



GREENSOLV
ENVIRONMENTAL PRODUCTS

PRE-PAINT GUIDE

The life of a coating depends as much on the degree and quality of surface preparation as on the selected coating system.

HOW TO PREPARE STEEL BEFORE PAINTING

According to SSPC (The Society for Protective Coating)

TYPES OF CONTAMINANTS:

- OIL AND GREASE
- DIRT AND DUST
- RUST AND CORROSION
- COMBUSTION RESIDUE (carbon)
- DETERIORATED PAINT†
- MILL SCALE
- SOLUBLE SALTS

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MADE IN CANADA

BEFORE PAINTING, MAKE SURE THAT:

1. Surface is adherent and has the right surface profile
2. Ambient temperature is above 10°C
3. Surface is free of the following contaminants:
 - Oil and grease, dirt and dust, rust and corrosion, combustion residue (carbon), mill scale, soluble salts, deteriorated paint†

Note: the procedure presented in this document will allow you to remove all contaminants except mill scale, deteriorated paint and severe rust. These contaminants have to be removed mechanically with manual tools (sanders or grinders) or with blast cleaning (sand, aluminum oxide or steel grit); these preparations will also create a surface profile. It is recommended to chemically clean the surface before a blast cleaning to avoid contaminating the abrasives. After a blast cleaning, the use of chemicals is usually unnecessary unless the steel has been soiled again.

Note: chemical cleaning can be performed with solvents or with water borne cleaners. Often, solvent cleaners (ex: Greensolv 920EK, 940, 941 and 960) are used to avoid a water rinse that could create surface corrosion. Solvent cleaners will evaporate completely leaving a dry and corrosion free surface. In this document, we recommend the use of water borne cleaners for 3 reasons: 1- much more efficient; 2- much greener and 3- much cheaper. To use solvent cleaners, contact your Greensolv representative.

HEAVY DEGREASING

- For bare steel without rust
- For steel completely or partially covered with paint, without rust
- For assemblies containing other metals than steel, refer to the ALUMINUM & OTHER section

Cleans: Oil and grease, dirt and dust, combustion residue (carbon)

Products:

G-MAX 304 – ALKALINE DEGREASER – concentrate

- Dilution: 33% G-MAX 304 / 67% water
- Coverage: 450 sq. ft./gallon – diluted product (ratio 33/67)

VpCI 440 – CORROSION INHIBITOR AND ADHERENCE PROMOTOR**

- Dilution: 0.25% VpCI 440 / 99.75% water
- Coverage: 60,000 sq. ft./gallon – diluted product (ratio 1:400)

DOSATRON – CHEMICAL INJECTOR

- Injects VpCI 440 into the rinse water stream at the right dilution

REMOVING SURFACE RUST & SOLUBLE SALTS

- For steel with surface rust (bare or painted)
- For steel with soluble salts (bare or painted)

Cleans: Oil and grease, dirt and dust, rust and corrosion, soluble salts

Products:

G-CLEAN 207 – RUST & CALCIUM REMOVER – concentrate

- Dilution: 33% G-CLEAN 207 / 67% water
- Coverage: 450 sq. ft./gallon – diluted product (ratio 33/67)

VpCI 440 – CORROSION INHIBITOR AND ADHERENCE PROMOTOR**

- Dilution: 0.25% VpCI 440 / 99.75% water
- Coverage: 60,000 sq. ft./gallon – diluted product (ratio 1:400)

DOSATRON – CHEMICAL INJECTOR

- Injects VpCI 440 into the rinse water stream at the right dilution



†Depending on the customer's need and the agreement between the parties, adherent paint might not have to be removed before repainting. However, it is crucial that loose paint be removed with a scraper, a sander or a grinder. If you wish to maximize the adherence, sand the whole painted surface. Use G-MAX 304 or G-CLEAN 207 to clean bare steel as well as painted surfaces before repainting.

STEP 1

DEGREASING AND/OR REMOVING RUST



Note: use G-MAX 304 for a surface free of rust (bare or painted). Use G-CLEAN 207 for a rusted steel surface or one contaminated with soluble salts (bare or painted)

WHEN HEAVILY CONTAMINATED, FOLLOW THESE TIPS:

- Once applied, scrub the surface with a brush
- When diluting or rinsing, use warm or hot water
- Let the product work on the surface for up to 30 minutes (reapply product if surface dries)
- Prepare a solution of DEGREASER by adding 67% water to a volume of 33% G-MAX 304.
- AND/OR Prepare a solution of RUST & CALCIUM REMOVER by adding 67% water to a volume of 33% of G-CLEAN 207
- Apply G-MAX 304 on the surface to be cleaned with a sprayer or low pressure pump
- Let work for 5 to 10 minutes
- Scrub the surface with a brush or a rag if needed

STEP 2

WATER RINSE WITH PLENTY OF WATER



Note: if you wish to rinse steel with water and prevent surface corrosion, it is important to use VpCI 440, a corrosion inhibitor and adherence promoter, at a ratio of 0.25% in water. Please note that the protection against corrosion is limited to a few hours indoor (24 to 48 hours). The new coating should be applied shortly after the surface has been washed. **The surface can be rinsed without the use of VpCI 440;** make sure to reduce the water's drying time by using either hot water (> 40°C) and/or by blowing compressed air to evaporate the water more rapidly.

- Inject VpCI 440 into the water stream with the DOSATRON system at a dosage of 0.25% (1:400). If VpCI 440 is not used, rinse with hot water and/ or dry the surface with compressed air to minimize surface corrosion
- Rinse with plenty of low pressure water or with a pressure washer. Rinse until foam disappears

STEP 3

AIR DRY



- Let the surface dry and make sure it does not get contaminated again before applying a fresh coat of paint

STEP 4

APPLYING A NEW COATING



- At this point, the surface is dry, free of contaminants and has a surface profile that maximizes adherence
- You can now start painting