

US Coating Solutions
5948 Emerson Avenue S
Minneapolis, MN 55419
612-805-2887

AGS-1
Technical Data Sheet

Unique Properties

AGS-1 System has been designed for high performance areas where hardness, chemical and abrasion resistance is required. The aliphatic backbone of **AGS-1** provides excellent UV resistance, which makes it particularly useful in exterior applications. One of the most outstanding features of **AGS-1** is its rapid hardness development. **AGS-1** is water borne and extremely tough even at deposits of 1 to 2 mil dry film thickness.

TYPICAL PROPERTIES

• Type	Aliphatic polyurethane
• Appearance	Amber colored dispersion
• Total solids	35%
• pH	8.3
• Viscosity, Brookfield, 25°C, cps	300
• Specific gravity of solids @ 25°C	1.14
• Freeze/thaw stability	Passes 5 cycles
• VOC, by weight	360 gms/liter
• Type of VOC	N-Methyl Pyrrolidone

KEY BENEFITS

- Rapid hardness development
- UV resistance
- Abrasion resistance
- Chemical resistance
- Impact resistance
- Flexibility
- Water borne
- Pigmented or transparent
- Meets U.S.D.A. requirements for indirect food contact surfaces.

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TABLE 1

Application Properties of Clean Film

- Can be applied by roll, brush, or spray -

1 mil D.F.T. **AGS-1**

Dry Time

Set to touch – 20 min. Thorough dry – 30 min.

Sward Hardness Development -

4 hours	12
1 week	44

TABLE 2

Physical Performance Properties

- 1 mil dry film thickness **AGS-1[®]**

Pencil Hardness	ASTM D3363	4H
Pendulum Hardness (Konig)	ASTM D4366	109
Taber Abrasion (mg. Loss per 1000 cycles, CS-11 wheel 1000 gram load)	ASTM D4060	21
Impact Resistance at 30°F, in-lb.		160
QUV Weatherometer	ASTM D4329	Oxidation - No effect Blistering - No effect Yellowing - No effect Loss of gloss-No effect
Tensile Strength	ASTM D2370	8000psi
% Elongation at break	D2370	100
Temperature Service Range "Continuous"	ASTM D2485	275°F- +/- 28°F
Temperature Service Range "Intermittent"	ASTM D2485	450°F - +/- 50°F
Special Gloss at 60°	ASTM D523	60
Solvent Resistance	ASTM G20 Modified	Excellent
Salt Resistance	ASTM G20 Modified	Excellent
Acid Resistance	ASTM G20 Modified	Excellent
Alkali Resistance	ASTM G20 Modified	Excellent
Salt Spray Resistance-1000Hr.	ASTM B117	Excellent

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ADHESION PROPERTIES

AGS-1 primer has outstanding adhesion to a wide variety of substrates. However, on certain metal and special substrates, we suggest that proper sand blasting or anti-corrosive coating be applied before *AGS-1* application.

<u>Metal</u>		<u>Plastic</u>	
Untreated Cold		Polycarbonates	Excellent
Rolled Steel	Excellent	Vinyl	Excellent
Bonderite 100	Excellent		
Bonderite 1000	Excellent		
Tin Plate	Excellent		
Untreated Aluminum	Excellent		
Anodized Aluminum	Excellent		

All surfaces must be free of contaminates. For metal surfaces, a white metal blast is recommended. For concrete surfaces, blasting or blast-track will give the best results. For new concrete surfaces, a 5% acid wash is acceptable.

FORMULATING GUIDE

Flash rusting is seldom encountered with systems based on *AGS-1*. However, unusually high humidity conditions may cause some problems. Ammonium benzoate, as well as other anti-flash rusting products available at local paint stores, is effective in eliminating flash rusting.

COLORS

Available in clear or color.

CAUTION:AGS surfaces have a low coefficient of friction and therefore tend to be slippery.

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