

Overview

Spraylat's Liquid Specialties Group offers a wide range of high performance liquid coatings. Spraylat's coating technologies are engineered to provide unique solutions to individual customer requirements. Our expertise in providing environmentally friendly, "near zero" VOC coatings represents industry leading formulation expertise.

Custom Solutions

Spraylat strives to address the individual requirements of its customers with specialized product solutions. Matching the production environment and equipment to the paint product is critical to achieving the highest quality result at the lowest cost. Spraylat products can be modified to accommodate specific customer needs. These customized adjustments to our standard products are often based on a Spraylat line survey.

Liquid Specialties Products

Spraylat's Liquid Specialties product lines include water and solvent-based products formulated from a variety of resin chemistries. These resin families include those listed below. Within these product lines, we offer forced dry, bake and air dry systems. Additionally, products designed for primer or direct to metal application are available.

Spraylat Liquid Product Lines

- 2K Urethanes
- 1K Urethanes, Alkyds, Acrylics
- 2K Epoxies
- High Solids Polyesters
- Polyurethane Dispersions (PUD)
- High Solids/Low Bake Air-Dry/Bake Primers
 - > Alkyd, Epoxy, Urethane, Zinc Rich



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1K Water-Based Technologies



1K Products

- 1K NZ “Near Zero” VOC Urethane
- 1K Hydratone Alkyd
- 1K NZ “Near Zero” Acrylic Emulsion
- 1K NZ “Near Zero” Oil-Modified Urethane

**HIGH-PERFORMANCE,
EASY-TO-USE,
FIELD APPLICATION FRIENDLY**

Features

- Environmentally Friendly
 - > NZ “Near Zero” 0.3-0.6 VOC Urethane
 - > HAPS Free, Chrome-Free, Lead-Free
 - > Meet SCAQMD Rule 1107
- Applicator Friendly
 - > No Pot Life
 - > Air-Dry, Forced-Dry, Bake
 - > Direct-to-Metal Capability
 - > Excellent Adhesion to Stainless Steel
 - > Spray, Vacuum or Dip Coat (alkyds)
- Very Good Weatherability
- Good Corrosion Resistance
- Wear and Abrasion Resistant
- Full Range of Finishes and Glosses
 - > Full Gloss Range up to 80-85°+
 - > All Metallics and Colors



Surface Preparation

Coating adhesion is enhanced through proper surface preparation. Prior to priming or coating direct-to-metal, all surfaces must be free from dirt, grease, oil, fingerprints and other forms of surface contamination. Chemical cleaning of metals, which may include an acid etch, is recommended in most cases. Severe corrosion or oxidation may require mechanical cleaning by means of sand blasting or other abrasive cleaning methods before chemical cleaning. Certain Spraylat products are designed to coat over marginally cleaned steel surfaces.

Pretreatment

A chromate conversion coating of aluminum or a zinc, iron phosphate treatment, applied onto steel surfaces, will provide excellent coating adhesion and enhance the corrosion performance of the final coated product.

Priming

Untreated steel, iron or aluminum substrates can be primed with a Spraylat solvent or water-based epoxy primer to provide enhanced adhesion and corrosion resistance. For other substrates including castings, plastics, etc, please consult with a Spraylat technical representative for recommendations.

Spraylat offer a selection of 1K solvent and water-based primers that are suitable for use with any Spraylat 1K topcoat. In addition to being environmentally friendly, these primers are fast drying, allowing for touch-up or sanding of the primed surface within an hour of application. High film builds of up to 8-12 mils are also achievable with selected 2K solvent-based epoxy primers. Spraylat primers are also formulated to be very smooth, and commonly enhance the appearance of the final coated product.

Equipment Recommendations

Spraylat's 1K products are recommended for production painting using all manual/automatic conventional air spray, airless, air assisted, HVLP and electrostatic guns including turbo bells and turbo discs. In general, Spraylat products can be adjusted to accommodate on-site equipment systems.

Spraylat will work with individual customers to fine tune our products to satisfy individual production situations. In consultation with the equipment supplier, Spraylat will assist in determining the application equipment that best suits the paint production requirements and maximizes transfer efficiency.

Flash, Dry and Cure

Water-based 1K coatings require an adequate flash time for water and/or solvent removal before drying. Suggested flash-off times are 5-15 minutes for most applications. Product formulations can often be adjusted to accommodate specific flash time requirement when in-line painting is being performed. Flash times will be influenced by wet film thickness, substrate temperatures and air movement.

Spraylat 1K products are normally used for air-dry or forced-dry production application. These coatings can also be baked. General curing conditions are shown in the table below.

	Air-dry Tack-Free/ To Handle	Full Cure	Forced-dry	Bake
1K NZ Urethane	20-30 min /4 hrs	5-7 days	30-60 min, 160-180°F	15-30 min, 250-350°F
1K NZ Acrylic	15-20 min /4 hrs	5-7 days	30-60 min, 160-180°F	15-30 min, 250-350°F
1K Hydratone Alkyd	30-120 min /4hrs	5-7 days	30-60 min, 160-180°F	15-30 min, 250-350°F

Wet-on-Wet Application

Spraylat's 1K topcoats can be applied wet-on-wet onto recommended water-based or solvent based primers. Time between coatings should be 1-2 hours, depending on ambient conditions and the film thickness of the prior coating.

Recoat

Recoating or touch-up of the top coat can be accomplished after sufficient cure of the initial paint film. This is typically 1-2 hours. Extended times between recoating may require additional surface preparation to insure good adhesion between layers due to contamination of the painted surface. In some cases, this may involve a light abrasion of the painted surface.

Film Thickness/High Film Builds

Topcoats should be applied at a dry film thickness of 1.0-3.0 mils to assure good coating performance and final finish properties. Primer thickness is critical to achieving the desired corrosion resistance. A minimum dry film primer thickness of 1-1.5 mils is recommended for most applications.

Certain applications require high film builds of 5 mils or more. Spraylat's 2K solvent-based epoxy primer is capable of achieving a total film build of 5+ mils. This primer can be applied wet-on-wet to achieve these higher film thicknesses.

Spraylat 1K Products

	1K NZ Urethane & Oil-Modified Urethane		1K Hydratone Alkyd**		1K NZ Acrylic	
Typical Coating Properties						
Density, lbs./gal., ± 0.2`	8.7		8.7		8.52	
Solids Content, wgt.%, ± 2%	41.1		60-70		37.3	
Viscosity, Zahn #2, sec.	32-37		30-40		30-35	
VOC, lbs./gal.	0.3-0.6		1.0-2.8		0.1-0.5	
Coating Performance						
Gloss, 60°	80-90		85+		85+	
Pencil Hardness	air-dry forced-dry H	bake 2H	air-dry forced-dry H	bake 2H	air-dry forced-dry H	bake 2H
Impact Resistance, lbs.	40	40	40	40	40	40
Chemical Resistance, water resistance, 24hrs.	pass	pass	pass	pass	pass	pass
MEK, double rubs	50	100	50	100	50	100
motor oil, 24 hrs.	pass	pass	pass	pass	pass	pass
diesel fuel, 48 hrs.	pass	pass	pass	pass	pass	pass
Humidity Resistance, 300 hrs.,	pass	pass	pass	pass	pass	pass
Salt Spray Resistance, <1/16" creep, hrs.						
- Bonderite 1000	>600	>1000	>600	>1000	>600	>1000
- chromated Al	>600	>1000	>600	>1000	>600	>1000
- with primer, hrs.	>1000	>1000	>1000	>1000	>1000	>1000
- no primer, DTM	> 200	> 200	> 200	> 200	> 200	> 200
QUV Accelerated Weathering			Performs to Typical Industry Standards for this resin family		Performs to Typical Industry Standards for this resin family	
60° Gloss, initial	88					
60° Gloss, initial	70%					
60° Gloss, 12 months, % retention						
Florida Weathering						
60° Gloss, initial	90		85		85	
60° Gloss, 12 month, % retention	80%		60%		60%	

*Properties of actual products will vary by individual product formulation and pigment loading

**Solvent-based 1K Alkyd Products also available.

Coating Use

Spraylat's 1K water-based technologies are formulated to be very easy-to-use and adaptable to a wide range of production environments. These coatings can be air-dried/forced-dried or baked. Normal application is either by air-drying or forced-drying. The performance of the final coating is enhanced when a full bake is elected. 1K products have no pot-life, so working time in production is not an issue.

The corrosion protection afforded by each of these coatings, when applied in conjunction with a recommended Spraylat primer or alternative surface treatment methods, is excellent. Spraylat's 1K NZ urethane coating offers the greatest level of weatherability and durability when industrial and ACIE applications are involved. Spraylat's 1K coatings also provide good mar and abrasion resistance. Chemical and water resistance is also excellent. In general, the service life of equipment can be extended when using these coatings.

Industry Applications

TRANSPORTATION

- Truck Bodies, Trailers
- Maintenance, Utility Vehicle
- Highway Signs

ACIE

- Agricultural Equipment
- Industrial Machinery
- Construction Equipment

INDUSTRIAL

- Tanks, Vessels, Cylinders
- Storage Products/Containers
- Machinery
- Pump Housings
- Tools, Hardware

ARCHITECTURAL

- Structural Parts, Buildings
- Extrusions

APPLIANCES