

Product Data Sheet

NeoCryl® A-6075

NeoCryl® A-6075 is an aqueous acrylic copolymer emulsion designed for plastic coatings requiring exceptional chemical resistance properties. NeoCryl® A-6075 exhibits superior adhesion characteristics on a wide variety of plastic substrates, including ABS, Polycarbonate, Polystyrene and Nylon.

Delivery form: 45 % solids in water.

Product characteristics

Type	- Styrenated acrylic
Total solids, by volume	- 43.2 %
Weight per gallon, 25°C as supplied	- 8.65 lbs.
Specific gravity of solids, 25°C	- 1.038
Freeze/thaw stability	- Pass 5 cycles
Mechanical stability	- Passes

Film properties/Key Benefits

- Superior Adhesion
- Exceptional Naphtha Resistance
- Excellent Gasoline Resistance
- Outstanding Alcohol Resistance

Recommendations for end-use

- Suggested Markets:
 - Interior Automotive & General Plastics Coating

Product specifications

Property	Range	Unit	GAP
Appearance	Milky white liquid		0059
Total solids w/w	44 - 46	%	0001
pH	7.8 - 8.3		0016
Visc. Brookfield 25°C	50 - 150	mPa.s	0020
Sediment 1-1	max. 0.20	%	0005
Sediment straight	max. 0.10	%	

Other product data

Property	Value	Unit	GAP
Free monomer	max. 1000	ppm	0118
VOC (theoretical)	none	%	
Preservative(s):			
CMIT/MIT (3:1) (casno. 55965-84-9)	0.0027	%	0222

Test methods

Test methods (GAP) referred to in the table(s) are available on request.

Storage guidelines

The resin should be stored indoors in original, unopened, undamaged container in a dry place at storage temperature between 5- 40 °C. Exposure to direct sunlight should be avoided.

Shelf life

Under above mentioned storage conditions, the shelf life of the resin will be 12 months ex work.

Material safety

A Material Safety Data Sheet for this product is available on request.

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ADHESION

A 3 mil wet film thickness of Formulation WB-3005 was applied, via bird applicator, and conditioned 20 minutes at 170°F (77°C). Adhesion was evaluated via ASTM D3359-92 crosshatch.

Noryl 844	5B
Noryl 1222	5B
Noryl N-190	5B
ABS KJW Cicolac	5B
ABS 236	5B
ABS AR-1000	5B
ABS TA-1000	5B
Lexan 3110	5B
Lexan 4291	5B
Lexan FL-400	5B
Lexan FL-900	5B
Prevex W30	5B
Prevex W50	5B
Xenox 1101 A	5B
Aromatic Ester Carbonate	5B
Impact Polystyrene	5B
Styron 6087 SF	5B
Nylon 6,6	5B

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FILM PROPERTIES

A 3 mil wet film thickness was applied, via bird applicator, on Noryl 1222 and conditioned for 20 minutes at 170°F (77°C).

Results were as follows:

<u>GENERAL</u>	<u>CLEAR FORMULATION WB-3005</u>	<u>GLOSS WHITE FORMULATION WB-3008</u>
Hardness - König - Sward	88	82
Gloss - 60° Geometry	--	85
<u>CHEMICAL RESISTANCE</u>		
VM&P Naphtha Resist. (1 hr. Immersion)		
Whitening	NE	--
Softening	NE	NE
Transfer	NE	NE
Wet Adhesion	5B	5B
Gasoline (1 hr. spot - 1 hr. recovery)		
Whitening	NE	--
Softening	NE	NE
Alcohol (1 hr. spot - 1 hr. recovery)		
Whitening	NE	--
Softening	NE	NE
Double Rubs (> 100)		
Window Cleaner	NE	NE
Armor-All	NE	NE

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FILM PROPERTIES (Cont'd)

GENERAL

**CLEAR FORMULATION
WB-3005**

**GLOSS WHITE FORMULATION
WB-3008**

O.1N HC1 (2 hr. spot)
Whitening
Softening

NE
NE

--
NE

Hot Water Resistance
(4 hr. spot @ 158°F - 1 hr. recovery)
Whitening
Softening

NE
NE

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NE

Cleveland Condensation Cabinet
(100% RH; 100°F; 96 hr.)
Whitening
Softening
Recovery

Slight
NE
3 Hour

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NE
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Suggested Starting Point Formulas:

WB-3005	Clear Lacquer	WB-3008	Gloss White Enamel for Plastic
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COALESCING

NeoCryl® A-6075, as supplied, will not form a film at room temperature. Coalescing solvents must be added to formulas. The amount and type will depend on the particular application and drying schedule.

NeoCryl® A-6075, representing new water-borne technology, exhibits different co-solvent compatibilities. Ethylene glycol monobutyl ether (Butyl Cellosolve, Dowanol EB, etc.) is NOT SUITABLE as a coalescing solvent. This solvent will cause excessive swelling of the polymer and eventual gelation.

Coalescing solvents which have been found to be suitable with NeoCryl® A-6075 are ARCOSOLV DPnB, ARCOSOLV DPM, ARCOSOLV PM, ARCOSOLV PTB, EKTASOLVE EP, CARBITOL and TEXANOL. These co-solvents may be used alone or in blends depending on application requirements.

For most applications, 30 parts co-solvent per hundred solid resin will be a suitable level for proper coalescence. Some applications may require the use of a permanent plasticizer. Dibutyl phthalate and Santicizer 8 have been found suitable.

Formulations WB-3005 and WB-3008 can be used as a guide for proper coalescing procedure.

Defoamers

Type	Level	Supplier
NeoCryl® AP-2860	0.05 - 0.30%	DSM NeoResins
Foamaster 111	0.05 - 0.20%	Henkel Corp.
BYK-024	0.05 - 0.20%	BYK Chemie USA

Flow Agents

Type	Level	Supplier
FC129 (1% Solution)	4 -5 lbs./100 gal	3M
Triton GR-7M	0.5 - 2 lbs./100 gal	Rohm & Haas

Raw Material Suppliers

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Material	Supplier
Triton CF-10	Union Carbide Corp. (800) 335-8550
Tamol 165	Rohm & Haas (215) 592-3000
Patcote 519	Patco Specialty Chemicals (816) 561-9050
Zopaque RCL-9	SCM Pigments (800) 638-3234
Arcosolv DPnB	Lyondell Chemical (800) 321-7000

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