JET MIRROR SHEET

Virtually unbreakable Jet Mirror* sheet is an excellent, cost-effective choice for reflective surfaces. Made from LEXAN™ polycarbonate, Jet Mirror* sheet is far superior to tempered glass and polished metal. It has a proprietary abrasion resistant coating on one side that provides a high tolerance to scratching. The reverse side has a metalized finish offering exceptionally high reflective values. This combination of high performance properties enables this virtually unbreakable material to weigh less than tempered glass mirrors.

FEATURES

- Made from LEXAN™ polycarbonate providing glass-like clarity
- Easily fabricated
- Surface treated to resist scratches, abrasion and dents
- Highly reflective
- Flame retardant, meets vertical burn requirements
- Easily maintained
- Lightweight
- Virtually unbreakable – high impact strength

APPLICATIONS

- Lavatory mirrors
- Stow bin mirrors
- Decorative panels

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Material grade:	Mar resistant HMR optical quality polycarbonate mirror, flame retardant FAR 25.853 and UL 94 V-0 rated 9600 LEXAN™ sheet
Material color:	Clear, Bronze and Gold
Scope:	Optical specifications for HMR, hard mar resistant, aircraft grade, flame retardant, polycarbonate mirror. Although polycarbonate sheets cannot be manufactured completely without flaws, the use of this document will insure that only those sheets meeting this specification will be used for JetMirror sheet.

Property	Requirement	Test
1.0 Dimension		
1.1 Gauge tolerance		
Nominal gauge range	Min. limit/Max. limit	TMB 2000
Available 0.080", 0.118"		
Other gauges available upon request	-10%/+10%	
1.2 Width tolerance 48"	-0"/+0.5"	TMB 4000
1.3 Length 96"	-0"/+2"	TMB 5000
2.0 Appearance		
Substrate		
2.1 Warpage	Length divided by 100	TMB 1800
2.2 Squareness	500" (Max.)	TMB 2400
2.3 Ripples/distortion	Compared against visual	TMB 2700
Mirror standard		
2.4 Visual defect		TMB 3200
100% visual inspection performed		
A. Black specks, carbon		
Defect size	Max. defects per sq. ft.	TMB 3210
0.040"-0.065"	1	
0.032"-0.039"	3	
0.020"-0.031"	3	
0.010"-0.019"	30	
B. Inclusions, bubbles, pits		
Defect size	Max. defects per sq. ft.	TMB 3600
0.040"-0.065"	1	
0.032"-0.039"	3	
0.020"-0.031"	4	
0.010"-0.019"	30	
3.0 Mirror		
3.1 Visual defects		
Visual inspection performed		
A. Aluminum splatter	Max. defects per sheet	TMB 4815
Defect size 0.065"-0.500"	1 cluster	
B. Voids, white spots		
Defect size	Max. defects per sq. ft.	TMB 4820
0.040"-0.065"	1	
0.032"-0.039"	2	
0.020"-0.031"	4	
0.010"-0.019"	8	
C. Protective backing (paint)		
1. Thickness	1.5 to 2 mils	TMB 4960
2. Uniformity	Pass	TMB 4980

Notes:

- There shall be no black speck clusters of 3 or more above 0.19" in a 1.0" diameter circle.
- There shall be no more than 1 splatter cluster on sheet and limited to 20% of total sheet area, leaving a minimum of 80% usable sheet.
- There shall be no more than 20% of any production run that yields less than 80% usable sheet due to aluminum splatters.

Property		Requirement	Test
4.0 Coating			
4.1	Abrasion taber, haze (100 cycles)	4% (Max.)	TMB 2046
4.2	Cost adhesion (scribe)	No coating removed by adhesive tape	TMB 2047
4.3	Visual defects (coating) 100% visual inspection performed		
	A. Lint/fibers	Max. defects per sq. ft.	TMB 1059
	Width < 0.030"		
	Length > 0.500"	0	
	Length < 0.500"	1	
	B. Scratches (mirror coated side)	Max. defects per sq. ft.	TMB 1060
	Width < .020"		
	Length > 1.0"	0	
	Length 0.500"-1.0"	1	
	Length 0.250"-0.500"	4	

Notes:
- Random coating sags or minor areas of distortion may occur around defects. If such defects do occur, they will generally be less than 1.0" by 1.0" across and shall not exceed 1 per 25 square feet.
- Inspection of this product must be performed using the test methods indicated. If a defect does not appear using these methods, it will not be considered a defect.

Property	Typical Value	Test method
GENERAL		
Specific gravity	1.25	ASTM D792
Water absorption (24 hrs @ 73°F)	0.20%	ASTM 570
MECHANICAL		
Tensile strength	9,500 psi	ASTM D638
Tensile elongation	95%	ASTM D638
Flexural modulus	370,000 psi	ASTM D790
Flexural strength 1	3,500 psi	ASTM D790
Compressive strength	12,500	ASTM D695
Dynatup impact strength 0.5" dart, @ 73°F	50 ft.-lbs.	ASTM D3783
Izod impact strength		
Notched @ 73°F	2.4 ft.-lbs.	ASTM D256A
Unnotched @ 73°C	NB	
THERMAL		
Defection temperature (264 psi)	280°F	ASTM D648
Coefficient of thermal expansion	3.75 x 105 in/in/°F	ASTM D696
Thermal conductivity	1.35 BTU/hr/ft/2/°F/in	ASTM C177
Specific heat @ 77°F	0.3 BTU/lb/°F	
OPTICAL		
Refractive index	1.495	ASTM D542
Light transmission	85-89%	ASTM D1003
FLAMMABILITY		
UL Flammability	V-0 (90 mil and above) V-2 (34-89 mils)	UL 94
FAA flammability @ 40 to 125 mils	Passes A&B	FAR 25.853
ATS 1000 @ 40 mils to 125 mils	Pass	

ABRASION RESISTANCE COMPARISON

TEST METHOD	UNCOATED	COATED
ASTM D1044	Polycarbonate	JetMirror
Taber abrader 500g	% Haze @ 100 cycles	
Load CS-10F wheels	>15.0	<4.0

CHEMICAL RESISTANCE COMPARISON

TEST METHOD	UNCOATED	COATED
ANSIZ26.1	Polycarbonate	JetMirror
Crazing	Fail	Pass