

# Chemical Admixtures for Concrete

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## Material Producer List

Materials & Tests Division



## Chemical Admixtures for Concrete

The following materials are prequalified in accordance with DMS-4640, “Chemical Admixtures for Concrete.”

The dosage rates indicated are the manufacturer’s published recommended dosage rates for use under normal conditions. Determine actual dosage rates with trial mixes made with project materials under anticipated construction temperatures and conditions.

1. When using any of the combinations of “Group I, Chemical Admixtures” and “Group II, Air Entraining Admixtures,” ensure they are added to the concrete mix separately.
2. Concrete admixtures may exhibit substantially different performances with different brands or changing chemistry of cement. This is usually most noticeable in the retarding effect at a specified dosage. In those cases where a pre-approved admixture does not seem to provide satisfactory performance, please immediately notify the Rigid Pavements and Concrete Materials Section of the Materials and Tests Division at (512) 506-5858.

The Department reserves the right to conduct random sampling of prequalified materials for testing and to perform random audits of test reports. Department representatives may sample material from the manufacturing plant, terminal, shipping container, and concrete plant. MTD reserves the right to test samples to verify compliance with DMS-4640.

Information on the solids content is included when performing a concrete mix design.

For more information, contact the Materials & Tests Division’s Rigid Pavements and Concrete Materials Section at (512) 506-5858.

## Group 1, Chemical Admixtures

### Type A: Water Reducing Admixtures

- These admixtures reduce the quantity of mixing water required to produce concrete of a given consistency.

Pre-Approved Water Reducing Admixtures (Type A)

Product	Dosage in mL per 100 kg (oz. per 100 lb.) of Cement	Approx. % Solids (for mix design)	Producer	Producer Code
Adva 140M	390 to 1300 (6 to 20)	16	GCP Applied Technologies	99532
Adva 190	130 to 325 (2 to 5)	31		
Adva 405	325 to 650 (5 to 10)	19		
Chryso Enviromix 159	195 to 780 (3 to 12)	33	Chryso	98128
Chryso Enviromix 300	195 to 780 (3 to 12)	33		
Chryso Enviromix 330	195 to 652 (3 to 10)	17		
Chryso Enviromix 340	195 to 780 (3 to 12)	30		
Chryso Enviromix 350	195 to 685 (3 to 10)	16		
Chryso Enviromix 380	195 to 652 (3 to 10)	18		
Chryso EnviroMix 728	325 to 1170 (5 to 18)	21		
Chryso EnviroMix 740	195 to 782 (3 to 12)	22		
Chryso EnviroMix 740i	195 to 782 (3 to 12)	22		
Chryso EnviroMix i40	195 to 780 (3 to 12)	34		
Chryso EnviroMix i44	325 to 1170 (5 to 18)	21		
Chryso Fluid Optima 203	196 to 522 (3 to 8)	22		
Chryso Fluid Optima 216	522 to 1304 (8 to 20)	22		
Chryso Fluid Optima 256 EMx	130 to 587 (2 to 9)	36		
Chryso Fluid Optima 258 EMx	130 to 457 (2 to 7)	32		
Chryso Fluid Premia 180	196 to 522 (3 to 8)	25		
Chryso Fluid Premia 198	65 to 391 (1 to 6)	31		
Chryso Omega 410	195 to 652 (3 to 10)	18		
Chryso Optima 223	195 to 522 (3 to 8)	17		
Chryso Optima 233	130 to 456 (2 to 7)	30		
Chryso Optima 249	130 to 326 (2 to 5)	33		
Chryso Optima 1130	130 to 326 (2 to 5)	35		
Chryso Optima 1240	130 to 391 (2 to 6)	30		
Chryso Pave 259 EMX	195 to 780 (3 to 12)	33		
Chryso Plast 209	195 to 390 (3 to 6)	34		

**Pre-Approved Water Reducing Admixtures (Type A)**

<b>Product</b>	<b>Dosage in mL per 100 kg (oz. per 100 lb.) of Cement</b>	<b>Approx. % Solids (for mix design)</b>	<b>Producer</b>	<b>Producer Code</b>
Chryso Plast 375 EMX	195 to 652 (3 to 10)	32		
Chryso Plast 405	195 to 390 (3 to 6)	29		
Chryso Plast CP 40 EMX	195 to 780 (3 to 12)	33		
Chryso Plast Omega 166	261 to 652 (4 to 10)	18		
Chryso Plast P140	195 to 520 (3 to 8)	19		
Chryso Plast P150	195 to 520 (3 to 8)	35		
Chryso Plast P400	195 to 390 (3 to 6)	40		
Chryso PREMIA 576	130 to 587 (2 to 9)	35		
Chryso Quad 520 EMx	195 to 978 (3 to 15)	24		
Chryso Quad 842	130 to 652 (3 to 10)	21		
Chryso Quad 855 EMx	130 to 652 (2 to 10)	25		
Chryso Quad TC 855 EMx	130 to 652 (2 to 10)	25		
Chryso Rapid Flo i46 EMx	195 to 585 (3 to 9)	19		
Clarena MC2000	130 to 460 (2 to 7)	16		
CONCERA CP1124	390 to 1040 (6 to 16)	15		
Daracem 55	195 to 585 (3 to 9)	44	GCP Applied Technologies	99532
Daracem 65	195 to 780 (3 to 12)	36		
DNL 485	260 to 650 (4 to 10)	6		
DNL 785	390 to 780 (6 to 12)	9	DarCole Products, Inc.	98387
DWR 385	195 to 390 (3 to 6)	34		
Dynamon NRG 546	195 to 975 (3 to 15)	25		
Dynamon NRG 1092	195 to 975 (3 to 15)	40		
Dynamon SX	200 to 975 (3 to 15)	26	MAPEI	99289
Dynamon SX 37	65 to 162 (1 to 2.5)	38		
Elara SP200	130 to 200 (2 to 3)	35	GCP Applied Technologies	99532
Eucon A+	195 to 522 (3 to 8)	42		
Eucon Eco Strength	200 to 1040 (3 to 16)	53		
Eucon HC	130 to 390 (2 to 6)	39		
Eucon LR <sup>1</sup>	195 to 260 (3 to 4)	40	Euclid Chemical Corp.	99924
Eucon LW	195 to 390 (3 to 6)	42		
Eucon MR	260 to 910 (4 to 14)	44		
Eucon MRX	195 to 782 (3 to 12)	30		

**Pre-Approved Water Reducing Admixtures (Type A)**

<b>Product</b>	<b>Dosage in mL per 100 kg (oz. per 100 lb.) of Cement</b>	<b>Approx. % Solids (for mix design)</b>	<b>Producer</b>	<b>Producer Code</b>
Eucon NR	195 to 390 (3 to 6)	43		
Eucon NW	195 to 390 (3 to 6)	43		
Eucon SE	130 to 325 (2 to 5)	23		
Eucon SPJ	260 to 455 (4 to 7)	34		
Eucon WR	130 to 650 (2 to 10)	38		
Eucon WR 75	130 to 195 (2 to 3)	44		
Eucon WR 91	130 to 375 (2 to 6)	42		
Eucon X-15	195 to 975 (3 to 15)	43		
Eucon X-20	195 to 975 (3 to 15)	27		
EvoTek 7015	195 to 1170 (3 to 18)	30	Riteks	98250
EvoTek 2000	65 to 520 (1 to 8)	40		
ExtendFlo X90	130 to 783 (2 to 12)	28	RussTech	99379
FinishEaseNC	196 to 457 (3 to 7)	44		
FloTek 1225	225 to 325 (3.5 to 5)	35	Riteks	98250
FloTek 1240	195 to 325 (3 to 5)	40		
Isocast 6200	130 to 1300 (2 to 20)	41		
Isocast 6300	130 to 1300 (2 to 20)	39		
Isoflex 3650	130 to 980 (2 to 15)	44		
Isoflex 7350	65 to 650 (1 to 10)	19		
Isoflex 8600	65 to 975 (1 to 15)	15		
Isoflow 7730	130 to 980 (2 to 15)	30	Cemex Admix USA	98358
Isoflow 8530	130 to 780 (2 to 12)	30		
Isoflow 9100	130 to 390 (2 to 6)	30		
Isoflow 9750	130 to 520 (2 to 8)	30		
Isoplast 1440	130 to 780 (2 to 12)	38		
Isoplast 3600	65 to 1300 (1 to 20)	42		
LC400P	196 to 327 (3 to 5)	38	RussTech	99379
LC-500	196 to 327 (3 to 5)	39		
Mapecube 60	325 to 650 (5 to 10)	24		
Mapecube 60W	200 to 975 (3 to 15)	24		
Mapefluid 441	390 to 1170 (6 to 18)	40	MAPEI Corp.	99289
Mapefluid N200	200 to 1630 (3 to 25)	41		

**Pre-Approved Water Reducing Admixtures (Type A)**

<b>Product</b>	<b>Dosage in mL per 100 kg (oz. per 100 lb.) of Cement</b>	<b>Approx. % Solids (for mix design)</b>	<b>Producer</b>	<b>Producer Code</b>		
Mapeplast 400 NC	195 to 455 (3 to 7)	42				
Mapeplast KB 1200	195 to 780 (3 to 12)	46				
Mapeplast N	130 to 520 (2 to 8)	38				
Mapeplast Paver Plus	130 to 520 (2 to 88)	38				
<b>MasterEase 5000</b>	<b>65 to 325 (1 to 5)</b>	<b>49</b>				
MasterGlenium 1466	130 to 260 (2 to 4)	40	Master Builders Solutions US LLC	99470		
MasterGlenium 3030	390 to 1170 (6 to 18)	30				
MasterGlenium 3400	130 to 780 (2 to 12)	44				
MasterGlenium 7500	130 to 975 (2 to 15)	26				
MasterGlenium 7920	130 to 780 (2 to 12)	33				
MasterGlenium 7960	130 to 780 (2 to 12)	36				
MasterPolyHeed 900	195 to 980 (3 to 15)	41				
MasterPolyHeed 980	130 to 520 (2 to 8)	25				
MasterPolyHeed 997	195 to 780 (3 to 15)	48				
MasterPolyHeed 1020	195 to 780 (3 to 12)	24				
MasterPolyHeed 1025	195 to 780 (3 to 12)	25				
MasterPolyHeed 1720	195 to 780 (3 to 12)	19				
MasterPolyHeed 1725	195 to 780 (3 to 12)	18				
MasterPozzolith 80	260 to 650 (4 to 10)	41				
MasterPozzolith 200	195 to 325 (3 to 5)	32				
MasterPozzolith 322	195 to 455 (3 to 7)	44				
MasterPozzolith 700	195 to 325 (3 to 5)	28				
Master X-Seed 66	260 to 980 (4 to 15)	38				
MIRA 59	190 to 590 (3 to 9)	46				
MIRA 62	130 to 390 (2 to 6)	18				
MIRA 85	195 to 780 (3 to 12)	44	GCP Applied Technologies	99532		
MIRA 95	130 to 460 (2 to 7)	11				
MIRA 110	195 to 325 (3 to 5)	17				
MIRA PAVE 11	195 to 325 (3 to 5)	17				
NexCrete 1200	196 to 780 (3 to 12)	45	Ritek	98250		
NexCrete 1410	65 to 391 (1 to 6)	20				
NexCrete 1610	65 to 1304 (1 to 20)	22				

**Pre-Approved Water Reducing Admixtures (Type A)**

<b>Product</b>	<b>Dosage in mL per 100 kg (oz. per 100 lb.) of Cement</b>	<b>Approx. % Solids (for mix design)</b>	<b>Producer</b>	<b>Producer Code</b>
NexCrete 1710	195 to 975 (3 to 15)	23	Euclid Chemical Corp.	99924
NexCrete 1L-X	65 to 520 (1 to 8)	19		
NexCrete ES	65 to 1300 (1 to 20)	22		
Plastol 341	130 to 650 (2 to 10)	17		
Plastol 6420	130 to 650 (2 to 10)	16		
Plastol 6425	200 to 1000 (3 to 15)	31		
Plastol SPC	195 to 390 (3 to 6)	41	MAPEI Corp.	99289
Plastol Ultra 109	130 to 780 (2 to 12)	40		
Polychem SPC	130 to 190 (2 to 3)	37	Sika Corp.	99572
Sika Plastocrete 161	195 to 325 (3 to 8)	28		
Sika Plastocrete 250	130 to 590 (2 to 9)	16		
Sika ViscoCrete 1000	130 to 1170 (2 to 18)	30		
Sika ViscoCrete 1100	65 to 780 (1 to 12)	46		
Sika ViscoCrete 2100	130 to 1040 (2 to 16)	40		
Sika ViscoCrete 4100	195 to 780 (3 to 12)	40		
Sika ViscoCrete 6100	195 to 1040 (3 to 16)	40		
Sika ViscoFlow-2020	130 to 520 (2 to 8)	21		
Sikament 686	195 to 780 (3 to 12)	20		
Sikament AFM	195 to 780 (3 to 12)	15		
Sikament N	390 to 1300 (6 to 20)	41		
Sikament 475	200 to 980 (3 to 15)	20		
SikaPlast 300 GP	130 to 780 (2 to 12)	19		
Sikaplast 500	195 to 780 (3 to 12)	33		
Slump Retain 240	130 to 780 (2 to 12)	25	RussTech	99379
Superflow 2000 SCC	196 to 1697 (3 to 26)	30		
Superflow 2000 RM	65 to 391 (1 to 6)	20		
Superflow 2040 RM	65 to 522 (1 to 8)	39	GCP Applied Technologies	99532
WRDA 35	130 to 520 (2 to 8)	41		
WRDA 64	195 to 390 (3 to 6)	44		
WRDA 79	200 to 325 (3 to 5)	39		
WRDA PAVE 18	162 to 390 (2.5 to 6)	45		
ZYLA 610	130 to 260 (2 to 4)	21		

**Pre-Approved Water Reducing Admixtures (Type A)**

<b>Product</b>	<b>Dosage in mL per 100 kg (oz. per 100 lb.) of Cement</b>	<b>Approx. % Solids (for mix design)</b>	<b>Producer</b>	<b>Producer Code</b>
ZYLA 630	130 to 455 (2 to 7)	23		
ZYLA 640	130 to 455 (2 to 7)	19		



## Type B: Retarding Admixtures

- These admixtures retard the setting of concrete.

Pre-Approved Retarding Admixtures (Type B)				
Product	Dosage in mL per 100 kg (oz. per 100 lb.) of Cement	Approx. % Solids (for mix design)	Producer	Producer Code
CHRYSO NutralSet TC	65 to 723 (1 to 12)	17	Chryso	98128
Eucon DS	65 to 1000 (1 to 16)	26	Euclid Chemical Corp.	99924
Eucon LR	260 to 650 (4 to 10)	40		
Eucon NR	260 to 520 (4 to 8)	43		
Eucon Retarder 75	195 to 325 (3 to 5)	34		
Eucon Retarder 100	130 to 390 (2 to 6)	39		
Eucon Stasis	65 to 1040 (1 to 16)	18		
Mapecrete Resolve	65 to 780 (1 to 12)	14	MAPEI Corp.	99289
Mapetard Plus	130 to 325 (2 to 5)	33		
MasterPozzolith 200	260 to 390 (4 to 6)	34	Master Builders Solutions US LLC	99470
MasterPozzolith 700	195 to 450 (3 to 7)	28		
MasterSet R 961	195 to 325 (3 to 5)	34		
Polychem Renu	65 to 780 (1 to 12)	14	MAPEI Corp.	99289
Sika Plastiment XR	130 to 325 (2 to 5)	15	Sika Corp.	99572
SikaTard 440	130 to 520 (2 to 8)	20		
SYAD 40	33 to 390 (0.5 to 6)	35	Riteks	98250
SYAD 75	100 to 195 (1.5 to 3)	25		
V-MAR VSC500	455 to 975 (7 to 15)	16	GCP Applied Technologies	99532
Zyla R	195 to 325 (3 to 5)	12		

### Type C: Accelerating Admixtures (Non-Chloride)

- These admixtures accelerate the setting and early strength development of concrete.
- Do not use accelerating admixtures on bridge decks or the top slab of direct traffic culverts.

Pre-Approved Accelerating Admixtures (Non-Chloride) (Type C)

Product	Dosage in mL per 100 kg (oz. per 100 lb.) of Cement	Approx. % Solids (for mix design)	Producer	Producer Code
Accelguard 80	1040 to 2080 (16 to 32)	60	Euclid Chemical Corp.	99924
Accelguard AcN 200	650 to 3900 (10 to 60)	42		
Accelguard G3	650 to 5870 (10 to 90)	40		
Accelguard NCA	780 to 4875 (12 to 75)	59		
Advanset NC	522 to 5850 (8 to 90)	45	Riteks	98250
Advanset NC14	650 to 2935 (10 to 45)	14		
Advanset RCI	522 to 5870 (8 to 90)	31		
Chryso CI 100	500 to 3500 (7.5 to 54)	31	Chryso	98128
Chryso TurboCast 650A	397 to 5850 (6 to 90)	47		
Chryso Turbocast 701	650 to 5850 (10 to 90)	34		
Chryso Turbocast NCT	520 to 5850 (8 to 90)	62		
Daraset 200	650 to 3910 (10 to 60)	47	GCP Applied Technologies	99532
Daraset 400	650 to 3910 (10 to 60)	54		
DCI Corrosion Inhibitor	2730 to 8320 (42 to 128)	33	DarCole Products, Inc.	98387
DNS 130	585 to 3510 (9 to 54)	47		
DNS 166	585 to 3510 (9 to 54)	54		
Eucon CIA	3250 to 9750 (50 to 150) <sup>1</sup>	32	Euclid Chemical Corp.	99924
Isoxel 5400	650 to 6500 (10 to 100)	56	Cemex Admix USA	98358
Mapefast Super Set	520 to 2080 (8 to 32)	59	MAPEI Corp.	99289
Mapefast Super Set Plus	520 to 2080 (8 to 32)	59		
Mapeshield CI 300	520 to 5850 (8 to 90)	30		
MasterLife CI 30	2600 to 5850 (40 to 90)	33	Master Builders Solutions US LLC	99470
MasterSet FP 20	325 to 3910 (5 to 60)	48		
MasterSet AC 534	650 to 2925 (10 to 45)	56		
NCA	1000 to 3000 (16 to 48) <sup>2</sup>	98	Fritz-Pak Corp.	99803
Polarset	520 to 6500 (8 to 100)	42	GCP Applied Technologies	99532
RussTech RCI	522 to 5870 (8 to 90)	31	RussTech	99379
Sika CNI	3250 to 9750 (50 to 150) <sup>1</sup>	33		

**Pre-Approved Accelerating Admixtures (Non-Chloride) (Type C)**

<b>Product</b>	<b>Dosage in mL per 100 kg (oz. per 100 lb.) of Cement</b>	<b>Approx. % Solids (for mix design)</b>	<b>Producer</b>	<b>Producer Code</b>
Sika Mix NCA	650 to 2925 (10 to 45)	46	Sika Corp.	99572
Sika Plastocrete 161FL	390 to 4160 (6 to 64)	43		
Sika Rapid -1	520 to 3120 (8 to 48)	32		
Sika Set NC-4	580 to 2600 (9 to 40)	58		

1. Do not exceed 17,366 mL/m<sup>3</sup> or 768 oz./CY.
2. Dosage in g per 100 kg (oz. per 100 lb.)

### Type D: Water-Reducing, Retarding Admixtures

- These admixtures reduce the quantity of mixing water required to produce concrete of a given consistency and retard the setting of concrete.

Pre-Approved Water Reducing Retarding Admixtures (Type D)

Product	Dosage in mL per 100 kg (oz. per 100 lb.) of Cement	Approx. % Solids (for mix design)	Producer	Producer Code
Chryso ControlSet 65	130 to 325 (2 to 5)	32	Chryso	98128
Chryso ControlSet 105	130 to 520 (2 to 8)	20		
Chryso ControlSet 125	130 to 456 (2 to 7)	17		
Chryso ControlSet 100R	130 to 260 (2 to 4)	36		
Chryso Plast P400	260 to 455 (4 to 7)	40		
Chryso Plast 405	260 to 455 (4 to 7)	29		
Chryso SetControl iTC	130 to 325 (2 to 5)	22		
Daratard 17	130 to 520 (2 to 8)	50	GCP Applied Technologies	99532
Daratard 37	130 to 520 (2 to 8)	45		
Eucon HC	130 to 390 (2 to 6)	39	Euclid Chemical Corp.	99924
Eucon LR <sup>1</sup>	260 to 650 (4 to 10)	40		
Eucon NR	260 to 520 (4 to 8)	43		
Eucon NW	130 to 782 (2 to 6)	41		
Eucon Retarder 75	195 to 325 (3 to 5)	34		
Eucon Retarder 100	130 to 390 (2 to 6)	39		
Eucon SE	130 to 325 (2 to 5)	23		
Eucon Stasis	65 to 1040 (1 to 16)	18		
FloTek 1225	225 to 325 (3.5 to 5)	35	Riteks	98250
FloTek 1240	325 to 522 (5 to 8)	35		
FR-1	100 to 120 (1.5 to 2) <sup>2</sup>	92	Fritz-Pak Corp.	99803
HydraStop	65 to 485 (1 to 7.5)	16	Riteks	98250
Isoflex 7350	65 to 650 (1 to 10)	19	Cemex Admix USA	98358
Isopause 2370	130 to 520 (2 to 8)	43		
Isopause 2500	65 to 650 (1 to 10)	19		
Isoplast 1440	130 to 780 (2 to 12)	38		

**Pre-Approved Water Reducing Retarding Admixtures (Type D)**

<b>Product</b>	<b>Dosage in mL per 100 kg (oz. per 100 lb.) of Cement</b>	<b>Approx. % Solids (for mix design)</b>	<b>Producer</b>	<b>Producer Code</b>
LC400P	260 to 520 (4 to 8)	38		
LC400R	65 to 390 (1 to 6)	33	RussTech	99379
LC-500	196 to 327 (3 to 5)	39		
Mapeplast 400 NC	260 to 390 (4 to 6)	41	MAPEI Corp.	99289
Mapeplast N	130 to 520 (2 to 8)	38		
Mapetard R	130 to 325 (2 to 5)	45		
MasterPozzolith 80	455 to 650 (7 to 10)	41		
MasterPozzolith 200	260 to 390 (4 to 6)	50		
MasterPozzolith 700	195 to 450 (3 to 7)	28		
MasterSet Delvo	195 to 325 (3 to 5)	14	Master Builders Solutions US LLC	99470
MasterSet R 100	130 to 260 (2 to 4)	50		
MasterSet R 300	195 to 325 (3 to 5)	50		
MasterSet R 961	195 to 325 (3 to 5)	34		
Polychem Renu	65 to 780 (1 to 12)	14	MAPEI Corp.	99289
Recover	130 to 780 (2 to 12)	21	GCP Applied Technologies	99532
RENU	65 to 783 (1 to 12)	13	RussTech	99379
Sika Plastiment	130 to 390 (2 to 6)	33	Sika Corp.	99572
Sika Plastiment XR	130 to 325 (2 to 5)	15		
Sika Plastocrete 250	130 to 590 (2 to 9)	16		
SikaTard 440	130 to 520 (2 to 8)	20		
Standard Delayed Set	200 to 300 (3 to 5) <sup>2</sup>	93	Fritz-Pak Corp.	99803
SYAD 40	33 to 390 (0.5 to 6)	35	Ritek	98250
V-Mar VSC500	455 to 975 (7 to 15)	16	GCP Applied Technologies	99532
WRDA 64	260 to 590 (4 to 9)	44		
WRDA 79	325 to 650 (5 to 10)	39		
Zyla 610	260 to 783 (4 to 7)	20		
Zyla 614R	130 to 300 (2 to 5)	28		
Zyla 630	195 to 445 (5 to 7)	23		
Zyla R	195 to 325 (3 to 5)	12		

1. These admixtures entrain a small amount of air.
2. Dosage in g per 100 kg (oz per 100 lb.)

**Type E: Water-Reducing and Accelerating Admixtures (Non-Chloride)**

- These admixtures accelerate the setting and early strength development of concrete while reducing water content.
- Do not use accelerating admixtures on bridge decks or the top slab of direct traffic culverts.

**Pre-Approved Water-Reducing and Accelerating Admixture (Type E)**

Product	Dosage in mL per 100 kg (oz. per 100 lb.) of Cement	Approx. % Solids (for mix design)	Producer	Producer Code
Accelguard 80	780 to 5870 (12 to 90)	59	Euclid Chemical Corp.	99924
Accelguard AcN 200	650 to 3910 (10 to 60)	46		
Accelguard G3	650 to 5870 (10 to 90)	40		
Accelguard NCA	780 to 4890 (12 to 75)	58		
DNS 166	585 to 3510 (9 to 54)	54	DarCole Products, Inc.	98387
LCNC-166	522 to 5870 (8 to 90)	54	RussTech	99379
NCA	1000 to 3000 (16 to 48) <sup>1</sup>	98	Fritz-Pak Corp.	99803
Sika Plastocrete 161FL	390 to 4160 (6 to 64)	43	Sika Corp.	99572
Sika Set NC-4	580 to 2600 (9 to 40)	58		

1. Dosage in g per 100 kg (oz. per 100 lb.)

### Type F: High Range Water-Reducing Admixtures (HRWR)

- These are admixtures that reduce the quantity of mixing water required to produce concrete of a given consistency by 12% or greater.
- Do not use this type admixture on bridge deck concrete.

Pre-Approved High Range Water-Reducing Admixtures (Type F)

Product	Dosage in mL per 100 kg (oz. per 100 lb.) of Cement	Approx. % Solids (for mix design)	Producer	Producer Code
ADVA 140M	390 to 1300 (6 to 20)	16	GCP Applied Technologies	99532
ADVA 150M	522 to 1304 (8 to 20)	11		
ADVA 190	195 to 590 (3 to 9)	30		
ADVA 195	195 to 980 (3 to 15)	32		
ADVA 198	130 to 980 (2 to 15)	26		
ADVA 405	650 to 1175 (10 to 18)	19		
ADVA Cast 555	400 to 1400 (6 to 20)	16		
ADVA Cast 575	130 to 650 (2 to 10)	40		
ADVA Cast 585	130 to 650 (2 to 10)	36		
ADVA Cast 593	130 to 650 (2 to 10)	37		
ADVA Cast 600	130 to 650 (2 to 10)	38		
ADVA Flex	260 to 910 (4 to 14)	29		
ADVA ITM750	195 to 650 (3 to 10)	34		
Chryso Enviromix 330	456 to 1174 (7 to 18)	17		
Chryso Enviromix 350	522 to 1174 (8 to 18)	16		
Chryso Enviromix 728	652 to 1170 (10 to 18)	17		
Chryso Enviromix 740	567 to 1304 (9 to 20)	22		
Chryso Enviromix 740i	567 to 1304 (9 to 20)	22		
Chryso Enviromix i40	780 to 1304 (12 to 20)	34		
Chryso Enviromix i44	652 to 1170 (10 to 18)	17		
Chryso Fluid Optima 126	456 to 1304 (7 to 20)	21		
Chryso Fluid Optima 203	196 to 522 (3 to 8)	22		
Chryso Fluid Optima 216	522 to 1304 (8 to 20)	22		
Chryso Fluid Optima 256 EMx	457 to 1045 (7 to 16)	36		
Chryso Fluid Optima 258 EMx	457 to 1045 (7 to 16)	32		
Chryso Fluid Premia 180	196 to 522 (3 to 8)	25		
Chryso Fluid Premia 198	196 to 1304 (3 to 20)	31		

**Pre-Approved High Range Water-Reducing Admixtures (Type F)**

<b>Product</b>	<b>Dosage in mL per 100 kg (oz. per 100 lb.) of Cement</b>	<b>Approx. % Solids (for mix design)</b>	<b>Producer</b>	<b>Producer Code</b>
Chryso Fluid ProPel 3300	520 to 1430 (8 to 22)	40		
Chryso Fluid ProPel AG	650 to 1300 (10 to 20)	39		
Chryso Omega 410	391 to 1304 (6 to 20)	18		
Chryso Optima 223	391 to 1304 (6 to 20)	17		
Chryso Optima 233	326 to 978 (5 to 15)	30		
Chryso Optima 249	261 to 782 (4 to 12)	33		
Chryso Optima 1130	261 to 782 (4 to 12)	36		
Chryso Optima 1240	261 to 1043 (4 to 16)	30		
Chryso Quad 842	391 to 1304 (6 to 20)	21		
Chryso Quad TC 855 EMx	391 to 1304 (6 to 20)	25		
Chryso RapidFlo i46 EMx	652 to 1170 (10 to 18)	19		
Chryso PREMIA 576	130 to 587 (2 to 9)	35		
CLARENA MC2000	460 to 980 (7 to 15)	16		
CONCERA SA8080	520 to 1300 (8 to 20)	20	GCP Applied Technologies	99532
Daracem 19	390 to 1300 (6 to 20)	40		
DSF 1443SCC	195 to 1690 (3 to 26)	29	DarCole Products, Inc.	98387
Dynamon NRG 546	195 to 975 (3 to 15)	25		
Dynamon NRG 1092	195 to 975 (3 to 15)	40		
Dynamon SX	180 to 975 (3 to 15)	26	MAPEI Corp.	99289
Dynamon SX 37	130 to 715 (2 to 11)	38		
Elara SP200	200 to 650 (3 to 10)	35	GCP Applied Technologies	99532
Eucon 37	650 to 1040 (10 to 16)	40		
Eucon 1037	650 to 1625 (10 to 25)	41		
Eucon MRX	195 to 782 (3 to 12)	30		
Eucon SP	390 to 1625 (6 to 25)	40	Euclid Chemical Corp.	99924
Eucon SPJ	260 to 455 (4 to 7)	34		
Eucon X-15	195 to 975 (3 to 15)	43		
Eucon X-20	195 to 980 (3 to 15)	27		
EvoTek 2000	65 to 520 (1 to 8)	40		
EvoTek 7015	195 to 1170 (3 to 18)	30	Riteks	98250
EvoTek 7000	195 to 980 (3 to 15)	40		
EXP 950	130 to 650 (2 to 10)	40	GCP Applied Technologies	99532



**Pre-Approved High Range Water-Reducing Admixtures (Type F)**

<b>Product</b>	<b>Dosage in mL per 100 kg (oz. per 100 lb.) of Cement</b>	<b>Approx. % Solids (for mix design)</b>	<b>Producer</b>	<b>Producer Code</b>
Isocast 6200	130 to 1300 (2 to 20)	41	Cemex Admix USA	98358
Isocast 6300	130 to 1300 (2 to 20)	39		
Isoflex 8600	65 to 975 (1 to 15)	15		
Isoflow 7730	130 to 980 (2 to 15)	30		
Isoflow 8530	130 to 780 (2 to 12)	30		
Isoflow 9100	130 to 390 (2 to 6)	30		
Isoflow 9750	65 to 650 (1 to 10)	30		
Isoplast 3600	65 to 1300 (1 to 20)	42		
Mapecfluid 441	390 to 1170 (6 to 18)	40	MAPEI Corp.	99289
Mapecfluid N200	200 to 1630 (3 to 25)	41		
MasterGlenium 1466	260 to 650 (4 to 10)	40	Master Builders Solutions US LLC	99470
MasterGlenium 3030	390 to 1170 (6 to 18)	20		
MasterGlenium 3400	130 to 780 (2 to 12)	45		
MasterGlenium 7101	195 to 780 (3 to 12)	32		
MasterGlenium 7500	130 to 975 (2 to 15)	26		
MasterGlenium 7700	260 to 975 (4 to 15)	34		
MasterGlenium 7710	130 to 975 (2 to 15)	25		
MasterGlenium 7920	130 to 780 (2 to 12)	33		
MasterGlenium 7960	260 to 780 (4 to 12)	36		
MasterPolyHeed 980	390 to 780 (6 to 12)	25		
MasterPolyHeed 1020	195 to 780 (3 to 12)	24		
MasterPolyHeed 1025	195 to 780 (3 to 12)	25		
MasterPolyHeed 1720	195 to 780 (3 to 12)	19		
MasterPolyHeed 1725	195 to 780 (3 to 12)	18		
MasterRheobuild 1000	650 to 1625 (10 to 25)	41		
MIRA 59	190 to 590 (3 to 9)	46	GCP Applied Technologies	99532
MIRA 62	390 to 975 (6 to 15)	18		
MIRA 85	195 to 780 (3 to 12)	44		
MIRA 95	130 to 975 (2 to 15)	11		
MIRA 110	350 to 975 (6 to 15)	17		
MIRA PAVE 11	350 to 975 (6 to 15)	17		

**Pre-Approved High Range Water-Reducing Admixtures (Type F)**

<b>Product</b>	<b>Dosage in mL per 100 kg (oz. per 100 lb.) of Cement</b>	<b>Approx. % Solids (for mix design)</b>	<b>Producer</b>	<b>Producer Code</b>
NexCrete 1410	457 to 1300 (7 to 20)	20	Riteks	98250
NexCrete 1710	195 to 975 (3 to 15)	23		
NexCrete 1L-X	65 to 520 (1 to 8)	19		
NexCrete ES	65 to 1300 (1 to 20)	22		
Plastol 341	130 to 165 (2 to 10)	17	Euclid Chemical Corp.	99924
Plastol 5000	195 to 975 (3 to 15)	32		
Plastol 6400	200 to 780 (3 to 12)	36		
Plastol 6425	200 to 1000 (3 to 15)	31		
Plastol 6420	130 to 650 (2 to 10)	17		
Plastol SPC	195 to 800 (3 to 12)	40		
Plastol Ultra 109	130 to 780 (2 to 12)	40		
Plastol Ultra 209	130 to 780 (2 to 12)	36	MAPEI Corp.	99289
Polychem Paver Plus	190 to 392 (3 to 6)	37		
Polychem SPC	130 to 520 (2 to 8)	38	Hexion Inc.	99536
SAFSP - 101	910 to 2080 (14 to 32)	40		
Sika ViscoCrete 1000	130 to 1170 (2 to 18)	30	Sika Corp.	99572
Sika ViscoCrete 1100	65 to 780 (1 to 12)	46		
Sika ViscoCrete 2100	130 to 1040 (2 to 16)	40		
Sika ViscoCrete 2110	195 to 780 (3 to 12)	40		
Sika ViscoCrete 4100	195 to 780 (3 to 12)	40		
Sika ViscoCrete 6100	195 to 1040 (3 to 16)	40		
Sika ViscoFlow 2020	130 to 520 (2 to 8)	21		
Sikament AFM	390 to 780 (6 to 12)	15		
Sikament N	390 to 1300 (6 to 20)	41		
Sikament 475	200 to 980 (3 to 15)	20		
Sikament 686	195 to 780 (3 to 12)	20		
SikaMix HC-300	130 to 650 (2 to 10)	24		
Sikaplast 300GP	130 to 780 (2 to 12)	19		
Sikaplast 500	195 to 780 (3 to 12)	33		
Supercizer 1	300 to 450 (5 to 7) <sup>1</sup>	95		
Supercizer 5	300 to 450 (5 to 7) <sup>1</sup>	91		
Superflow 2000 SCC	196 to 1697 (3 to 26)	30	RussTech	99379

**Pre-Approved High Range Water-Reducing Admixtures (Type F)**

<b>Product</b>	<b>Dosage in mL per 100 kg (oz. per 100 lb.) of Cement</b>	<b>Approx. % Solids (for mix design)</b>	<b>Producer</b>	<b>Producer Code</b>
Superflow 2000 RM	457 to 1300 (7 to 20)	20		
Superflow 2040 RM	65 to 522 (1 to 8)	39		

1. Dosage in g per 100 kg (oz. per 100 lb.)

**Type G: Water-Reducing High Range and Retarding Admixtures**

- These are admixtures that reduce the quantity of mixing water required to produce concrete of a given consistency by 12% or greater and retard the setting of concrete.
- Do not use this type admixture on bridge deck concrete.

**Pre-Approved Water-Reducing High Range and Retarding Admixtures (Type G)**

Product	Dosage in mL per 100 kg (oz. per 100 lb.) of Cement	Approx. % Solids (for mix design)	Producer	Producer Code
Chryso Fluid Optima 100	260 to 780 (4 to 30)	30	Chryso	98128
Daracem 100	325 to 1300 (5 to 20)	41	GCP Applied Technologies	99532
Eucon 537	650 to 1300 (10 to 20)	43	Euclid Chemical Corp.	99924
FinishEase-NC	522 to 783 (8 to 12)	44	RussTech	99379
Supercizer 7	250 to 750 (4 to 12) <sup>1</sup>	89	Fritz-Pak Corp.	99803

1. Dosage in g per 100 kg (oz. per 100 lb.)

## Group II, Air Entraining Admixtures

### Air Entraining Admixtures

- These are admixtures added to the batch for entraining air.
- The dosage MUST be adjusted as necessary to produce the required air content in the concrete within the specified tolerances.

Pre-Approved Air Entraining Admixtures

Product	Dosage in mL per 100 kg (oz. per 100 lb.) of Cement	Approx. % Solids (for mix design)	Producer	Producer Code
Air Plus	16 to 81 (0.25 to 1.25) <sup>1</sup>	98	Fritz-Pak Corp.	99803
Airalon 3000	30 to 200 (0.5 to 3)	3	GCP Applied Technologies	99532
Airalon 7000	30 to 200 (0.5 to 3)	7		
A-Train FF	33 to 130 (0.5 to 2)	7		
A-Train PR	33 to 130 (0.5 to 2)	10	Riteks	98250
A-Train VR	22 to 260 (0.25 to 4)	10		
CCT Stable Air	65 to 580 (1 to 8.9)	31	Cellular Concrete Technologies	98274
Chryso Air 260	13 to 195 (0.2 to 3)	7	Chryso	98128
Chryso Air 260 Ultra	13 to 196 (0.2 to 3)	5		
Chryso Air G 100	13 to 488 (0.2 to 7.5)	6		
Chryso Air G 200	7 to 488 (0.1 to 7.5)	10		
Chryso AirMax LDC	13 to 196 (0.2 to 3.0)	7		
Chryso Air NVR	33 to 130 (0.5 to 2)	13		
Chryso Air TX	33 to 130 (0.5 to 2)	10		
Daravair AT30	15 to 200 (0.25 to 3)	10		
Daravair AT60	15 to 200 (0.25 to 3)	20	GCP Applied Technologies	99532
Daravair-1000	33 to 195 (0.5 to 3)	5		
Daravair PAVE 10	33 to 195 (0.5 to 3)	5		
Darex AEA	49 to 195 (0.75 to 3)	6		
Darex AEA ED	30 to 302 (0.5 to 5)	8		
Darex II AEA	33 to 195 (0.5 to 5)	10	DarCole Products, Inc.	98387
DSA 110	16 to 130 (0.25 to 2)	8		
Eucon AEA 92	6 to 260 (0.1 to 4)	6	Euclid Chemical Corp.	99924
Eucon AEA 92S	33 to 130 (0.5 to 2)	3		
Eucon Air 30	33 to 260 (0.5 to 4)	3		
Eucon Air 40	16 to 260 (0.25 to 4)	13		

**Pre-Approved Air Entraining Admixtures**

<b>Product</b>	<b>Dosage in mL per 100 kg (oz. per 100 lb.) of Cement</b>	<b>Approx. % Solids (for mix design)</b>	<b>Producer</b>	<b>Producer Code</b>
Eucon Air Mac-12	6 to 260 (0.1 to 4)	14		
Eucon Air MAC6	6 to 260 (0.1 to 4)	7		
Eucon Air Mix	33 to 65 (0.5 to 1)	15		
Eucon Air Mix 200	33 to 65 (0.5 to 1)	15		
Isosphere 5004	6 to 320 (0.1 to 5)	4	Cemex Admix USA	98358
Isosphere 9004	6 to 320 (0.1 to 5)	4		
Isosphere 9014	6 to 320 (0.1 to 5)	2		
Mapeair SA	8 to 130 (0.125 to 2)	7	MAPEI Corp.	99828
Mapeair SA 50	30 to 200 (0.5 to 30)	3		
Mapeair VR	8 to 195 (0.125 to 3)	15		
MasterAir AE 90	16 to 260 (0.25 to 4)	6	Master Builders Solutions US LLC	99470
MasterAir AE 200	8 to 260 (0.125 to 4)	12		
MasterAir AE 400	16 to 260 (0.25 to 4)	8		
MasterAir VR 10	16 to 260 (0.25 to 4)	13		
MasterCell 25	32 to 180 (0.5 to 2.75) <sup>1</sup>	97		
Quantec PL-466	130 to 325 (2 to 5)	13	GCP Applied Technologies	99532
RAE-260	33 to 130 (0.5 to 2)	9	RussTech	99379
RSA-10	33 to 130 (0.5 to 2)	7		
RVR-15	33 to 130 (0.5 to 2)	15		
Sika AEA-14	130 to 195 (1 to 3)	8	Sika Corp.	99572
Sika Air	16 to 195 (0.25 to 3)	6		
Sika Air 260	7 to 400 (0.1 to 6)	10		
Sika Air 360	7 to 400 (0.1 to 6)	7		
SikaControl AIR-160	7 to 400 (0.1 to 6)	3		
Sika Multi Air 25	13 to 195 (0.2 to 3)	6		
Super Air Plus	16 to 81 (0.25 to 1.25) <sup>1</sup>	97	Fritz-Pak Corp.	99803
Terapave	30 to 200 (0.5 to 3)	10	GCP Applied Technologies	99532

1. Dosage in g per 100 kg (oz. per 100 lb.)