



PRODUCT INFORMATION

Product Name: QW18-1

Last Updated: April 7, 2015

PRODUCT

QW18-1: Urethane; Polyurethane: Water-based Aliphatic Polyester Dispersion

DESCRIPTION

QW18-1 is a translucent aliphatic waterbased urethane resin. **QW18-1** provides solvent resistance and good physical properties without the use of typical crosslinkers. **QW18-1** is a single component low VOC product which offers better chemical and abrasion resistance than traditional polyurethane dispersions. **QW18-1's** extreme toughness allows formulators to develop high performance coatings and adhesives for the most demanding applications.

APPLICATIONS

- wood coatings
- concrete floor coatings
- metal coatings
- plastics coatings
- base polymer for paint formulations
- heat reactivated adhesives at 200-250 °F

TECHNICAL INFORMATION

% Solids	35 ± 1
Viscosity, cps @ 25 °C	25 - 400
Specific Gravity	1.06 ± 0.01
Wt. /Gallon	8.75 lbs. ± .1
pH	7.75 ± 0.75
VOC Lb. /Gal.	2.49 ± .05
VOC g/L	297 ± 8

TYPICAL PROPERTIES

CS10 Wheel ¹	8 mg
Hardness (Sward, 1 week)	25
Tensile Strength ²	5000
Elongation ²	360%

Solvent Resistance Drop/Rub (1=best - 5=worst)

	<u>Water</u>	<u>MEK</u>	<u>Ethanol</u>
QW18-1	1/1	4/4	2/2
QW18-1 + 4% Aziridine	1/1	2/2	2/2

Stain Tests (0=None - 5=Severe)

	<u>Ink</u>	<u>Coffee</u>	<u>Catsup</u>	<u>Iodine</u>	<u>Mustard</u>
QW18-1	0	1	0	2	1
QW18-1					
QW18-1+4% Aziridine	0	1	0	4	1



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TEST METHODS (ASTM Method)

% Solids - D-2369	Hardness - D-2134	Viscosity – D-2196
Abrasion - D-4060	Appearance - E-284	pH- E-70
Tensile - D-412	Elongation - D-412	VOC Properties - D-3960
Weight/Gallon - D-1475		

¹Taber Abrasion Weight Loss: 1000g load / 1000 cycles

²Instron Tensile Tester; films pulled at 2 in. /min.

FORMULATING TIPS

QW18-1 film forms at room temperature. **QW18-1** may be further crosslinked with XL29SE (UCC) or aziridines. **QW18-1** is generally compatible with our other QW resin series or a variety of acrylic resin emulsions. Reduce XL29SE in M-Pyrol to 25% active ingredients and add 6 parts to 100 parts QW18-1 with thorough mixing. Mixture is active for 72 hours.

STORAGE AND HANDLING

Store between 55 to 95°F. Consult Safety Data Sheet prior to working with this material.

CLEAN UP

Soap and water. All applicators and utensils must be thoroughly cleaned prior to use. For further information, refer to the Safety Data Sheet. **WARNING: Refer to the Safety Data Sheet**

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05/15