

Blast Resistance Classes EN 13123 / 13124-1 and 13124-2

EN 13123 / 13124-1 and 13124-2 is the European standard for blast resistance of windows, doors and enclosures using a shock tube (124-1) or outdoor test (124-2). The Shock Tube test uses air pressure within a chamber to simulate a blast and the outdoor test uses an equivalent of a TNT explosive charge. When the shock wave from a blast encounters an obstacle it creates a pressure peak for a certain duration – the standards measure the resistance of the tested materials to the impact created by the pressure peak.

EN 13123 / 13124-1 – Shock Tube Test

Resistance Class	Peak Pressure (bar)	Positive Impulse (I+)(bar.ms)	Duration (ms)
EPR1	0.5	3.7	≥20
EPR2	1	9	≥20
EPR3	1.5	15	≥20
EPR4	2	22	≥20

EN 13123 / 13124-2 – Outdoor Test

Resistance Class	Mass explosive charge (kg)	Distance (m)	Peak Pressure (bar)	Positive Impulse (I+)(bar.ms)
EXR1	3	5	2.5	3
EXR2	3	3	8	5
EXR3	12	5.5	7	7
EXR4	12	4	16	10
EXR5	20	4	28	15

Test results should include S = splintering / NS = non-splintering