**UNITILE UCS 28mm- EDGE SUPPORT RIGID GRID (ESRG) SYSTEM**

**System Description:**

**Panel:**

Unitile Calcium Sulphate (UCS) access flooring system is manufactured using calcium sulphate core of 28 mm thickness imported from **Knauf Germany** having a very high density of **1700** Kgs /mtr3 of Natural gypsum.

The panel is designed in a way it offers excellent acoustical sound deadening value, also offers a high degree of walking comfort ensuring perfect working environment. The panel also possesses electrostatic characteristics.

**Pedestal:**

The pedestal assembly shall provide easy adjustment of leveling and accurately align panels for a maximum ± 25 mm in the vertical direction. The Pedestal head assembly shall consist of embossed head mechanically riveted to a rolled formed stud and 2 check nuts for level adjustment and arresting vertical movement. The pedestal head shall consist of an anti-vibration conductive cap with inbuilt isolating spacers for Panel and stringer location.

**Stringers:**

The stringer shall be continuous box type, for strength, lateral stability, and for enhanced rolling load performance and to support the panels on all four sides for alignment without leaving any gap at the pedestal head preventing air leakage.

All steel components shall be Hot Dip Galvanized.

**Image**

Panel Illustration

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| **Category** | Laminated, Edge Support Rigid System (ESRG) |
| **Core Material** | Calcium Sulphate |
| **Panel Construction** |  |
| **Panel size** | 600 x 600mm, |
| **Panel thickness** | 28 mm |
| **Panel Weight** | 18 Kg |
| **Weight of System** | **56 kg/m2 for FFH 300mm (varies with height)** |
| Pedestal height | 65mm – 2000mm |
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**Panel Construction:**

The UCS floor panel is manufactured from 1700 kg/ mtr3 fiber reinforced calcium sulfate, which forms the core of the panel. Non- combustible high quality alpha-hemihydrate single pressed gypsum and non-toxic unbleached cellulose fibers are used as reinforcing material. The core is manufactured using a unique technique of compressing multiple layers of natural gypsum to guarantee homogenous density across the panel and have high resistance to water absorption.

The top & bottom surface of the core is fully bonded and laminated by Al/ GI sheet respectively & then trimmed to fine dimensional tolerances for modular control, accurate alignment of the grids, interchangeability of panels and prevention of creep. The design incorporates a full depth ABS edge band, which while providing total encapsulation of the calcium sulphate core also protects the edge of the surface covering and resists ingress of moisture.

**Feature Benefits:**

* High strength to weight performance
* Excellent fire resistance properties tested as per Class O and Class 1 standards
* Precision in floor levels and positive alignment with the understructure
* Good acoustical properties
* Unique In-built stringer design
* 90-97% UCS panels can be recycled at the end of their life

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| **UCS 28 mm - Structural Performance: Raised access Floors as per BSEN 12825** | | |
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| **Classification** | **Deflection** | **Concentrated Load Kgs/ kN** |
| Class A | 2.5 mm | 600 / 5.88 |
| Class B | 3.0 mm | 680 /6.66 |
| Class C | 4.0 mm | 820 / 8.03 |
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| Ultimate Concentrated Load | 1837 / 18.00 kN |  |
| Uniformly Distributed Load Kg/m² | 1377 kg/m² |  |

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| **Rolling Loads** | **Kgs ( lbf)** |
| Stringer Load | 102 Kgs (225 lbf) |
| Pedestal Axial Load | 22 kN |
| Pedestal Over Turning Moment | 113 N x Meters |
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| **Other Structural Parameters:** |  |
| Soft body impact | Tested as per (T12.03) of MOB PF2 PS Standards |
| Hard body impact | Tested as per (T12.03) of MOB PF2 PS Standards |
| Fire Rating | Class O & Class 1, as per BS 476 Part 6 (Fire Propagation) & 7 (Surface spread of flame). Rated REI 30 as per 1366-6 under BSEN 13501-2. |

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| **Application** | |
| General Office | No |
| Training Room | No |
| Auditorium | No |
| Data Center | Yes |
| Computer Room | Yes |
| Server / Hub Room | Yes |
| Switch Room | Yes |
| Communication Room | Yes |
| Control room | Yes |
| Hotel | No |
| Library | No |
| Hospital | No |

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| **Factory Bonded Finishes** | |
|  | Available |
| Bare | No |
| Modular Carpet | No |
| Marble | Yes |
| Vinyl | Yes |
| HPL | Yes |

Note: If any

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| **Special Applications** | |
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| Bridging Sections | Where obstructions prevent the use of pedestals |
| Ramp Pedestals | Pivot head pedestal to support angled ramp panels |

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| **Fabrication Tolerance** | |
| Floor Panel Flatness | ± 0.75 mm in any direction |
| Floor Panel Width or Length from the specified size | ± 0.50mm |
| Floor Panel Squareness | ± 0.38 mm |

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| **Installation Tolerance** | |
| Overall level before application of any load | ± 1.5 mm over any 5.00 Sq mt.  ± 6 mm over any size of basic space |
| Panel Level | + 0.75 mm before the application of any load |
| Panel Interchangeability installation and removal | Interchangeable (except for field cut panels) and replaceable in any of the four directions at 90º increments |

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| **Electrical Resistivity** - As per ASTM F150/ NFPA 99 / ANSI S7.1 / CEI 61340 but modified for the surface to the ground. Tested at 100/500 volts: | | |  |
| Conductive range | 2.5x104 - 1x106 Ohms (surface to ground) |  |
| Static dissipative range | 1x106 - 1x109 Ohms (surface to ground) |  |
| Anti-static range | 1x109 - 2x1010 Ohms (surface to surface) |  |