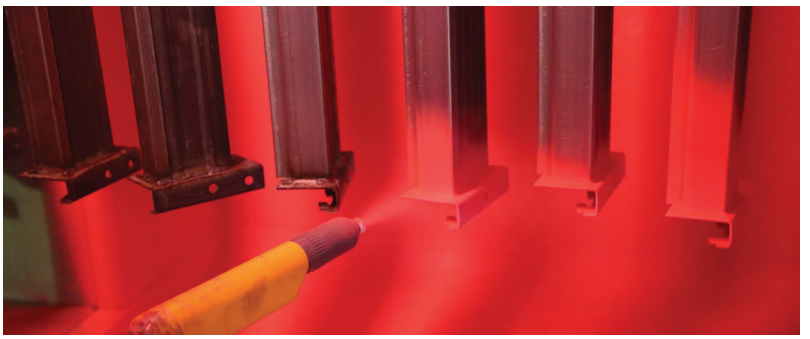
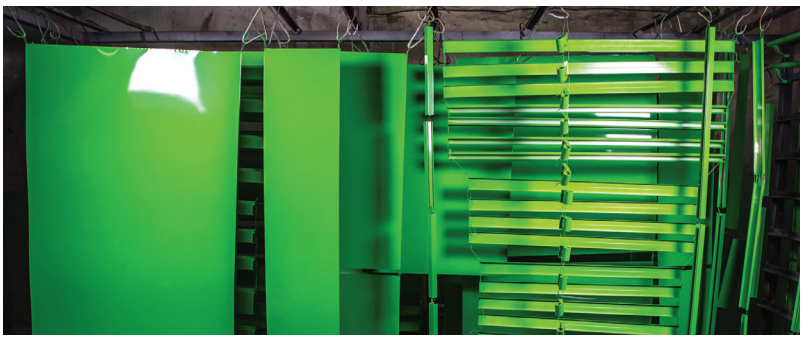
STEPAN® Resins for Powder Coatings





Stepan®

RUCOTE® powder resins provide a broad range of high quality properties for powder coatings. These are manufactured to demanding ISO 9001:2008 quality standards, and are backed by focused technical support. With Stepan's RUCOTE® resins for powder coatings, formulators can achieve the coatings performance that is desired: High to low gloss finishes, standard and superdurable applications, good to excellent chemical resistance and even anti-graffiti applications.

POLYURETHANE POWDER COATINGS

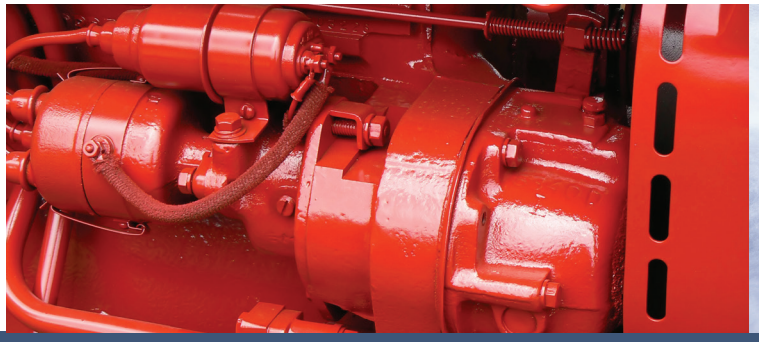
RUCOTE® 100 resin series can be formulated in a wide variety of powder coatings with high gloss, textured, matte, and sand finishes that are useful in automotive, outdoor furniture, lawn and garden, and general industrial applications. In addition, the RUCOTE® 100 resin series can be used to formulate TGIC-free systems.

EPOXY POLYESTER HYBRID POWDER COATINGS

RUCOTE® 500 resin series can be formulated in a wide variety of powder coatings with high gloss, river textures, matte, metallic, hammertone, and sand finishes. These hybrid powder coatings are especially useful in appliance, shelving, office furniture, fixtures, and general industrial applications.

POLYESTER POWDER COATINGS (TGIC & HAA)

RUCOTE® 900 resin series can be formulated in a wide variety of powder coatings with high gloss, satin, matte, metallic, and sand finishes. Polyester powder coatings are especially useful in architectural, lawn and garden, agricultural, and construction equipment applications.



POWDER RESINS SELECTION GUIDE

Stepan

		APPLICATIONS					PERFORMANCE FEATURES	TYPICAL CHEMICAL PROPERTIES				
Cure Chemistry	**RUCOTE®**	**Standard Durable**	**Interior Use Only**	**Chemical Resistant**	**Matte Finishes**	**Super Durable**		**Viscosity at 200°C Poise**	**TG (°C)**	**Hydroxyl Value**	**Acid Value**	**Recommended Bake Cycle**
Polyurethane	102	•					Smooth and excellent gloss, excellent mechanical properties	40	57	42	NA	10' @ 400° F
Polyurethane	104	•		•	•		Designed for detergent resistance with high gloss and excellent elasticity	40	57	112	NA	15' @ 400° F
Polyurethane	106	•					Good flow and high gloss, higher Tg than RUCOTE® 102	42	66	42	NA	10' @ 400° F
Polyurethane	107	•					Very high gloss and excellent mechanical properties, high Tg	40	65	47	NA	10' @ 400° F
Polyurethane	108	•			•	•	Greatest UV resistance, can be formulated for high or low gloss finishes	35	53	295	NA	12' @ 400° F
Polyurethane	109	•			•		Designed for one-shot low gloss system when used in conjunction with RUCOTE® 123 or 118	25	55	265	NA	15' @ 400° F
Polyurethane	117	•		•			Anti-graffiti coatings, designed for high chemical resistance and toughness in combination with high gloss	40	60	110	NA	15' @ 400° F
Polyurethane	118	•			•		Highest Tg, provides greatest resistance to sintering, good for low gloss and wrinkle finishes	72	68	42	NA	10' @ 400° F
Polyurethane	121	•					Very flexible (0 T-Bend) and excellent corrosion resistance. Used in low gloss systems	40	58	40	NA	15' @ 400° F
Polyurethane	123	•			•		Specifically designed for use in combination with RUCOTE® 109 for one shot low gloss finishes	75	64	23	NA	15' @ 400° F
Cure Chemistry	**RUCOTE®**											
50:50 Hybrid	5006		•				Excellent flow and leveling	25	67	NA	85	10' @ 365° F
50:50 Hybrid	5016		•				Low reactivity resin, FDA CFR 175.300 compliant	25	67	NA	85	Varies by catalyst
50:50 Hybrid	5500		•				Low cure with good mechanical properties and flow	21	61	NA	75	10' @ 320° F
50:50 Hybrid	5551		•				Low cure, FDA CFR 175.300 compliant	21	61	NA	75	10' @ 320° F
60:40 Hybrid	560		•				Excellent flow and leveling, good chemical resistance	30	60	NA	55	10' @ 375° F
60:40 Hybrid	561		•				Low reactivity resin, FDA CFR 175.300 compliant	30	60	NA	55	Varies by catalyst
60:40 Hybrid	562		•				Excellent flow and leveling, good chemical resistance	30	60	NA	55	10' @ 375° F
60:40 Hybrid	5001		•				Designed for highest overbake resistance, medium reactivity, excellent flow	30	58	NA	55	12' @ 330° F
70:30 Hybrid	570		•				Good flow and leveling	50	62	NA	37	15' @ 392° F
Cure Chemistry	**RUCOTE®**											
TGIC or HAA 93:7/95:5	921	•					Highest reactivity, low temperature cure, non-blooming	18	60	NA	38	15' @ 302° F
TGIC or HAA 93:7/95:5	9006	•					Low reactivity, excellent flow, good overbake stability	34	68	NA	36	10' @ 400° F
TGIC or HAA 93:7/93:7	9008	•		•			Improved chemical resistance	25	69	NA	50	10' @ 374° F
TGIC or HAA 93:7/95:5	9010	•				•	Better UV resistance, high gloss, AAMA 2604 approvable	42	66	NA	32	10' @ 374° F
TGIC or HAA 90:10/93:7	9011	•		•		•	Improved chemical resistance, AAMA 2604 approvable	30	65	NA	50	10' @ 400° F
TGIC or HAA 93:7/95:5	9014	•				•	Excellent smoothness and clarity, AAMA 2604 approvable	25	67	NA	34	10' @ 400° F 20' @ 365° F
TGIC or HAA 93:7/95:5	9400	•					Medium reactivity, excellent flow, good overbake stability	32	68	NA	34	10' @ 400° F

Polyol Manufacturing Plants

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Elwood, IL, USA
- Production Plant
- Pilot Reactors

Columbus, GA, USA
- Powder R&D Center
- Production Plant

Wesseling, Germany
- Production Plant

Brzeg Dolny, Poland
- R&D Center
- Production Plant

Nanjing, China JV
- R&D Center
- Production Plant
- Esterification Pilot Reactor
- Propoxylation Pilot Reactor

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