



Technologies

137 Folly Mill Road
Seabrook, NH 03874
USA 603-474-7177

Product Data Sheet

Product →	SF18 – Solvent Free Polyurethane Dispersion
Description →	SF18 is solvent free aliphatic translucent water borne urethane resin. SF18 provides performance without NMP addition and is a single component ultra low VOC product that offers chemical and abrasion resistance. SF18 allows formulators to develop high performance coatings and adhesives in compliance with VOC regulations.
Application →	<ul style="list-style-type: none"> ✓ Wood Coatings ✓ Concrete Coatings ✓ Metal Coatings ✓ Base polymer for paint formulations
QC Specifications	<ul style="list-style-type: none"> ✓ Viscosity - 25 – 400 cps ✓ Solids - 34 – 36% ✓ pH - 7 – 8.5

Recommended Starting Formulations

Formula ONE		Formula TWO	
Ingredient	%Weight	Ingredient	%Weight
SF18	93.90	SF18	93.90
Triglyme	4.69	Triglyme	4.69
BYK 345	0.24	Tego 500	0.24
Tego 825	0.24	Tego 825	0.24
Esi-Cryl 325N35	0.93	Esi-Cryl 325N35	0.93
Total	100.00	Total	100.00
PROCEDURE		PROCEDURE	
<ol style="list-style-type: none"> 1. Add Ingredients 1 and 2 under agitation. 2. VERY SLOWLY charge item 3 and mix for 15 minutes. 3. Add ingredients 4 and 5 in order and mix for 30 minutes. 4. Evaluate film quality to confirm results. 		<ol style="list-style-type: none"> 1. Add Ingredients 1 and 2 with good agitation. 2. Add 3 and mix 15 minutes. 3. Add 4 and 5 in order and mix at least 30 minutes (high shear mixing is recommended). 4. Evaluate film quality on a Lenata card to confirm results. 	

DISCLAIMER

Formulas are provided as guidance to the customer. Henkel Corporation does not guarantee the performance of end use applications. We recommend that Henkel customers fully test starting formulas for manufacturing suitability, performance properties, and specific end use applications. Henkel will not be held liable for any defects in the manufacture or use of these formulas.



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QC DATA

PROPERTIES	STARTING POINT FORMULATION
Viscosity (cps)	10-100 cps
Solids %	28 - 33%
Weight/Gallon	8.7
pH	7.5

PHYSICAL PROPERTIES

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PROPERTIES	STARTING POINT FORMULATION ONE WITH CARBODILITE SV-02	STARTING POINT FORMULATION TWO WITH AZIRIDINE
Tensile (psi)	3615 psi	3184 psi
Elongation (%)	221 %	171 %
Taber (mg loss, CS10,1000 cycles)	8.9 mg	14.2 mg
Gloss on Leneta Chart @ 60°	89	90
Leneta Film Quality	Good	Good
Crosslinker	Carbodilite SV-02	QZ43
Crosslinker Level – pph	3	3
MEK Double Rubs (6 mil/7 day RT cure on leneta card)	69	150
Water Resistance @ 18 hrs **	0	0
IPA / Water Resistance @ 18** hrs	1	0
VOC g/l	< 150 g/l	< 150 g/l
4 week Heat Stability w/o cross-linker	PASS	PASS
Freeze/ Thaw (3 cycles) w/o cross-linker	PASS	PASS
Chemical Resistance Rating	Best	Worst
	0	5

****Performed on 6 mils drawdown on glass, ratings key see below.**

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