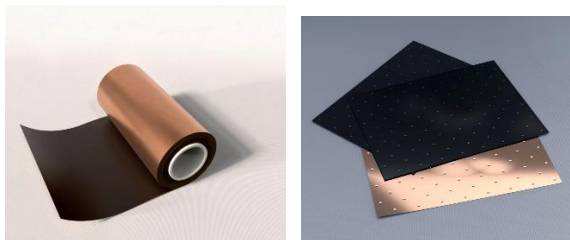


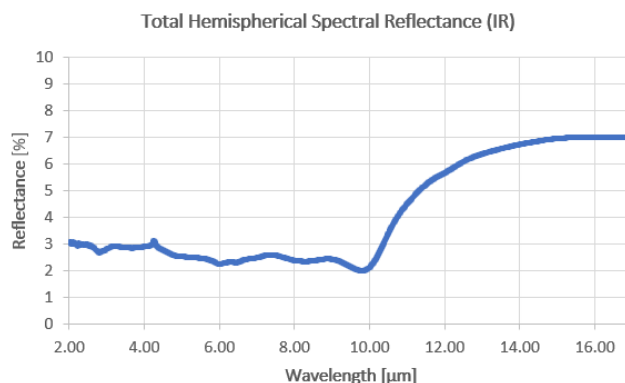
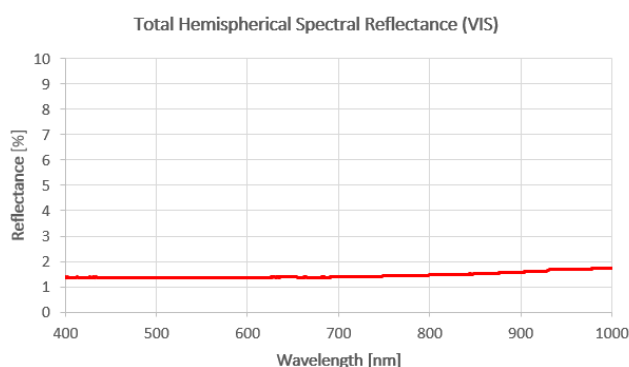
ACKTAR™ Fractal Black on Copper

1. Overview

Acktar Fractal Black™ on Copper Foil offers exceptional light absorption and thermal management properties across a broad spectral range. The integration of Fractal Black with copper foil provides excellent thermal conductivity and electrical conductivity, making it ideal for applications where optical performance, thermal performance, and electrical conductivity are critical. **Acktar Fractal Black™ on Copper Foil** is available in sheets, rolls, tapes and die-cuts. The material is designed to meet the demanding requirements of scientific and industrial applications.



2. Optical Performance



3. General Properties

Substrate material	Copper
Coating	- Thickness <5 μm, weight 1 mg/cm² 100% inorganic
Certificates	RoHS, REACH, ISO 9001:2015, AS9100

High thermal conductivity

The copper foil's excellent thermal conductivity ensures efficient heat dissipation, making it ideal for applications requiring precise thermal management. This property enhances the stability and performance of optical and electronic systems, especially in high-temperature or vacuum environments.

Flexible and Lightweight

The foil's flexible design allows for easy application on various surfaces and integration into different optical setups, while its lightweight nature makes handling and installation straightforward.

4. Available Configurations

		Copper
Thickness in mil (mm)		4 (0.1)
Service temperature [°C]	without adhesive	long term: –196 °C to +300 °C short term: up to +450 °C
	low-outgassing adhesive	long term: –50 °C to +150 °C short term: up to +260 °C
Delivery formats		• Sheet: 260 mm x 200 mm • Roll: 260 mm width, 5 – 20 m length • Die-cut (pre-cut): Supplied as a tight-tolerance cut to shape labels according to drawing
Perforation		To facilitate air passage during launch, the film may be perforated. The perforation may be done before/after the coating process, upon request.

5. Handling and Storage

Cleanroom classification	• ISO 8 to ISO 5 (≈ FS 209E Class 100,000 to Class 100)
Abrasion resistance	• Moderate
Cleanability	• Coated foils can withstand cleaning with ethanol, IPA or acetone with no change in optical and technical characteristics • The coating can also be cleaned with up to 10 bar air pressure
Storage conditions	• Indoors (temperature approx. 20 °C; RH approx. 50 %)
Standard shelf life	• Minimum of 12 months after the date of shipment, provided that the material is stored in its original, unopened container under the storage conditions

6. Contact Us

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