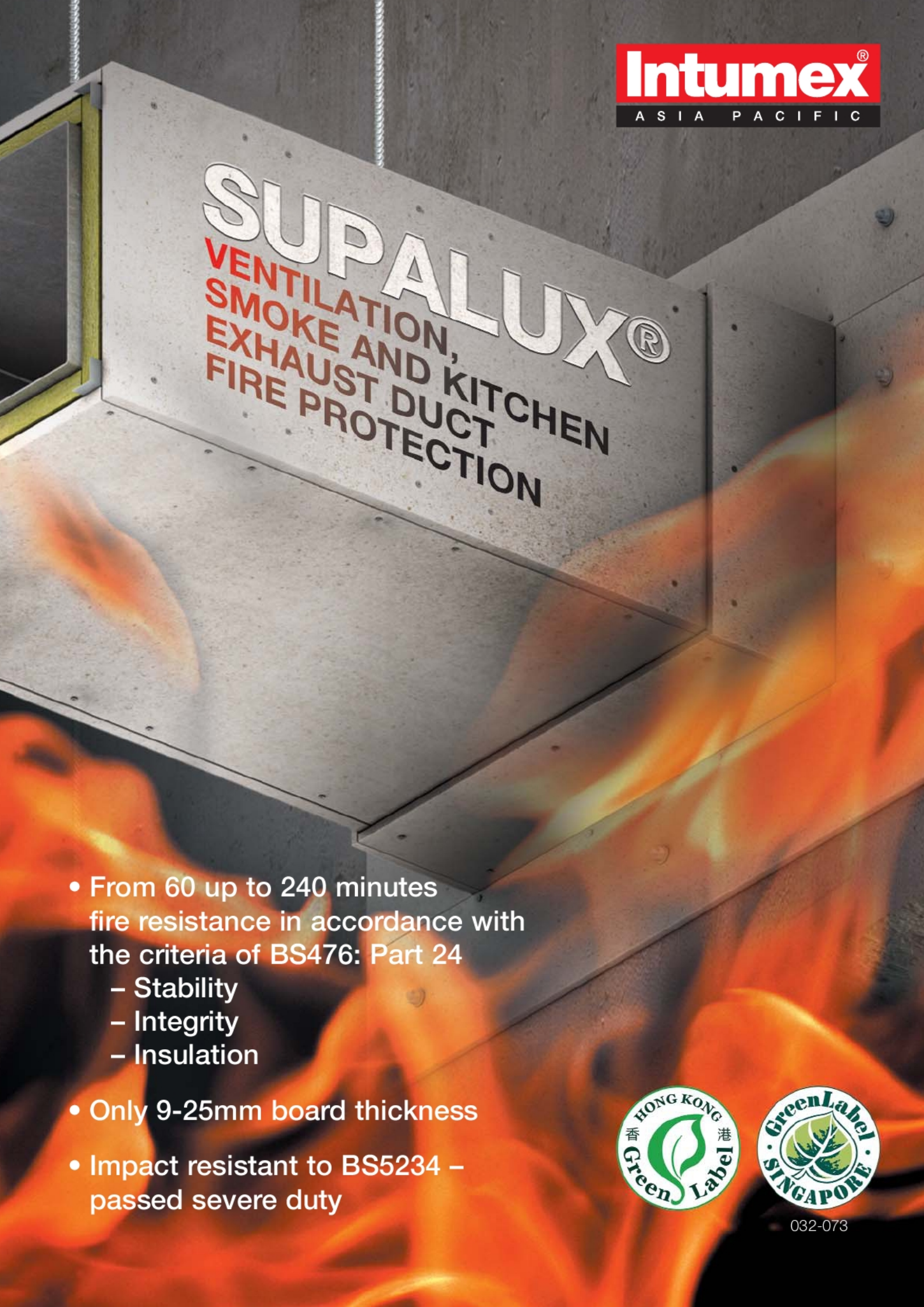


- From 60 up to 240 minutes fire resistance in accordance with the criteria of BS476: Part 24
  - Stability
  - Integrity
  - Insulation
- Only 9-25mm board thickness
- Impact resistant to BS5234 – passed severe duty

HONG KONG 香港 Green Label

GreenLabel SINGAPORE

032-073

SUPALUX®

VENTILATION, SMOKE AND KITCHEN EXHAUST DUCT FIRE PROTECTION

If you have heard of SUPALUX®, you are probably aware that the origin of fire resistant calcium silicate board began here. SUPALUX® consist of a calcium silicate matrix of reinforced fibres and fillers, absolutely free of asbestos. The SUPALUX® formula is cured to form a dimensionally stable board through an autoclave process where the board is subject to high pressure and temperatures. The result is a board that is lightweight, has a high impact resistance, high fire resistance, and with all the excellent qualities that SUPALUX® has being delivering to a loyal following of customers and end users for more than 25 years.

EFFECT OF MOISTURE

Saturate a SUPALUX® board in water and allow it to dry and see the return to its original condition with almost no degradation. Moisture and dampness has no permanent effect on the mechanical or fire performance of the material. It is therefore possible to install SUPALUX® at any time in the building programme.

IMPACT RESISTANT

A SUPALUX® wall construction has fulfilled all the severe duty requirements for impact, crowd pressure, deflection and multiple cycles of door slam in accordance with British Standard 5234, proving its excellent impact resistance.

THERMAL

SUPALUX® has a very low thermal conductivity of 0.21W/mK.

BIOLOGICAL

Fibres and fillers in SUPALUX® do not attract insects or vermin and do not support mould growth.

CHEMICAL

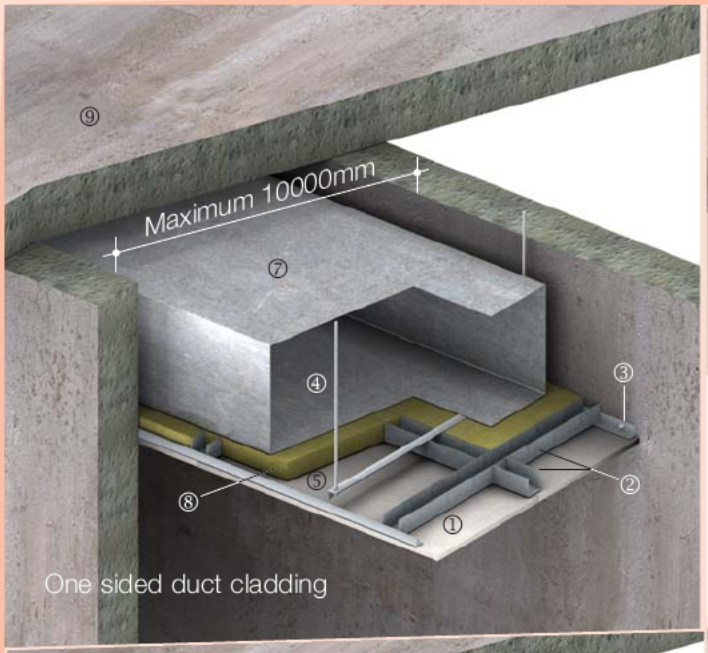
SUPALUX® is not affected by brine or dilute chlorine and other chemical solutions. It is also resistant to low concentrations of most acids, alkalis, bleaching agents and solvents

COMPATIBILITY

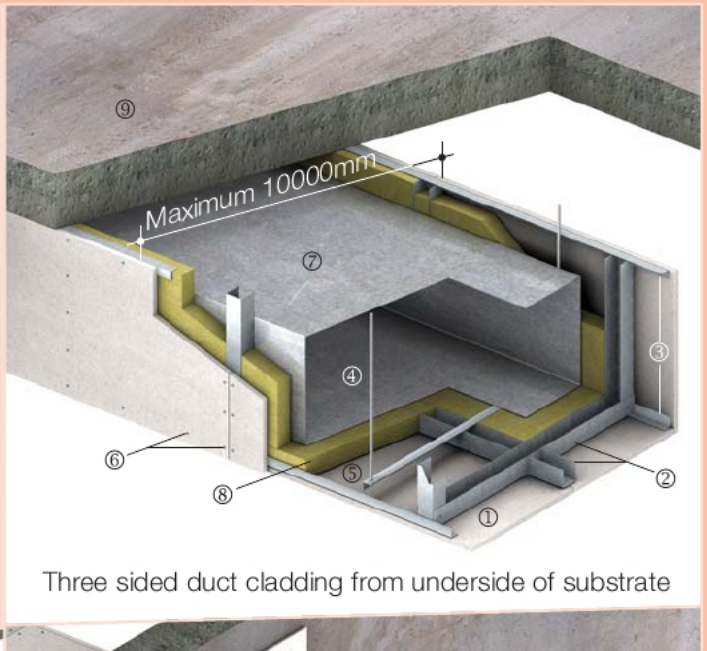
SUPALUX® is compatible with most building materials, non-caustic and will neither promote corrosion nor affect bituminous compounds.

The surface of SUPALUX® can readily receive many forms of architectural treatments from painting, wallpapering, waterproofing membrance, tiling, and other common aesthetics finishes. It is advised that the manufacturers instructions of these treatments should always be strictly adhered to.

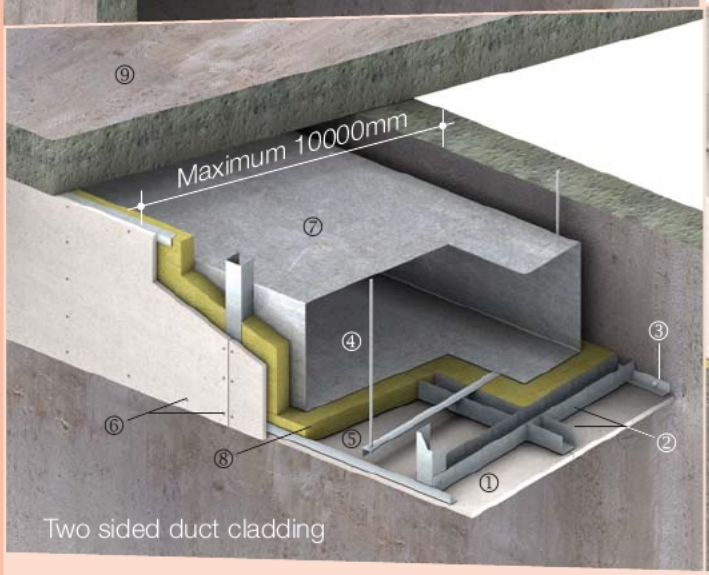
From top: SUPALUX® post cladding steel ducts in the solar panel plant of Renewal Energy Corporation, Park Hotel and ION Orchard, Singapore.



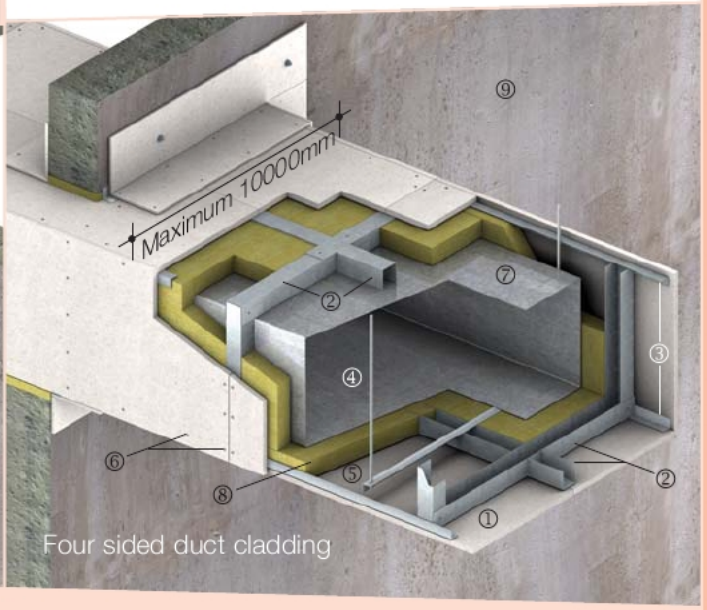
One sided duct cladding



Three sided duct cladding from underside of substrate



Two sided duct cladding



Four sided duct cladding

① SUPALUX® board
15mm thick for FRL of 120 minutes
25mm thick for FRL of 240 minutes

② Steel channels 50mm x 50mm x 0.6mm thick folded around duct at cross joints

③ Steel angles minimum 50mm x 50mm x 0.6mm thick at corner joints, fixed to substrate using M6 anchor bolts at nominal 200mm centres where necessary

④ Steel rod hangers of diameters and spaced at centres in accordance to the stress limits, i.e.
15N/mm² for FRL of 60 minues
10N/mm² for FRL of 120 minues
6N/mm² for FRL of 240 minues

⑤ Steel angles minimum 50mm x 50mm x 0.6mm thick according to duct weight and size and maximum permitted stress levels

⑥ No.8 self-tapping screws at nominal 200mm centres

⑦ Air duct of galvanised steel sheet

⑧ Mineral wool
2 layers of 25mm x 100kg/m³ for FRL of 120 minutes
2 layers of 50mm x 100kg/m³ for FRL of 240 minutes

⑨ Ceiling or wall substrate

NOTE:

These methods are in accordance with the approval of assessment report no. **WF 172243 ISSUE 2**.

All gaps and imperfection of fitting to the substrate are to be sealed with Intumex® AN Fire Stopping Acrylic.

For more details on multiple ducts in one cladding, impact resistance requirements and installation, please contact Intumex Asia Pacific.

Intumex® ASIA PACIFIC

SPECIFICATION & PROPERTIES

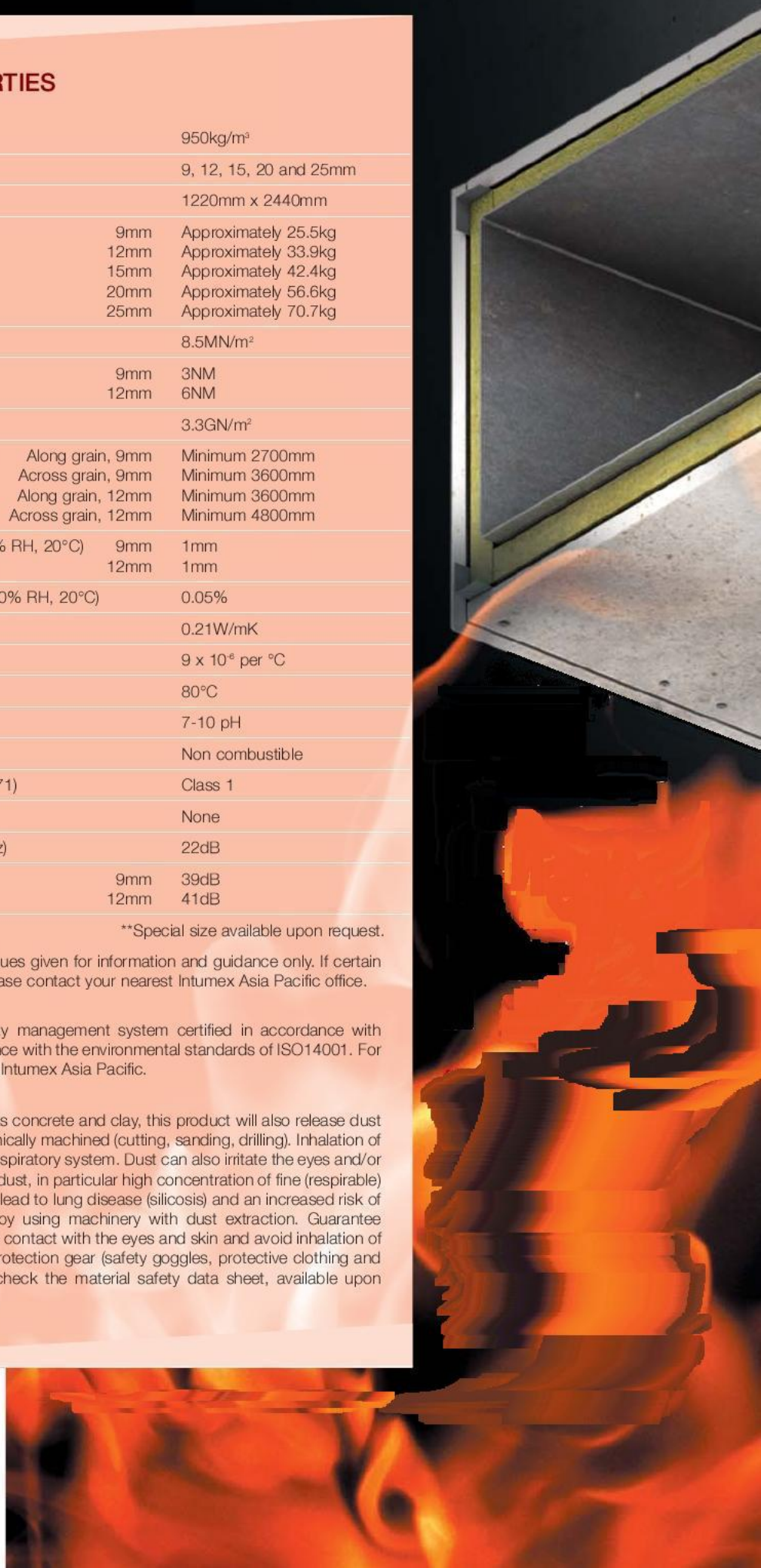
Density (nominal at EMC*)		950kg/m³
Thickness		9, 12, 15, 20 and 25mm
Width x Length**		1220mm x 2440mm
Weight	9mm	Approximately 25.5kg
	12mm	Approximately 33.9kg
	15mm	Approximately 42.4kg
	20mm	Approximately 56.6kg
	25mm	Approximately 70.7kg
Flexural strength (dry, BS4624)		8.5MN/m²
Hard body impact (BS8200)	9mm	3NM
	12mm	6NM
Flexural modulus (dry)		3.3GN/m²
Bending radius	Along grain, 9mm	Minimum 2700mm
	Across grain, 9mm	Minimum 3600mm
	Along grain, 12mm	Minimum 3600mm
	Across grain, 12mm	Minimum 4800mm
Sag, when suspended at 600mm span (95% RH, 20°C)	9mm	1mm
	12mm	1mm
Moisture movement ambient to saturated (30% RH, 20°C)		0.05%
Thermal conductivity		0.21W/mK
Coefficient of thermal expansion (100°C)		9 x 10^{-6} per °C
Maximum working temperature		80°C
Surface alkalinity		7-10 pH
Fire performance (BS476: Part 4: 1970)		Non combustible
Surface spread of flame (BS476: Part 7: 1971)		Class 1
Smoke or toxic gas emission		None
Acoustic reduction (over range 100-3150 Hz)		22dB
Sound attenuation	9mm	39dB
	12mm	41dB

*EMC: Equilibrium moisture content. **Special size available upon request.

The properties in above tables are mean values given for information and guidance only. If certain properties are critical for the application, please contact your nearest Intumex Asia Pacific office.

SUPALUX® is manufactured under a quality management system certified in accordance with ISO9001: 2000 Certification and in accordance with the environmental standards of ISO14001. For further technical information, please consult Intumex Asia Pacific.

GENERAL NOTE:
As for all products containing quartz, such as concrete and clay, this product will also release dust containing quartz particles when it is mechanically machined (cutting, sanding, drilling). Inhalation of high concentrations of dust can irritate the respiratory system. Dust can also irritate the eyes and/or the skin. The inhalation of quartz containing dust, in particular high concentration of fine (respirable) dust or over a prolonged period of time can lead to lung disease (silicosis) and an increased risk of lung cancer. Avoid the inhalation of dust by using machinery with dust extraction. Guarantee adequate ventilation on the work floor. Avoid contact with the eyes and skin and avoid inhalation of the dust by wearing appropriate personal protection gear (safety goggles, protective clothing and dust mask). For more information please check the material safety data sheet, available upon request from Intumex Asia Pacific.



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