

Solutions for metal coatings

Pre-treatments

- **Esacote**® PUDs acrylic-urethane and acrylic emulsions suitable for Cr(VI), Cr(III) and Cr-Free formulations.
- **Esacote**® PUDs acrylic-urethane and acrylic emulsions with improved adhesion on Zn/Al alloys, galvanized iron (HDGI/EGI), aluminium and cold rolled steel.
- **Esacote**® PUDs acrylic-urethane and acrylic emulsions with outstanding flexibility for coil coating applications.
- **Esacote**® PUDs and acrylic emulsions with enhanced alkali resistance.
- **Esacote**® non-ionic and cationic PUDs with good stability in low pH.
- **Esacote**® radiation curable PUDs with outstanding performance.

Primers

- **Esacote**® PUDs with enhanced chemical, mechanical and weathering resistance. Specific grades with low VOC.
- **Esacote**® PUDs, acrylic-urethane and acrylic emulsions with outstanding flexibility for coil coating application.
- **Esacote**® non-ionic and cationic PUDs with good stability in low pH and cationic formulations.
- **Esacote**® radiation curable PUDs with outstanding performance.
- **Viscolam**® synthetic rheology additives that solve most of the technical challenges in production and application of water based metal coating formulations.

Top coats

- **Decosphaera**® polymeric matting agents based on PU beads suitable for 100% UV/EB coil coating formulations.
- **Esacote**® PUDs with enhanced chemical, mechanical and weathering resistance. Specific grades with low VOC.
- **Esacote**® PUDs acrylic-urethane and acrylic emulsions with outstanding flexibility for coil coating application.
- **Esacote**® PUDs which provide good compatibility with pigmented pastes for coloured top coats.
- **Esacote**® PUDs radiation-curable PUDs with outstanding performance.
- **Adiwax DSP** solvent wax preparations for flip-flop effect and antisetling.
- **Spheromers**® polymeric matting agents based on AC beads for deep matt and scratch resistance as well as for special texturized effects.
- **Viscolam**® synthetic rheology additives that solve most of the technical challenges in production and application of water based metal coating formulations.

Water based resins for metal coating applications information & typical value chart

Products families and main features

		Main application				Chemical properties					Film properties	
		Antifingerprint	Pretreatment	Primer	Topcoats	Chemical nature	Solvent (%)	Solvent type	Dry content (%)	pH	MFFT (°C)	König (K) hardness (sec)
Water based acrylic emulsions												
Esacote® AC 301	Hydroxyl functional				x	AC	0	Solvent free	40	7.0-8.0	~60	95
Esacote® AC 302	Hydroxyl functional	x	x	x	x	AC	0	Solvent free	50	7.0-8.0	~50	50
Esacote® AC 509	DTM binder			x	x	AC	0	Solvent free	43	7.5-8.5	~25	65
Water based urethane acrylic dispersions												
Esacote® PU 98/N	Enhanced adhesion	x	x			PC	15	NEP	31	7.0-9.0	~0	130
Esacote® PU 147	Enhanced alkali resistance	x	x			PE	5	NEP	35	7.0-8.5	~0	136
Esacote® PU 148	Enhanced alkali resistance	x	x			PE	4.5	DPGDME	35	7.0-9.0	~0	93
Esacote® UA7023	Selfcrosslinking hybrid	x	x	x	x	PC	0	Solvent free	35	7.0-9.0	~60	140
Water based BIOBASED polyurethane dispersions												
Esacote® BIO 118	33% Bio based carbon content	x	x			PES	8	DPGDME	32	7.5-8.5	~43	150
Esacote® BIO 148*	33% Bio based carbon content	x	x			PE	4.5	DPGDME	35	7.0-9.0	~15	100
Esacote® BIO 5045	68% Bio based carbon content	x	x			PE	3	DPGDME	30	7.0-9.0	~0	45
Water based polyurethane dispersions												
Esacote® PU 40	Excellent overall compatibility			x		PES	<1	MEK	35	7.5-9.5	~0	50
Esacote® PU 61	Antiscratch			x	x	PC	8	DPGDME	35	7.0-9.0	~25	127
Esacote® PU 62	Excellent overall compatibility			x		PES	5	DPGDME	35	7.0-9.0	~0	38
Esacote® PU 6419	Excellent alkali resistance	x	x			PE	15	NEP	31	7.0-9.0	~0	150
Esacote® PU 6814	Excellent film formation/hardness	x	x			PC	14	NMP	35	7.0-9.0	~0	145
Esacote® PU 70	Excellent film formation/hardness	x	x			PC	8	NEP	35	7.0-9.0	~10	120
Esacote® PU 7020	Flexibility / chemical resistance			x	x	PC	4	DPGDME	35	7.0-9.0	~0	35
Esacote® PU 77	Improved mech. / chem. resistance	x	x			PC	<0.5	MEK	35	7.0-9.0	~35	105
Esacote® PU 931	NON IONIC - Low pH stable	x	x			PE	<1	Acetone	30	8.0-10.0	~0	NA
Esacote® PU C1	CATIONIC - High water resistance	x	x	x		PC	<1	MEK	30	4.0-6.0	~0	14
Esacote® PU HMF	Alcohol/alkali resistance	x	x			PES	8	NEP	30	8.5-10.5	~0	115
Rheological modifiers						Chemico-physical properties						
Viscolam® 630	Low shear HASE	-	-	-	-	0	Solvent free	30	2.0-4.0	-	-	KU builder
Viscolam® NT 74	High shear HASE	-	-	-	-	0	Solvent free	30	2.0-4.0	-	-	ICI builder
Viscolam® PS 010 AIR	Low shear HEUR	-	-	-	-	0	Solvent free	39.5	4.0-7.0	-	-	KU builder
Viscolam® PS 167	Low/Medium Shear HEUR	-	-	-	-	23	2-Butoxyethanol	40	5.0-7.0	-	-	KU builder
Viscolam® PS 170 AIR	Medium Shear HEUR - 20% biobased carbon content	-	-	-	-	0	Solvent free	46.5	4.0-7.0	-	-	KU builder
Viscolam® PS 202 AIR	High Shear HEUR	-	-	-	-	0	Solvent free	20	4.0-7.0	-	-	ICI builder
Polymeric matting agents						Chemico-physical properties						
Spheromers® CA 6					x	Crosslinked PMMA	6 µm	matting agent				
Spheromers® CA 10					x		10 µm	texturing agent with matt effect				
Spheromers® CA 15					x		15 µm					
Spheromers® CA 20	Monosized spherical beads				x		20 µm					
Spheromers® CA 30					x		30 µm					
Spheromers® CA 40					x		40 µm					
Spheromers® CA 60					x		60 µm					
Decosphaera® 3 EF	Gaussian beads				x	Crosslinked PU	~3µm	matting agent for 100% UV/EB				
Decosphaera® 8/20	Gaussian beads				x	Crosslinked PU	~8µm	matting agent for 100% UV/EB				

Above data cannot be considered as supply specification.

AC acrylic
 PC polycarbonate
 PE polyether
 PES polyester
 NA not applicable
 FCMD food contact material declaration available
 DPGME dipropylene glycol methyl ether
 DPGDME dipropylene glycol dimethyl ether

This information is given in good faith and to the best of our knowledge. Every user of our products is responsible as regards the observation of all legal regulations including patent laws. Detailed information on handling and specific precautions to be observed in the use of the product can be found in our relevant Health and Safety Information Sheets.