

Mars® steels for military applications

Threat			Mars® 380		Mars® 440		Mars® 500		Mars® 550		Mars® 600		Mars® 650		Multi-layer system examples (from strike face to back face)					
			Recommended minimum thickness for protection (mm)																	
Stanag 4569 KE Threat Level		i	Th	AD** (kg/sqm)	Th	AD** (kg/sqm)	Th	AD** (kg/sqm)	Th	AD** (kg/sqm)	Th	AD** (kg/sqm)	Th	AD** (kg/sqm)	Multi-layer system					AD** (kg/sqm)
															Grade / thickness		AG*** (mm)	Grade / thickness		
1	7,62 x 51 Nato ball	0°	10,5	82	8,3	65	6,3	49	8,7	68	5,0	39	5,5	43	Mars®650 – 5,2mm	0	Glass fibers – 6mm	-	-	54
	5,56 x 45 Nato SS109																			
	5,56 x 45 M193																			
2	7,62 x 39 API BZ	0°	13,5	106	13	102	12,5	98	10	78	8,5	67	7,5	59	Mars®600 – 4,5mm	30	Mars®500 – 6,5mm	-	-	86
		30°	7	55	-	-	6	47	-	-	6	47	-	-	Mars®650 – 5,4mm	0	Aramid fibers – 9mm	-	-	57
															-					
3	7,62 x 54R API B32	0°	18	141	-	-	16	126	-	-	14	110	13	102	Mars®600 – 5mm	15	Mars®600 – 6,5mm	-	-	90
															Mars®600 – 5mm	10	Mars®380 – 8mm	-	-	102
	7,62 x 51 AP WC	0°	23	181	20,7	162	20,5	161	-	-	-	-	-	-	Mars®600 – 9mm	15	Mars®380 – 13,5mm	-	-	177
															Mars®650P – 6mm R6T10	30	Mars®650P – 8mm R8T12	15	Mars®500 – 12,5mm	167
															Mars®600 – 7mm	10	Mars®650P – 6mm R6T10	10	Mars®600 – 8,5mm	153
															Mars®650P – 6mm R6T10	30	Mars®650P – 8mm R8T12	35	Mars®600 – 8,5mm	136
															-					
															60°	8,5	67	8	63	8
4	14,5 x 114 API B32	0°	37	290	35	274	-	-	-	-	-	-	-	-	Mars®600 – 14mm	0	Mars®380 – 13,5mm	-	-	216
															Mars®600 – 8,5mm	20	Mars®600 – 8,5mm	20	Mars®500 – 8mm	196
															Mars®600 – 8,5mm	30	Mars®380 – 15mm	-	-	184
		30°	23	181	-	-	-	-	-	-	-	-	-	-	Mars®500 – 6mm	30	Mars®380 – 13,5mm	-	-	153
5	25 x 137 APDS-T	60°	34	267	-	-	-	-	-	-	-	-	-	-	Mars®650P – 12mm R12T18	100	Mars®650P – 6mm R6T10	100	Mars®380 – 15mm	206
	25 x 137 APFSDS-T	-	-	-	-	-	-	-	-	-	-	-	-	-	-					

**AD : Areal Density

***AG : Air Gap

Mars® 650P = Perforated Mars® 650

All tests are carried out at Stanag recommendations speeds.

All information in this document is for information purpose only. Final configuration must be tested on vehicle.

Looking for a specific multi-layer configuration of for protection against a threat that is not included in this table?
Please contact us for recommendation
Industeel reserves the right to change its product range at any time without prior notice.

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