



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: AB-90F

### DESCRIPTION

AB-90F is NMP free, high performance aliphatic polyester urethane dispersion with adhesion on metal, plastic and concrete substrates. AB-90F could be used as is or with crosslinked through COOH functional groups. Coatings based on AB90F will be hard and with high chemical, solvent and water resistance.

### APPLICATIONS

- Interior and exterior automotive plastics
- Consumer electronics such as cellular phones, computers and TV housing
- Concrete coatings
- Light duty metal coatings
- Other applications requiring excellent mar and scuff resistance

### FEATURES

- Adhesion to PC, ABS, PC/ABS mixtures
- Excellent chemical
- Excellent hardness

### PROPERTIES

|                        |              |
|------------------------|--------------|
| Appearance             | Clear Liquid |
| Percent Solids, weight | 34 +/- 1     |
| Specific Gravity, 25°C | 1.04         |
| pH                     | 8.3 – 9.5    |

### STORAGE

Store in a cool, dry place, preferably less than 80°F, to ensure a useful shelf life of 18 months. Protect from freezing. Mix before use.



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## STARTING POINT FORMULATION

| Material Component 1 | Lbs.          | Supplier     |
|----------------------|---------------|--------------|
| AB-90F               | 93.00         | Quaker Color |
| DPNB                 | 5.00          | Eastman      |
| Tego 901W            | 0.30          | Degussa      |
| BYK 346              | 0.90          | BYK          |
| Rheolate 300         | 0.80          | Elementis    |
| <b>Total</b>         | <b>100.00</b> |              |

*Cure schedule: 30min@60°C, 3 days at ambient temperature*

*For ambient cure only increase the solvent content to 7%*

## CROSSLINKERS

- Water Reducible Isocyanate, 3-5% on total formula
- Carbodiimide XL-732N 5-6% on total formula
- Epoxy-silane, 6% on total formula
- Fastest property development when X-linked with isocyanate and XL-732N.

## Metal Primer Formulation

| Material     | Lbs.          | Supplier     |
|--------------|---------------|--------------|
| AB- 90F      | 48.43         | Quaker Color |
| DPNB         | 3.40          | Eastman      |
| Tego 901W    | 0.20          | Degussa      |
| Byk 346      | 0.46          | Byk          |
| Aerosil R972 | 0.35          | Degussa      |
| OTL R 57     | 24.71         | Quaker Color |
| Talc 399     | 21.97         | Nyral        |
| Flash X      | 0.48          | Halox        |
| <b>Total</b> | <b>100.00</b> |              |



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## TEST RESULTS

|  |        |                |       |          |         |          |                   |              |      |                |       |
|--|--------|----------------|-------|----------|---------|----------|-------------------|--------------|------|----------------|-------|
| <b>Hardness</b>  |        | <b>Sward</b>   |       | 44       |         |          | <b>Pencil</b>     |              | 2H   |                |       |
| <b>Dry Adhesion, tape</b>                                      |        | AI             |       | 5B       | CRS     | 5B       | B1000             | 5B           | Tin  | 4B             | PC 5B |
| <b>Mechanical Properties</b><br><i>No crosslinking</i>         |        | <b>Tensile</b> |       | 4376     |         |          | <b>Elongation</b> | 311          |      | <b>Modulus</b> | 3432  |
| <b>Stain, 2hrs</b>   | Butter | Coffee w/cream | Gravy | Hair oil | Ketchup | Lipstick | Mayonnaise        | Orange Juice | Soup | Mustard        |       |
| <b>Epoxy Silane X-Link</b><br>No recovery time/24 hrs recovery | 5/5    | 3/3            | 5/5   | 5/5      | 5/5     | 5/5      | 5/5               | 5/5          | 5/5  | 2/3            |       |
| <b>Carbodiimide X-Link</b><br>No recovery time/24 hrs recovery | 5/5    | 2/3            | 5/5   | 5/5      | 5/5     | 5/5      | 5/5               | 5/5          | 5/5  | 2/3            |       |

5- no effect; 4- slightly visible stain, no softening, no blistering  
 3- visible stain, 50% the color of the stain

## Automotive Interior Plastics

|                            |  |             |                              |            |
|----------------------------|--|-------------|------------------------------|------------|
| <b>Test</b>                | <b>PC substrate, isocyanate X-Link</b> |             |                              |            |
| Cure                       | 30 min@ 80°C, 72 hrs RT                |             |                              |            |
| <b>Dry Adhesion, tape</b>  | 5B                                     |             |                              |            |
| <b>Wet Adhesion, tape</b>  | 5B                                     |             |                              |            |
| (immersion, 96 hrs @ 74°C) |  |             |                              |            |
|                            | <b>Aspect</b>                          | <b>AATC</b> | <b>5 Finger Scratch Test</b> |            |
|                            |  |             | <b>8N</b>                    | <b>13N</b> |
| <b>Dry Cloth</b>           | mars                                   | 5           |                              |            |
| <b>Windex x 10 DR</b>      | mars                                   | 4-5         |                              |            |
| <b>Fantastic x 10 DR</b>   | mars                                   | 4-5         |                              |            |
| <b>Formula 409 x 10DR</b>  | mars                                   | 4-5         |                              |            |
| <b>Suntan @74°C x 1hr</b>  | 5                                      |             | pass                         | fail       |
| <b>DEET @ 74°C x 1 hr</b>  | 5                                      |             | pass                         | fail       |



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## Metal Primer



Dry to sand

90 min

1000 hrs Water Immersion

No delaminating, blistering or corrosion to scribe or field

Could be used with waterborne or solvent borne base coats or top coats.

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.