

Product		Application	Density (g/cc)	RWS%	RBS%	VOD (km/s)	Rec. Min. Blasthole Diam. (mm)	Rec. Max. Blasthole Depth (m)	Rec. Max. Charge Length (m)	Hole Type	Rec. Max. Sleep Time	Gassed	Reactive Ground		
COAL	ANFO		Dry blasting applications		0.80	100	100	2.5–4.8	76	80	75	Dry	42 days	No	No
	Fortan Coal	10 11 12 13	Increased bulk strength for dry holes in open cut coal mines		1.00	106	132	2.5–5.8	115	80	75	Dry	21 days	No	No
					1.10	111	153	2.5–5.8	115						
					1.20	115	172	2.8–6.1	127						
					1.28	118	189	3.1–6.3	150						
	Aquacharge Coal		Cost effective blasting for dewatered holes		1.20–1.25	111–116	166–173	4.0–6.3	120	80	45	Dry/dewatered	21 days	Yes	No
	Fortis Coal S Coal H		Reliable wet hole blasting in open cut coal mines		1.15–1.25	100–106 97–103 103–110	144–166 139–161 148–172	3.7–6.5	115	50	45	Dry/wet/ dewatered	21 days	Yes	No
	Flexigel Coal		Soft ground applications in open cut coal mines		++Nominal density refer to TDS	47 54 71 78 84 90	29 40 75 92 109 128	2.5–4.1	200 200 200 100 150 150	60		Dry/dewatered Dry/dewatered Dry/dewatered Dry/dewatered Dry/wet	21 days	No	No
Fortis Deep		Reliable wet hole blasting in deeper holes		1.25	114	178	4.5–6.5	250	70	65	Dry/wet	21 days	Yes	No	
HARD ROCK	Fortan Advantage		Increased bulk strength for dry holes in open cut hard rock mines		1.00	107	134	2.5–5.8	115	30	25	Dry	21 days	No	No
	11 12 13			1.10	112	154	2.5–5.8	115							
				1.20	117	175	2.8–6.1	127							
				1.28	120	192	3.1–6.3	150							
				Aquacharge Advantage		Cost effective blasting for dewatered holes		1.20–1.25	108–118	162–176	4.0–6.3	120	30	25	Dry/dewatered
	Fortis Advantage S Advantage H		Reliable wet hole blasting in open cut hard rock mines		1.10–1.25	100–110 97–107 103–113	137–172 133–167 142–177	3.7–6.5	89	20	15	Dry/wet/ dewatered	21 days	Yes	No
Flexigel Advantage		Soft ground applications in open cut hard rock mines		++Nominal density refer to TDS	47 54 71 78 84 90	29 40 75 92 109 128	2.5–4.1	200 200 200 100 150 150	60		Dry/dewatered Dry/dewatered Dry/dewatered Dry/dewatered Dry/wet	21 days	No	No	
HOT AND REACTIVE GROUND	Fortan Eclipse		High bulk strength products for dry holes in mildly reactive environments		1.00	107	134	2.8–5.6	76	80	75	Dry	12 hrs reactive ground 21 days unreactive ground	No	Yes
	11 12 13			1.10	112	154	3.6–6.0	76							
				1.20	117	175	3.5–6.0	102							
				1.30	121	194	4.0–6.8	150							
				Aquacharge Eclipse		Cost effective blasting for dewatered holes in mildly reactive environments		1.20–1.25	112–115	168–180	4.0–6.7	120	80	45	Dry/dewatered
	Fortis Eclipse S Eclipse H		Reliable wet hole blasting in mildly reactive environments		1.10–1.25	102–112 98–108 105–116	140–175 135–169 144–181	3.7–6.6 3.7–6.5 4.1–6.7	90	45	40	Dry/wet/ dewatered	12 hrs reactive ground 21 days unreactive ground	Yes	Yes
	Flexigel Eclipse		Soft ground applications in highly reactive environments		++Nominal density refer to TDS	70 77 83 90	74 92 108 129	2.5–4.1	200 100 150 150	60		Dry/dewatered Dry/dewatered Dry/dewatered Dry/wet	Consult Orica for reactive ground 21 days unreactive ground	No	Yes
	Fortan Eclipse Plus		High bulk strength products for dry holes in highly reactive environments		1.00	108	135	2.8–5.6	76	80	75	Dry	12 hrs reactive ground 21 days unreactive ground	No	Yes
	11 12 13			1.10	113	155	3.2–6.1	76							
				1.20	118	177	3.5–6.5	102							
				1.30	122	198	3.8–6.9	150							
				Aquacharge Eclipse Plus		Cost effective blasting for dewatered holes in highly reactive environments		1.20	113	169	4.0–6.5	120	80	45	Dry/dewatered
	1.25					116	181	4.0–6.7							
	Fortis Eclipse Plus H		Reliable wet hole blasting in highly reactive environments		1.10–1.25	98–108 100–110	135–169 137–172	3.7–6.5 4.1–6.5	90	30	25	Dry/wet/ dewatered	12 hrs reactive ground 21 days unreactive ground	Yes	Yes
Fortis Vulcan		Reliable blasting in hot, or hot and reactive ground with in-hole temperatures up to 100°C		1.25	112	175	3.7–6.6	90	45	40	Dry/wet/ dewatered	8 hrs – 100°C	Yes	Yes	
Fortan Xtreme		High bulk strength products for dry holes at in-hole temperatures up to 100°C		1.20	118	177	2.8–6.5	102	80	75	Dry	Up to 50°C – 21 days Up to 100°C – 8 hrs	No	Yes	
Fortis Xtreme		Reliable wet hole blasting for in-hole temperatures up to 100°C		1.20	113	169	4.4–6.5	76	50	45	Dry/wet/ dewatered	Up to 50°C – 21 days Up to 100°C – 8 hrs	Yes	Yes	
Xtreme		Dry blasting applications for in-hole temperatures up to 100°C		0.80	100	100	2.5–4.8	76	80	75	Dry	Up to 50°C – 21 days Up to 100°C – 8 hrs	No	Yes	
Vistansi		High shock energy further assists to optimise fragmentation and expand blast patterns, particularly in hard rock metal mining operations. For use in dry or dewatered holes in reactive environments		1.20–1.35	138–149	224–251	4.0–6.0	100	30	25	Dry/dewatered	To be determined based on testing of the reactive ground	Yes	Yes	
Vistisi		Highest energy to optimise fragmentation and expand blast patterns, particularly in hard rock metal mining operations. For use in dry, dewatered or wet holes in reactive environments		1.20–1.35	133–144	216–243	4.5–6.0	90	30	25	Dry/wet/ dewatered	To be determined based on testing of the reactive ground	Yes	Yes	
CHALLENGING	Aquacharge Clear		To minimise fume generation in dewatered blastholes		1.20–1.25	113–116	169–181	4.0–6.6	120	80	45	Dry/dewatered	21 days	Yes	No
	Aquacharge Clear i		To minimise fume generation in mildly reactive ground. For use in dewatered blastholes		1.20–1.25	113–116	169–181	4.0–6.6	120	80	45	Dry/dewatered	12 hrs reactive ground 21 days unreactive ground	Yes	Yes
	Flexigel Clear		To minimise fume generation in soft ground applications		++Nominal density refer to TDS	70 77 83 90	74 92 108 129	2.5–4.1	200 100 150 150	60		Dry/dewatered Dry/dewatered Dry/dewatered Dry/wet	21 days	No	No
	Flexigel Clear i		To minimise fume generation in soft ground applications in mildly reactive ground. For use in dry or dewatered blasthole applications		++Nominal density refer to TDS	70 77 83 90	74 92 108 129	2.5–4.1	200 100 150 150	60		Dry/dewatered Dry/dewatered Dry/dewatered Dry/wet	Consult Orica for reactive ground 21 days unreactive ground	No	Yes
	Fortis Clear		To minimise fume generation in dry, dewatered or wet blastholes		1.15–1.25	102–108	147–169	3.7–6.6	115	50	50	Dry/wet/ dewatered	21 days	Yes	No
	Fortis Clear S		To minimise fume generation in dry, dewatered or wet blastholes		1.15–1.25	100–106	144–166	3.7–6.5	115	50	50	Dry/wet/ dewatered	21 days	Yes	No
	Fortis Clear i S		To minimise fume generation in mildly reactive ground. For use in dry, dewatered or wet blastholes		1.15–1.25	100–106	144–166	3.7–6.5	115	50	50	Dry/wet/ dewatered	12 hours reactive ground may be extended subject to testing 21 days unreactive ground	Yes	Yes
	Fortis Clear i		Use where the generation of post blast fume could be experienced in reactive ground		1.15	102	147	3.7–6.2	115	30	50	Dry/wet	Determined based on reactive ground 21 days unreactive ground	Yes	Yes
	1.20					105	158	3.7–6.4	115	45					
	1.25					108	169	3.7–6.6	115	50					
	Aquacharge Extra		Cost effective blasting with highest bulk strength for dewatered holes		1.20–1.25	116–119	174–186	4.0–6.5	120	80	45	Dry/dewatered	42 days	Yes	No
	Fortan Extra		Highest bulk strength with longer sleep time		1.00	110	137	2.5–5.6	76	80	75	Dry	42 days	No	No
	11 12 13			1.10	116	159	2.5–6.0	76							
				1.20	122	183	2.8–6.5	102							
1.30				128	208	3.8–6.9	150								
Fortis Extra H				Highest bulk strength, longer sleep time		1.10–1.25	110–120 110–121	151–187 151–189	4.1–6.7 4.1–6.7	64	45	40	Dry/wet/ dewatered	42 days	Yes
Fortis Marathon		Longest sleep time, more robust, for the most challenging wet hole blasting		1.10–1.25	103–113	142–177	3.9–6.5	64–76	50	45	Dry/wet/ dewatered	84 days	Yes	No	
Vistan s		High shock energy further assists to optimise fragmentation and expand blast patterns, particularly in hard rock metal mining operations. For use in dry or dewatered holes in reactive environments		1.20–1.40	140–159	227–278	4.0–6.0	100	30	25	Wet/dewatered	21 days	Yes	No	
Vistis		Highest energy to optimise fragmentation and expand blast patterns, particularly in hard rock metal mining operations. For use in dry, dewatered or wet holes		1.20–1.40	137–156	223–273	4.5–6.0	90	30	25	Dry/wet/ dewatered	21 days	Yes	No	
UNDERGROUND	Subtek (QLD, NSW, VIC, NT, TAS)		Suitable for use in downholes, upholes and development headings		0.8	75	75	3.0–6.2	38	—	Density and application specific	Dry/wet	30 days	Yes	No
	1.0					88	110		38						
	1.2					101	151		45						
	Subtek Control (SA, WA)		Used in underground development mining		0.55	—	36–138	2.5–6.2	38	—	Near horizontal holes of any practical length	Dry/wet	7 days	Yes	No
	1.0								45						
	1.2								64						
	Subtek Control i (SA, WA)		Used in underground development mining with mildly reactive ground		0.55	—	37–145	2.5–6.2	38	—	Near horizontal holes of any practical length	Dry/wet	Determined based on reactivity	Yes	Yes
	1.0								45						
	1.2								64						
	Subtek with Subtek Control (QLD, NSW, VIC, NT, TAS)		Used in underground mining for development/headings		0.8	75	75	3.0–6.2	38	—	Near horizontal holes of any practical length	Dry/wet	30 days	Yes	No
	1.0					88	110		38						
1.2					101	151		45							
Subtek Control (Chemical Decoupled Charging)		Used in underground mining for downholes, upholes and development headings		>0.55	58	40		38	—	Near horizontal holes of any practical length	Dry/wet	7 days	Yes	No	
Subtek Charge (SA, WA)		Used in underground mining for downholes, upholes and development headings		0.8	67	67	3.0–6.2	38	—	50	Dry/wet	7 days	Yes	No	
1.0					79	99		45		35					
1.2					92	138		64		5					
Subtek Eclipse with Subtek Control (QLD, NSW, VIC, NT, TAS)		Used in underground mines with reactive ground		0.8	75	75	3.0–6.2	38	—	Near horizontal holes of any practical length	Dry/wet	Determined based on reactivity	Yes	Yes	
1.0					88	110		38							
1.2					101	151		45							
Subtek Control (Chemical Decoupled Charging)		Used in underground mines with mildly reactive ground		>0.55	58	40		38	—	Near horizontal holes of any practical length	Dry/wet	Determined based on reactivity	Yes	Yes	
Subtek Eclipse (SA, WA)		Used in underground mines with mildly reactive ground		0.8	71	71	3.0–6.2	38	—	50	Dry/Wet	30 days	Yes	No	
1.0					84	105		45		35					
1.2					97	145		64		5					
QUARRY/ CONSTRUCTION	Centra Gold Gold ES Gold GT		Designed specifically for use in wet blastholes		1.20	112	168	4.5–6.4	76	25	20	Dry/wet	21 days	Yes	No
	1.10					99	136	4.1–5.8	76	25	20				
	1.20					115	172	4.4–6.5	76	25	20				
Centra Extend		Dry hole bulk explosive		1.10	114	157	3.5–6.05	89	25	20	Dry	21 days	Yes	No	
Centra Eclipse		Designed for mildly reactive ground		1.10–1.25	102–112	140–175	3.7–6.6	90	30	25	Dry/wet/ dewatered	21 days	Yes	Yes	
CIVIL TUNNELLING	Civec		Designed for use in civil tunnelling and underground construction applications		0.80–1.20	72–98	72–147	4.5–6.2	38–64	—	—	Dry/wet	7 days	Yes	No

\* Relative to ANFO @ density 0.8 g/cc

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