



# Extreme Distribution Environment Certification Polyfuzer™ Polymer Fusion Label Technology

## Performance Data

The following performance data is representative of polymer fusion label performance using ASTM D7932-14 and MIL-STD 810G for labeling to be used in extreme distribution environments.

All tests referenced are shown below.

### High Temperature:

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

### Low Temperature:

Test Name	Test Specs	Surface	Result
Low Temperature	-60°F for 72hrs	HDPE, PP Test Plaques	Exceeded performance criteria

### Rainfall:

Test Name	Test Specs	Surface	Result
Rainfall	40MPH raindrops for 40min	HDPE, PP Test Plaques	Exceeded performance criteria

### Salt Fog, Salt Spray:

Test Name	Test Specs	Surface	Result
Salt Fog, Salt Spray	5% salt solution at 95°F	HDPE, PP Test Plaques	Exceeded performance criteria

### Blowing Dust:

Test Name	Test Specs	Surface	Result
Blowing Dust	Blown dust @ 2mph for 6hrs	HDPE, PP Test Plaques	Exceeded performance criteria

### Humidity:

Test Name	Test Specs	Surface	Result
Humidity	80°F, 95-100% humidity 45 days	HDPE, PP Test Plaques	Exceeded performance criteria

### Freeze / Thaw, Temperature Cycling:

Test Name	Test Specs	Surface	Result
Temperature Cycling	3 cycles 77°F, 95% RH to 18°F	HDPE, PP Test Plaques	Exceeded performance criteria

### Accelerated Aging, Thermal Testing:

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





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## Performance Data Cont.

### Solar Radiation, Xenon Exposure:

Test Name	Test Specs	Surface	Result
Solar, Xenon	(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>





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## Performance Data Cont.

### Chemical Resistance Testing Cont.:

Test Name	Test Specs	Surface	Result
#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>

### FDA 510(k) Durability Requirement:

Test Name	Test Specs	Surface	Result
600 Wash Cycles	250ppm ZEP FS Z-Chlor (#2443)	HDPE, PP Test Plaques	<i>Exceeded performance criteria</i>

