLIAM BLYTHE IS A
MANUFACTURER OF INORGANIC
SPECIALITY CHEMICALS AND
ADVANCED MATERIALS.



With significant investment in product development and production infrastructure our business is committed to working in development partnerships with our clients.

Our ever expanding portfolio currently covers Iodine, Tin, Copper and Tungsten derivatives as well as derivatives of many other elements, for example Graphene Oxide.

Application areas that William Blythe focuses on are Catalysts, Coatings, Electronics, Life Sciences, Pigments, Polymer Additives, and others.

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William Blythe is a wholly owned
subsidiary of Synthomer PLC

