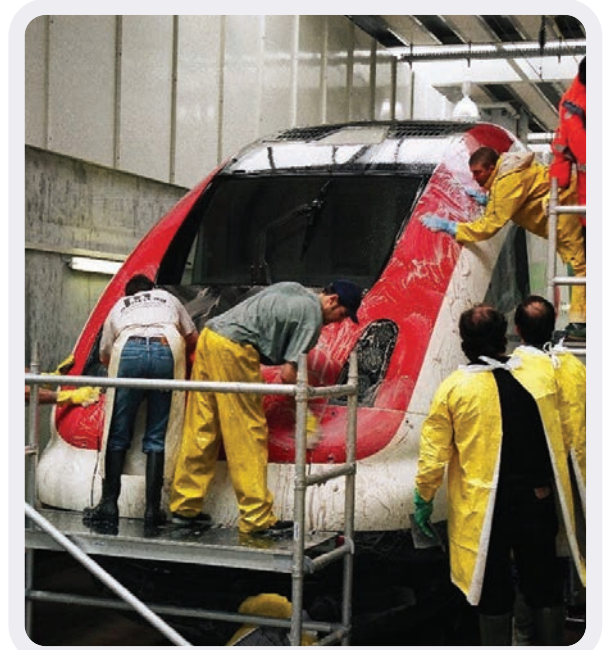


# Proud to Partner with Crous Chemicals

## Keep Your Fleet Clean & Shiny

Bringing you the most advanced chemical solutions to help protect your fleet through all weather conditions. Emeg are proud to collaborate with Crous Chemicals Switzerland and LECM UK to offer a range of products and services to ensure total fleet protection and maintenance.

With a comprehensive range of cleaning agents, Crous Group is the one-stop-shop for preserving the value of your rail fleet.



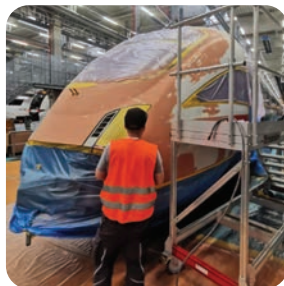
Trusted by:







**Graffiti Removal**



**Bodywork Repair**



**Industrial Painting**



**Upholstery Cleaning**



**Sealing**



**Glass Renovations**



**Preservation**



**Basic Cleaning**



**Glass Foiling**



## Paint renovation in just 36 hours

We offer a cost-efficient paint refurbishment service for the interior and exterior of your vehicles. Vehicles refurbished by Crous Rail Service are ready for use again within 36 hours and increase the profitability of your rail vehicles considerably.



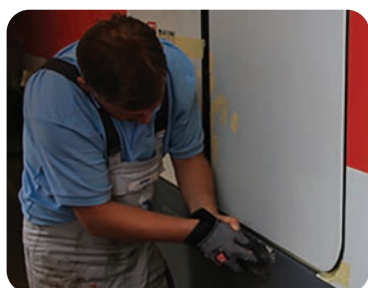
**Step 1:** Prewash - Graffiti cleaning with Graffiti Killer.



**Step 2:** Intensive cleaning with Transolv.



**Step 3:** Removal of the old pictograms.



**Step 4:** Painting preparation and removing corrosion.



**Step 5:** Filling of paint chips with special 2k polyester filler.



**Step 6:** Sanding down.

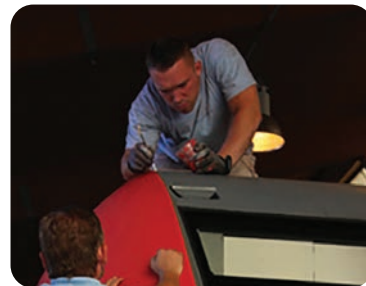




**Step 7:** Masking off the areas to be painted.



**Step 8:** Painting with 2k paint.



**Step 9:** Spot repairs of paint damage.



**Step 10:** Applying new pictograms.



**Step 11:** Preparing the old surfaces for the permanent coating.



**Step 12:** Applying the permanent coating - Permaseal TP.



**Step 13:** After 6 hours' drying time, the vehicle is ready for service.



**Step 14:** Paint renovation completed within 36 hours.







### Intensive Heavy-Duty Cleaning

For fleet cleaning and maintenance, we highly recommend our professional, mobile heavy-duty cleaning team for the following:

- ✦ Cockpit maintenance
- ✦ Vehicle cleaning (interior and exterior)
- ✦ Intensive floor cleaning and polishing
- ✦ Air conditioner channel cleaning
- ✦ Window cleaning (interior and exterior)
- ✦ Upholstery shampooing
- ✦ Carpet care
- ✦ Odour removal
- ✦ Disinfecting



### Scratch-Free Glass Protection Film

Replacing glass panes is costly and often scratches and acid burns in glassing are not repairable. Emeg has partnered with Crous Rail Service to offer a cost-effective special procedure which completely eliminates the deepest scratches and acid burns.

We provide two types of anti-scratch foil:

- ✦ Clear foil
- ✦ Laminated heat protection foil for glass panes

### The process is quick and cost-effective

**Step 1:** Damaged areas on glass panes are marked. The damaged glass does not have to be removed.

**Step 2:** With a two-stage application method, damaged areas are polished to remove scratches or acid burns.

**Step 3:** Protective foil is applied.

**Step 4:** After 8 hours of drying time the glass becomes visibly clear.

### Protective Foil Products:

SFG150µm EASY RELEASE FOIL

SFG175µm EASY RELEASE HEAT PROTECTION

The film protects against new scratches and acid burns, and can be replaced quickly and easily.





## Graffiti Removal

Our mobile Graffiti Clean team are on hand 24 hours a day to remove any unwanted graffiti.

### The process is quick and cost-effective

**Step 1:** Apply Crous Graffiti Remover.

**Step 2:** For acrylic graffiti and tar or bitumen, wait 30-90 seconds for product to dissolve.

**Step 3:** Synthetic graffiti will take up to 30min per m<sup>2</sup>.

**Step 4:** Scrub with 3M pad.

**Step 5:** Wipe down with Transolv Protein pH11.

**Step 6:** Wipe down with Mag Blue Pro.

**Step 7:** Apply AR-Top and wait for 3 minutes.

**Step 8:** Wipe down with Mag Blue Pro.







### Graffiti Killer ECO Liquid

#### Graffiti Killer ECO Gel

##### Features:

- Biodegradable Swiss-quality product made in Germany
- Removes all known acrylic and synthetic based graffiti spray paint
- Removes from 1k & 2k painted or protected surfaces
- Contains no heavy metals or phenols
- Consists of water-soluble solvents
- Free from methanol, VOCs, NMP and NEP



### Graffiti Killer Liquid 20

#### Graffiti Killer Gel 20

##### Features:

- Biodegradable Swiss-quality product made in Germany
- Removes all known acrylic and synthetic based graffiti spray paint
- Removes from 1k & 2k painted or protected surfaces
- Contains no heavy metals or phenols
- Consists of water-soluble solvents
- Free from methanol, VOCs, NMP and NEP



### Tar & Bitumen Remover

##### Features:

- Specially developed in Switzerland, made in Germany
- Removal of problematic graffiti e.g. tar, bitumen spray and all petroleum based graffiti
- Problematic graffiti mediums are distinguished by their outlines and their black/brown colour, petroleum-based graffiti can differ in colours e.g. white, silver and gold



## Wall Paint Remover

### Features:

- ✦ Specially developed Swiss product, made in Germany
- ✦ Removal of water based exterior wall paints
- ✦ These problematic graffiti mediums are distinguished by their large splatter appearance e.g. balloon-bombing



## Elite 007

### Features:

- ✦ Removal of graffiti from sensitive and delicate surfaces such as interior linings, GFK, synthetic materials, PVC and acrylic glass
- ✦ Developed to remove all graffiti, tags, permanent marker (edding), as well as glue residues and chewing gum on fabric seats



## Elite Paste

### Features:

- ✦ Specially developed Swiss product, made in Switzerland
- ✦ Removes stubborn shadows left behind after cleaning
- ✦ This product has the advantage of not dulling the surface
- ✦ Not to be used on acrylic glass, fabrics and carpet floors



## Fast Cleaner

### Features:

- ✦ Swiss-quality product made in Germany
- ✦ This high-speed cleaner has been specifically developed for exterior finishes and acrylic glass
- ✦ Remove all known graffiti, tags, permanent marker (edding), as well as glue residues
- ✦ No rinsing required

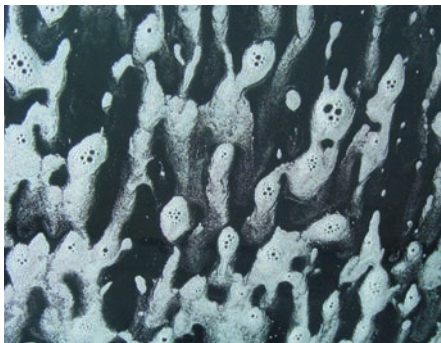




## Graffiti Killer Cargo

### Features:

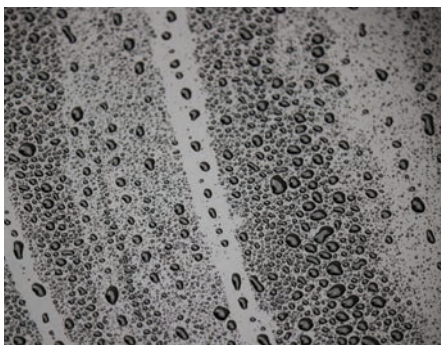
- ✦ Specially designed to remove all types of graffiti from untreated surfaces, such as aluminium and stainless steel
- ✦ 90% biodegradable, free of solvents and phosphates
- ✦ Non-flammable and dissolves in water
- ✦ Works on wet surfaces



## Transolv

### Features:

- ✦ Highly effective alkaline cleaner developed in South Africa, made in Germany
- ✦ Removal of very tough dirt from surfaces e.g. grease, brake dust, rust and atmospheric dirt
- ✦ Contains no acid, sodium hydroxide, phosphates or ammonia
- ✦ No rust on metals (including aluminium)
- ✦ Environmentally friendly, biodegradable and non-flammable
- ✦ Neutralise surfaces, dilute TRANSOLV 1:100 with water after graffiti removal



## Seal-UV - Non-Permanent

### Features:

- ✦ Top-quality preservation product  
Restores treated surfaces to original condition and protects against UV-A & B
- ✦ Cleanability is significantly increased as pores are closed so bleaching is prevented
- ✦ Creates a separation layer so graffiti and dirt can no longer penetrate the surface
- ✦ Contains no solvent, teflon, wax or silicone
- ✦ Thermoplastic coating protects the surface from cold (to -30°C) & heat (up to +90°C)
- ✦ The penetration of brake dust, rust and insects is prevented
- ✦ Shelf life of 2 years





### Permaseal TP - Permanent (Gloss/Matt)

#### Features:

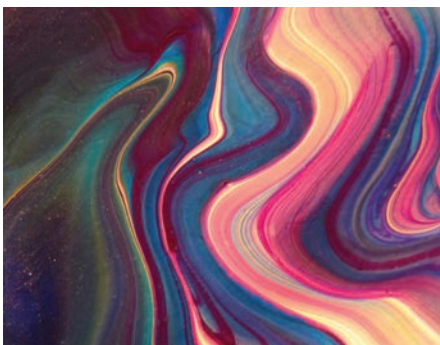
- ✦ Permanent anti-graffiti coating for non-absorbing 2-component painted surfaces
- ✦ Prevent any adhesion of spray paints and similar impurities
- ✦ Contains an inorganic polymer which is chemically bonded to the lacquer surface and reacts with the moisture in the air to form a glossy surface
- ✦ Has an excellent adhesion, high-chemical, UV and weather resistance (>4,000 hours according to ASTM G 154)
- ✦ Thickness of the cured protective layer is undetectable  $\leq 5\mu\text{m}$  to  $\leq 8\mu\text{m}$



### Permaseal 37 Permanent (Matt)

#### Features:

- ✦ Permanent anti-graffiti coating for stainless steel and aluminium surfaces
- ✦ Prevent any adhesion of spray paints and similar impurities
- ✦ Contains an inorganic polymer which is chemically bonded to the lacquer surface and reacts with the moisture in the air to form a matt surface
- ✦ Permaseal 37: excellent adhesion
- ✦ High resistance to chemicals
- ✦ Provides a high UV and weather resistance (>4,000 hours according to ASTM G 154)
- ✦ Cured protective layer is undetectable  $\leq 5\mu\text{m}$



### Wall Paint Killer

#### Features:

- ✦ For treated, coated and painted surfaces: exposed concrete, natural stone, metal, windows, etc
- ✦ Removes all types of emulsion paint from the above-mentioned surfaces
- ✦ Organic substances in the product are biodegradable (OECD test)
- ✦ Contains no heavy metals or phenols
- ✦ Consists of water-soluble solvents





### Graffiti Killer ECO Liquid

### Graffiti Killer ECO Gel

#### Features:

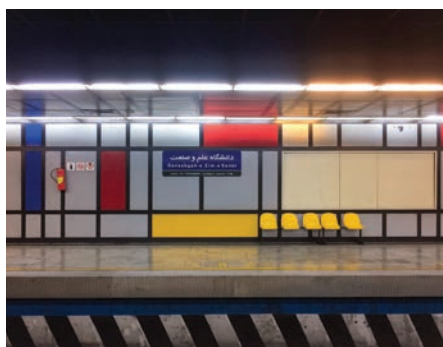
- ✦ Swiss quality product
- ✦ Removes any kind of known graffiti, such as acrylic and synthetic resin spray of painted and sealed surfaces
- ✦ Contains no heavy metals nor phenols
- ✦ Consists of water-soluble solvents
- ✦ VOCs, NMP and NEP-free



### Elite 007

#### Features:

- ✦ For treated, coated and lacquered surfaces especially for indoor use
- ✦ Developed for sensitive surfaces such as interior cladding GRP, plastics, PVC and plexiglass
- ✦ Ideal for removing all known graffiti, tags, waterproof pens (edding), as well as adhesive residue and chewing gum on fabric seats



### Elite 007 Paste

#### Features:

- ✦ For treated, coated and lacquered surfaces especially for indoor use
- ✦ Developed to complement Elite 007
- ✦ Removes leftover shadows on the already treated interior cladding in the building or on other surfaces. In particular, stubborn shadows from waterproof pencils (edding)
- ✦ Not for plexiglass, fabric seats, etc
- ✦ Suitable for carpets





## Quick Cleaner (Waterless)

### Features:

- For treated, coated and lacquered surfaces especially for indoor use
- Developed for sensitive surfaces such as interior cladding GRP, plastics, PVC and plexiglass
- Removing of all known graffiti, tags, waterproof pens (edding), as well as adhesive residue and chewing gum on fabric seats



## Abrasive-S

### Features:

- For non-treated, non-coated, porous surfaces
- Developed to remove all types of graffiti from untreated surfaces
- At least 90% biodegradable
- Free of solvents and phosphates
- Non-flammable and dissolves in water
- Works on wet surfaces



## Shadow Remover

### Features:

- For untreated surfaces
- Fair-faced and washed concrete, natural stone
- Caution acid-based product
- If there are still shadows (no paint residues) after the graffiti removal with Abrasive-S, the shadow remover removes them without leaving any residue



## 2-Component PU Top Coat - Permanent

### Features:

- Permanent surface protection
- Reduces dirt adhesion and makes subsequent maintenance easier
- Removed easily and conveniently, without repeating a coat of paint or re-applying an anti-graffiti protective layer
- Any kind of pollution (e.g. exhaust gases) no longer penetrates the porous surfaces and can be cleaned easily
- Water-based and can be diluted with water
- Contains no solvents
- 2k PU contains modern UV stabilisers and is characterised by high adhesive strength
- Water vapour diffusion ability, breathability, good solvent and chemical resistance, high hardness and good elasticity

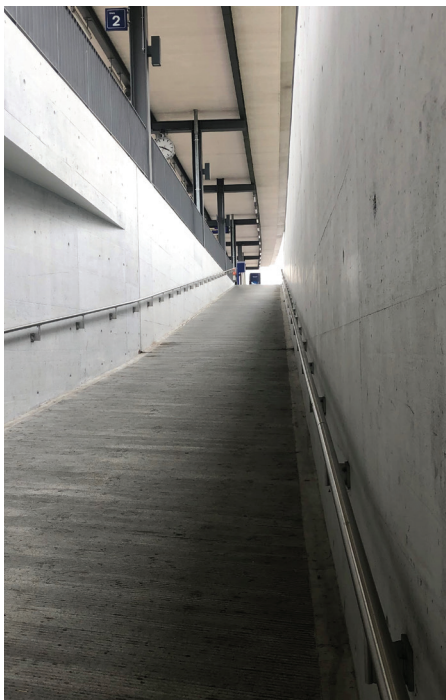




## Transolv

### Features:

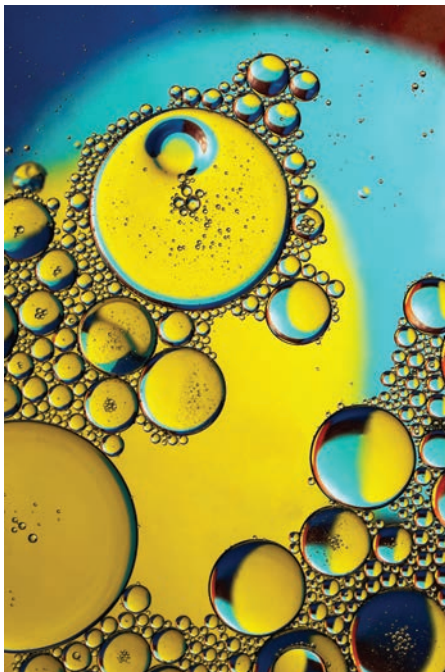
- ✦ Highly effective alkaline cleaner for very strong and extremely dirty surfaces
- ✦ Especially for the removal of brake dust dirt and organic deposits such as rust, oil, grease, etc
- ✦ Replaces acid-based cleaning products and is water-soluble
- ✦ Contains no acids, sodium hydroxide, phosphates or ammonia
- ✦ Does not rust on metals (including aluminum)
- ✦ Environmentally friendly, biodegradable and non-flammable



## Primer WB 100 for 2-Component

### Features:

- ✦ Deep primer for porous finishes: exposed concrete, cement and mineral plaster
- ✦ Vapour diffusible, transparent primer and prevents discoloration of the building material surface
- ✦ Water-thinnable on a micro-acrylic dispersion basis and suitable for all mineral substrates (inside and outside)
- ✦ Low-odour, solvent-free and environmentally friendly
- ✦ Impregnates and protects against moisture penetration, prevents blooming damage, deposits and clouds
- ✦ Solidifies sandy, weathered building material surfaces as well as residues of lime and mineral paints
- ✦ Equalises substrates with strong or different levels of absorption



## NANO-Sil - Non-Permanent

### Features:

- › For porous facade surfaces
- › Natural stone, limestone, washing and exposed concrete, brick and plastering
- › Water-based, non-permanent long-term protective impregnation from the field of nanotechnology
- › In diluted form, it is used for the water and oil repellent treatment of inorganic substances such as mineral building materials
- › Achieves an oleo-phobic (oil-repellent) effect
- › Pores of the building material remain open. Water vapour diffusion is not or hardly influenced
- › Protected surface remains breathable
- › Protects against unwanted general deposits from the environment and exhaust gases
- › Facilitates facade maintenance by self-cleaning with rainwater





We supply custom-made lighting to the customer's exact specifications.



### CLED Panel

Features:

- ✧ Easy installation in grid ceiling
- ✧ Can be used anywhere when suspended
- ✧ Glare-free
- ✧ Modern design
- ✧ Available for all standard dimensions



### CLED Hibay

Features:

- ✧ Rail stations
- ✧ Washing facilities
- ✧ Track systems
- ✧ Warehouses
- ✧ Garages





## CLED Modular Flood Light

### Features:

- Rail stations
- Washing facilities
- Track systems
- Warehouses
- Garages



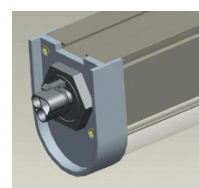
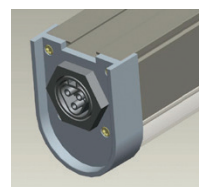
| Y in the Model     | Y=01 | Y=02 | Y=03     |
|--------------------|------|------|----------|
| Beam Angle         | 60°  | 90°  | 100°x125 |
| Light Distribution |      |      |          |



## CLED Linear Light

### Features:

- Rail stations
- Washing facilities
- Track systems
- Warehouses
- Garages





| Diagram of the luminous intensity distribution  | V-Type            | Wattage | Lumens   |
|---|-------------------|---------|----------|
| <p>UNIT:cd<br/>C0/180,146.8deg<br/>C30/210,133.8deg<br/>C60/240,113.0deg<br/>C90/270,106.9deg<br/>AVERAGE BEAM ANGLE(50%):125.1 DEG</p> | Clear (130lm/W)   | 11W     | 1430lm   |
|   |                   | 18W     | 2340lm   |
|   |                   | 22W     | 2860lm   |
|   | Frosted (110lm/W) | 11W     | 1080lm   |
|   |                   | 18W     | 1980lm   |
|   |                   | 22W     | 110200lm |

| Diagram of the luminous intensity distribution  | P-Type            | Wattage | Lumens   |
|---|-------------------|---------|----------|
| <p>UNIT:cd<br/>C0/180,123.3deg<br/>C30/210,118.5deg<br/>C60/240,110.4deg<br/>C90/270,107.0deg<br/>AVERAGE BEAM ANGLE(50%):125.1 DEG</p> | Clear (130lm/W)   | 11W     | 1430lm   |
|   |                   | 18W     | 2340lm   |
|   |                   | 22W     | 2860lm   |
|   | Frosted (110lm/W) | 11W     | 1080lm   |
|   |                   | 18W     | 1980lm   |
|   |                   | 22W     | 110200lm |

| Diagram of the luminous intensity distribution  | D-Type            | Wattage | Lumens   |
|---|-------------------|---------|----------|
| <p>UNIT:cd<br/>C0/180,251.3deg<br/>C30/210,234.0deg<br/>C60/240,220.4deg<br/>C90/270,111.0deg<br/>AVERAGE BEAM ANGLE(50%):204.2 DEG</p> | Clear (130lm/W)   | 11W     | 1430lm   |
|   |                   | 18W     | 2340lm   |
|   |                   | 22W     | 2860lm   |
|   | Frosted (110lm/W) | 11W     | 1080lm   |
|   |                   | 18W     | 1980lm   |
|   |                   | 22W     | 110200lm |
|   | Clear (130lm/W)   | 11W     | 1430lm   |
|   |                   | 18W     | 2340lm   |
|   |                   | 22W     | 2860lm   |



## CLED Train Tubes

### Features:

- ◆ 40% energy savings without flickering
- ◆ Railway-friendly
- ◆ Easy installation
- ◆ 100% maintenance-free
- ◆ Lifetime 7-11 years
- ◆ L90 B10 C2
- ◆ 50,000 hours
- ◆ MTBF 320 years
- ◆ 5-year warranty
- ◆ 130 lm / watt chips
- ◆ SDCM 3/5
- ◆ Chips 2835/ 3030
- ◆ Rotating end caps

### Options Include:

|             |       |             |        |                         |  |
|-------------|-------|-------------|--------|-------------------------|--|
| T5 LED-Tube |       | T8 LED-Tube |        | T8 LED-Tube with T5 end |  |
| P-Type 160° |       | V-Type 200° |        | D-Type 320°             |  |
| 24VdC       | 36VdC | 72VdC       | 110VdC | 250AC                   |  |

