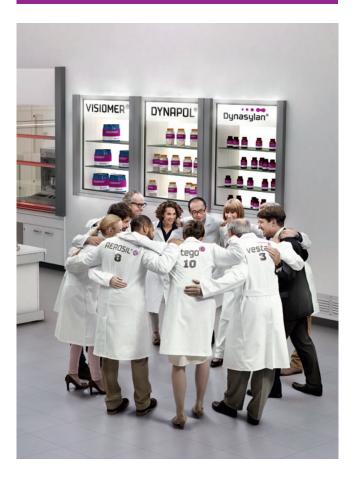
One partner. Many experts.

PRODUCT REFERENCE GUIDE





Coating Innovations

Evonik offers Intelligent and Innovative Solutions for the Paints, Coatings, Printing Inks, and Adhesives Industries.

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Coating Additives

The Coating Additives Business Line supplies its customers with optimal solutions in the paints, coatings and printing ink sectors and supports them with the production of resource-efficient coatings. The Business Line bundles a diverse product portfolio for the coatings industry, like additives, co-binders, matting agents, fumed silica, specialty resins and nanoresins.

Product name	Additives
AEROSIL®	Solvent and waterborne coatings – rheology, suspension of pigments, free flow, reinforcement, improved corrosion resistance
AEROXIDE®	Powder coatings – improved free flow
AERODISP®	Waterborne coatings – suspension of pigments, improved film formation, reinforcement
ACEMATT®	Solvent, waterborne, UV coatings – gloss reduction
AIRASE®	Defoamers and deaerators for waterborne applications, each formulated to provide optimum defoaming and compatibility
CARBOWET®	Effective wetting and surface tension reduction additives with varying degrees of emulsification and stabilization
DYNOL™	Superwetting surfactants for the most difficult to wet surfaces
SURFYNOL®	Range of multi-functional surfactants and defoamers including low foam dynamic wetting agents, unique molecular defoamers, and specialty surfactants
TEGO [®] Airex	Prevents air inclusions and pinholes in waterborne, solventborne, and radiation-curing coatings
TEGO [®] Dispers	Promotes pigment wetting and stabilization and prevents floating, flooding and settling of pigments
TEGO [®] Foamex	Prevents foam formation in waterborne coatings and printing inks
TEGO° Glide TEGO° Flow	Improves flow/leveling, slip and scratch resistance. Prevents cratering, pigment flooding and floatation
TEGO° Phobe	Used to make hydrophobic waterborne exterior paints. Special products for other systems are available

Coating Additives – *continued*

Product name	Additives – continued
TEGO [®] Rad	Crosslinkable, acrylate additives which improve slip, substrate wetting, scratch resistance and leveling in energy-curable formulations
TEGO [®] Wet TEGO [®] Twin	Substrate wetting and anti-cratering additives
TEGO [®] Protect	Anti-graffiti and easy-to-clean additives for polyurethane coatings
TEGO [®] Humectant	Humectant for colorants, minimized influence on coatings properties
SPHERILEX° SIPERNAT° ZEOLEX°	Specialty fillers for replacement of TiO_2 and improvement of film properties like hiding power, touch-up & burnish resistance in water based formulations
ZETASPERSE®	Dispersants providing effective stabilization of pigments and particles in aqueous systems

Product name	Specialty binders
SILIKOPHEN®	Methyl and phenyl-methyl silicone resins which provide corrosion protection up to 650°C
SILIKOPON®	Silicone-epoxy hybrid resins that are the basis for isocyanate-free, air-drying, 2K anti-corrosion top coats
SILIKOFTAL®	Silicone-polyester resins which provide heat and weathering resistance, low surface tension, low thermoplasticity, high flexibility, and good pigmentability
SILIKOTOP®	Low-viscosity, isocyanate-crosslinking silicone polyester resins used for corrosion protection in top coat applications
SILIKOPUR®	Waterborne, silicone-modified 1K polyurethane dispersion. Flexible coating resin for leather, wood, plastic, rubber, and metal
TEGOMER®	Building blocks

Product name	Nanoresins
ALBIDUR®	Silicone elastomer particles to modify coatings to improve fracture toughness and release properties without affecting the glass transition temperature of the cured formula
NANOCRYL® NANOPOL®	Liquid silica nanocomposites for surface hard- ness and scratch/abrasion resistance of coatings without impairing transparency or gloss

Product name	Co-binders
TEGO° AddBond	Widely compatible polyester co-binders which improve the adhesion of coatings and printing inks
TEGO° VariPlus	Widely compatible co-binders that increase solids content and accelerate touch drying while improving hardness, gloss, and film build

Contact

Coating Additives Phone +49 201 173-2222 coating-additives@evonik.com www.coating-additives.com

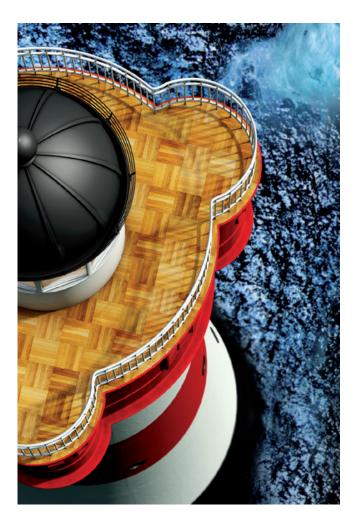
Please scan this QR Code to find a suitable contact partner at Evonik or visit **www.coating-additives.com**



Crosslinkers

Crosslinkers offers a wide variety of isocyanates and diamines to the coatings market to make highly functional, chemically resistant, non-yellowing urethane resins and epoxy hardeners. We also offer new, non-isocyanate based technologies as well as new innovations for the powder coatings industry.

Applications
Aliphatic diisocyanates for PUDs, UV oligomers, prepolymers, and elastomers
2K PUR coatings for automotive OEM; refinish, aircraft, plastic coatings etc.
Blocked polyisocyanates for ther- mosetting 1K PUR; excellent light stability and weather resistance
Blocked polyisocyanate for ther- mosetting 1K PUR BPA free interior can coatings; FCN status for interior can coatings
Cosolvent-free aqueous dispersions of a blocked crosslinker for light-stable PUR systems
Non-isocyanate, high scratch and chemical resistant 1K and 2K coatings systems, suitable for various substrates
PUR powder coating crosslinkers for exterior weatherable, anti-graffiti, lawn & garden,
heat transfer, etc.
5 . 5 .
heat transfer, etc. Flexible polyesters for 1K and 2K PUR systems; helps reduce viscosity
heat transfer, etc. Flexible polyesters for 1K and 2K PUR systems; helps reduce viscosity and VOCs in refinish systems Blocked diamine; accelerator for
-



Contact Crosslinkers www.evonik.com/crosslinkers

Please scan this QR Code to find a suitable contact partner at Evonik or visit www.evonik.com/crosslinkers-contact



Crosslinkers – continued

As the world leader in high-quality, performance-oriented epoxy curing agents and modifiers, Evonik brings formulating solutions and products with unique performance advantages to epoxy systems. Formulators look to our expansive line of products across a breadth of chemistries, along with our technical support to achieve success with their most challenging projects.

Ancamide[®] Curing Agents

Amidoamine

Low viscosity; very good adhesion, particularly to concrete; good cure in humid conditions; modified amidoamines offer faster cure speed and improved chemical resistance

- civil engineering (flooring, concrete bonding and crack injection, tile grouts)
- · high-solids coatings

Polyamide

Excellent corrosion resistance; good flexibility and toughness with high viscosity; long pot life and good water resistance

 solventborne, two-pack (2K) primers and finishes (marine coatings, pipe and tank coatings)

Ancamine[®] Curing Agents

Aliphatic

High reactivity; fast cure at ambient or low temperatures; relatively moisture insensitive; good chemical/solvent resistance

- civil engineering (patch repair systems and flooring)
- high-solids coatings

Cycloaliphatic

Very good chemical resistance; cure at low temperatures under damp conditions; resistant to amine blush and water spotting; excellent color/color stability

- · solvent free and high-solids coatings
- flooring
- · chemically-resistant linings and secondary containment

Ancarez[®] Waterborne Epoxy Resins

Specialty resins designed to deliver corrosion resistance when used with Evonik's waterborne curing agents (below)

- industrial coatings
- flooring

Anquawhite[®], Anquamine[®], Epilink[®] Low/No VOC Curing Agents

Waterborne curing agents that provide low VOC and low color, and are easy to apply and clean. Products with different cure speeds for use with various types of epoxy resins

- · protective and industrial concrete coatings
- steel coatings
- · anti-corrosive primers

Epodil® Reactive Diluents

Viscosity reduction for ease of application; improved pigment/ filler wetting. Mono-, di-, and multifunctional diluents.

- metal coatings
- concrete coatings

Amicure® Polycarbamide Curing Agents

Designed for use with polyisocyanate resins; deliver coatings with rapid hardness development, excellent low temperature cure, good color and UV stability and excellent surface appearance

- concrete coatings
- direct-to-metal (DTM) coatings

Hybridur[®] Waterborne Polymer Dispersions

For one part (1K) systems; rapid dry; low VOC; barrier properties; durability and UV resistance

- wood coatings (e.g. gymnasium floors)
- metal coatings
- concrete coatings
- hard plastic coatings (e.g. automotive interiors)



Contact

Epoxy Curing Agents, Customer Service www.evonik.com/crosslinkers-contacts

Please scan this QR Code to find further information or visit www.evonik.com/crosslinkers



Coating & Adhesive Resins

The Coating & Adhesive Resins Business Line manufactures highquality binders based on polyesters and polymethacrylates for a broad spectrum of markets and applications. It includes solutions for coil coating and food packaging applications. In addition, the Coating & Adhesive Resins Business Line supplies solutions for a multitude of other industries. From polymers for hot melts, to reactive sealants and synthetic waxes, they provide specially designed products for a wide variety of adhesive & sealant applications.

Car doors, engine hoods, sound dampening,

printing plates, defoamers, foams, printing

inks, insulated glass sealants

DYNAPOL®

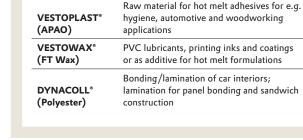
Polyester resins designed for can coating, coil coating & flexible packaging applications

- BPA free
- High molecular weight
- · High chemical resistance

DEGACRYL® HS (formerly DEGALAN®)

Polymers for heat seal coating formulations

- · Universal and secure sealing
- · Transparency with anti-fog
- Recyclable PET packaging



Applications

Product name

POLYVEST°

(Polybutadiene)







Contact Coating & Adhesive Resins

Please scan this QR Code to find further information or visit www.evonik.com/designed-polymers



Specialty Methacrylates

VISIOMER® methacrylates are primarily used as building blocks for polymeric binders. Their excellent weather resistance originates from their UV stability.

The desired properties of coatings are obtained from various functionalities of methacrylate monomers. High solids and low VOC coatings are possible with bulky side chain methacrylates. Specialty methacrylate monomers further provide improved wet adhesion, robust freeze-thaw stability and durability for architectural coatings.

Product name	Applications
	Methacrylate monomers for manufacturing waterborne and solventborne coatings and
VISIOMER®	adhesives resins



Contact Specialty Methacrylates visiomer@evonik.com

Please scan this QR Code to find a suitable contact partner at Evonik or visit **www.visiomer.com**



High Performance Polymers

VESTOSINT[®] and VESTAMELT[®] bring structure to coatings. Our polyamide 12 powders transform drab surfaces into decorative or functional structured elements. Surfaces treated with coatings which are formulated with VESTAMELT[®] or VESTOSINT[®] additives have high flexural strength and elasticity and excellent abrasion resistance. Our VESTAKEEP[®] brand of PEEK (Polyether ether ketone) powders deliver high performance coatings, offering high temperature performance, strength, durability, and excellent wear resistance.

Product name	Applications
VESTOSINT°	Coating of metal, coil coating, textured paints, wood paints, packaging foils, rubber surfaces
VESTAMELT®	Coil coating, textured paints
VESTAKEEP®	Coating of metal (electrostatic spraying, flame spraying), dispersion coating, tribological coating



Contact

High Performance Polymers evonik-hp@evonik.com www.vestosint.com www.vestamelt.com www.vestakeep.com

Performance Intermediates

Performance Intermediates offers a broad range of high-quality ingredients and additives which are also used for the paints and coatings industry.

Product name	Applications
1,3-Butadiene	1.3-Butadiene is used for the production of copolymers and styrene butadiene latex (SBL) for the paint industry as well as for the production of high solid styrene butadiene rubber (HSSBR), liquid polybutadiene (LPBD) and nitrile butadiene rubber (NBR) for the coatings industry
2-Propylheptanol	2-Propylheptanol (2-PH) is used in the production of 2-Propylheptacyrlate, which may be used for the manufacture of coatings
DRIVOSOL°	The DRIVOSOL [®] product family is used as a propellant in paint aerosols with various mixing ratios of the components n-Butane, Iso-Butane and Propane. The mixing ratio can individually be adapted to your requirements by flexible pressure settings in a range from 1.2 to 7.8 bar. Create your individual mix with our DRIVOSOL [®] Tuner: drivosol-tuner.evonik.com
ELATUR [®] CH	Diisononyl-cyclohexanoate (DINCH) is a plasticizer used for the manufacture of coatings, inks and colors
ELATUR [®] DPT	ELATUR® DPT (di(iso)-pentyl- terephthalate) is a new fast fuser for special PVC applications, like coatings flooring, wall coverings and films. It is especially effective when used in combination with ELATUR® CH
Isotridecyl alcohol	Isotridecyl alcohol (ITDA) can be used as and for the production of specialty solvents as well as specialty resins for coatings & inks
Tertiary-Butanol	Tertiary-Butanol (TBA) is offered in different qualities (pure and azeotrope) and is used in the production of hydroxyethyl cellulose, which is a thickener for dispersions, film- building agent for distempers and the main component of wallpaper paste
VESTINOL° 9	Diisononyl-phthalate (DINP), an INA-based plasticizer, used for the manufacture of coatings, inks and colors



Contact

Performance Intermediates c4-chemicals@evonik.com www.evonik.com/c4-chemicals



Functional Silanes

Dynasylan[®] functional silanes are used as additives in coating formulations to boost adhesion, improve weathering and durability, and also change the surface properties of the coating. Our proprietary technologies include low VOC multi-functional oligomeric silanes, water-borne HYDROSIL series, ethyl polysilicate SILBOND[®] binders, stain repellent F-series and heavy metal-free corrosion protection SIVO[®] solgel binders. Dynasylan[®] is the solution for your next cutting-edge idea. Protectosil[®] products provide long-term protection for mineral-based substrates and are well-known as hydro- and oleophobizing agents, preventing corrosion, graffiti and other surface damaging effects.

Product name	Applications
Dynasylan®	Adhesion promotion, crosslinking, surface modification
Dynasylan® GLYEO	Adhesion promotion for water-based coating systems
Dynasylan® HYDROSIL	Waterborne, adhesion promotion
Dynasylan® SIVO®	Cr-VI-free corrosion protection
Dynasylan® SILBOND®	Binder for inorganic zinc rich coatings, inorganic zinc rich paints
Protectosil®	Water repellents , graffiti control, corrosion control (admixed and surface applied) and surface protection (easy-to-clean)





Contact

Functional Silanes Phone +49 6181 59-13226 dynasylan@evonik.com silanes@evonik.com protectosil@evonik.com

Please scan these QR Codes to find a suitable contact partner at Evonik or visit www.dynasylan.com and www.protectosil.com





NOTES NOTES

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