

# Bulk Systems – Product Reference Chart

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	
<b>ANFO</b>	Dry blasting applications	0.80	100	100	2.5–4.8	76	80	75	Dry	42 days	No	No	
<b>COAL</b>													
<b>Fortan Coal</b>	Increased bulk strength for dry holes in open cut coal mines	10	1.00	106	132	2.5–5.8	115	80	75	Dry	21 days	No	No
11		1.10	111	153	2.5–5.8	115	80	75	Dry				
12		1.20	115	172	2.8–6.1	127	80	75	Dry				
13		1.28	118	189	3.1–6.3	150	80	75	Dewatered				
<b>Aquacharge Coal</b>	Cost effective blasting for dewatered holes	1.20–1.25	111–116	166–173	4.0–6.3	120	80	45	Dry and dewatered	21 days	Yes	No	
<b>Fortis</b>	Reliable wet hole blasting in open cut coal mines	Coal	1.15–1.25	100–106	144–166	3.7–6.5	115	50	45	Dry, wet or dewatered	21 days	Yes	No
Coal S		97–103		139–161	3.7–6.5								
Coal H		103–110		148–172	3.7–6.5								
<b>Flexigel Coal</b>	Soft ground applications in open cut coal mines	50	0.50	45	28	2.5–3.6	250	80	75	Dry	21 days	No	No
60		0.60	52	39	2.5–3.7	229	80	75	Dry				
80		0.80	66	66	2.5–3.9	100	80	75	Dry				
100		1.00	79	99	3.7–4.1	150	80	35	Dry/dewatered				
<b>Fortis</b>	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
<b>HARD ROCK</b>													
<b>Fortan Advantage</b>	Increased bulk strength for dry holes in open cut hard rock mines	10	1.00	107	134	2.5–5.8	115	30	25	Dry	21 days	No	No
11		1.10	112	154	2.5–5.8	115	30	25	Dry				
12		1.20	117	175	2.8–6.1	127	30	25	Dry				
13		1.28	120	192	3.1–6.3	150	30	25	Dewatered				
<b>Aquacharge Advantage</b>	Cost effective blasting for dewatered holes	1.20–1.25	108–118	162–176	4.0–6.3	120	30	25	Dry and dewatered	21 days	Yes	No	
<b>Fortis</b>	Advantage	Reliable wet hole blasting in open cut hard rock mines	1.10–1.25	100–110	137–172	3.7–6.5	89	20	15	Dry, wet or dewatered	21 days	Yes	No
Advantage S				97–107	133–167	3.7–6.5							
Advantage H				103–113	142–177	3.7–6.5							
<b>Flexigel Advantage</b>	Soft ground applications in open cut hard rock mines	50	0.50	53	33	2.5–3.6	250	30	25	Dry	21 days	No	No
60		0.60	60	45	2.5–3.7	229	30	25	Dry				
80		0.80	74	74	2.5–3.9	100	30	25	Dry				
100		1.00	87	109	3.7–4.1	150	30	25	Dry/dewatered				
<b>HOT AND REACTIVE GROUND</b>													
<b>Fortan Eclipse</b>	High bulk strength products for dry holes in mildly reactive environments	10	1.00	107	134	2.8–5.6	76	80	75	Dry	12 hrs reactive ground 21 days unreactive ground	No	Yes
11		1.10	112	154	3.6–6.0	76	80	75	Dry				
12		1.20	117	175	3.5–6.0	102	80	75	Dry				
13		1.30	121	194	4.0–6.8	150	80	65	Dewatered				
<b>Aquacharge Eclipse</b>	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 or dewatered	12 hrs reactive ground 21 days unreactive ground	Yes	Yes	
<b>Fortis</b>	Eclipse	Reliable wet hole blasting in mildly reactive environments	1.10–1.25	102–112	140–175	3.7–6.6	90	45	40	Dry, wet or dewatered	12 hrs reactive ground 21 days unreactive ground	Yes	Yes
Eclipse S				98–108	135–169	3.7–6.5							
Eclipse H				105–116	144–181	4.1–6.7							
<b>Flexigel Eclipse</b>	Soft ground applications in highly reactive environments	60	0.60	56	42	2.5–3.7	200	80	75	Dry	12 hrs reactive ground 21 days unreactive ground	No	Yes
80		0.80	70	70	2.5–3.9	100	80	75	Dry				
100		1.00	84	105	2.5–4.1	150	80	65	Dewatered				
100		1.00	84	105	2.5–4.1	150	80	65	Dewatered				
<b>Fortan Eclipse Plus</b>	High bulk strength products for dry holes in highly reactive environments	10	1.00	108	135	2.8–5.6	76	80	75	Dry	12 hrs reactive ground 21 days unreactive ground	No	Yes
11		1.10	113	155	3.2–6.1	76	80	75	Dry				
12		1.20	118	177	3.5–6.5	102	80	75	Dry				
13		1.30	122	198	3.8–6.9	150	80	65	Dewatered				
<b>Aquacharge Eclipse Plus</b>	Cost effective blasting for dewatered holes in highly reactive environments	1.20–1.25	113–116	169–181	4.0–6.5	120	80	45	Dry or dewatered	12 hrs reactive ground 21 days unreactive ground	Yes	Yes	
<b>Fortis</b>	Eclipse Plus	Reliable wet hole blasting in highly reactive environments	1.10–1.25	98–108	135–169	3.7–6.5	90	30	25	Dry, wet or dewatered	12 hrs reactive ground 21 days unreactive ground	Yes	Yes
Eclipse Plus H				100–110	137–172	4.1–6.5							
<b>Fortis</b>	Vulcan	Reliable blasting in hot, or hot and reactive ground with in-hole temperatures up to 150°C	1.25	112	175	3.7–6.6	90	45	40	Dry, wet or dewatered	8 hrs – 100°C 8 hrs – 150°C	Yes	Yes
Vulcan Plus				81	127	3.7–5.5							
<b>Fortan Xtreme</b>	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	No	
<b>Fortis Xtreme</b>	Reliable wet hole blasting for in-hole temperatures up to 100°C	1.20	113	169	4.4–6.5	89	50	45	Dry, wet or dewatered	Up to 50°C – 21 days Up to 100°C – 8 hrs	Yes	No	
<b>Xtreme</b>	Dry blasting applications for in-hole temperatures up to 100°C	0.8	100	100	2.5–4.8	76	80	75	Dry	Up to 50°C – 21 days Up to 100°C – 8 hrs	No	No	
<b>CHALLENGING</b>													
<b>Fortan Extra</b>	Highest bulk strength with longer sleep time	10	1.00	110	137	2.5–5.6	76	80	75	Dry	42 days	No	No
11		1.10	116	159	2.5–6.0	76	80	75	Dry				
12		1.20	122	183	2.8–6.5	102	80	75	Dry				
13		1.30	128	208	3.8–6.9	150	80	65	Dewatered				
<b>Aquacharge Extra</b>	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 or dewatered	42 days	Yes	No	
<b>Fortis</b>	Extra	Highest bulk strength, longer sleep time	1.10–1.25	110–120	151–187	4.1–6.7	64	45	40	Dry, wet or dewatered	42 days	Yes	No
Extra H				110–121	151–189	4.1–6.7							
<b>Flexigel Clear</b>	To minimise fume generation in soft ground applications	50	0.50	53	33	2.5–3.6	200	80	75	Dry	21 days	No	No
60		0.60	60	45	2.5–3.7	200	80	75	Dry				
80		0.80	74	74	2.5–3.9	100	80	75	Dry				
100		1.00	87	109	3.7–4.1	150	80	35	Dry/dewatered				
<b>Flexigel Control</b>	Vibration and wall control in soft ground applications	45	0.45	49	28	2.6–3.1	200	80	75	Dry	21 days	No	No
60		0.60	60	45	3.4–3.7	200	80	75	Dry				
80		0.80	74	74	3.6–3.9	100	80	75	Dry				
100		1.00	87	109	3.7–4.1	150	80	30	Dewatered				
<b>Fortis Marathon</b>	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 or dewatered	84 days	Yes	No	
<b>UNDERGROUND</b>													
<b>Subtek Charge</b>	Used in underground mining for development/tunnelling	0.80–1.20	75–101	75–151	3.0–6.2	42	—	25	Dry or wet	7 days	Yes	No	
<b>Subtek Velcro</b>	Used in underground mining for uphole stoping	0.80–1.20	71–97	71–145	3.0–6.2	64	—	50	Dry or wet	30 days	Yes	No	
<b>Subtek Eclipse</b>	Used in underground mines with mildly reactive ground	0.80–1.20	71–97	71–145	3.0–6.2	64	—	50	Dry or wet	Determined based on reactivity	Yes	Yes	
<b>QUARRY / CONSTRUCTION</b>													
<b>Centra</b>	Primer sensitive bulk emulsion explosive	1.20	105	157	4.4–6.3	76	20	20	Dry, wet or dewatered	—	Yes	No	
<b>Centra</b>	Gold	Designed specifically for use in wet blastholes	1.20	112	168	4.5–6.4	76	25	20	Dry or Wet	21 days	Yes	No
Gold ES				99	136	4.1–5.8	76	25	20	Dry or Wet			
Gold GT				115	172	4.4–6.5	76	25	20	Dry or Wet			
<b>Centra Extend</b>	Dry hole bulk explosive	1.10	114	157	3.5–6.05	89	25	20	Dry	21 days	Yes	No	
<b>Centra Eclipse</b>	Designed for mildly reactive ground	1.10–1.25	102–112	140–175	3.7–6.6	90	30	25	Dry, wet or dewatered	21 days	Yes	Yes	
<b>CIVIL TUNNELLING</b>													
<b>Civec</b>	Designed for use in civil tunnelling and underground construction applications	0.80–1.20	72–98	72–147	4.5–6.2	38	—	—	Dry or Wet	7 days	Yes	No	

\* Relative to ANFO @ density 0.8 g/cc

Please refer to the Technical Data Sheets on [www.oricaminingservices.com](http://www.oricaminingservices.com) for the latest product updates.

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