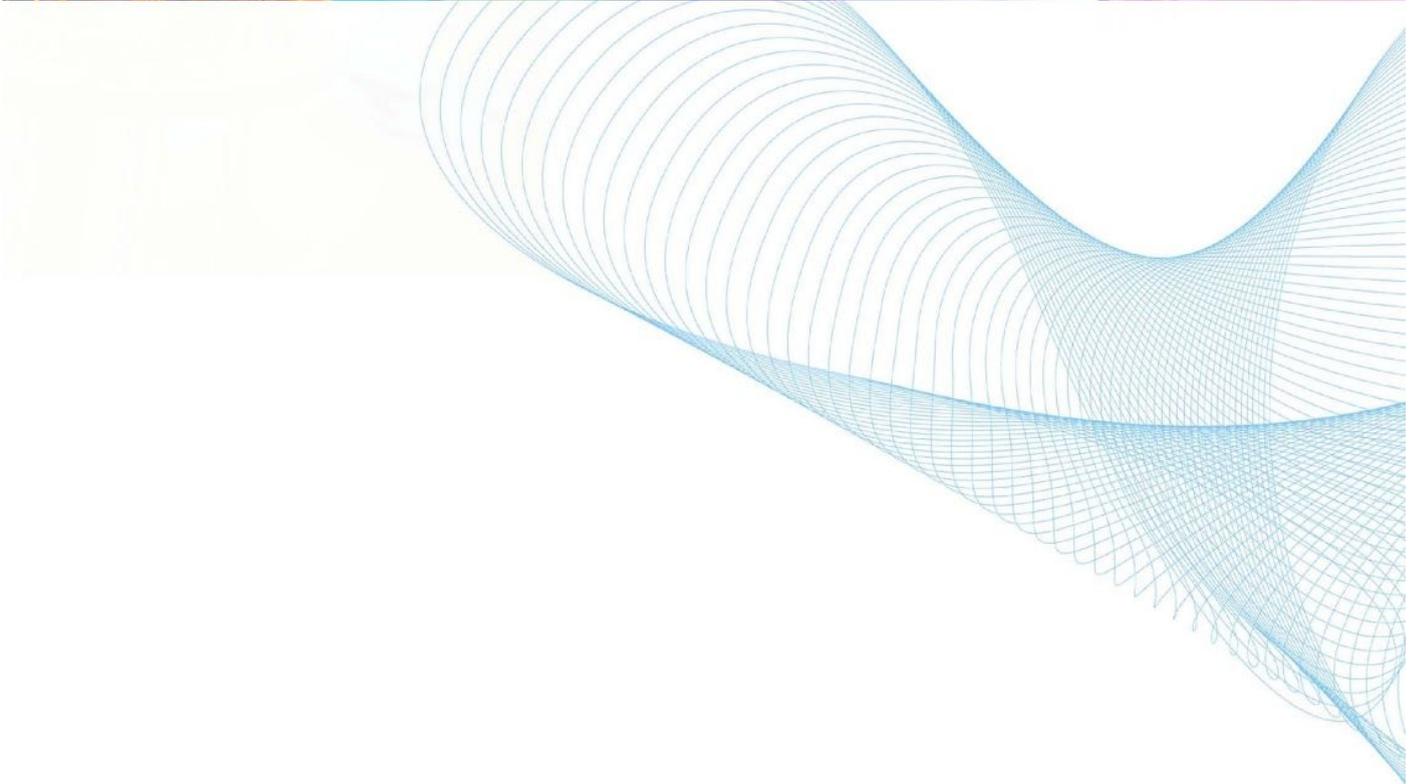




www.litmuschem.com



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The Technical Innovations in the field of fine chemicals

Litmus Chemical Co., Ltd., which was appointed to New Technology Idea Business and received the Credit Guarantee Fund from Small Business Administration in Korea, was established in 2001 and located in Korea.

It is an important professional manufacturer and supplier with experience over a decade for powder coating additives in Korea. With continually increasing investment, Litmus Chemical Co., Ltd. has owned some standard production lines, the related modern equipments and precision instruments for product analysis and detectives as well as employee trained well. Through continuous innovation in recent years, we developed a variety of good quality products to provide to user. At present, Litmus Chemical Co., Ltd. has become well-known one of the most additive products of powder coating in Korea.



The company also has interests in:

- Raw Materials for Paint/Ink & Powder coating
- Raw materials for Synthetic resin

Websites for all these activities have not yet been developed. If you require more information, please e-mail us indicating your area of interest.

The Company also prides itself on its proactive approach to regulation and standards and has established a leadership position in having many of its activities externally certified for compliance beyond strict regulatory needs.

Powder Coating Product List

Crosslinking Agents for Polyester Powder Coatings

Products	Comparison	Characteristic	Remarks
REACT® PCA-501	EMS Chemie XL-552	Hydroxyalkylamide: General purpose	Highly reactive, high functionality; Crosslinker for Polyester Powder coatings (cure temp. 180°C*10min)
REACT® PCA-5601	EMS Chemie QM-1260	Hydroxyalkylamide	React®PCA-5601 is an improved Hydroxyalkylamide crosslinker for the formulation of exterior durable powder coatings. The colour stability of React®PCA-5601, particularly when cured in direct fired gas ovens, combined with a favourable toxicological profile, makes this crosslinker exceptionally suitable for powder coatings where high colour stability is required.
REACT® PCA-560M		Matt hardener for single component matt powder coatings (For semi-gloss)	PCA-560M is a beta-hydroxyalkylamide hardener designed for single component reduced gloss polyester powder coatings. When formulated with the appropriate carboxyl functional polyesters a wide gloss range can be achieved. PCA-560M offers cured films with excellent gloss stability, very good surface characteristics and outstanding mechanical performance.
REACT® PCA-610M		Matt hardener for single component matt powder coatings (For Matte finish)	PCA-610M can be mixed with various carboxyl functional polyester resins to formulate matte, one shot, and exterior durable polyester powder coatings with ranges from about 5 to 30% of low gloss. - Improving the impactness of TGIC-Free Polyester Matt powder coatings

Matting Agents for Polyester Powder Coatings

Products	Comparison	Characteristic	Remarks
REACT® ST-24H		Acrylic Resin (20-80% of gloss for dark colour)	React® ST-24H is a matting agent based on Polyester/HYDROXYALKYLAMIDE powder coatings. The use of this product can provide 20-80% of gloss, excellent flow and outstanding anti-yellowing for powder coatings.
REACT® ST-24M	EMS Chemie MA68022	Acrylic Resin General purpose	React® ST-24M is a matting agent based on Polyester/HYDROXYALKYLAMIDE powder coatings. The use of this product can provide 30-60% of gloss, excellent flow for powder coatings.
REACT® ST-30		Acrylic Resin (20-80% of gloss for white colour)	React® ST-30 is a matting agent based on Polyester/HYDROXYALKYLAMIDE powder coatings. The use of this product can provide 20-60% of gloss, excellent flow for powder coatings.
REACT® PSA-380	EMS Chemie V68-39	Acrylic Resin	React® PSA-380 is a matting agent based on Polyester/HYDROXYALKYLAMIDE powder coatings. The use of this product can provide 30-80% of gloss, good hardness and outstanding anti-yellowing for powder coatings.
REACT® LC-2400		Acrylic Resin	React® LC-2400 is a matting agent based on Polyester/HYDROXYALKYLAMIDE powder coatings. The use of this product can provide 30-80% of gloss, excellent flow and outstanding anti-yellowing for powder coatings.
REACT® PSA-301B	DT-3329	Modified PE (Huntsman DT-3329-1)	PSA-301B is used in the production of gloss reduced powder coatings. Polyester/TGIC based powder coatings of gloss level ranging from 25~80% may easily be formulated by the use of PSA-301B .

REACT® LC-4000		Modified PE	Secondary- matting agent for TGIC/polyester based powder coatings (LC-4000 is a secondary- matting agent for TGIC/ polyester system. The use of this product, which is used in combination with PSA-301)
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Matting Agents for Hybrid Powder Coatings

Products	Characteristic	Remarks
REACT® PSA-302S	Acrylic Resin	PSA-302S is a non-reactive matting agent based on hybrid powder coatings. The use of this product can provide 10-80% of gloss, excellent flow and outstanding anti-yellowing for hybrid powder coatings.

Flow & Leveling Agents for Powder Coatings

Products	Characteristic	Corresponding Products	Remarks
REACT® LA-100	Acrylic/Silica General purpose: Non Reactive Flow Modifiers	BYK-366P	General purpose ; Non Reactive Flow Modifiers - Flowing Agent for Powder coatings. - Excellent flow & leveling properties - Prevent cratering, pinholes, fish eyes and another surface defects - Good film appearance & recoatable - Excellent UV & weather resistance
REACT® FA-200A	Acrylic/Silica More Flow, Particularly suited to thin-layer powder coatings: Non Reactive Flow Modifiers	ESTRON-PL200	React® FA-200 is noted for its superior flow and leveling characteristics, excellent recoatability and intercoat adhesion properties, all of which are essential attributes for powder coating primers. Surface defects such as orange peel, craters, pinholes, and other imperfections can be reduced or eliminated by incorporating 0.7-1.5% of React® FA-200 into pigmented powder coating formulations.
REACT® RFA-260P	Acrylic/Silica Substrate wetting& Adhesion: Reactive Flow Modifiers	BYK-364P	React®RFA-260 is a specialty powder flow control agent that is based on a hydroxyl functional polymer that has been converted into free-flowing powder by adsorption onto silica-type carrier.
REACT® FA-300N	Acrylic/Silica More Flow and Non Reactive Flow Modifiers	ESTRON-P67 General purpose	React® FA-300N is widely known for its reliable performance as a flow control agent for general industrial powder coatings and is well suited for a spectrum of common binder chemistries including polyesters, polyurethanes, hybrids, epoxies, and acrylics. React® FA-300N is based on a liquid acrylic polymer that has been converted into free-flowing powder by adsorption onto silica-type filler.
REACT® FA-300H	Acrylic/Silica More Flow and Non Reactive Flow Modifiers	PV-88	React® FA-300H is widely known for its reliable performance as a flow control agent for general industrial powder coatings and is well suited for a spectrum of common binder chemistries including polyesters, polyurethanes, hybrids, epoxies, and acrylics. React® FA-300H is based on a liquid acrylic polymer that has been converted into free-flowing powder by adsorption onto silica-type filler.
REACT® FA-MB	100% Activity of leveling agent	Troy TC 486	React® FA-MB is a 100% Activity of leveling agent. This material has been designed for a balance of good flow and good clarity in powder coating formulations. A key attribute of this flow control agent is that leveling agent has already been highly dispersed into the resin and thus is very easily incorporated into the final formulation.

Degassing Agents for Powder Coatings

Products	Characteristic	Remarks
REACT® B-1	Acrylic Copolymer	Anti-pinhole agent for Powder coatings; This product has wonderful anti-yellow trait, so it is used with PCA-501, in order to prepare powder coating that can stand anti-yellow without any air bubble.

Curing Agents for Epoxy Powder Coatings

Products	Characteristic	Remarks
HiReact® LC-779	Accelerated Dicyandiamide	Accelerated Dicyandiamide- Medium- cure speed
HiReact® LC-780	Accelerated Dicyandiamide	Accelerated Dicyandiamide- Fast cure speed & FUSION BONDED EPOXY
HiReact® LC-780(S)	Accelerated Dicyandiamide	Accelerated Dicyandiamide- Low temp & Fast cure speed

Accelerators for Epoxy Powder Coatings

Products	Characteristic	Remarks
HiReact® MI-35	Amine adduct based on 2-methyl imidazole	MI-35 acts as curing agent for epoxy powder coatings.
HiReact® MI-50	Amine adduct based on 2-methyl imidazole (<i>Latent catalysts</i>)	MI-50 acts as accelerator for epoxy powder coating cured by phenolic and dicyandiamide hardener. A typical application is for coating rebar steel and pipelines and FUSION BONDED EPOXY .

Texturing Additives for Powder Coatings

Products	Characteristic	Remarks
REACT ® TA-180	Amide modified fluorocarbon polymer	Special coarse texture additive with fine grained finish
REACT ® TA-181	Amide modified fluorocarbon polymer	Special medium texture additive with fine grained finish
REACT ® TA-184	Amide modified fluorocarbon polymer	Special fine texture additive with fine grained finish
REACT ® TA-185	Amide modified fluorocarbon polymer and polyethylene	Special fine and economic texture additive with fine grained finish
REACT ® TA-185M	Amide modified fluorocarbon polymer and polyethylene	Special fine and economic texture additive & Low gloss with fine grained finish

Structuring Additives (Wrinkling Additives) for Powder Coatings

Products	Characteristic	Remarks
REACT ® SA-190	Cellulose Ester (postpone add)	Special post-additive Structure with fine grained finish
REACT ® SA-191	Acrylic Resin (postpone add)	It is used for making the Hammertone and Structure finish of Powder coatings with a postpone add (with a dry-blending) . It is compatible with numerous cross-linking resin and has a lower solution viscosity.
REACT ® SA-194H	Amide modified fluorocarbon polymer (General purpose)	SA-194H is a structuring agent for Hybrid power coatings which provides a "long wave structure" SA-194H can be used effectively in : - Hybrid Systems
REACT ® SA-195	Amide modified fluorocarbon polymer	SA-195 is used at low addition rates to provide a coarse structure in Polyester powder coatings . The use of SA-195 provides the following benefits: - Excellent control of hammertone type structuring - Consistent structure development

Gloss Enhancing Agents for Powder Coatings

Products	Characteristic	Remarks
REACT ® GL-120	Acrylic Copolymer	GL-120 is commonly called brightening agent or luster-enhancing agent, as the molecule configuration of GL-120 contain some definite quantity of polarity group, it has super moist function to polar additive of powder coatings and to substrate of powder coatings, in process of production and construction of powder coatings, It also can eliminate crater and pinhole, increase luster, accelerate flow and leveling.

Electrostatic agent for Powder Coatings

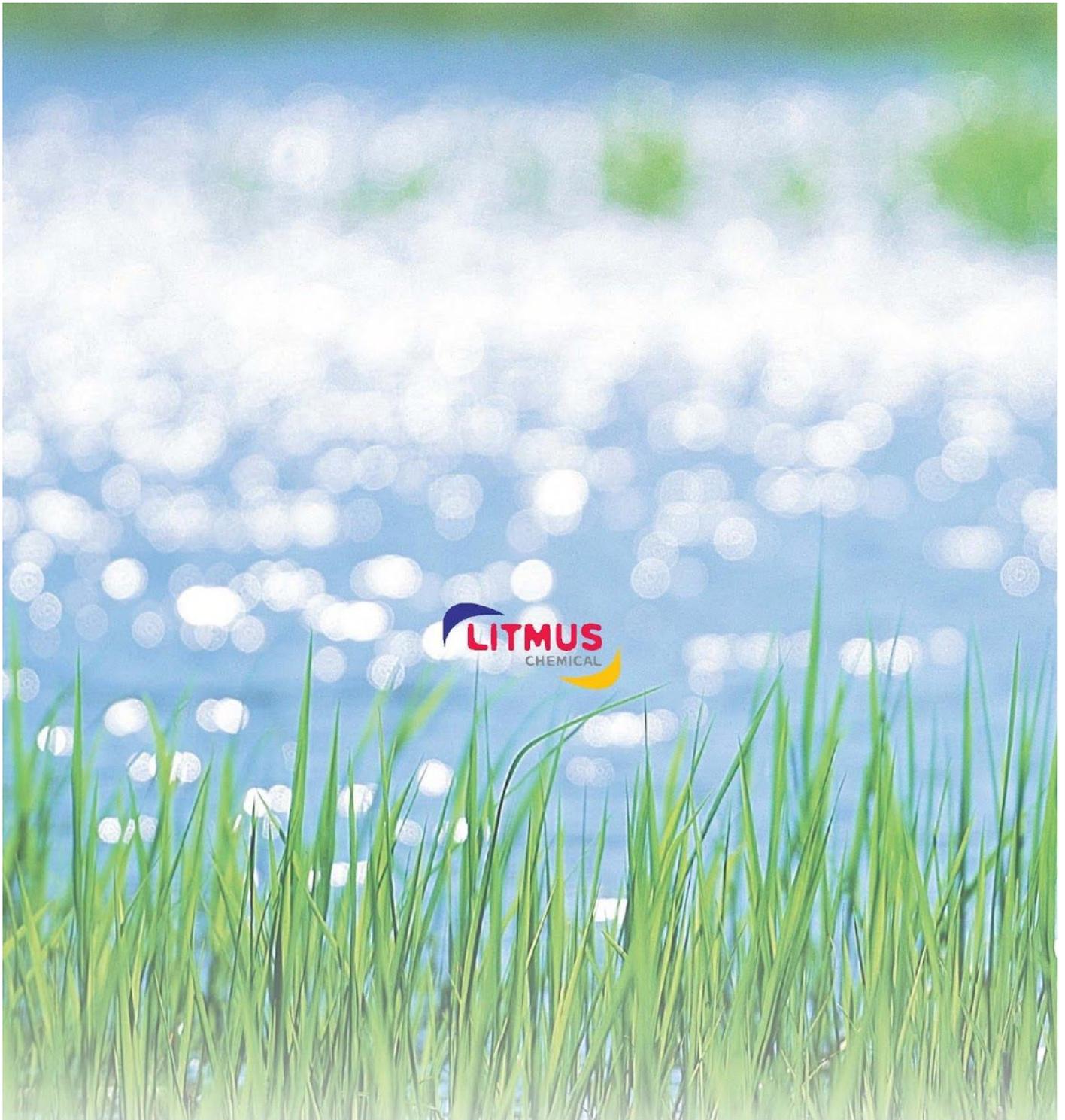
Products	Characteristic	Remarks
REACT ® EA-30	polar fatty acid ester electrostatic agent	The present invention is an excellent polar fatty acid ester C for powder coatings. EA-30 prevents building up of direct current potentials during electrostatic powder spray coating. This allows, particularity with high direct current voltages, for the output speed to be increased and uniform thick film coatings, especially at object edges and ends, can be achieved.

Adhesion Promoters for Powder Coatings

Products	Characteristic	Remarks
REACT ® AP-403C	Adhesion Promoter	The present invention relates to compositions of monomeric silanes with, for example, oligosilanes, aminofunctional oligosiloxane, or silicone polymers. These compositions are useful, for example, as adhesion promoters for moisture-curable silylated resins to improve bonding of sealants or adhesives or coatings to many difficult substrates.

High performance Anti-crater agent for Powder Coatings

Products	Characteristic	Remarks
REACT ® AC-801T	High performance Anti-crater Agent	High performance anti-crater agent AC-801T is a high wetting agent modified by polyether siloxane copolymer. It has excellent substrate wetting, anti-crater effect and flow promotion performances. It is widely used in all kinds of powder coating based system.



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