

KINGDOM OF SAUDI ARABIA
SAUDI ARABIAN STANDARDS ORGANIZATION

SASO

SAUDI STANDARD
DRAFT No 31913

Waterproofing Cementitious
COATING (WATER BASED)

SAUDI ARABIAN STANDARDS ORGANIZATION

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PAINTS AND VARNISHES – Waterproofing Cementitious Coating (WATER BASED)

1. SCOPE AND FIELD OF APPLICATION

This standard specifies two components acrylic polymer modified cementitious flexible water proofing system based on selected polymer and powders. It is water proofing of masonry structures, marbles and other construction materials. It can also be used as background water proofing mortar under the tiles, marble, granite, etc.

2. COMPLEMENTARY REFERENCES

- 2.1 **SASO ISO 4618:2014** “paints and varnishes - terms and definitions”
- 2.2 **SASO ISO 15528:2013** “Paints and Varnishes – Sampling”.
- 2.3 **SASO ISO 1513:2014** “Paints and Varnishes – Examination and Preparation of samples for Testing.
- 2.4 **SASO ISO 1514:2004** Paints and Varnishes – Standard Test Panel for Testing. (concrete)
- 2.5 **SASO ISO 3251:2008** Paint and Varnishes-Determination of Non-Volatile matter of Paints, Varnishes and Binder for Paint and Varnishes.
- 2.6 **SASO 2194:2003** "Paints and Varnishes – Test Methods for Consistency of Paints using the Stormer Viscometer"
- 2.7 **SASO ISO 6503:2006** Paint and Varnishes – Determination of Total Lead – Flame Atomic Absorption Spectrometric Method.
- 2.8 **SASO ASTM D7073:2014** “Guide for Application and Evaluation of Brush and Roller Applied Paint Film .
- 2.9 **SASO EN 14891:2013** – Method of determination of Tensile Strength, Crack Bridging, Hydrostatic Pressure.
- 2.10 **SASO ISO 22196:2014** Measurement of Anti-Bacterial activity on Plastics and other Non-Porous Surfaces.

3. DEFINATION

3.1 Component A (Powder part)

Special well graded fillers, cement and special additives to enhance properties that meet this standard.

3.2 Component B (liquid part)

The vehicle shall consist of a suitable emulsion binder, water, preservatives, and other additives as may be necessary.

4. REQUIREMENTS

4.1 Condition in Container

The product shall show no evidence of biological growth, skinning, putrefaction, and corrosion of the container.

4.2 Non-Volatile Content

The non-volatile content of the mixed coating shall be not less than $75\% \pm 2$ by weight when tested as per 2.5.

4.3 Consistency

The paint shall be in such a condition that stirring readily produces a smooth, uniform mixture of good consistency. It shall have a viscosity not less than 80 Krebs Unit (KU) at $23 \pm 2^\circ\text{C}$ when tested as per 2.6.

4.4 Lead Content

The lead content shall not exceed 0.009 % of the total mass of the paint when tested as per 2.7.

4.5 Application Properties

The mixture after recommended thinning shall be provide good results, and the resulting film shall give shall not show at the application any undesirable defects. 2.8.

4.6 Appearance of dried film

The dried film shall have smooth finish, free of sagging or wrinkling and shall not be inferior to a film prepared in the same way from the approved reference sample when tested as per 2.8.

4.8 Crack Bridging Ability

When tested for Crack Bridging Ability, the mixture film shall not less than 0.75 mm per when tested as per 2.9

4.9 Alkali Resistance

When tested for alkali resistance, the paint film shall show no signs of deterioration, blistering or surface defects after 15 days continuous exposure when applied on cement mortar block.

Note : The top surface of the cement block is coated with elastomeric emulsion paint at $100\mu\text{m}$. This coated side is facing upwards, while the half of the total thickness and the bottom uncoated surface of the cement block is immersed in the 3% Sodium Hydroxide solution. Sample is exposed at $39\pm 1^\circ\text{C}$.

4.10 Hydrostatic Pressure

The paint film with a dry film thickness of 2 mm dried for 28 days at $23 \pm 2^\circ\text{C}$ and not more than 50% relative humidity shall give no water penetration observed at 1.5 bar pressure when tested as per 2.9

4.11 Tensile Strength

The paint film with a DFT of 1.0 mm dried for 28 days at $23 \pm 2^\circ\text{C}$ and at a relative humidity of not more than 70% shall be more than 0.5 N/mm^2 when tested as per 2.6

4.12 Pot life

Not less than 60 minutes @ $23 \pm 2^\circ\text{C}$.

5. Storage Stability

The paint when stored at a temperature of $38\pm 5^\circ\text{C}$ in the original sealed containers shall retain the properties specified in this standard for a period of not less than 12 months.

6. SAMPLING

6.1 A representative sample of not less than 500 ml shall be taken from the paint in accordance with Saudi standard mentioned in 2.1.

6.2 Samples shall be prepared for testing in accordance with Saudi standard mentioned in 2.2 .

7. METHODS OF TESTING

Tests shall be carried out on the filled containers as well as on test samples taken in accordance with item 2.0.

7.1 Condition in Container

7.2 Non-Volatile Content

7.3 Consistency

7.4 Lead Content

- 7.5 Application Properties
- 7.6 Appearance of Dried Film
- 7.7 Self-Priming
- 7.8 Alkali Resistance
- 7.10 Hydrostatic Pressure
- 7.11 Alkali Resistance
- 7.12 Tensile Strength

8. PACKAGING

The paint shall be packed in clean, dry, airtight suitable containers. The containers shall be so filled as to leave an ullage of 15% maximum.

9. MARKING

Each container shall be legibly and indelibly marked with the following information in Arabic or in both Arabic and English.

- 9.1 Name, type and colour of the paint.
- 9.2 Name of the manufacturer and/or the trademark.
- 9.3 Country of origin and whether manufactured under license to a named brand/manufacturer
- 9.4 Batch number.
- 9.5 Date of production in month and year.
- 9.6 Mass and/or volume of the paint.
- 9.7 Application instructions.
- 9.8 Warning relating to flammability and toxicity where required.

REFERENCES

-DIN EN 14891 : 2013 LIQUID APPLIED WATER IMPERMEABLE PRODUCTS FOR USE BENEATH CERAMIC TILING BONDED WITH ADHESIVES