



A Step Ahead...

QUAKER COLOR

DIVISION OF McADOO & ALLEN, INC.

201 S. HELLERTOWN AVENUE P.O. BOX 219
QUAKERTOWN, PENNSYLVANIA 18951-0219
(215) 536-3520 FAX (215) 536-6464
www.quakercolor.com

Technical Data Sheet

Product Code: PR-1470

Experimental PUD

DESCRIPTION

PR-1470 is NMP free, high gloss, hydrophobic high performance aliphatic urethane dispersion with excellent adhesion to metal substrates. PR-1470 could be used as is or crosslinked through COOH functional groups. Coatings based on PR-1470 have high chemical, solvent and corrosion resistance.

APPLICATIONS

- DTM Coatings
- Other applications requiring very good stain and soiling resistance

FEATURES

- Excellent stain and chemical resistance
- Excellent corrosion resistance
- High hydrophobicity
- Adhesion to untreated steel (CRS) and Aluminum substrates

PROPERTIES

Appearance	Clear Liquid
Percent Solids, weight	30 +/- 1
Specific Gravity, 25°C	1.01
pH	7.8– 9.0
Mechanical Properties	
Tensile strength	5370 psi
Modulus	4746 psi
Elongation	316
Freeze Thaw Stability	Passes 5 Cycles
Hydrolytic Stability 7days/70°C/75%RH	
Tensile strength	5105 psi
Modulus	4725 psi
Elongation	288



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STORAGE

Store in a cool, dry place, preferably less than 80°F to ensure a useful shelf life of eighteen months. Protect from freezing. Mix before use.

STARTING POINT FORMULATION

Clear Coat Formulation PR-1470-1

Material	Lbs.	Supplier
Components		
PR-1470	90.26	Quaker Color
Proglyde DMM	9.03	Dow
Capstone FS-34	0.71	DuPont
Total	100.00	

Cure schedule: 30min@80°C, 7 days RT

Substrate: CRS for corrosion resistance

Application: Conventional Spray

Clear Coat Formulation PR-1470-2

Material	Lbs.	Supplier
Components		
PR-1470	87.12	Quaker Color
Proglyde DMM	8.71	Dow
Nano X-linker	3.48	Proprietary
Capstone FS-34	0.69	DuPont
Total	100.00	

Cure schedule: 30min@80°C, 7 days RT

Cure schedule: 7 days RT

Substrate: CRS for corrosion resistance

Application: Conventional Spray



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Clear Coat Formulation PR-1470-3

Material	Lbs.	Supplier
Components		
PR-1470	86.37	Quaker Color
Proglyde DMM	8.63	Dow
Carbodilite SW-12G	4.32	Nisshinbo Chemical Inc.
Capstone FS-34	0.68	DuPont
Total	100.00	

Cure schedule: 30min@80°C, 7 RT

Substrate: CRS for corrosion resistance

Application: Conventional Spray

CROSSLINKERS

- Carbodiimide 3-5% by weight on total formula
- Nano X-linker 3-5% by weight on total formula

TEST RESULTS

CRS, dft 1.5 mils, cure 7 day RT,

no crosslinker:

Adhesion

5B

Stain Resistance, 24 hr spot, covered

- Hot Coffee 3
- Lipstick 5
- Mustard 3
- Red Wine 3
- Ketchup 5

Chemical Resistance, 24 hr spot, covered

- Formula 409 5
- 12.5% Ammonia 5
- 10% HCl 5
- Windex 5
- IPA 100% 3
- Ethanol 95% 3
- Vaseline 5

CRS, dft 1.5 mils, 80C@30 min cure 7 day RT, Nano X-linker:



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Adhesion 5B

Stain Resistance, 24 hr spot, covered

- Hot Coffee 5
- Lipstick 5
- Ketchup 5

Chemical Resistance, 24 hr spot, covered

- Formula 409 5
- 12.5% Ammonia 5
- 10% HCl 5
- Windex 5
- IPA 100% 3
- Ethanol 95% 3
- Vaseline 5

CRS, dft 1.5 mils, 80C@30 min cure 7 day RT, Carbodiimide crosslinker:

Adhesion 5B

Stain Resistance, 24 hr spot, covered

- Hot Coffee 5
- Lipstick 5
- Ketchup 5

Chemical Resistance, 24 hr spot, covered

- Formula 409 5
- 12.5% Ammonia 5
- 10% HCl 5
- Windex 5
- IPA 100% 5
- Ethanol 95% 5
- Vaseline 5



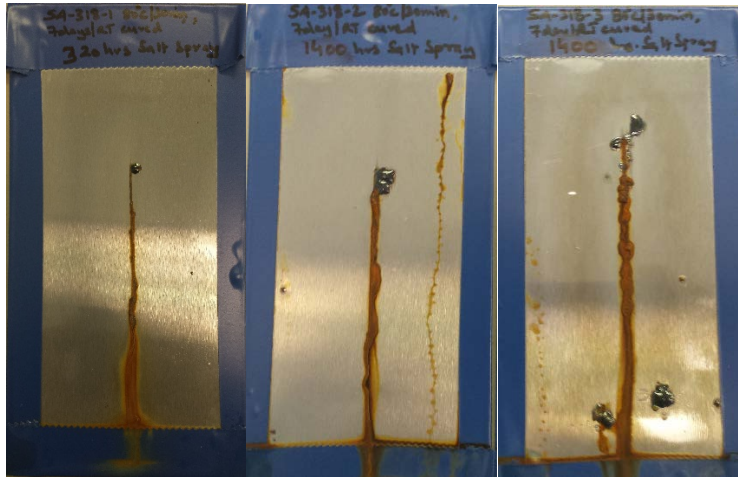
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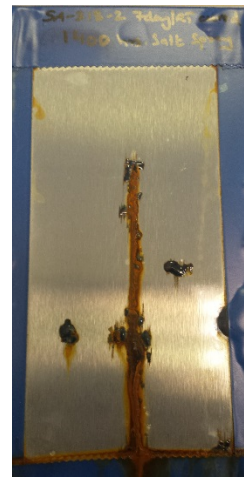
Salt Spray Results for Clear Formulations on CRS



320 hrs.
PR-1470-1

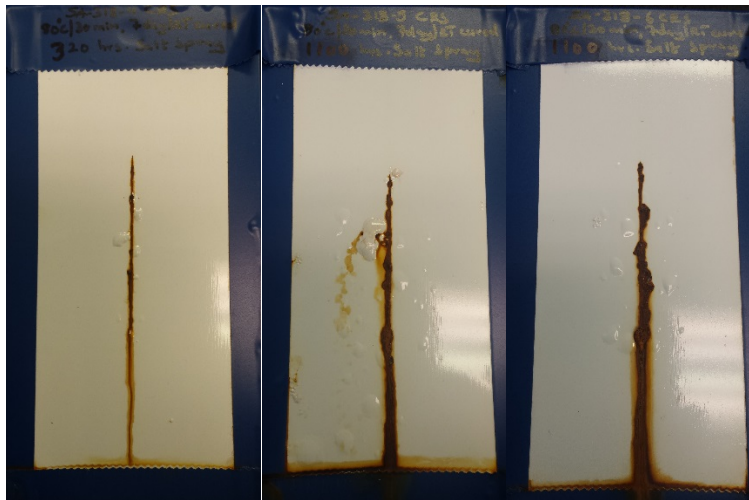
80°C/30min/7daysRT
1400 hrs
PR-1470-2

1400 hrs.
PR-1470-3



7days/RT cured
1400 hrs.
PR-1470-2

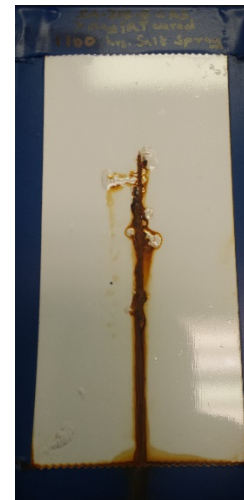
Salt Spray Results for Pigmented Formulations on CRS



320 hrs.
PR-1470-1

80°C/30min/7daysRT
1100 hrs.
PR-1470-2

1100 hrs.
PR-1470-3



7days/RT cured
1100 hrs.
PR-1470-2



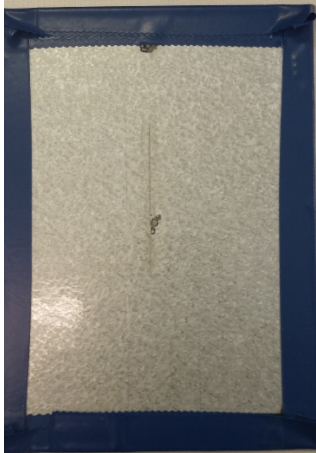
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Salt Spray Results for Clear and Pigmented Formulations on Non-Ferrous



80°C/30min/7daysRT Clear
2000 hrs.
PR-1470-1 Galvanum



PR-1470-1
Air dried
3000 hrs.
15days/RT Clear
3000 hrs.
PR-1470-1
Aluminum



PR-1470-LG-2
3000 hrs.
15days/RT Pigmented
3000 hrs.
PR-1470-LG-2
Aluminum

Quaker Color manufactures all its products under carefully controlled conditions to meet rigid specifications. The values given in this publication are typical values intended as guidelines for the use of the products, they are not specifications. It is the user's responsibility to thoroughly test the product in their particular application to determine its performance, efficacy and safety. Should you require the actual specifications currently enforced on specific products contact your Quaker Color representative for the appropriate information.