



APPLICATION GUIDE

COSMO-PRIM

INDUSTRIAL PRIMER FOR GALVANIZED STEEL, ALUMINUM, METAL

SURFACE PREPARATION:

There is a correlation between good adhesion results when using this epoxy system and correct surface preparation prior to use. Proper preparation consists of removing all residue, oil, dirt, grease, dust, rust, contaminants and excessive moisture present on the surface. Also, in reference to the SSPC standards mentioned in the different parts of this Surface Preparation section, refer to the APPENDIX - SUMMARY OF SSPC STANDARDS.

.i. Galvanized steel

Allow to weather for a minimum of six months before coating. Clean with solvent in accordance with SSPC-SP1 (the recommended solvent is COSMO PRIM Activator). Where weathering is not possible, or the surface has been treated with chromates or silicates, first solvent clean in accordance with SSPC-SP1 and apply a test patch. Allow the paint to dry for at least a week before testing for adhesion. If the adhesion is weak, it will be necessary to apply the blast jet in accordance with the SSPC-SP7 standard to remove these treatments. Rusted galvanizing requires minimal hand tool cleaning in accordance with SSPC-SP2, prime area the same day it is cleaned.

.ii. Aluminum

Remove all oil, grease, dirt, rust, and other foreign material by solvent cleaning in accordance with SSPC-SP1.

.iii. Concrete and Masonry (atmospheric service)

For surface preparation, refer to NACE 6/SSPC-SP13. Surfaces must be completely clean and dry. Concrete and mortar must be cured for at least 28 days @ 75 °F (24 °C). Remove all loose mortar and foreign material. The surface must be free of laitance, concrete dust, dirt, shoring release agents, moisture curing membranes, loose cement and hardeners. Fill holes, air pockets and other gaps with cement patching compound. Weathered masonry and soft or porous cement pre-casts should be blast cleaned or power tool cleaned to remove poorly adhered contamination and to obtain a hard, firm surface. The grout must be removed by treating it with a 10% solution of muriatic acid and neutralizing completely with water.

.iv. Concrete and Masonry (immersion service)

For surface preparation, refer to NACE 6/SSPC-SP13, Section 4.3.1 or 4.3.2

.v. Iron and Steel (atmospheric service)

The minimum surface preparation is by cleaning with hand tools according to SSPC-SP2. Remove all oil and grease from surface by solvent cleaning in accordance with SSPC-SP1. For best performance, use commercial blast cleaning in accordance with SSPC-SP6, blast clean all surfaces using a sharp, angled abrasive for optimum surface profile (2.0 mils). Prime the surface of any bare steel within 8 hours or before surface rust occurs.

.vi. Iron and Steel

Remove all oil and grease from the surface by wiping with solvent in accordance with SSPC-SP1. Minimum surface preparation is blast cleaning to near white metal in accordance with SSPC-SP10, blast clean all surfaces using a sharp, angular abrasive for optimal surface profile (2-3 mils). Remove all weld spatter and round off all sharp edges. Prime any bare steel the same day it is cleaned.

APPLICATION PROCEDURES: (IMPORTANT NOTE: MIX BEFORE USE)

SURFACE PREPARATION IN GENERAL

- 1.- Clean the surface perfectly in order to eliminate dust, grease, oils and silicones with detergent and water and Cleaning Solvent; then sand with #320 wet sandpaper; rinse and dry perfectly.
- 2.- In areas where sheet metal work is required, remove all coatings until leaving the metal bare.
- 3.- Treat bare metal and rusty areas.
- 4.- Repair major imperfections and/or dents on any sheet.

MIX

Mix the contents of both components by mechanical stirring. Make sure that no pigment remains at the bottom. The mixing ratio is 1 PART COSMO PRIM: 1 PART ACTIVATOR. Combine 1 part volume of COSMO PRIM with 1 equal part volume of ACTIVATOR. Thoroughly stir the mixture by mechanical stirring.

If necessary, strain/filter it.

APPLICATION

USE RESPIRATOR WITH FILTER FOR ORGANIC VAPORS. Apply with an air pressure in the gun of 1.5 to 3 kg/cm² (21.3 – 42.7 lbs -in²); Give 2 simple coats, leaving at least 5 minutes of airing between coats.

Between 5 to 10 minutes is recommended between the first simple coat to the second simple coat.

SANDING

Let COSMO PRIM dry for at least one hour before dry sanding, use #360 or #400 sandpaper; to sand with water, let dry for at least two hours.

RE-COATING

If you sanded wet, allow it to dry for a minimum of one hour before applying plaster, primer or topcoat. If you sanded dry, you can apply the next coating once you have finished sanding. It can also be coated "wet on wet" after 15 minutes after the last coat has been applied.

TIPS FOR OPTIMUM PERFORMANCE:

- Strip coat sharp angles as well as cracks and welds to prevent premature failure in these areas.
- When using spray application, overlap 50% with each pass of the gun to avoid pinpoints, bare areas, and small holes. If necessary, apply crosswise at right angles.
- Performance is calculated based on volume of solids and does not include the factor of application loss due to surface profile, surface roughness or porosity, skill and technique of applicator, application method, various surface irregularities, loss of material during mixing, spillage, over-thinning, weather conditions, and excessive film thickness.
- Excessive reduction of material can affect film thickness, appearance and adhesion.
- To prevent blockage of spray equipment, clean equipment before use or before prolonged downtime.

CLEANING INSTRUCTIONS:

Clean up spills and splashes immediately. Clean tools immediately after use. Follow the manufacturer's safety recommendations when using any solvent.

SAFETY PRECAUTIONS:

Refer to Product Safety Data Sheet before use.

ADDITIONAL INFORMATION:

The data on this Application Guide represent typical values of the product characteristics. It is the user's responsibility to take appropriate measures in order to comply with the requirements established within their industry under current legislation. The information represents a general guide and should not be considered as a guarantee of its properties. The information provided is based on the company's own research and that of experts. From the moment the user receives it until he or she decides to use the product (the product has a useful life of 12 months), the content of the Application Guide may change without prior notice.

APPENDIX – SUMMARY OF SSPC STANDARDS

(MENTIONED IN SURFACE PREPARATION SECTION)

SSPC-SP-1 (Solvent Cleaning) Surface preparation or cleaning using solvents, water vapor, alkaline solutions, soapy emulsions, detergents and organic solvents that remove contaminants from the substrate such as: grease, oil, dust and salts soluble in the cleaning agent. Solvent cleaning can be used prior to paint application and in conjunction with other mechanical surface preparation methods for the removal of rust, mill scale, or paints.

SSPC-SP-2 (Hand Tool Cleaning) Surface preparation or manual cleaning using manual tools (hand brushes, sandpaper, etc.) to remove impurities, such as: welding residues, oxidation, aged paint and other fouling. This method may not completely remove all incrustations that are adhered to the surface.

SSPC-SP-6 / NACE N°3 (Abrasive blast cleaning - Commercial shot blasting / sandblasting) Surface preparation or Abrasive blast cleaning known as shot blasting or sandblasting - Commercial Grade. This type of cleaning uses some type of pressurized abrasive to clean the surface, through this method, all mill scale, rust, paint and any fouling material is removed. The surface must be free of oil, grease, dust, rust and the remains of the lamination layer must not exceed 33% of the surface in each square inch of it. The remains should only be seen as having a different color. It is generally specified in those areas with very little demand without corrosive environments.

SSPC-SP-7 / NACE N°4 (Abrasive blast cleaning - Quick shot blasting / sandblasting) Surface preparation or Abrasive blast cleaning known as quick shot blasting or sandblasting or burst. This type of cleaning uses some type of pressurized abrasive to clean the surface; through this method, mill scale, rust, paint and any encrusting material is removed. The surface must be free of oil, grease, dust, loose lamination film, loose rust and loose layers of paint. Keeps the lamination layer where it is firmly adhered. These parts should not be detached with a sharp object. It is used only in cases of very mild conditions and will present areas of probable failure.

SSPC-SP-10 / NACE N°2 (Abrasive blast cleaning - Shot blasting / semi white sandblasting) Surface preparation or abrasive blasting known as shot blasting or semi-white sandblasting. This type of cleaning uses some type of pressurized abrasive to clean the surface; through this method, all mill scale, rust, paint and any fouling material is removed. The surface must be free of oil, grease, dust, rust, lamination layer, paint residue and other foreign materials. Up to 5% of contaminant remains are allowed, which may appear only as different coloration on each square inch of the surface. It is the most commonly used specification. It has the characteristics of good preparation and speed at work. It is used for regular to severe conditions.

SSPC-SP-12 / NACE N° 5 (Pressure water cleaning - Waterjetting) Surface preparation or pressure water cleaning or waterjetting. This type of cleaning achieves a defined degree of surface cleanliness prior to the application of a coating or protective coating. The standard is limited in scope to the exclusive use of water and is used primarily for applications where the substrate is carbon steel. However, the waterjetting process can be used for cleaning non-ferrous surfaces such as bronze, aluminum, and other metals such as stainless steel. This standard does not address the cleaning of concrete which is detailed in SSPC-SP 13.

SSPC-SP-13 / NACE N°6 (concrete cleaning) Surface preparation or cleaning of concrete using mechanical, chemical, or thermal methods prior to the application of a protective coating or coating. The requirements of this standard are applicable to all types of cement surfaces, including floors and walls, prefabricated slabs, masonry walls, etc. A concrete surface must be free of contaminants, laitance, loosely adhered concrete, and dust, providing a uniform substrate suitable for the application of protective coating or coating.

4.3 Methods of mechanical surface preparation.

4.3.1 Dry abrasive blasting, wet abrasive blasting, vacuum-assisted abrasive blasting, and centrifugal shot blasting, as described in ASTM D 4259, can be used to remove contaminants, laitance, and weak concrete, to expose underground voids, and to produce a good concrete surface with adequate profile and surface porosity.

4.3.2 Cleaning with high-pressure water or Waterjetting as described in NACE No. 5/SSPC-SP 12, ASTM D 4259, can be used to remove contaminants, laitance and weak concrete, to expose underground voids and to produce a good concrete surface with adequate profile and surface porosity.

