

Metso Beads 2048

DESCRIPTION

Metso Beads 2048 are a powder form of anhydrous sodium metasilicate.

PHYSICAL PROPERTIES

Physical		Chemical	
Appearance:	White granules: odourless	Sodium Oxide (Na ₂ O):	50.5 %
Bulk Density:	1089 kg/m ³	Silicon dioxide (SiO ₂):	46.2 %
Particle Size:	841-212 microns (#20-#65	Carbon dioxide (CO ₂):	1.66 % max.
Solubility in Water:	Mesh)	Insolubles:	0.02 % max.
pH (1% Solution)	180 kg/m ³ @ 20 °C	Iron :	15 ppm
	12.6		max.

APPLICATION

Metso Beads 2048 are normally dry blended and used as an extender in oilwell cements. Light weight slurries can be formulated by blending Metso Beads 2048 with the lime present in cement or by the addition of calcium chloride to produce a calcium silicate gel. This gel structure creates enough viscosity to allow for additional mix water without the problem of excess free water separation. Metso Beads 2048 may accelerate the set time of some cement blends. Metso Beads 2048 are normally added in a concentration of 0.1% to 3 % by weight of cement. Resulting slurry densities range from 1350-1750 kg/m³.

Sodium Metasilicate (%BWOC)	Slurry Density (kg/m ³)	Slurry Yield (m ³ /tonne)	Water		Compressive Strength, 24 hr (kpa)		Thickening Time (hr:min)			
			m ³ /tonne	%	50	60				
0	1893	0.929	0.537	44	32889	36613	+4:05	3:10	2:35	---
0.15	1737	1.116	0.732	60	12039	15500	3:20	2:37	2:10	---
1.0	1737	1.116	0.732	60	13073	14997	2:40	1:34	---	---
0.25	1678	1.221	0.830	68	9791	10411	---	---	---	---
1.0	1678	1.221	0.830	68	11308	11880	---	---	---	---
0.5	1618	1.342	0.952	78	6523	8812	---	3:30	2:10	---
2.0	1618	1.342	0.952	78	9150	9791	1:53	1:28	---	---
0.5	1558	1.488	1.100	90	5171	6392	---	---	---	---
2.0	1558	1.488	1.100	90	827	7447	---	---	---	---
0.75	1498	1.658	1.270	104	2634	4309	+5:00	+5:00	+5:00	+5:00
2.0	1498	1.658	1.270	104	4365	4502	+5:00	1:43	---	---
1.0	1438	1.876	1.490	122	1827	2620	---	---	---	---
2.0	1438	1.876	1.490	122	2896	3517	---	---	---	---
1.5	1378	2.175	1.795	147	1014	1586	+5:00	+5:00	+5:00	+5:00
3.0	1378	2.175	1.795	147	1869	1993	+5:00	1:27	---	---
2.0	1318	2.588	2.199	180	703	1207	---	---	---	---
3.0	1318	2.588	2.199	180	1000	1414	---	---	---	---

MIXING AND HANDLING

Metso Beads 2048 can be added directly through the admix bottle or predissolved in the cement mix water tank prior to use. If prehydrating in water, calcium chloride must be added first to ensure gel formation. Metso Beads 2048 exhibit a natural tendency to absorb humidity from the air. When stored in humid air for prolonged periods, these products may become sticky and cake into solid masses. Store product in a dry place and ensure packaging is tightly sealed. For more information see Material Safety Data Sheet.

WHMIS: Controlled (See M.S.D.S.)

TDG: (See M.S.D.S.)

PACKAGING: 40 kg Bag