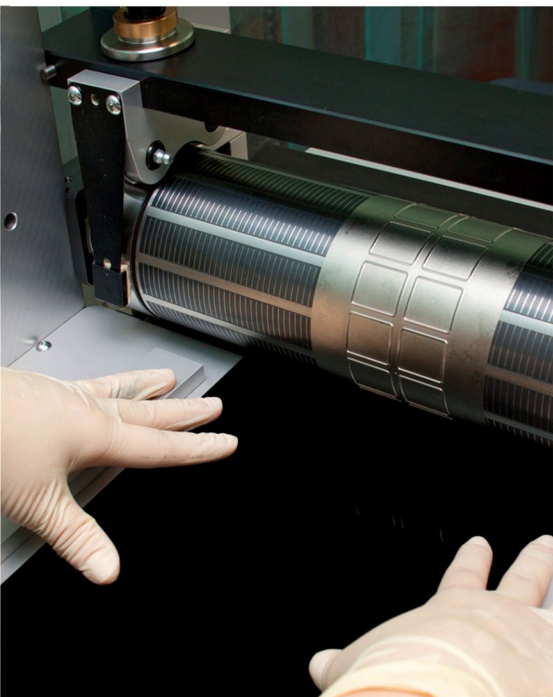
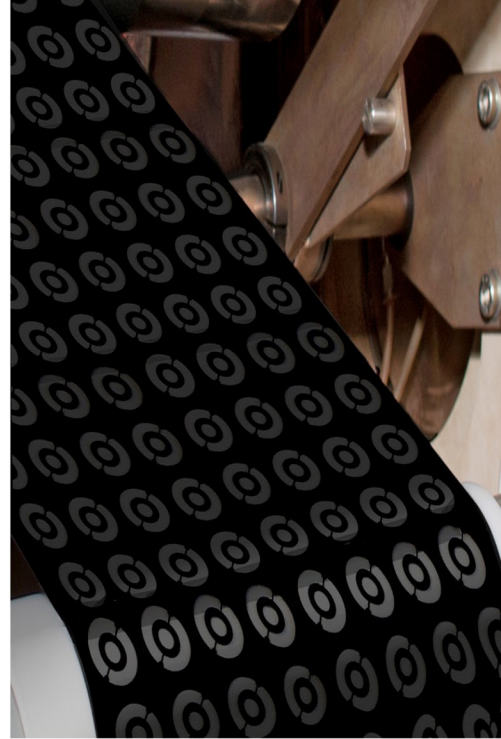
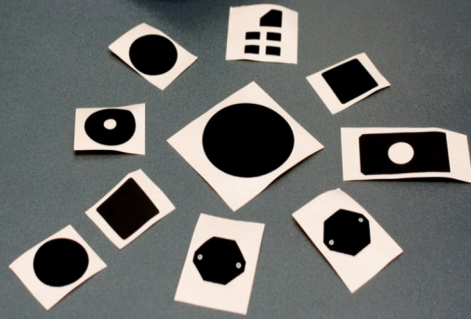


Acktar

Advanced Coatings

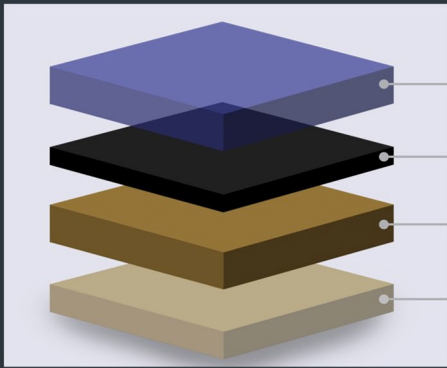
www.acktar.com



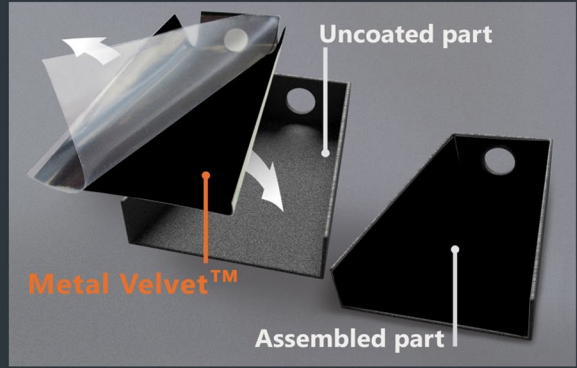
Acktar Black Thin Films and Foils

HIGH-TECH ON THE SURFACE





Removable Film
 Black Coating
 Substrate
 Adhesive



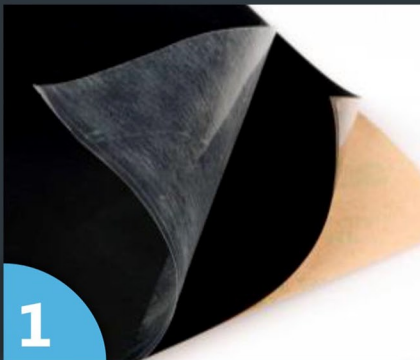
Main Features

- Broadband optical performance
- Broad operational temperature range
- Clean room compatible (ISO 5)
- Low outgassing: CVCM < 0.001
- Biocompatible: no cytotoxicity
- High laser damage threshold (LIDT)
- Cleanable
- Die - cuts and customized labels
- Low-outgassing and high-temperature adhesive options

Typical Applications

- Optical system housings
- Apertures and baffles
- Beam dumps
- Laser safety screens
- Mobile phone camera parts
- Automotive – cameras and HUDs
- Calibration standards
- Analytical lab arrays
- Space qualified option is available

Manual assembly-example



1



2



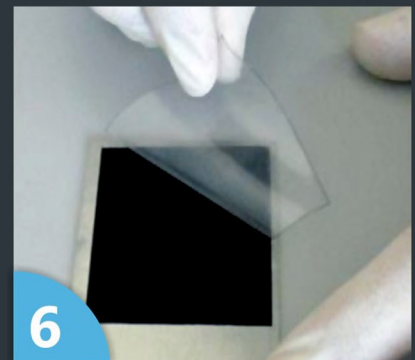
3



4



5

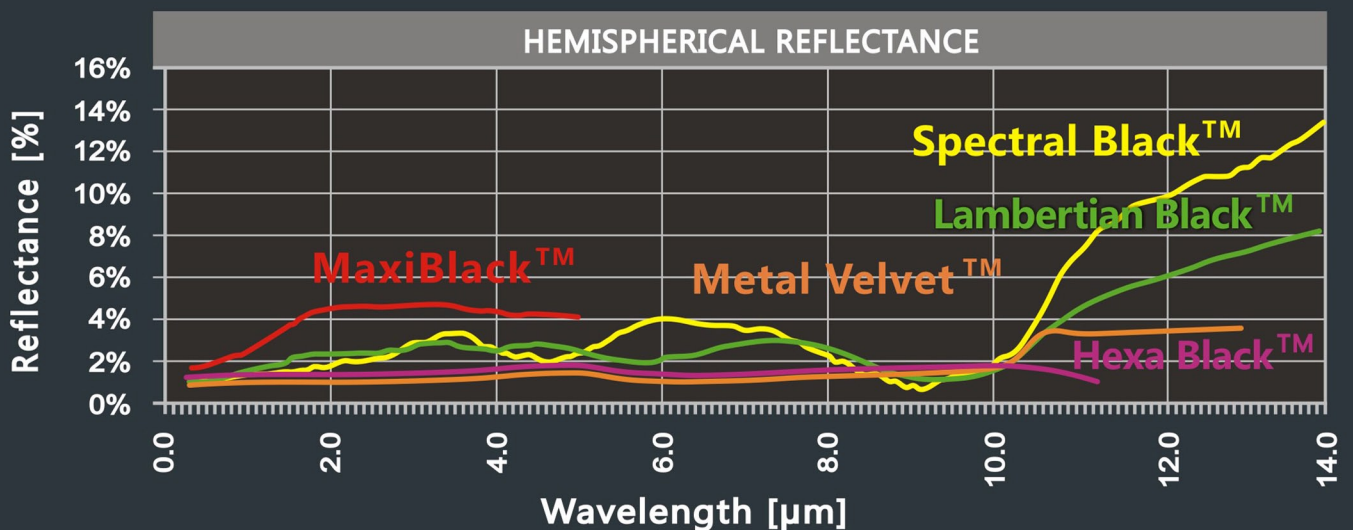


6

*BRDF data is available in simulation software



Foil Type	Metal Velvet™ Extra Diffusive	Lambertian Black™ Ultra Diffusive	MaxiBlack™ Diffusive Polyimide	Spectral Black™ Semi-Specular	Hexa Black™ Semi-Specular
Substrate Material	Aluminum	Stainless Steel	Polyimide (Kapton)	Aluminum	Aluminum Honeycomb
KEY FEATURE	Reflectance ~ 1%	High absorbance at grazing angles	Thin Polyimide	Semi specular finish	Ultra-high absorbance at grazing angles
Thickness	120µm	100µm	25/50/75µm	130µm	2mm
Appearance	Diffusive	Highly diffusive	Diffusive	Specular	Diffusive 3D structure
Typical spectral range	EUV-FIR	EUV-FIR	UV-MWIR	VIS-MWIR	EUV-FIR
AOI range	0 - 60°	0 - 80°	0 - 60°	0 - 45°	0 - 88°
Reflectance normal AOI	≤1%	≤1.5%	≤2.5%	≤2%	≤1.5%
Abrasion Resistance	Light	Moderate to high	Moderate	Moderate	Moderate plus
Cleanliness	Class 10000 - ISO 7	Class 100 - ISO 5	Class 100 - ISO 5	Class 100 - ISO 5	Class 10000 - ISO 7
Self adhesive back	Self adhesive back standard - available without adhesive				
Service temperature	Without adhesive: long term (-)196°C to (+)350°C; short term up to (+)400°C				(-)258°C to (+)250°C
	With standard adhesive: long term (-)40°C to (+)121°C; short term up to (+)177°C				
	With low-outgassing: long term (-)50°C to (+)150°C; short term up to (+)260°C				
Delivery Formats					
Sheet	20x30 cm / 20x60 cm				
Roll	20/30 cm width, any length				
Adhesive	Optional				
Die-cut (pre-cut)	Supplied as tight-tolerance cut to shape labels according to drawing				
Certificates	RoHS, REACH, ISO 9001:2015, AS9100		  		
Storage and Shelf Life					
Storage conditions	Indoors (temperature approx. 21°C; RH approx. 50%)				
Standard shelf life	For best performance, apply adhesive and remove protective film with 12 months				



* Typical data

- Acktar is a world leader in the development and production of high emissivity Ultra Black coatings for the suppression of stray light throughout the optical spectrum UV-VIS-IR. With the ability to coat most substrates: plastic, glass, ceramics and metals to custom 3D opto-mechanical parts, Acktar is considered a standard of excellence in the field. The coatings are space-qualified, inorganic, thin, RoHS & REACH compliant, biocompatible, low outgassing and more.
- Acktar offers pre coated opto-mechanical parts such as apertures, slits, beam dumps and Hexa Black designed uniquely for grazing angles.
- Acktar's coated foils and thin films enable the customer to benefit from Acktar coatings performance without sending the parts to Acktar. This is an ideal solution for very large quantities, over-sized part areas and for contaminated environments where the light absorbing surface needs to be periodically renewed.

We are proud to serve major industries including:

- Space Optics and Satellites
- Security & Defense
- Metrology and Inspection
- Mobile Optics and Micro-Optics
- Automotive
- Bio & Medical

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