



## 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, plank & 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 ULTRAPRIME](#) at a rate of 8 – 10m<sup>2</sup> 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 Compound 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 levelling compound has fully set (approx. 2-4 hours at 23°C), any minor surface imperfections may be smoothed using ARDEX Feather Finish.

The various floor finishes can now be applied. Tile finishes can be achieved with appropriate ARDEX tile adhesives & grouts. Resilient floor coverings can be installed using the following NEXUS Adhesives:

- For sheet vinyl coverings, use **NEXUS 880** High Performance Vinyl Sheet Adhesive.
- For vinyl plank use **NEXUS 880** or **NEXUS 870** Vinyl Plank Adhesive.

All ARDEX products and NEXUS adhesives shall be mixed and used in accordance with the product data sheets.

*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).*