

MIL-STD-810G Military Durability Certification

Polyfuze® Polymer Fusion Label Technology

Performance Data

The following performance data represents third-party verified testing of Polyfuze Polymer Fusion Label Technology, conducted by Assured Testing Laboratories in accordance with MIL-STD-810G. These results confirm the extreme environmental durability of Polymer Fusion labels, ensuring suitability for military, aerospace, and defense applications.

All referenced test results are detailed below.

High Temperature:

Test Name	Test Specs	Surface	Result
High Temperature - Method 501.5	95-120°F for 24hrs for 7 Days	HDPE, PP Test Plaques	<i>Exceeded performance criteria</i>

Low Temperature:

Test Name	Test Specs	Surface	Result
Low Temperature - Method 502.5	-60°F for 72hrs	HDPE, PP Test Plaques	<i>Exceeded performance criteria</i>

Rainfall:

Test Name	Test Specs	Surface	Result
Rainfall - Method 506.5	40MPH raindrops for 40min	HDPE, PP Test Plaques	<i>Exceeded performance criteria</i>

Salt Fog, Salt Spray:

Test Name	Test Specs	Surface	Result
Salt Fog, Salt Spray - Method 509.5	5% salt solution at 95°F	HDPE, PP Test Plaques	<i>Exceeded performance criteria</i>

Blowing Dust:

Test Name	Test Specs	Surface	Result
Blowing Dust - Method 510.5	Blown dust @ 2mph for 6hrs	HDPE, PP Test Plaques	<i>Exceeded performance criteria</i>

Humidity:

Test Name	Test Specs	Surface	Result
Humidity - Method 507.5	80°F, 95-100% humidity 45 days	HDPE, PP Test Plaques	<i>Exceeded performance criteria</i>

Freeze / Thaw, Temperature Cycling:

Test Name	Test Specs	Surface	Result
Temperature Cycling - Method 503.5	3 cycles 77°F, 95% RH to 18°F	HDPE, PP Test Plaques	<i>Exceeded performance criteria</i>

Accelerated Aging, Thermal Testing:

Test Name	Test Specs	Surface	Result
Aging, Thermal	150°F, 80% humidity, 96hrs	HDPE, PP Test Plaques	<i>Exceeded performance criteria</i>



Polyfuze® Graphics Corporation
999 W. State Route 89A
Clarkdale, AZ. 86324
Tel: 928.634.8888

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Performance Data Cont.

Solar Radiation, Xenon Exposure:

Test Name	Test Specs	Surface	Result
Solar, Xenon - Method 505.5	(56) 24 hour cycles	HDPE, PP Test Plaques	<i>Exceeded performance criteria</i>

Abrasion Resistance, Desert:

Test Name	Test Specs	Surface	Result
Abrasion, Desert	500g @ 60rpm at 60 °C ± 2	HDPE, PP Test Plaques	<i>Exceeded performance criteria</i>

Abrasion Resistance, Room Temperature:

Test Name	Test Specs	Surface	Result
Abrasion, Room Temp.	500g @ 60rpm at room temp.	HDPE, PP Test Plaques	<i>Exceeded performance criteria</i>

Abrasion Resistance, Cryogenic:

Test Name	Test Specs	Surface	Result
Abrasion, Cryogenic	500g @ 60rpm at -55 °C ± 3	HDPE, PP Test Plaques	<i>Exceeded performance criteria</i>

Chemical Resistance Testing:

Test Name	Test Specs	Surface	Result
Deionized Water	8hr. exposure, max 24hr dry	HDPE, PP Test Plaques	<i>Exceeded performance criteria</i>
5% Salt Water	8hr. exposure, max 24hr dry	HDPE, PP Test Plaques	<i>Exceeded performance criteria</i>
Windex	8hr. exposure, max 24hr dry	HDPE, PP Test Plaques	<i>Exceeded performance criteria</i>
Betco AF67 Bathroom Cleaner	8hr. exposure, max 24hr dry	HDPE, PP Test Plaques	<i>Exceeded performance criteria</i>
99% Isopropyl Alcohol	8hr. exposure, max 24hr dry	HDPE, PP Test Plaques	<i>Exceeded performance criteria</i>
Dot 3 Brake Fluid	8hr. exposure, max 24hr dry	HDPE, PP Test Plaques	<i>Exceeded performance criteria</i>
#2 Diesel Fuel	8hr. exposure, max 24hr dry	HDPE, PP Test Plaques	<i>Exceeded performance criteria</i>
Nitric Acid - Ph 1.0±0.2	8hr. exposure, max 24hr dry	HDPE, PP Test Plaques	<i>Exceeded performance criteria</i>
HCL - Ph 1.0 ± 0.2	8hr. exposure, max 24hr dry	HDPE, PP Test Plaques	<i>Exceeded performance criteria</i>
Sodium Hydroxide - Ph 12±0.2 @ 5.25%	8hr. exposure, max 24hr dry	HDPE, PP Test Plaques	<i>Exceeded performance criteria</i>
Sodium Hypochlorite - 5%	8hr. exposure, max 24hr dry	HDPE, PP Test Plaques	<i>Exceeded performance criteria</i>
Quaternary Ammonium 200 ppm	8hr. exposure, max 24hr dry	HDPE, PP Test Plaques	<i>Exceeded performance criteria</i>

