

Manufacturing your chemical innovation

# CROSS-LINKING AGENTS

The Cross-Link between you and us





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Chimica Lombarda for over three decades is a leading manufacturer and a worldwide supplier of Made in Italy chemical innovation.

Our extensive range of cross-linking agents enhance the performance of end products across a multitude of applications in leather, textile, paper and industrial coatings.

Our commitment to excellence ensures reliability, sustainability, and tailored solutions for every industry need, making Chimica Lombarda a symbol of Italian expertise and craftsmanship in crosslinking technologies.

Chimica Lombarda's expertise ensures that every crosslinking agent meets the demands of modern industrial applications, setting benchmarks for quality and innovation in global markets.



## 💿 Poly-isocyanates

#### PRODUCT OVERVIEW

Poly-isocianate crosslinking agent used in the curing of acrylic polymers and polyurethane dispersions for leather and textile treatment, as well as in wood and metal finishing formulations.

It enhances the performances of fluorocarbon finishes, requiring a soft curing temperature. This product provides high durability in water and oil repellence and it improves the stain release effect of the fluorocarbon ausxiliaries. It maintains pure white color after heat treatment.

#### **PROPERTIES & BENEFITS**

- · High reactivity with a variety of substrates
- Excellent chemical resistance
- Excellent physical properties
- Non yellowing
- Enhance finish clarity and gloss retention
- Improves durability and abrasion resistance
- Guarantees superior adhesion across multiple surfaces
- Reduces drying times, boosting productivity

PRODUCT NAME	IONIC NATURE	ISOCYANATE TYPE	CO-SOLVENT TYPE	SOLID CONTENT %	DOSAGE %	FEATURES & BENEFITS
LC 189/100	-	AL	SF	100	5 - 10	Poly-isocianate crosslinking agent used in the curing of acrylic polymers and polyurethane dispersions for leather and textile treatment, as well as in wood and metal finishing formulations. It enhances the perfor- mances of fluorocarbon finishes, requiring a soft curing temperature. This product provides high durability in water and oil repellence and it improves the stain release effect of the fluorocarbon ausxiliaries. It maintains pure white color after heat treatment.
LC 189/100 LV	-	AL	SF	100	5 - 10	Poly-isocianate crosslinking agent used in the curing of acrylic polymers and polyurethane dispersions for leather and textile treatment, as well as in wood and metal finishing formulations. It enhances the perfor- mances of fluorocarbon finishes, requiring a soft curing temperature. Low viscousity, high NCO content and high reactivity.

## Blocked Poly-isocyanates

#### PRODUCT OVERVIEW

Chimica Lombarda blocked polyisociantes are chemically blocked latent crosslinkers and adhesion promoters to formulate 1K or 2K sotving systems.

When heated these multifunctional blocked isocyanates start crosslinking with complementary functional groups in the coating substrate.

Our range offers a wide pH latitude including anionic and nonionic types, which are easy to formulate with good compatibility to a range of aqueous auxiliaries and other additives.

#### **PROPERTIES & BENEFITS**

- Easy to formulate 1K system coating and impregnation systems with controlled reactivity at advised unblocking temperature
- Applicable by e.g. spraying, dipping, roller/knife/curtain coating, brushing
- Heat curing for controlled reactivity in controlled conditions
- · Sustainable and safe water-based, low VOC and no handling of free isocyanates
- · Enhance impact, scratch and chemical resistance
- Provide excellent color retention
- · Enhance adhesion, tensile strength and washout under severe conditions
- · Meet your needs with a broad portfolio of anionic and nonionic grades and technical support

PRODUCT NAME	IONIC NATURE	ISOCYANATE TYPE	CO-SOLVENT TYPE	SOLID CONTENT %	DOSAGE %	FEATURES & BENEFITS
ACRALINK MK	Non ionic	AL	SF	40	5 - 10	Water-based stabilized crosslinking agent. It improves the resistance of the oil and water repellent effect of auxiliaries for textile industries. It improves rubfastness and wash of pigment prints. ACRALINK MK exhibits high compatibility and stability in various formulations. VOC FREE. Blocked NCO: activation at temperature>140°C.
ACRALINK DP	Non ionic	AL	DMM	40	5 - 10	Water-based and Diisopropylamine-blocked crosslinking agent. It can be used as extender to improve oil and water resistance. High resistance to yellowing, it improves wet color fastness and fabric quality. It works as fixing agent in pigment printing. Blocked NCO: activation at temperature > 110 °C.
ACRALINK DMP	Non ionic	AL	DMM	39	5 - 10	Water-based and DMP-blocked crosslinking agent. It can be used as extender to improve oil and water resistance. High resistance to yellowing, it improves wet color fastness and fabric quality. It works as fixing agent in pigment printing. Blocked NCO: at temperature >120 °C.
ACRALINK DMP/A	Anionic	AL	DMM	40	5 - 10	Water-based and DMP-blocked crosslinking agent. It can be used as extender to improve oil and water resistance. High resistance to yellowing, it improves wet color fastness and fabric quality. It works as fixing agent in pigment printing. Blocked NCO: at temperature >120 °C. Suggested for anionic system.
LC 5712	-	AL	NS - AE	75	5 - 10	Blocked, aliphatic polyisocyanate based on HDI, MEKO-free. It can be used to formulate lightfast, one-component stoving polyurethane coatings with high resistance to thermal yellowing or as an additive in conventional stoving coating systems to improve the reactivity, flexibility and adhesion. Blocked NCO: activation temperature > 160 °C.
LC 5713	-	AL	NS - AE	75	5 - 10	Blocked, aliphatic polyisocyanate based on HDI. It can be used to formulate lightfast, onecomponent polyurethane stoving coatings or as an additive in conventional stoving systems to improve flexibility and adhesion. Blocked NCO: activation at temperature > 140 °C.
LC 5715	-	AL	MPA	72	5 - 10	Blocked, aliphatic polyisocyanate based on HDI, MEKO-free. It can be used to formulate lightfast, one-component stoving polyurethane coatings or as an additive in conventional stoving systems to improve the flexibility and adhesion. Blocked Nco: activation temperature > 180 °C

## Poly-carbodiimides

#### PRODUCT OVERVIEW

Chimica Lombarda carbodiimides are waterborne polycarbodiimide resin which contains carbodiimide group [-N=C=N-] with hydrophilic segments.

They are a low-toxic and highly reactive crosslinking agents that react with carboxy group. They can be cured at room temperature or higher if faster reaction is desired.

#### **PROPERTIES & BENEFITS**

- Non or Low Toxic & Safety (Non or Low skin irritant)
- Environmentally Friendly (VOC free)
- Long Pot-Life
- Easy of use (No premix, etc.)

- Water and chemical resistance
- Adhesion improvement
- Excellent anti-hydrolysis property
- Excelletn flexibility

PRODUCT NAME	IONIC NATURE	ISOCYANATE TYPE	CO-SOLVENT TYPE	SOLID CONTENT %	DOSAGE %	FEATURES & BENEFITS
CARBO GREEN 40	Non ionic	AL	SF	40	5 - 10	High molecular weight crosslinking agent, with an high content of reactive groups. Long pot-life and compatibility whit carboxylic acid functional waterborne acrylic and polyurethane emulsions or resins.
CARBOSTAB 100	Non ionic	AL	SF	100	6 - 10	Versatile anti-hydrolisis agent for a wide range of polymers including PU, PET, PBT, TPU, TPEE and EVA. Long pot-life, solvent-free,Anti-hydrolysis & adhesion properties.
CR RET 30	Non ionic	AL	SF	30	5 - 10	Polymeric multifunctional carbodiimide. It is a crosslinking agent for room temperature curing. It can be added to dispersions of polyurethane and acrylic polymers to enhance their performances. Long pot-life, VOC free, non-yellowing.
CR RET 40	Non ionic	AL	DPM	40	5 - 10	Solvent-based high molecular weight carbodiimide. It improves adhesion, other than abrasion and scratch resistance. High pot-life of the formulation, it improves chemical resistance against organic solvent and water and both aqueous and solvent based coatings.
CR RET 60	Non ionic	AL	DPM	60	5 - 10	Polymeric multifunctional carbodiimide. It is a crosslinking agent for room temperature curing. It can be added to dispersions of polyurethane and acrylic polymers to enhance their performances. Long pot-life, water and solvent system, high reactivity.
LC CDI 50	Non ionic	AL	SF	48	5 - 10	Solvent and APEO-free polymeric multifunctional carbodiimide. Crosslinking agent for dispersions and emulsions of aqueous polymers containing carboxyl groups. Antihydrolysis properties, long pot-life, solvent-free, ready to use.
LC CDI 100	Non ionic	AL	SF	100	5 - 10	Solvent and APEO-free polymeric multifunctional carbodiimide. It is a crosslinking agent for dispersions and emulsions of aqueous. Long pot-life, solvent free, high concentration.

## 🥺 Polyurea crosslinker

#### PRODUCT OVERVIEW

Chimica Lombarda polyurea portfolio offers the suitable adhesion promoter for your leather and textile coating.

Polyurea combines curing and adhesion promotion without compromising the elasticity and the flexibility of the substrate enhancing the printability.

#### **PROPERTIES & BENEFITS**

- High elasticity and mechanical strength
- Excellent mechanical (dry/wet rubbing abrasion) and chemical esistance
- Excellent adhesion
- Long curing and processing flexibility
- Good milling features and low swelling with water and solvents
- Light articiles
- Anti-tacking features
- Enhance printability

PRODUCT NAME		ISOCYANATE TYPE	CO-SOLVENT TYPE	SOLID CONTENT %	DOSAGE %	FEATURES & BENEFITS
LC 393/1	-	-	SF	27	3 - 5	Anti-tacking agent that improves print retention, wet fastness and flexes.
LC 195	-	AL	DPM	30	3 - 5	Anti-tacking agent that improves print retention, wet fastness and flexes.

### Poly-azridine crosslinker

#### PRODUCT OVERVIEW

Chimica Lombarda developed next to its conventional aziridine crosslinker a novel polymeric aziridine technology which combines high levels of processability and functional performance as well as very low toxicity.

Our new crosslinker is a breakthrough innovation in that it competes with traditional aziridines on functional performance but offers significant safety and sustainability benefits to many different industries and markets. This new portfolio exemplifies the company's commitment to using science to develop sustainable solutions that outperform conventional market alternatives

#### **PROPERTIES & BENEFITS**

- Water resistance and high chemical resistance at low dosing level
- Excellent adhesion to different substrates
- High thermal stability and reactivity
- No stoving or heating needed after application

- Non yellowing during aging
- Broad pH range applicability
- Reactivity with carboxylic acid functional waterborne acrylic emulsions or urethane dispersions
- Low toxicity (non genotic and non mutagenic)

PRODUCT NAME		ISOCYANATE TYPE	CO-SOLVENT TYPE	SOLID CONTENT %	DOSAGE %	FEATURES & BENEFITS
LC 60	-	-	SF	100	1 - 3	Crosslinker agent with excellent features for all polymers emulsions, such as acrilyc, polyurethane and buthadienic resins. Improve fastness, fast reticulation, 12 hours potlife.
LC 65	-	-	SF	100	1 - 3	Crosslinker agent with excellent features for all polymers emulsions, such as acrilyc, polyurethane and buthadienic resins. Improve fastness, fast reticulation, 12 hours potlife.
POLY GREEN 70	-	AL	DPM	70	4 - 8	Low toxicity (non-genotoxic and non-mutagenic), multifunctional polymeric aziridine crosslinker for reaction with carboxylic acid functional waterborne acrylic emulsions or urethane dispersions.

#### THE GIVES VALUES, PROVIDE GENERAL INFORMATION AND ARE NOT PART OF PRODUCT SPECIFICATION:

 AL: Aliphatic
 PE: Polyether Diols
 DMM: Dypropilene Glycol Dimethyl Ether

 AR: Aromatic
 PC: Polycarbonate Diols
 NBP: Normal Buthyl Pirrolidone

 PES: Polyester Diols
 BDG: Butyldiglycol
 MPA: Methoxy Propil Acetate

SF: Solvent-free

TOU: Tetraoxaundecane



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Sede Amministrativa e Produttiva: Via Volta, 30 - 26861 Fombio (LO) Tel. 0377.433202 - Fax: 0377.435406 commerciale@chimicalombarda.it www.chimicalombarda.com