

## NovaCryl™ PS-R 50 Ultra-Removable Pressure Sensitive Adhesive

### Description

NovaCryl PS-R 50 water-based acrylic PSA is designed for low peel, ultra-removable film applications. NovaCryl PS-R 50 exhibits the following traits:

- Single component ultra-removable PSA
- Excellent cling and electro-wetting characteristics
- Clean (no ghosting) removability
- Stable, low peel on both low and high surface energy substrates
- Good UV stability and good clarity
- Free of Alkyl Phenol Ethoxylate (APE) type surfactants
- FDA CFR 21, Section 175.105 compliant

### Typical Dispersion Properties

Property	Typical Value
% Solids	54 - 57
pH	6.5 - 7.5
Viscosity (Brookfield, LTV #3 Spindle, 30 RPM)	100 - 400 cps
Average Particle Size	200 - 500 nm
Ionic Character	Anionic
Surface Tension	43 dynes/cm
Glass Transition Temperature (Tg) Calculated	-29°C
Mechanical Stability	Excellent

### Typical Adhesive Performance\*

Adhesion Test	Type	Failure Mode	Performance		
			(oz/in)	(lb/in)	(N/25 mm)
180° peel on Stainless Steel (SS)	30 min.	A	3.2	0.2	0.9
	24 hr.	A	6.4	0.4	1.8
180° peel on HDPE	30 min.	A	0.3	0.02	0.09
	24 hr.	A	0.6	0.04	0.18
Loop Tack on SS	1" x 1"	A	9.6	0.6	2.7
Loop Tack on HDPE	1" x 1"	A	4.8	0.3	1.3
Shear (30 min. dwell)	1/2" x 1/2" x 500g	C	> 80 hrs	> 80 hrs	> 80 hrs

Failure Mode: A = Adhesive, C = Cohesive

\*All adhesion properties were evaluated on direct-coated 2 mil polyester facestock at 0.9 mil dry coat weight. PSTC 101 for peel adhesion, PSTC 16 for loop tack, and PSTC 107 for shear testing.

### Application Areas

- Protective films for glass, automotive, electronic, and display applications
- Removable temporary labels, shelf markings, and decals
- Window "cling" film applications

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## Removability Testing Performance

NovaCryl PS-R 50 PSA maintains its peel adhesion over a long period of time with minimal adhesion build-up and clean removability. Peel adhesion performance after room temperature aging on various substrates is presented below.

Substrate	Dwell Time/180° Peel (lb/in)			
	30 min.	24 hr.	48 hr.	168 hr. (1 week)
SS	0.16	0.28	0.37	0.37
HDPE	0.03	0.04	0.05	0.04
Glass	0.16	0.26	0.20	0.31
Acrylic	0.24	0.24	0.27	0.28
Polycarbonate	0.22	0.28	0.28	0.31

All adhesion properties were evaluated on direct-coated 2 mil polyester facestock at 0.9 mil dry coat weight. PSTC 101 for peel adhesion.

## Formulation and Compatibility

NovaCryl PS-R 50 PSA can be used alone or formulated for a specific application or coating line configuration. It is compatible with many wetting agents, defoamers, and rheology modifiers. It is compatible with other NovaCryl PSAs such as PS-P 180, PS-P 170, and PS-P 130. Blending other PSAs with PS-R 50 will create a wide range of peel adhesion values on a variety of substrates. Preliminary trials should be conducted to determine the effective range of each component.

## Storage, Handling and Packaging

- Protect emulsion from freezing – ideal storage temperature is 70°F (22°C)
- Shelf life of one (1) year when properly stored
- Refer to MSDS for additional details
- Packaging options – Tank truck, 2200 lb. tote, 480 lb. fiber drum, 460 lb. plastic drum
- Coater-ready grades are available upon request

### NOTE:

Although the data supplied above is believed to be accurate, each user is advised to make an independent determination as to whether the described product(s) is/are appropriate for a particular use or application, whether such use will comply with all applicable laws or regulations, or whether such use will infringe the intellectual property rights of third parties.



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