



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

A Step Ahead...

Technical Data Sheet

Product Code: PR-1470

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 – 32
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



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

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



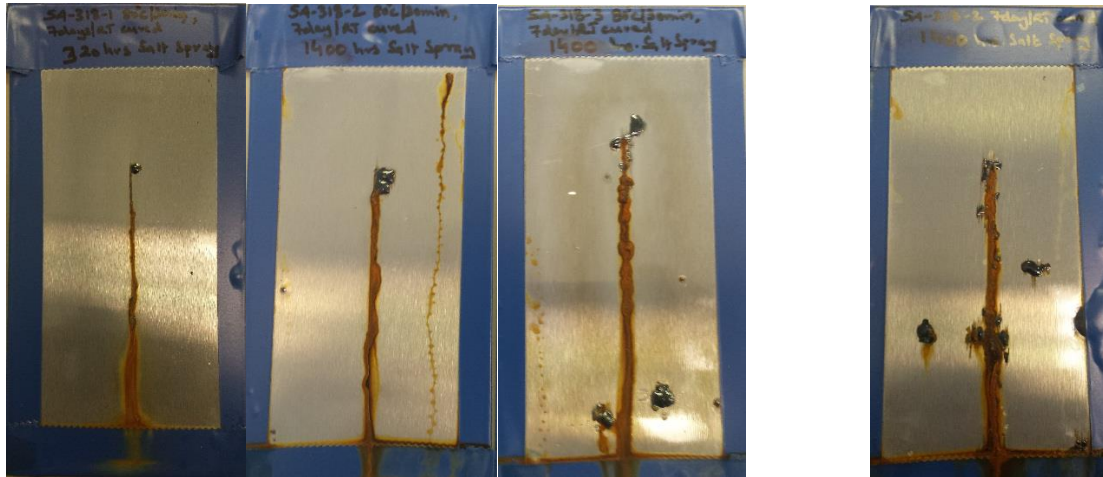
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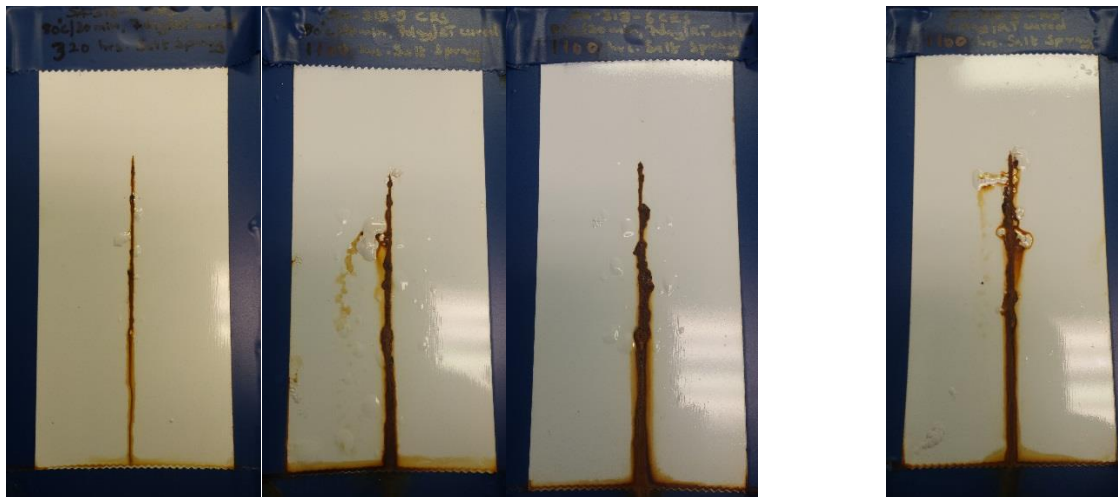
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Salt Spray Results for Clear Formulations on CRS



	80°C/30min/7daysRT			
320 hrs. PR-1470-1	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



	80°C/30min/7daysRT			
320 hrs. PR-1470-1	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