



SRO930 Levelling & Smoothing Metal Floors Prior to Installation of Resilient Floor Coverings

SCOPE

This recommendation is regarding the levelling & smoothing of metal floors such as in ships, oilrigs and warehouses prior to the installation of vinyl (sheet & vinyl composite tile) floor coverings as described in ARDEX Technical Bulletin TB100. This recommendation also applies to textile (carpet) floor coverings.

PREPARATION

This is the most important step in the whole process as failure to follow the preparation steps and incorrect epoxy priming will result in the levelling cement de-bonding due to reactions with the metal substrate. These preparation steps generally follow the Steel Structures Painting Council Guidelines (SSPC) for application between 15 – 25°C.

Note: *The metal flooring must be solid and well-fixed to the support framing. Aluminium deflects more easily than steel and must therefore be well attached. The deflection limits for metal floors are the same as for suspended concrete floor substrates where the allowable deflection can be no more than estimated from the formula "Span divided by 360" where span is the distance between the support framing.*

- Remove oil & grease from the metal substrates in accordance with SSPC – SP1 solvent cleaning. This can include steam cleaning.
- Abrasive blast steel and Brush blast Aluminium with non-metallic abrasive (e.g. garnet) in accordance with the epoxy manufacturers' requirements. This removes all mill scale, rust & oxidised metal as well as paint, old adhesives and other contaminants as per SSPC – SP6 recommendations.
- Apply a two pack zinc-phosphate epoxy primer at the recommended dry film thickness (minimum 40 microns) and let dry for 5 days (minimum) to achieve full cure. Do not allow access across this primed surface.
- Ensure the dry primed surface is free of all loose particles and dust or any other foreign matter prior to installation of the floor levelling system.
- Prime the clean surface with [ARDEX P 82](#) at a rate of 8 – 10m² per litre using a rubber squeegee and let dry to a thin clear, slightly tacky film. Minimum drying time is 3 hours, maximum is 24 hours.

LEVELLING

The ARDEX levelling /smoothing cements suitable for this application are:

- [ARDEX K 15 MICROTEC](#) (20kg) mixed with [ARDEX E 25](#) additive (1.6 litres) + water (4.0 litres).
- [ARDEX ARDITEX NA](#) two part levelling cement.

Pour the mixed liquid ARDEX Levelling Cement over the primed floor and spread with an **ARDEX T-4** Spreader to not more than 10mm thickness. Typically 3-5mm thickness is sufficient although up to 10mm thickness is possible. Use the **ARDEX T-5** Smoother to feather edge and touch up before the products have set.



For [ARDEX ARDITEX NA](#), a spiked roller can be used to smooth out trowel marks and achieve a smooth flat surface before the product has set.

Once the ARDEX levelling cement has fully set (approx. 2-4 hours at 23°C), any minor surface imperfections may be smoothed using ARDEX Feather Finish.

INSTALLATION OF SHEET VINYL AND VINYL COMPOSITE TILE (VCT)

Adhesive fix the sheet vinyl & VCT using the [ARDEX AF 545](#) Epoxy adhesive applied with a 0.8 x 1.6 x 2.0mm U-notch trowel at a rate of approx.6m² per litre.

INSTALLATION OF LINOLEUM SHEET FLOOR COVERINGS

Adhesive fix the sheet linoleum using the [ARDEX AF 545](#) Epoxy adhesive applied with a 0.8 x 1.6 x 2.0mm U-notch trowel at a rate of approx.6m² per litre.

INSTALLATION OF RUBBER TILES

Adhesive fix the rubber tiles using the [ARDEX AF 545](#) Epoxy adhesive applied with a 0.8 x 1.6 x 2.0mm U-notch trowel at a rate of approx.6m² per litre.

INSTALLATION OF TEXTILE FLOOR COVERINGS

Adhesive fix sheet carpet using the [ARDEX AF 266](#) Outdoor Carpet adhesive applied with a 3.2mm V3 trowel at a rate of approx. 2m² per litre.

All the above nominated adhesives shall be applied in accordance with the instructions on each data sheet with care being taken to avoid concentrations of adhesive. Observe any required adhesive "tack off" time and roll over the installed floor covering to achieve maximum contact.

Disclaimer:

The recommendation selected is based upon questions answered on the ARDEX Australia website. This recommendation is designed as a general application for your described situation and should not be considered site specific documentation for general distribution. Always consult the latest relevant ARDEX Technical Bulletins and information on the product packaging and/or product data sheets (available on the ARDEX Website). Australian and other relevant standards should be followed during installation. If you have any further questions or would like further clarification please contact the ARDEX Technical Services Hotline on 1800 224 070 (9am to 5pm Monday to Friday).