

TECHNICAL BULLETIN – TB026

ARDEX UNDERLAYMENTS FOR STATIC CONTROL SHEET VINYL FLOORING INSTALLATION AND ELECTROSENSITIVE MATTING

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INTRODUCTION & SCOPE

Computer, electronics and telecommunications installations, hospital operating theatres, preparation rooms, defence establishments, telephone exchanges, ordinance manufacture and storage facilities often require the use of “Static Control” Vinyl Floor Coverings to minimise or eliminate the risk of electro-static discharge.

Static-Control Vinyl Flooring requires a substrate of known resistance. Concrete subfloors have electrical conductivity that can vary greatly and may have resistance that is lower than the minimum stated in the “Static Control” Vinyl Flooring specifications.

A recent system introduced into health care facilities is electrosensitive matting which is placed under the flooring to detect falls by patients.

The ARDEX K15M and ARDEX K12N (both with ARDEX E25) and ARDEX K55 Self Smoothing Cement underlayments installed at a minimum 3mm provides the necessary isolation barrier of known resistance beneath the “Static Control Vinyl Flooring” and also a rapid drying underlayment for the special requirements of the matting.

The following procedure is for use where “Static Control” Sheet Vinyl requires a minimum 3mm isolating layer of self smoothing cement underlayment and where a copper strap earthing system is applied to the underlayment.

The matting system simply requires a flat, smooth and dry subfloor system.

INSTALLATION PROCEDURES

PRIMING

Concrete floors must be structurally sound with all previous coatings removed, clean and free of oil, grease, wax, latex compounds, curing compounds, efflorescence, laitance, dust and all foreign matter, back to an open porous matrix of the concrete.

Professional cleaning by mechanical means in line with sound building industry practices is advised and suggested cleaning & preparation methods in line with those recommended in ARDEX Technical Bulletin TB041 and AS1884-2012. Methods recommended include shotblasting, scarifying or diamond grinding to provide a surface profile of between CSP3 to CSP7.

APPLICATION

Primer for standard absorbent concrete shall be ARDEX P51 Primer. Mix ARDEX P51 1:2 with water and apply evenly with a soft push broom. Do not leave any bare spots and remove all puddles and excess primer. Allow to dry to a clear, thin film (min 3 hours max. 24 hours). Underlayment shall not be applied until primer is dry.

The cement-based self-smoothing underlayment shall be ARDEX K55 or either of ARDEX K15M or ARDEX K12N Self-Smoothing Cement. The additive to be mixed with ARDEX K15M or K12N shall be ARDEX E25 Resilient Emulsion as follows -

K15M	20kg powder	1.6 litres E25	4.0 litres water
K12N	20kg powder	1.0 litres E25	4.5 litres water

Underlayment shall be applied to a minimum of 3mm over the highest point in the floor.

Notes:

Where "Static Control" type flooring is installed it is usual to check that the conductivity of the completed floor is not higher than the maximum required as specified by the "Static Control" Vinyl Flooring manufacturer. Always refer to the Flooring Manufacturer for specific "Static Control" requirements.

The electronsensitive matting requires critical moisture levels, so moisture barrier systems may be necessary under the smoothing cement, and the underlayment needs to be fully cured and dried.

Where the subfloor is metal decking, ARDEX Technical Services can provide advice or refer to ARDEX Technical Bulletins TB100.

Particle board and similar wooden floors are not suitable for this system.

IMPORTANT

This Technical Bulletin provides guideline information only and is not intended to be interpreted as a general specification for the application/installation of the products described. Since each project potentially differs in exposure/condition specific recommendations may vary from the information contained herein. For recommendations for specific applications/installations contact your nearest ARDEX Australia Office.

DISCLAIMER

The information presented in this Technical Bulletin is to the best of our knowledge true and accurate. No warranty is implied or given as to its completeness or accuracy in describing the performance or suitability of a product for a particular application. Users are asked to check that the literature in their possession is the latest issue.

REASON FOR REVISION

Bulletin title change. Slight rewording on the clause concerning surface preparation. Addition of K55. Addition of allowance for ESM systems for health care.

REVIEW PERIOD

24 months from issue

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