

Title	Instruction painting – epoxy primer // coating
	For Reference ONLY
Revision	1
Revision date	03/11/2015

1. Purpose

This work instruction is applicable whenever epoxy primer and final standard coating is required on bare compressors and compressor packages. It regards carbon steel and cast iron frame, piping and equipment surfaces only. See below for further detail.

2. Means

2.1. Material

Primer coat : Zinc ethyle silicate (inorganic zinc silicate)

Thinner epoxy primer: as indicated in the primer technical documentation

Final coat polyurethane: Sigmadur 520 top coat - RAL 7035

Thinner polyurethane top coat: as indicated in the final coating technical documentation

Remover: Benzine D

ELCOMETER 345 or newer

3. Operators

All appointed personnel who have had the relevant 'on the job training'.

4. Instructions and criteria's

4.1. Surface preparation

All carbon steel pressure vessels, structural steel bases and heat exchangers, SS304 piping, aluminium profiles, shall be sandblasted to SSPC-SP6. All openings from couplings, flanges, etc.. , on the equipment shall be blanked off with appropriate plugging (ragged on the inside and plugged by conical plug or by tape) to avoid internal contamination with sandblast grit. Any contamination with sandblast grit will be rejected.

All surfaces will be clean and free from any contamination before the next action will proceed.

After any other assembly action, all external surfaces will be degreased by use of Benzine D. The steel surfaces are further prepared for painting per: SSPC-SP2 Hand Tool Cleaning.

4.2. Painting

Check thoroughly for cleanliness of all surfaces and protection of all area's which need not to be painted, before proceeding.

The paint will be applied by means of a manual spray pistol with an opening between 1.2 - 1.5 mm.
The spray pressure will be between 3 - 5 bars.

The paint action will be performed with a smooth horizontal or vertical movement of the spray pistol.
The distance between spray pistol and equipment will be \pm 40 cm.

The air temperature will be 5°C-40°C. The relative humidity will be 50-85%. All steel temperatures will be at least 3°C above dew point of the surrounding air.

Materials:

Painted surfaces:

Carbon steel piping & vessels,
Structural steel,

Unpainted materials:

All SS316 & SS304 equipment,
Aluminium profiles,
Instruments (Mfr. paint system),
Valve spindles,
Motor couplings,
Motors (Mfr. paint system),
Others which should not be painted.

Primer Coat:

Zinc Ethyle silicate for outdoor and high humid enviroment. Primer paint is an inorganic zinc silicate.

Color: as indicated in the primer technical documentation

Layer thickness: minimum 75 μ m

Second Coat:

Primer paint for outdoor and salt environment. Primer paint is a high build micaceous iron oxide pigmented polyamide cured recoatable epoxy coating.

Layer thickness: minimum 50 μ m

Final coat RAL 7035

SIGMADUR 520. Top coat is a high build semigloss aliphatic acrylic polyurethane finish.

Dilution: as specified in the final coating technical documentation

Remover: BENZINE D or other appropriate remover

Layer thickness: minimum 75 μ m

Drying time: as specified in the final coating technical documentation

Hardness: as specified in the final coating technical documentation

Final dry film thickness will be min. 200 μ m

5. Deviations

Not applicable

6. Registration

After cleaning following requirements shall be met:

- All surfaces will be visually clean and free from any contamination.

Before painting:

- Ambient conditions (impression).
- Steel conditions (impression)

After painting following requirements shall be met:

- Uniform consistency of paint
- No paint gutters allowed
- No blank material visible
- No foreign materials in paint

After painting a visual inspection according the above requirements and a thickness measurement will be performed. All results will be recorded on an inspection report and filed within the relevant job order file.

All coats must be measured (DFT) in order to obtain the individual coat thickness with the coat thickness gauge ELCOMETER 345 or other appropriate equipment. Perform approximately 20 measurements at different spots of the painted equipment. All readings must be within the specified tolerances.

Inspection report: Thickness of all layers must be within the tolerances. Registration in report MF/10/Q009

7. Appendix

Selected coating technical documentation – Sigmacover 256, Sigmadur 520.

8. Revisions

1	03/11/15		JJ	EVL	J. Boone
0	31/07/14		EVL	J. Boone	J. Boone
Rev.	Date		Created	Verified	Approved