DesertBoard.

TABLE FOR TECHNICAL SPECIFICATION - PSB CONFORM

PSB CONFORM TESTINGS	TEST METHOD	UNIT	REQUIREMENT BOARD THICKNESS RANGE (mm)		
			9 to 10	> 10 to 16	> 16 to 25
Bending strength - major axis	EN 310	N/mm^2	22	20	18
Bending strength - minor axis	EN 310	N/mm^2	11	10	9
Modulus of elasticity in bending - major axis	EN 310	N/mm^2	3500	3500	3500
Modulus of elasticity in bending - minor axis	EN 310	N/mm^2	1400	1400	1400
Internal bond	EN 319	N/mm^2	0.50	0.45	0.40
Swelling in thickness - 24 h immersion	EN 317	%	12	12	12
IB After Boiling test	EN 1087-1	N/mm^2	0.17	0.15	0.13

PSB FR

Fire-rated boards are specialized materials engineered to enhance the fire resistance of door cores and frames, playing a critical role in building safety and compliance with fire protection standards. These boards are specifically designed for use in the construction of door cores, ensuring that they can withstand high temperatures and resist the spread of flames and smoke during a fire event. Their certification is exclusively applicable to door cores and frames, underlining their tailored application and effectiveness in this context.

The boards comply with several rigorous standards, including EN1634-1, which evaluates the fire resistance of doors and shutters. They also meet UL-10C, a standard that assesses the performance of door assemblies in fire conditions, ensuring they provide adequate protection and containment. Additionally, compliance with BS 456 Part 22 further validates their fire-resistant properties, focusing on the performance of fire doors and their ability to withstand heat and flame for specified durations.

With these certifications, fire-rated boards are essential components in fire safety planning, helping to ensure that structures meet legal requirements and provide necessary protection to occupants in the event of a fire. Their specialized design and rigorous testing make them a reliable choice for architects and builders committed to enhancing safety in their projects.

PSB FR boards are primarily certified for use in door cores and frames, offering proven fire resistance to meet established safety standards. It's important to note that, as of now, our boards are certified only for door core and frame applications according to relevant fire safety standards. This certification ensures that the boards meet specific fire protection requirements, ensuring the integrity and performance of fire-rated doors in both commercial and residential environments.

While PSB boards are natural fire resistance without the addition of fire retardants, makes them a reliable option for improving overall fire safety in various other applications. These boards have been tested and approved to Class C under EN 13501-1 and Class B under the E84 standard, demonstrating their inherent resistance to fire and their ability to slow the spread of flames.

Although applications such as fire-rated wall assemblies**,** fire-rated partition walls, and boards make them a practical choice for these uses, provided they align with the appropriate fire safety designs and local regulations. However, it's crucial to recognize that these additional applications do not carry the same certification as our door core and frame products. Fire-rated applications must adhere to clearly defined standards for materials, and any material used in these systems should be evaluated and tested to meet those specific requirements.

In summary, while PSB FR boards are certified for door cores and frames, their fire resistance and reliable performance make them an excellent option for other applications aimed at improving fire safety. However, any use outside of the certified applications should be carefully considered and aligned with the appropriate fire safety standards and regulatory requirements.

Features

- High fire resistance, contributing to enhanced safety in building designs.
- Maintains structural integrity under high-temperature conditions.
- Can be integrated into fire-rated door assemblies for added protection.

Major Applications

- **Fire-Rated Doors/Frames (certified)**: Essential for constructing doors that need to comply with fire safety regulations in commercial and residential buildings.

Other Applications (C Class in EN 13501-1 / B Class in E84)**:**

- **Integration in Building Systems**: Can be used as part of fire-rated wall assemblies in various commercial and industrial settings to provide passive fire protection.

- **Fire-Rated Partition Walls:** Ideal for creating fire-rated partitions in offices, hospitals, and public buildings, ensuring compartmentalization in case of a fire.
- **Ceiling Systems:** Effective for fire-rated ceilings in commercial buildings, helping to contain fire and smoke, thereby providing additional escape time for occupants.
- **Smoke Barriers:** Can be used to create smoke barriers in large open spaces, such as shopping malls or warehouses, aiding in smoke control during a fire.
- **Fire Doors for Critical Infrastructure:** Used in fire doors for critical infrastructure facilities such as data centers, where fire safety is paramount for protecting sensitive information.
- **Temporary Fire Barriers:** Effective for use in temporary fire barriers during construction activities to protect ongoing works and adjacent areas.

The flexibility of PSB FR boards highlights their potential for enhancing fire safety in a range of building and construction applications. However, it is essential to note that their certified use is strictly limited to door cores and frames. While their inherent fire-resistant properties make them a reliable choice for other fire-rated applications, these uses are not officially certified. Any expansion beyond certified applications should be approached with caution and in full compliance with relevant fire safety standards.

TABLE FOR TECHNICAL SPECIFICATION - PSB FR DOOR CORE

PSB FR DOOR CORES TESTINGS	TEST METHOD	UNIT	REQUIREMENT BOARD THICKNESS RANGE (mm)				
			9	18	21.8	27.5	44
Bending strength - major axis	EN 310	N/mm^2	20	16	16	16	10
Bending strength - minor axis	EN 310	N/mm^2	10	8	8	8	5
Modulus of elasticity in bending - major axis	EN 310	N/mm^2	2500	2500	2500	2500	2500
Modulus of elasticity in bending - minor axis	EN 310	N/mm^2	1200	1200	1200	1200	1200
Internal bond	EN 319	N/mm^2	0.30	0.28	0.28	0.28	0.23
Swelling in thickness - 24 h immersion	EN 317	%	20	20	20	20	20