

Physical & Mechanical Properties	
200 x 5000	Dimensions (mm):
115	Foil Thickness (μm):
Optical Properties	
Metal Velvet™	Coating:
5 - 8	Coating Thickness (μm):
0.3 - 14	Wavelength Range (μm):
Environmental & Durability Factors	
-196 to +350	Operating Temperature (°C):
Light, do not touch	Abrasion Resistance:
ML-C-48497A	Humidity Resistance:
Regulatory Compliance	
Compliant	RoHS 2015:
View	Certificate of Conformance:
Compliant	Reach 247:

Need different specs or modifications?

Edmund Optics offers comprehensive custom manufacturing services for optical and imaging components tailored to your specific application requirements. Whether in the prototyping phase or preparing for full-scale production, we provide flexible solutions to meet your needs. Our experienced engineers are here to assist—from concept to completion.

Our capabilities include:

- Custom dimensions, materials, coatings, and more
- High-precision surface quality and flatness
- Tight tolerances and complex geometries
- Scalable production—from prototype to volume

Learn more about our [custom manufacturing capabilities](#) or submit an inquiry [here](#).

Product Details

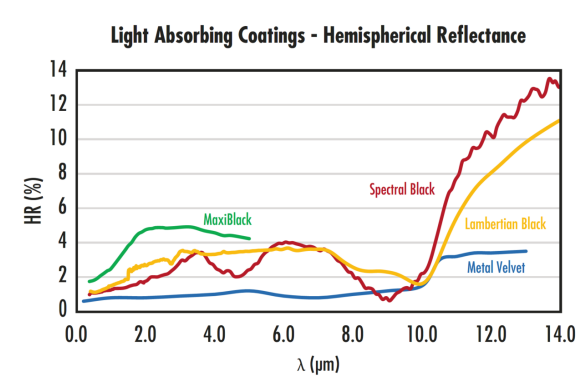
- Diffusive, Lambertian, or Specular Reflectance
- Extremely Wide Band Performance from the UV to IR
- Standard, Low Outgassing, and No Adhesive Options
- [Die Cut Labels](#) and [Larger Rolls](#) Available

Acktar Light Absorbent Foil and Film is used to eliminate light reflectance in applications where the direct coating of parts is not practical, including optical packaging, laser devices and platforms, IR systems, or passive thermal control. Acktar Light Absorbent Foil and Film features high emissivity with low reflectance, low outgassing, excellent biocompatibility, a broad operating temperature range, and compatibility with class 1 cleanrooms. Acktar Light Absorbent Foil and Film is available in pre-cut patterns or as large sheets for custom patterns.

Acktar Light Absorbent Foil and Film is offered in Metal Velvet™ (diffusive coating on aluminum), Spectral Black™ (semi-specular coating on aluminum), MaxiBlack™ (diffusive coating on polyimide), or Lambertian Black™ (diffusive coating on stainless steel). Metal Velvet offers superior light absorption performance while Spectral Black is more durable, and Lambertian Black performs better at grazing angles. Maxiblack, in addition to being durable and flexible, is nonconductive and can be used in applications that require light absorbing materials with no electrical conductivity.

Note: Metal Velvet has low resistance to abrasion and all surface contact should be avoided without proper equipment.

Technical Information



Product Type	Metal Velvet™	Lambertian Black™	MaxiBlack™	Spectral Black™	Hexa-Black™

Key Features	Low reflectance of ~1%	High absorption at grazing angles	Thin polyimide, nonconductive substrate	Semi-specular finish	Ultra-high absorption at grazing angles
Substrate Material	Aluminum	Stainless Steel	Polyimide (Kapton)	Aluminum	Aluminum Honeycomb
Substrate Thickness	120µm	100µm	75µm	130µm	2mm
Appearance	Diffusive	Highly Diffusive	Diffusive	Specular	Diffusive 3D Structure
Typical Spectral Range	EUV - FIR	EUV - FIR	UV - MMIR	VIS - MMIR	EUV - FIR
AOI Range	0 - 60°	0 - 80°	0 - 60°	0 - 45o	0 - 88°
Reflectance @ 0° AOI	~1%	~1.5%	~2.5%	~2%	~1.5%
Abrasion Resistance	Light	Moderate to High	Moderate	Moderate	Moderate
Cleanliness	Class 10000 - ISO 7	Class 100 - ISO 5	Class 100 - ISO 5	Class 100 - ISO 5	Class 10000 - ISO 7