PPG Protective & Marine Coatings

ABC • Amercoat • Amerlock
Amershield • Dimetcote • PSX

SURFACE PREPARATION STANDARDS OVERVIEW

SSPC – Steel Structures Painting Council
NACE – National Association of Corrosion Engineers
SA – Swedish Standards Organization

SSPC-SP1
Solvent Cleaning
Solvent cleaning is a method for removing all visible oil, grease, soil, drawing and cutting compounds, and other soluble contaminants. Solvent cleaning does not remove rust or mill scale. It is intended that solvent cleaning be used prior to the application of paint and in conjunction with surface preparation methods specified for the removal of rust, mill scale or paint. Change rags and cleaning solution frequently, so that deposits of oil and grease are not spread over additional areas in the cleaning process. Be sure to allow adequate ventilation.

SSPC-SP2/NACE ST2
Hand Tool Cleaning
A method of preparing steel surfaces by the use of non-power hand tools. Hand tool cleaning removes all loose mill scale, loose rust, non-adhered paint and other detrimental foreign matter by way of hand chipping, scraping, sanding, wire brushing, etc. It is not intended that adherent mill scale, rust, and paint be removed by this process. Mill scale, rust and paint are considered adherent if they can no be removed by lifting with a dull putty knife. Before hand tool cleaning, remove visible oil, grease, soluble welding residues, and salts by the methods outlined in SSPC-SP 1.

SSPC-SP3/NACE ST3
Power Tool Cleaning
A method of preparing steel surfaces by the use of power assisted hand tools. Power Tool Cleaning removes all loose mill scale, loose rust, and other detrimental foreign matter by way of power tool chipping, descaling, sanding, wire brushing, grinding, etc. It is not intended that adherent mill scale, rust, and paint be removed by this process. Mill scale, rust and paint are considered adherent if they can no be removed by lifting with a dull putty knife. Before power tool cleaning, remove visible oil, grease, soluble welding residues, and salts by the methods outlined in SSPC-SP 1.

SSPC-SP5/NACE No. 1/SA-3
White Metal Blast Cleaning
A white blast cleaned surface when viewed without magnification, shall be free of all visible oil, grease, dirt, dust, mill scale, rust, paint, oxides, corrosion products, and other foreign matter.

SURFACE PREPARATION STANDARDS OVERVIEW

SSPC-SP6 /NACE No. 3/ SA-2
Commercial Blast Cleaning
A commercial blast-cleaned surface, when viewed without magnification, shall be free of all visible oil, grease, dirt, dust, mill scale, rust, paint, oxides, corrosion products, and other foreign matter, except for staining. Random staining shall be limited to no more than 33% of each square inch of the surface area and may consist of light shadows, slight streaks, or minor discolorations caused by stains of rust, stains of mil scale or stains of previously applied coatings. Before blast-cleaning, visible deposits of oil or grease shall be removed by any of the methods specified in SSPC-SP1 or other agreed upon methods.

SSPC SP-7/NACE No.4/SA-1
BRUSH-OFF BLAST CLEANING
A brush off-cleaned surface, when viewed without magnification, shall be free of all visible oil, grease, dirt, dust, loose mil scale, loose rust and loose coating. Tightly adherent mil scale, rust, and coating may remain on the surface. Mill scale, rust, and coating are considered tightly adherent if they cannot be removed with a dull putty knife. The entire surface shall be subjected to the abrasive blast. The remaining mill scale, rust or coating shall be tight.

SSPC-10 /NACE No. 2/SA-2½
Near White Blast
A near white blast-cleaned surface, when viewed without magnification, shall be free of all visible oil, grease, dirt, dust, mill scale, rust, paint, oxides, corrosion products, and other foreign matter, except for staining. Staining shall be limited to no more than 5 percent of each square inch of surface area and may consist of light shadows, slight streaks, or minor discolorations caused by stains of rust, stains of mill scale, or stains of previously applied paint. Before blast cleaning, visible deposits of oil or grease shall be removed by any of the methods specified in SSPC-SP1 or other agreed upon methods.

SSPC-SP 11
Power Tool Cleaning to Bare Metal
Metallic surfaces which are prepared according to this specification, when viewed without magnification, shall be free of all visible oil, grease, dirt, dust, mill scale, rust, paint, oxides, corrosion products, and other foreign matter. Slight residues of rust and paint may be left in the lower portion of the pits if the surface is pitted. When painting is specified, the surface shall be roughened to the degree suitable for the specified paint system. The surface profile shall not be less than 1 mil (25 microns).

SSPC SP-12/NACE No.5
Water Jetting
This standard provides requirements for the use of high and ultrahigh-pressure water jetting to achieve various degrees of surface cleanliness. This standard is limited in scope to the use of water only without the addition of solid particles in the stream.

SURFACE PREPARATION STANDARDS OVERVIEW

Visual Surface Preparation Definition

WJ-1 – Surface shall be free of all previously existing visible rust, coatings, mill scale and foreign matter and have a matte metal finish.

WJ-2 – Surface shall be cleaned to a matte finish with at least 95% surface of the surface area free of all previous existing residues and the remaining 5% containing only randomly dispersed stains of previously existing rust, coatings and foreign matter.

WJ-3 – shall be cleaned to a matte finish with at least two-thirds of the surface free of all visible residues (except mil scale) and the remaining one-third containing only randomly dispersed stains of previously existing rust, coatings and foreign matter.

WJ-4 – Shall have all loose rust, loose mill scale and loose coatings uniformly removed.