SAS385 NEXUS
DATASHEET

TECHNICAL PERFORMANCE

Reaction to Fire

BS EN 13501-1 Classification	A1 - Plain tiles with polyester powder coating finish
ASTM E84/UL273 & CAN/ULC S102:2018	Class A (Plain tiles) Flame spread 10, Smoke development 5 (Plain tiles with polyester powder coated finish)
AUS ISO 9705	Group 1 (Plain tiles without acoustic backing)

Light Reflectance: Up to 86.07% (for RAL 9016 plain tiles, further information is available upon request)

Service Life: 40 years plus

Warranty: 25 years

System Weight

Module Size	Tile Included	Weight
1200x1200	No	4.0kg/m^2
1200x600	No	6.0kg/m^2
1200x1200	Yes (steel)	10.0kg/m^2
1200x600	Yes (steel)	12.0kg/m^2

MATERIAL HEALTH

VOCs: <0.5 µg/m^3 (tested in accordance with Indoor Comfort Gold and California Department of Public Health standards)

Formaldehyde Class: E1 in accordance with BS EN 13964:2014

REACH / LBC Red List: Product contains no substances on the authorisation, restriction or candidate list found on the current REACH SYHC or LBC Red List to 0.1% or 100ppm

SUSTAINABILITY

Circularity: Product suitable for reuse, refurbishment and repurposing

Install and Disassembly: Installation and disassembly / cycling guides available

STRUCTURAL PERFORMANCE

System Performance Criteria

Hanging Method	Grid Load Performance (with structural connections and 1.2m x 1.2m centres) [1]	Connection to Bottom Slot [2]	Connector to Grid
Safe Working Point Load [3]	4.8kN @ 6mm deflection	4.8kN [4]	
Safe Working Uniform Load [3]	6.5kN/m^2	N/A	
Ultimate Point Load	9.6kN	9.6kN	

1 Load can be placed anywhere on the ceiling including the noggin. Mid-span maximum point load no less than 1.2m apart in any direction
2 Load support no further than 100mm from rod connector
3 FoS of 2 applied
4 The safe working point load applied to hanger is limited to 4.6kN when a turnbuckle connection is used

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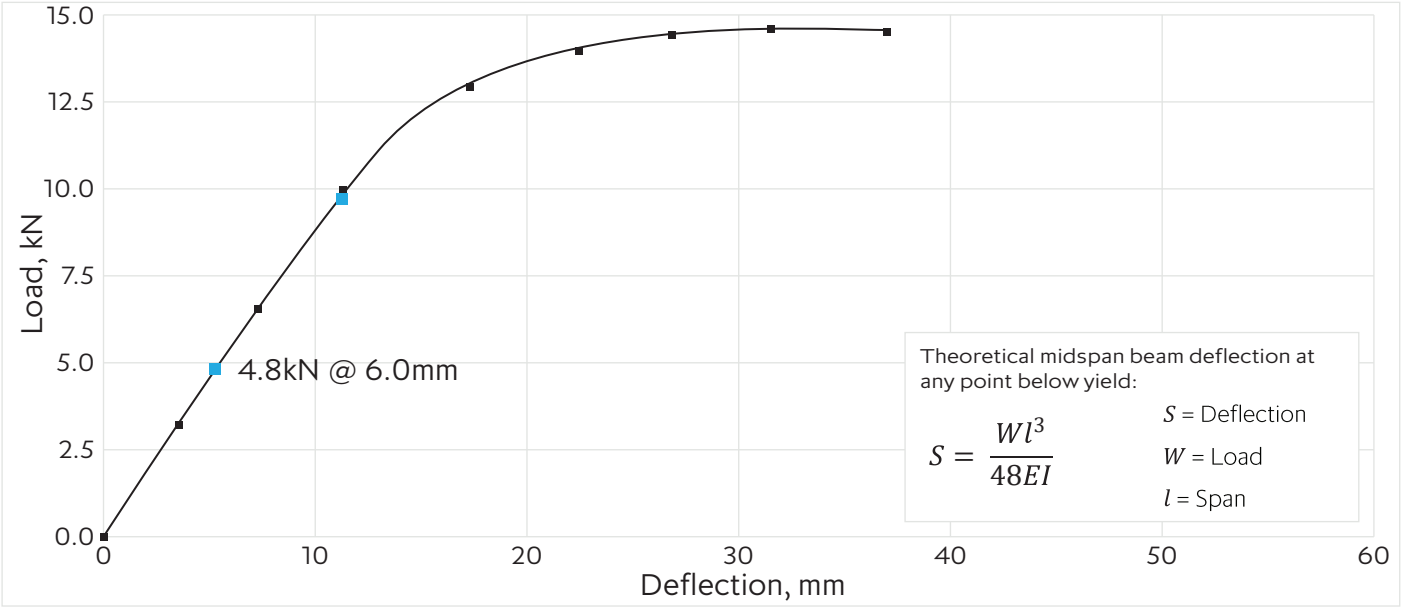
DATASHEET

Lateral Stability: For a 1.2m x 1.2m grid, the following maximum lateral loads could be applied based on a L/200 mid-span deflection. It should be noted that the system can resist larger values if the lateral restraint is located close to the point load. Further information can be provided upon request.

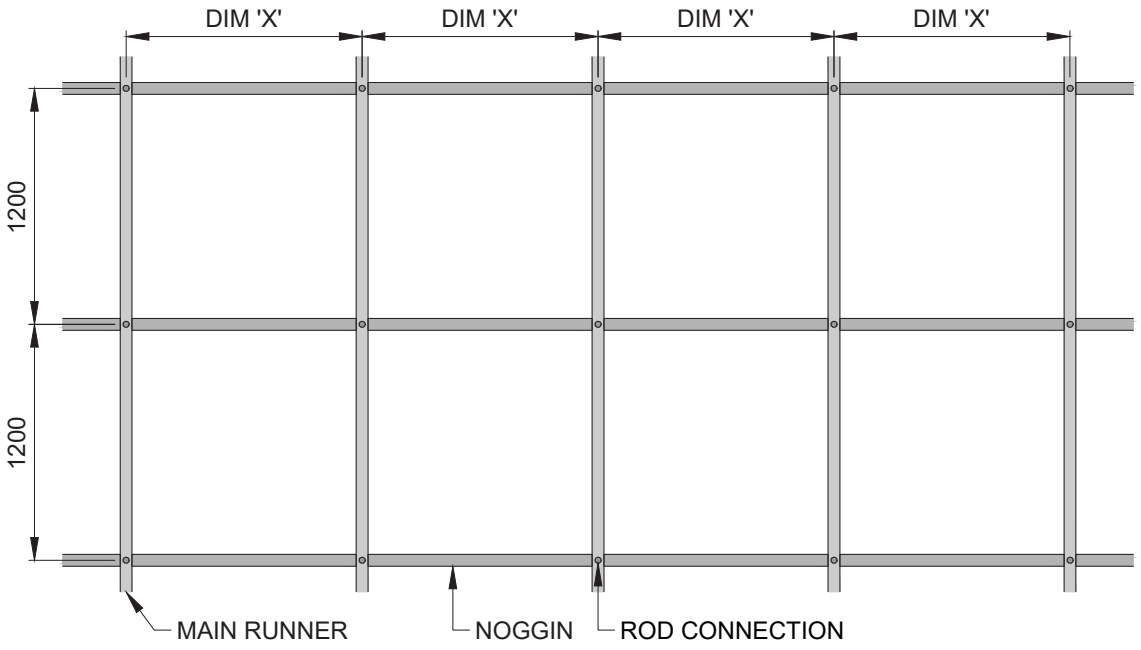
Lateral Resistance	Maximum Lateral Load @ L/200
Every other hanger position (**2.4m max**)	1.0kN
Every third hanger position (**3.6m max**)	0.5kN

Mid-span Point Load: Maximum mid-span point load for continuous main runner or cross noggin with adjacent 1.2m spans loaded



Span Table: For use when a member span and spacing greater than 1200mm is used

Member Span and Spacing, Dim 'X' (mm)	1200	1500	1800	2100	2400
Maximum Allowable Uniform Area Load (kN/m²) [1]	6.5kN/m²	4.1kN/m²	2.8kN/m²	1.8kN/m² *	1.2kN/m² *
Maximum Mid-Span Point Load (kN) [1]	4.8kN	3.8kN	3.1kN	2.7kN	2.2kN *
Maximum Static Point Load (kN) [2]	4.8kN	4.8kN	4.8kN	4.8kN	4.8kN



1 Values marked with an asterisk are governed by a deflection limit of L/100
2 Load when applied to bottom slot for spans of 1500mm and greater is dependent on relative position to hanger. Consult SAS International for further information

SAS385 NEXUS
DATASHEET

STRUCTURAL PROPERTIES

Second Moment of Area, Ixx: 444,561mm^4

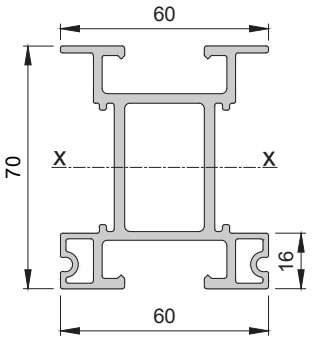
Area: 827mm^2

Young's Modulus, E: 69kN/mm^2

Aluminium Grade: 6005A T6

Steel Grade: All supplementary components sold by SAS are Grade 8.8 & S275 steel

M10 Turnbuckle Safe Working Load: 4.6kN



Disclaimer:
Quoted safe working loading and associated deflection values are based on both a structural assessment and UKAS accredited physical testing data. A factor of safety of 2 has been applied to assessed yield point values to determine safe working loads. This approximates to a combined load factor and material factor when a structural assessment to Limit State-based design codes of practice are used.
Safe working loads are also limited to a value such that a deflection limit of L/100 is not exceeded. Safe working loads to ensure compliance with more onerous deflection limits of L/200 and L/300 are also provided.
Note that the system is designed to be used as both an open configuration (without ceiling tiles) or as a closed configuration (with ceiling tiles). The weight of the ceiling tile must be included within the applied loading assessment, as appropriate.
For all proposed installations, a technical assessment carried out by a suitably qualified person is advisable. This should include proposed applied loading, system configuration and permitted limits. Advice and further information are available from SAS International upon request.