

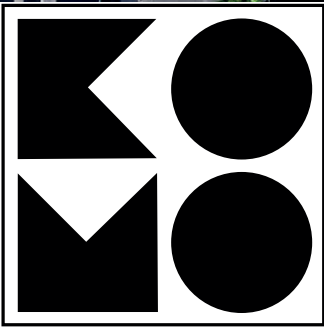
DL

Since 1936

CHEMICALS

Manufacturer of Sealants

PARABOND PANEL SYSTEM



THE SMART SOLUTION FOR FAÇADE PANEL BONDING

CLEAN, INVISIBLE AND DURABLE BONDING

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CLEAN, INVISIBLE AND DURABLE BONDING?

With the Parabond Panel System, DL Chemicals offers a high-quality and user-friendly bonding solution for façade panels. Our innovative hybrid adhesive technology ensures an aesthetic finish without visible fixings, while providing durable adhesion even in the most demanding façade projects.



WHY BOND?

BONDING IS GAINING GROUND AS THE PREFERRED METHOD FOR FAÇADE PANEL INSTALLATION. AND FOR GOOD REASON:

- **Aesthetic:** no screws, no drill holes, no compromises on design.
- **Flexible and safe:** Parabond Panel absorbs stresses from expansion and contraction, preventing cracks and fractures.
- **Suitable for thinner panels:** lighter construction and reduced costs.
- **No thermal bridges:** improved energy performance.
- **Reduced stress concentrations:** thanks to linear adhesion across the entire surface.



I. SYSTEM COMPONENTS

For reliable long-term adhesion, the Parabond Panel System consists of four perfectly coordinated products:



I.1 PARABOND PANEL

A flexible, one-component hybrid adhesive that provides structural bonding between the façade panel and the supporting structure.

- Flexible yet strong
- Resistant to weather, moisture and UV
- Suitable for, among others, Trespa Meteon and Equitone Tectiva.

Where to apply?

On the vertical substructure (wood or aluminium), in a vertical, uninterrupted V-shaped bead of 9x9x9 mm, approximately 1 cm from the tape.

When to use?

After pretreating the substructure and applying the tape. The façade panel must be positioned on the adhesive within 10 minutes.

No.	Packaging	Colour	#/box	#/pallet	Shelf life (months)	QR website
107044	Cartridge 290 ml	Black	25	1200	12	
108246	Foil bag 600 ml	Black	20	900	12	



I.2 PARASILICO CLEANER


A powerful, fast-drying cleaner/degreaser that ensures a grease- and dust-free surface, essential for proper adhesion.

Where to apply?

- On **aluminium substructures** (vertical battens) where tape and adhesive will be applied.
- On **HPL façade panels** (such as Trespa Meteor) in the adhesive zones.

How to use?

Apply with paper or a cloth, scrub thoroughly, and allow to evaporate before further processing. Then immediately apply the adhesive/tape so that dirt does not have time to settle.

No.	Packaging	#/box	#/pallet	Shelf life (months)	QR website
101320	Spray 400 ml	12	720	24	
101300	Canister 5 l	/	120	24	
101301	Canister 25 l	/	26	24	



I.3 HYBRID & PU PRIMER


A black primer that improves adhesive bonding on porous materials such as wood and fibre cement.

Where to apply?

- On **wooden substructures** (softwood, untreated) at the locations where adhesive and tape will be applied.
- On **fibre cement façade panels** (such as Equitone Tectiva) only at the bonding zones.

When to use?

After cleaning (if necessary), before applying tape and adhesive. **Allow the primer to dry for 10–15 minutes, and apply adhesive/tape within one hour of priming.**

No.	Colour	Packaging	#/box	#/pallet	Shelf life (months)	QR website
101328	Black	250 ml	12	1080	12	
101329	Black	1 l	8	288	12	



I.4 MIROFIX TAPE

A 3.2 mm thick double-sided adhesive tape that:


- Provides initial fixation of the façade panel.
- Acts as a spacer to ensure the correct adhesive thickness.

Where to apply?

Vertically and continuously on the pretreated vertical substructure, directly next to the adhesive application area.

When to use?

Before applying the adhesive. The protective liner should only be removed immediately prior to mounting the façade panel.

No.	Colour	Thickness	Width	Meters/roll	#/box	Shelf life (months)	QR website
101218	White	3,2 mm	12 mm	33	26	24	
104844	Black	3,2 mm	12 mm	33	26	24	

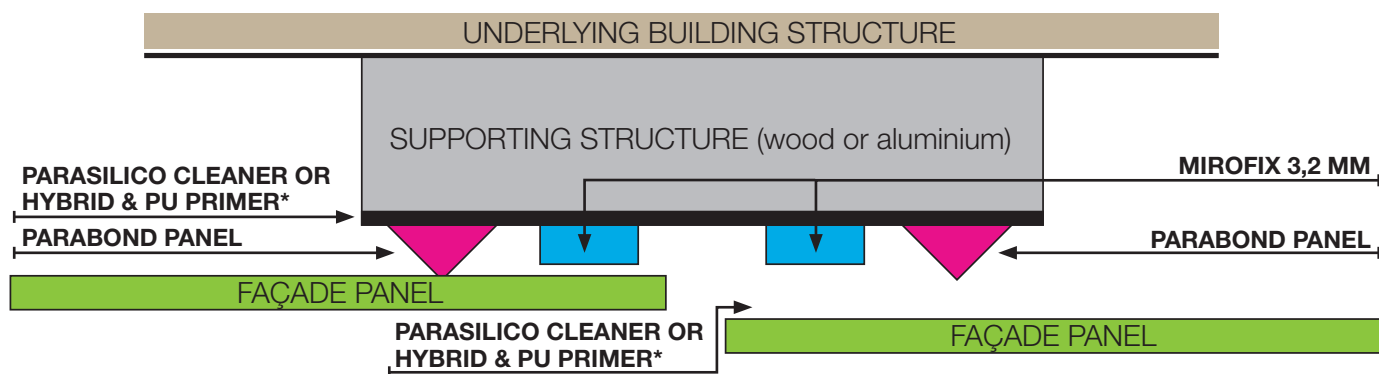


II. INSTALLATION INSTRUCTIONS

II.1 REQUIRED TOOLS & MATERIALS

- Parabond Panel
- Mirofix double-sided tape (3.2 mm)
- Parasilico Cleaner
- Hybrid & PU Primer
- DL Chemicals Battery Gun 18V Alu Combi 300/400/600 ml or Manual Gun Universal 310 ml
- V-nozzle
- DL Chemicals single-ply wiping paper 1000 m x 24 cm or double-ply wiping paper 300 m x 24 cm
- Roller or brush (for primer)
- Optional: spacer blocks or leveling bars





* See installation instructions

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II.2 PREPARATION OF SUPPORTING STRUCTURE

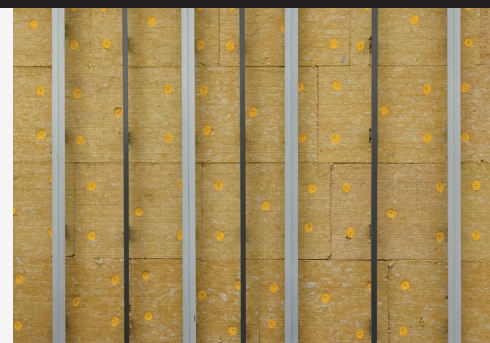
ALUMINIUM BATTENS:

Use anodised aluminium or plain galvanized steel that is corrosion-resistant.

Avoid painted or coated metal, as such coatings can negatively affect the adhesion of the tape and adhesive.

CLEAN THE SURFACE THOROUGHLY WITH PARASILICO CLEANER:

- **Aerosol 400 ml:**
 1. Shake before use.
 2. Spray onto the surface from a distance.
 3. Wipe the surface clean.
 4. Always use a clean cloth (replace regularly).
 5. Allow to evaporate before applying tape and adhesive.
- **Canister 5 l & 25 l:**
 1. Shake before use.
 2. Moisten a paper wad or clean cloth with Parasilico Cleaner.
 3. Wipe the surface clean.
 4. Always use a clean cloth (replace regularly).
 5. Allow to evaporate before applying tape and adhesive.



WOODEN BATTENS (UNTREATED SOFTWOOD):

Use only dry wood (<18% moisture content), planed on all sides, grease-free, and treated for durability.

Avoid resinous woods and sheet materials.

PRIME THE SURFACE WITH HYBRID & PU PRIMER:

- Ensure the wood is dry, clean, and dust-free.
- Shake the Hybrid & PU Primer well.
- Apply at temperatures between +5°C & +35°C.
- Apply a thin, even layer to the adhesive zones using a brush or roller. Avoid thick layers, as they reduce primer adhesion to the substrate.
- Allow to dry for 10–15 minutes (longer in cold temperatures).
- Apply adhesive and tape within one hour, otherwise re-prime.
- The primer can be used up to one month after opening, provided the container is properly sealed.



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II.3 PREPARATION OF FAÇADE PANELS

TRESPA METEON (HPL):

Clean the back of the panel (adhesive zone) with Parasílico Cleaner, as described in Step 1.

EQUITONE TECTIVA ((FIBRE CEMENT):

Prime the surface with Hybrid & PU Primer:

- Brush the back of the panel to remove dust.
- Apply Hybrid & PU Primer to the bonding zone, as described in Step 1.

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II.4 APPLYING MIROFIX

- Ensure the surface is completely dry (cleaner evaporated / primer dry).
- Apply the tape continuously along the substructure.
- Leave sufficient space (2 cm) next to the tape for the adhesive.
- Press the tape firmly along its entire length.
- Remove the protective liner only after applying the adhesive.



IMPORTANT GUIDELINES

- Do not work in fog, mist, rain, strong wind, or at temperatures below +5 °C or above +30 °C (ambient and surface temperature), and with relative humidity above 90%.
- The surface temperature of the façade panel and substructure must be at least 3 °C above the dew point to prevent condensation (see table on page 10). Condensation can negatively affect the adhesion of the adhesive, tape, and primer.
- Before starting, check that all surfaces are flat, dry, undamaged, and still within their shelf life. Record ambient temperature, surface temperature, relative humidity, and dew point.
- Wood moisture content must be below 18%.
- Verify in advance that the façade panel system complies with applicable national or local regulations.
- Always follow the manufacturer's guidelines for the façade panels.
- Fibre cement panels may be bonded up to a maximum building height of ground floor plus one storey. For higher façades, mechanical fastening is preferred.
- Bonded installation of fibre cement panels is preferably carried out on an aluminium supporting structure.

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II.5 APPLYING PARABOND PANEL

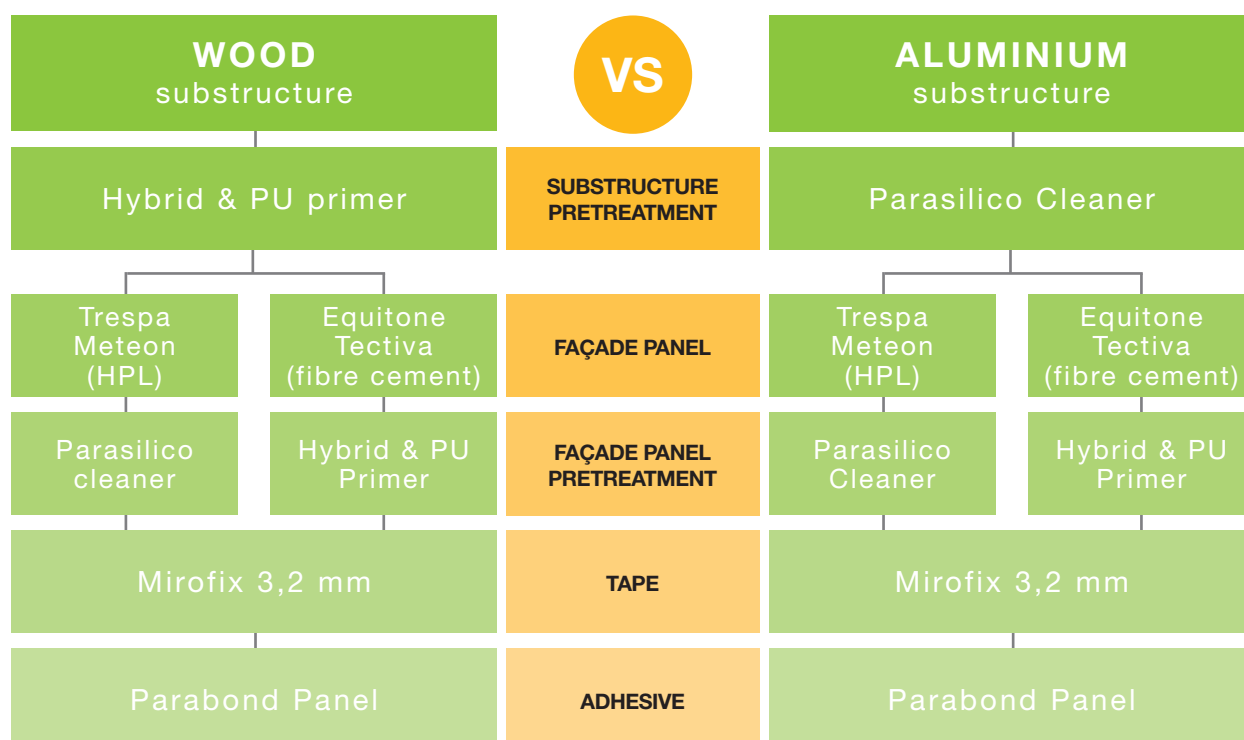
- Apply the adhesive using the supplied V-notched nozzle.
- Hold the gun at a 90° angle to the substructure.
- Apply a straight, continuous triangular bead (9×9×9 mm), approximately 1 cm from the tape.
- Work systematically and avoid interruptions.
- After applying the Parabond Panel, you have a maximum of 10 minutes to position the façade panel.

Avoid exposing the adhesive to direct UV light after the panel has been placed.

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II.6 INSTALLING THE FAÇADE PANEL

- Only now remove the protective liner from the tape.
- Carefully position the façade panel against the adhesive, without pressing directly onto the tape.
- Align the panel accurately, using leveling bars or spacer blocks if necessary.
- Once correctly positioned, press the panel firmly against the tape.
- Adhesive on the visible side? Remove immediately with Parasilico Cleaner. (Once cured, it can only be removed mechanically.)



III. TECHNICAL CONSIDERATIONS

III.1 REQUIREMENTS FOR SUBSTRUCTURE

MATERIAL SELECTION FOR VERTICAL BATTENS

- **Wood:** planed on all sides, grease-free, and treated for durability; maximum moisture content 18%. Avoid OSB, MDF, plywood, and resinous wood.
- **Metal:** anodised aluminium or plain galvanized steel. Avoid painted or coated metal (as it can impair the adhesion of the adhesive and tape).

MINIMUM BATTEN DIMENSIONS	Wooden Battens	Aluminium Battens
Min. width of intermediate and end battens	45 mm	40 mm
Min. width of joint battens	95 mm	100 mm
Min. batten thickness	28 mm	2 mm

MAXIMUM FASTENING DISTANCES (CENTRE-TO-CENTRE) FOR VERTICAL BATTENS

The spacing between vertical battens depends on three factors:

- 1. Building height and location**
The higher the building, the greater the wind load ▶ shorter c/c spacing required. Stricter requirements apply in coastal areas.
- 2. Placement on the façade**
In edge zones of tall buildings (>6 m), wind pressure is higher ▶ shorter spacing needed than in central zones.
- 3. Thickness and stiffness of the façade panel**
Thinner panels bend more easily or may break ▶ shorter spacing required for thinner panels.

For wind load calculations, refer to Eurocode 1, Part 1-4 (NEN-EN / NBN-EN). Always consult the façade panel manufacturer for project-specific values.

SOME GUIDELINES

FAÇADE PANEL	2 Battens per Panel	> 2 Battens per Panel
HPL 6 mm	450 mm (*)	550 mm (*)
HPL 8 mm	600 mm (*)	750 mm (*)
HPL 10 mm	750 mm (*)	900 mm (*)
Fibre Cement 8 mm	400–500 mm (**)	400–600 mm (**)

(*) Based on a maximum wind load of 600 N/m² and a maximum deflection of L/200. For horizontal applications (e.g., canopies), adjust the spacing using a factor of 0.75.

(**) For fibre cement panels, spacing depends on building height, terrain category, and position on the façade (central or edge zone).

FLATNESS OF THE SUBSTRUCTURE

For uniform adhesive application and stress-free installation, the substructure must be flat.

- Always check the flatness of the substructure.
- Large irregularities can lead to varying adhesive thicknesses and uneven stress distribution, potentially causing damage to the panels.
- Maximum allowable deviation: 2 mm relative to the façade line.

VENTILATION BEHIND FAÇADE PANELS

Proper ventilation is essential for durable bonding and to prevent damage (such as wood rot or metal corrosion).

REQUIREMENTS:

- The substructure must be installed vertically. Horizontal placement obstructs moisture drainage and is not permitted.
- The air cavity between the façade panel and the supporting structure must be at least 20 mm wide.
- Ventilation openings at the top and bottom of the façade: minimum 50 cm² per running metre.
- Direct bonding to masonry, concrete, or wood is not allowed.

Adequate ventilation prevents moisture accumulation and overheating behind the façade panels.

III.2 REQUIREMENTS FOR FAÇADE PANELS

JOINTS BETWEEN FAÇADE PANELS

To accommodate expansion due to temperature or moisture variations, a minimum joint of 10 mm must be provided between panels.

MAXIMUM PANEL DIMENSIONS

TRESPA METEON

- Thermal expansion: 2.5 mm/m in length & width (source: Trespa)
- Permissible deformation: max. 4.9 mm (according to KOMO certificate no. 21184/25)
- Maximum panel diagonal: 3.92 m

The adhesive system is therefore suitable for the standard size 3050 × 1530 mm (diagonal 3412 mm)

EQUITONE TECTIVA

- Thermal expansion: 1 mm/m for a 100 °C temperature difference (source: Equitone)
- Permissible deformation: max. 4.9 mm (according to KOMO certificate no. 21184/25)
- Maximum panel diagonal: 9.8 m

The adhesive system is therefore suitable for the standard size 3050 × 1220 mm (diagonal 3284 mm)

III.3 STORAGE & SHELF LIFE OF MATERIALS

SUBSTRUCTURE AND FAÇADE PANELS

- Store in a dry, well-ventilated area.
- Follow the storage instructions provided by the façade panel manufacturer.
- Avoid warping due to moisture or temperature fluctuations.
 - ▶ Do not install panels if they are deformed.

PARABOND PANEL SYSTEM

- Store between +5 °C and +25 °C, protected from moisture and sunlight.
- Use products only within their shelf life (see “EXP” + batch number on the packaging).
- Always record the batch numbers used for traceability.

III.4 TEMPERATURE REQUIREMENTS RELATED TO DEW POINT

Dew Point (°C) at a relative humidity of:

	35%	40%	45%	50%	55%	60%	65%	70%	75%	80%	85%	90%	95%	100%
6	-8	-7	-5	-3	-2	-1	0	1	2	3	4	5	5	6
8	-7	-5	-3	-2	0	1	2	3	4	5	6	7	7	8
10	-4	-3	-1	0	1	3	4	5	6	7	8	8	9	10
12	-3	-1	0	2	3	5	6	7	8	9	10	11	11	12
14	-1	1	2	4	5	6	8	9	10	11	12	13	13	14
15	0	2	3	5	6	7	9	10	11	12	13	14	14	15
16	1	2	4	6	7	8	10	11	12	13	14	15	16	16
17	1	3	5	7	8	9	10	12	13	14	15	16	17	17
18	2	4	6	7	9	10	11	12	14	15	16	17	18	18
19	3	5	7	8	10	11	12	13	15	16	17	18	19	19
20	4	6	8	9	11	12	13	14	16	17	18	19	20	20
21	5	7	9	10	12	13	14	15	16	17	18	19	20	21
22	6	8	10	11	13	14	15	16	17	18	19	20	21	22
23	7	9	10	12	14	15	16	17	18	19	20	21	22	23
24	8	10	11	13	14	16	17	18	19	20	21	22	23	24
25	9	11	12	14	15	17	18	19	20	21	22	23	24	25
26	9	11	13	15	16	18	19	20	21	22	23	24	25	26
27	10	12	14	16	17	19	20	21	22	23	24	25	26	27
28	11	13	15	17	18	19	21	22	23	24	25	26	27	28
29	12	14	16	18	19	21	22	23	24	25	26	27	28	29
30	13	15	17	18	20	21	24	24	25	26	27	28	29	30

When bonding façade panels, the substrates (the back of the panel and the front of the supporting structure) must not be damp due to condensation. Therefore, bonding must not be carried out under excessively high humidity. The relative humidity must remain below 90%, and the outdoor temperature should be between +5 °C and +30 °C.

The table on the left shows the dew point as a function of ambient temperature and relative humidity. The dew point is the temperature at which air becomes saturated with water vapour; further cooling will result in condensation. This can occur, for example, when the surface temperature in the morning is lower than the ambient temperature due to overnight cooling. To prevent condensation, the substrate must be at least 3 °C above the dew point.

If the dew point falls within the red zone, bonding is not permitted.

Example: At an ambient temperature of 20 °C and a relative humidity of 65%, the surface temperature of the substructure and façade panel must be at least 16 °C.

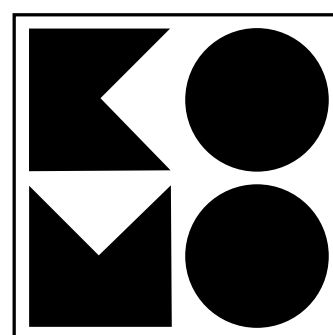
III.5 INDICATIVE CONSUMPTION TABLE

Product	Packaging	Theoretical Consumption in Linear Metres / Packaging*	Theoretical Consumption in m ² Façade Panel / Packaging*
Parabond Panel	290 ml	7	2,3
	600 ml	15	5,
Parasilico Cleaner	400 ml aerosol	28	9,3
	5 L canister	350	117
	25 L canister	1750	583
Hybrid & PU primer	250 ml	27,5	9,2
	1 L	110	37
Mirofix tape	33 m/rol	33	11

* In practice, actual consumption is often slightly higher. We recommend allowing a margin of $\pm 10\%$.

III.6 TECHNICAL PERFORMANCE ACCORDING TO KOMO TESTS (ATTEST 21184/25)

Our system complies with the guidelines for façade panel bonding and is tested according to KOMO certification requirements. DL Chemicals provides installers with a robust system, complete with clear instructions and support.



Parabond Panel has been tested according to BRL 4101-7 and meets the requirements for façade panel bonding.

To determine the amount of adhesive per m² of façade panel surface, the calculation values in the table should be used:

PARABOND PANEL	Measured Value	Safety Factor	Design Value
Tensile Strength Trespa Meteon	1,06	4	0,27
Tensile Strength Equitone Tectiva	1,17		0,29
Shear Strength Trespa Meteon	1,31	10	0,13
Shear Strength Equitone Tectiva	1,15		0,12
Maximum Elongation	12,3 mm	2,5	4,9 mm *

* Maximum movement of the façade panel

- Wind loads must be calculated according to Eurocode 1 (EN 1991-1-4).
Note: requirements may vary by region and project. Wind loads should always be calculated by a structural engineer.

MIROFIX TAPE

The tensile and shear strength of the installation tape are the values shown in the table and are relevant during the first 24 hours after the façade panel is installed.

MIROFIX TAPE	Measured Value
Thickness	3,2 mm
Tensile Strength	0,29 N/mm ²
Shear Strength	0,40 N/mm ²
Compressibility	0,022 N/mm ²

Rely on the Parabond Panel System for aesthetics, durability, and reliability.

DL Chemicals offers you a comprehensive range of high-quality products.

Professional products guarantee excellent quality while also enhancing your professional image.

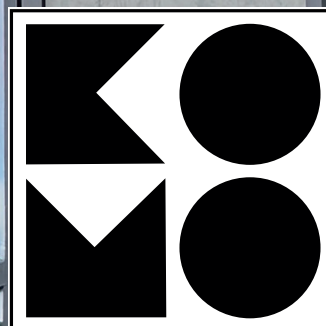
Each product is the result of our technical know-how and high level of service, built over more than 85 years as a Belgian family business.

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Mailing address & production: Roterijstraat 201–203, B-8793 Waregem

Head office & warehouse: Splenterbeekstraat 4, B-8710 Wielsbeke

T: +32 (0)56 62 70 51

info@dl-chem.com

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