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 crtical 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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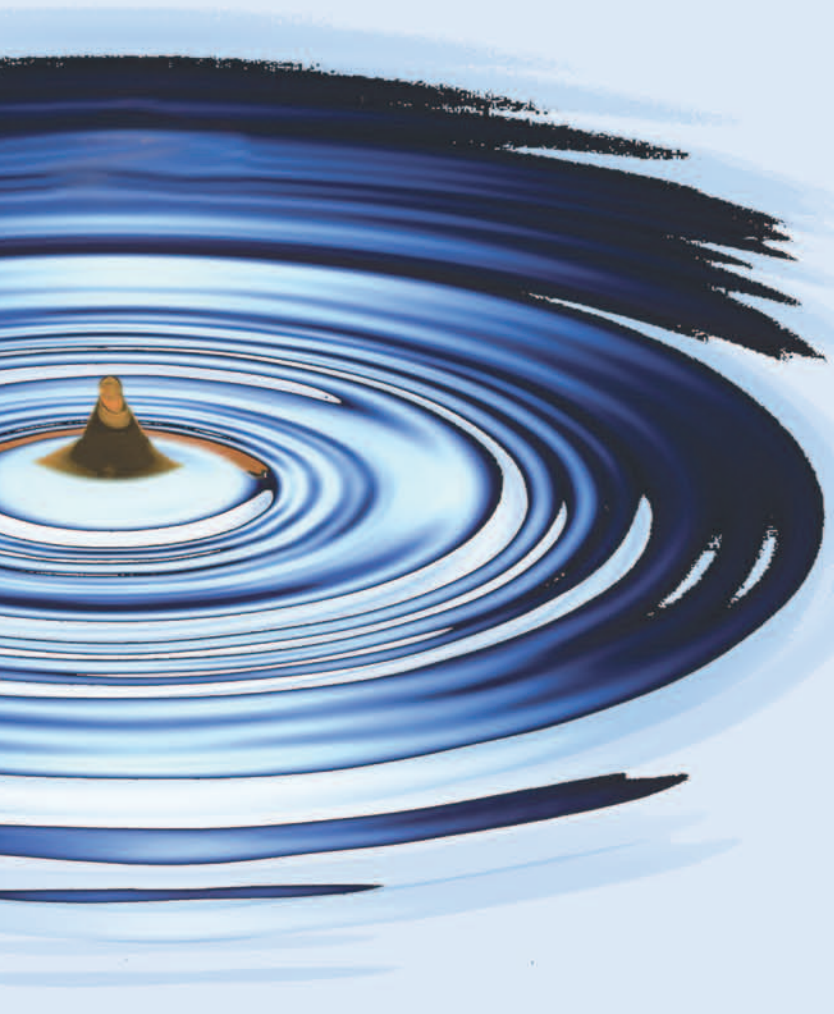
2K Urethane Technologies

SPRAYLAT
LIQUID SPECIALTIES GROUP

SUPERIOR PERFORMANCE INDUSTRIAL COATINGS

Key 2K Technologies

- 2K Conventional Solvent-based
- 2K Solvent-based Direct-to-Metal
- 2K Solvent-based NZ "Near Zero" VOC
- 2K NZ "Near Zero" VOC Water-based



Features

- Environmentally Friendly
  - > NZ "Near Zero" 0.1-1.0 VOC Water or Solvent Topcoat
  - > 0.1 VOC Epoxy Water-based Primer
  - > HAPS Free, Chrome-Free, Lead Free
  - > Meets SCAQMD Rule 1107
- Superior Weatherability
- Excellent Corrosion Resistance
- Wear and Abrasion Resistant
- Durable, Impact and Chip Resistant
- Exceptional Gloss & Surface Finish Retention
- Full Range of Finishes and Glosses
  - > Full Gloss Range up to 80-90˚+
  - > Most all Metallics and Colors Available
  - > Textured Finishes
- Direct-to-Metal Option
- Meets UL 1332 with Approved Primer System

SUPERIOR PERFORMANCE INDUSTRIAL COATINGS

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 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 a Spraylat technical representative for recommendations.

Both solvent and water-based primers are suitable for use with any Spraylat 2K 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

Plural component equipment is recommended for 2K urethanes, thus minimizing waste and pot life issues. Spraylat's 2K NZ, water-based urethane coating should only be applied using plural component equipment or agitated pressure pots.

Spraylat's solvent-based 2K products may also be "hot potted" or mixed prior to their application by conventional equipment. This includes manual/automatic conventional air spray, airless, air assisted, HVLP and electrostatic guns including turbo bells and turbo discs. Pot life limitations should be considered for these 2K products when using conventional spray equipment. Spraylat will work with individual customers to ensure our products match individual production situations. In consultation with the equipment supplier, Spraylat will assist in determining the equipment that best suits the paint application requirements and maximizes transfer efficiency.

Pot Life

If specialized plural component equipment is not used, pot life must be considered. Care should be taken to plan to mix only the amount of paint needed for the job or that can be comfortably sprayed within the allotted time.

	2K NZ Water	2K NZ Solvent	2K Conv. Solvent	2K DTM Solvent
Pot Life, hrs.	1.5-2.0	4-6	4-6	4-6

Flash, Dry and Cure

Solvent-based topcoats require an adequate flash-off of solvent before curing. 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 performed.

Spraylat 2K urethane products are designed for either forced-dry or air dry application. Each coating system can be adjusted in cure schedule by altering the ratio of the catalyst component or by changing the oven temperature. Full cure is reached within 5-7 days. General cure recommendations are shown in the table below.

	Air-dry			Forced-dry
	Dry-to-Touch	Tack-Free	Dry-to-Handle	
2K NZ Water	1-2 hrs	6-8 hrs	10-12 hrs	30 min, 160-180°F
2K NZ Solvent	1-2 hrs	6-8 hrs	10-12 hrs	30 min, 160-180°F
2K Conv. Solvent	1-2 hrs	6-8 hrs	10-12 hrs	30 min, 160-180°F
2K Epoxy Primer	1-2 hrs	6-8 hrs	10-12 hrs	30 min, 160-180°F

Wet-on-Wet Application

Spraylat 2K urethane topcoats can be applied wet-on-wet onto selected solvent-based epoxy primers or onto an initial topcoat. A typical time between wet-on-wet coating application is 15-30 minutes depending on ambient conditions and the film thickness of the prior coating.

Recoat

Time between coatings should be 1-2 hours, depending on ambient conditions to insure adequate removal of solvent from the primer has taken place. 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 cured paint.

Film Thickness/High Film Build

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 including the topcoat. This primer can be applied wet-on-wet (onto itself) to achieve these higher film thicknesses in specific instances. Spraylat technical service personnel can assist in determining the optimal film build for the desired final finish properties.

Spraylat 2K Urethane Products

	2K NZ Water	2K NZ Solvent	2K Conv. Solvent	2K DTM Solvent
Typical Coating Properties				
Density, lbs./gal., ± 0.2	10.8	11.6	10.1	11.5
Solids Content. wgt.%, ± 2%	56.5	79.2	63.7	79.2
Viscosity, Zahn #3, sec.	40-50	15-25	20-30	15-25
Mix Ratio	4:1	2:1	2:1	2:1
Reducer	Water	Exempt Solvents	Ketones	Exempt Solvents
VOC, lbs./gal.	0.1-1.0	0.1-1.0	2.7-3.5	2.0-3.5
Pot Life**, hrs.	1.5-2.0	4-6	4-6	4-6
Coating Performance				
Gloss, 60˚	80+	90+	85+	85+
Pencil Hardness	2H	4H	2H	3H
Impact Resistance, lbs.				
direct	160	80	80	120
reverse	160	80	40 (F)	120
Chemical Resistance,				
water resistance, 24hrs.	NC***	NC	NC	NC
motor oil, 24 hrs.	NC	NC	NC	NC
diesel fuel, 48 hrs.	NC	NC	NC	NC
Salt Spray Resistance with primer, hrs. <1/32 creep	>600	>600	>600	>600
QUV Accelerated Weathering				
60˚ Gloss, initial	80	93.0	91.5	92.6
60˚ Gloss, 12 months, % retention	50.8%	89.3%	91.0%	80.0%
Florida Weathering				
60˚ Gloss, initial	80	94.0	90.0	93
60˚ Gloss 12 months, % retention	80.5%	94.3%	92.5%	93.1%

*** *NC = no significant change from the original pencil hardness* ** *Pot Life varies with temperature and humidity conditions*

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

Coating Use

Spraylat's 2K urethane coatings are formulated to provide superior weatherability and durability for a full range of industrial and ACIE applications. Both the water and solvent-based products are user-friendly in most production environments. These coatings most often employ heat to achieve optimum coating properties.

Excellent corrosion protection is achieved with these top coats when applied in conjunction with a recommended Spraylat primer or applied over an appropriate surface treatment such as zinc or iron phosphate. Spraylat's 2K urethane coatings are durable and provide superior mar and abrasion resistance. Chemical, water and humidity resistance are also excellent. In general, the service life of equipment can be extended when using Spraylat 2K urethane 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

ELECTRONIC ENCLOSURES