REFERENCE STANDARD UNI EN ISO 8501-1 (SIS 055900:1967)

Preparation of steel surfaces before application of paint and similar products

The effectiveness of protective coatings on steel is significantly influenced by the condition of the steel surface prior to painting. The main factors affecting this operation are the presence of rust and rolling slag, the presence of impurities such as dust, oil and grease, and the profile of the surface. It is important to specify the quality of surface preparation required on a case-by-case basis.
Consequently, a standard has been approved, which specifies four degrees of surface corrosion and a number of preparation degrees, each having a quality degree referring to the starting degree of corrosion. The standard represents these degrees through a series of images, visually representing the various conditions in a clearer and more quickly appreciable way than a verbal description.

RUST GRADES:

A: Steel surface completely covered with adherent mill scale but little or no corrosion.

B: Steel surface which is corroding and from which the rolling slag has begun to flake off.

C: Steel surface on which the mill scale has been removed by corrosion or from which it can be easily scraped off, but with slight pitting visible to the naked eye.

D: Steel surface on which the rolling slag has been eliminated by corrosion and on which abundant pitting is visible to the naked eye.

SURFACE PREPARATION GRADES:

It is assumed that the steel surface has been cleaned of dirt and grease prior to treatment, and that the heavier layers of rust have been removed by chiselling.

Sa 1 (Light sandblasting)

By visual inspection, without magnification, the surface must be free from oil, grease and impurities, from loosely adhering rolling slag, from rust and foreign substances.

Sa 2 (Heavy sandblasting)

By visual inspection, without magnification, the surface must be free from oil, grease and impurities, from loosely adhering rolling slag, from rust and foreign substances.

Any residual contamination must be perfectly adherent.

Sa 2 ½ (Very heavy sandblasting)

By visual inspection, without magnification, the surface must be free from oil, grease and impurities, from rolling slag, from rust and foreign substances. Any remaining traces of contamination should only appear as spots, dots or streaks.

Sa 3 ("White metal" sandblasting)

The surface must have a uniform metallic colour.

PREPARATION OF STEEL SURFACES BEFORE APPLICATION OF PAINT AND SIMILAR PRODUCTS

Reference Standard UNI EN ISO 8501-1 (SIS 055900:1967)

Condition A
Unblasted

Condition B
Unblasted

Condition C
Unblasted

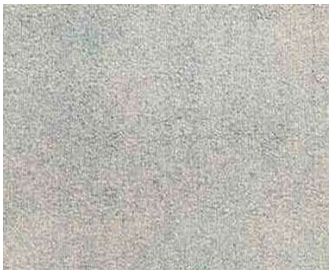
Condition D
Unblasted

Condition A
Blasted to Sa 1

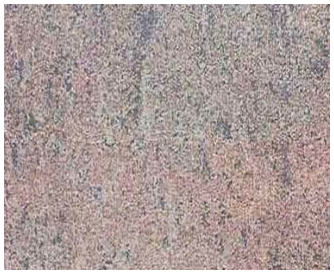
Condition B
Blasted to Sa 1

Condition C
Blasted to Sa 1

Condition D
Blasted to Sa 1



Condition A
Blasted to Sa 2

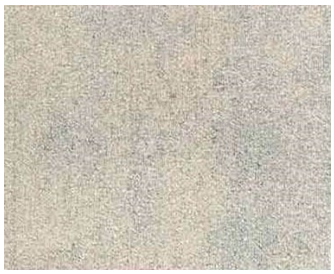


Condition B
Blasted to Sa 2

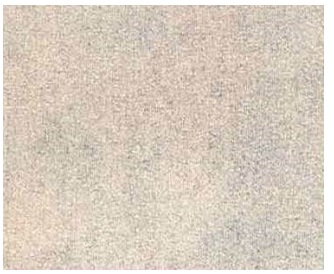
Condition C
Blasted to Sa 2

Condition D
Blasted to Sa 2

Condition A
Blasted to Sa 2,5

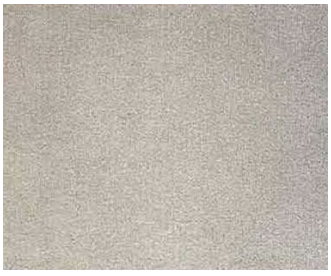


Condition B
Blasted to Sa 2,5

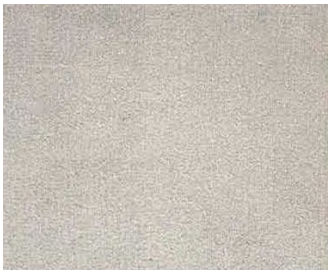


Condition C
Blasted to Sa 2,5

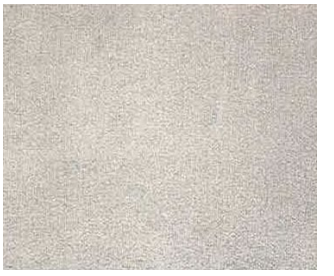
Condition D
Blasted to Sa 2,5



Condition A
Blasted to Sa 3



Condition B
Blasted to Sa 3



Condition C
Blasted to Sa 3

Condition D
Blasted to Sa 3