Chemical Admixtures for Concrete

NOTE: Refresh the page to view the most current list.

The following materials are pre-approved 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 Materials & Pavements Section of the Construction Division at (512) 506-5858.

The Department reserves the right to conduct random sampling of pre-approved 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. CST/M&P 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.

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	W. R. Grace	99532
Adva 190	130 to 325 (2 to 5)	31		
Chryso Enviromix 159	195 to 780 (3 to 12)	33	Chryso	98128
Chryso Enviromix 300	195 to 780 (3 to 12)	33		
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 i40	195 to 780 (3 to 12)	34		
Chryso Enviromix N	195 to 780 (3 to 12)	33		
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	130 to 587 (2 to 9)	36		
Chryso Plast 209	195 to 390 (3 to 6)	34		
Chryso Plast CP 40 EMX	195 to 780 (3 to 12)	33		
Chryso Plast MR700	260 to 910 (4 to 14)	39		
Chryso Plast MR	195 to 780 (3 to 12)	42		
Chryso Plast MRP	260 to 780 (4 to 12)	33		
Chryso Plast P150	196 to 327 (3 to 5)	35		
Chryso Plast P400	196 to 390 (3 to 6)	40		
Chryso Plast PS40	130 to 325 (2 to 5)	37		
Chryso Fluid Premia 180	196 to 522 (3 to 8)	25		
Chryso Fluid Premia 196	130 to 522 (2 to 8)	25		
Chryso ProPel 4600	457 to 1305 (7 to 20)	41		
Daracem 55	195 to 585 (3 to 9)	44	W. R. Grace	99532
Daracem 65	195 to 780 (3 to 12)	36		
Eucon A+	195 to 522 (3 to 8)	42	Euclid Chemical Corp.	99924

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
Eucon HC	130 to 390 (2 to 6)	39		
Eucon LR[1]	195 to 260 (3 to 4)	40		
Eucon LW	195 to 390 (3 to 6)	42		
Eucon MR	260 to 910 (4 to 14)	44		
Eucon NR	195 to 390 (3 to 6)	43		
Eucon NW	195 to 390 (3 to 6)	43		
Eucon Pro-Finish	196 to 325 (3 to 5)	38		
Eucon SPC	195 to 390 (3 to 6)	41		
Eucon SPJ	260 to 455 (4 to 7)	34		
Eucon WR	260 (4)	38		
Eucon WR 75	130 to 195 (2 to 3)	44		
Eucon WR 91	125 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		
Genesis 112	130 to 390 (2 to 6)	27	General Resource Tech.	99289
Glenium 3030 NS	390 to 1170 (6 to 18)	30	BASF Admixtures	99470
Glenium 3400 NV	130 to 780 (2 to 12)	44		
Glenium 7500	130 to 975 (2 to 15)	26		
KB-1200	195 to 780 (3 to 12)	46	General Resource Tech.	99289
MasterPave	260 to 390 (4 to 6)	41	BASF Admixtures	99470
MasterPave N	130 to 260 (2 to 4)	45		
Melchem	390 to 1625 (6 to 25)	34	General Resource Tech.	99289
MIRA 59	190 to 590 (3 to 9)	46	W. R. Grace	99532
MIRA 62	130 to 390 (2 to 6)	18		
MIRA 85	195 to 780 (3 to 12)	44		
MIRA 110	195 to 325 (3 to 5)	17		
MIRA PAVE 11	195 to 325 (3 to 5)	17		
Plastocrete 161	195 to 325 (3 to 8)	35	Sika Corp.	99572
Plastol Ultra 109	130 to 780 (2 to 12)	40	Euclid Chemical Corp.	99924
Polychem 400 NC	195 to 325 (3 to 5)	42	General Resource Tech.	99289
Polychem 775	130 to 195 (2 to 3)	18		

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
Polychem 1000	195 to 390 (3 to 6)	36		
Polychem KB 1000	195 to 520 (3 to 8)	36		
Polychem Paver Plus	130 to 520 (2 to 88)	38		
Polychem SPC	130 to 190 (2 to 3)	37		
Polyheed 900	195 to 980 (3 to 15)	41	BASF Admixtures	99470
Polyheed 997	195 to 780 (3 to 15)	48		
Polyheed 1020	195 to 780 (3 to 12)	24		
Polyheed 1025	195 to 780 (3 to 12)	25		
Polyheed 1720	195 to 780 (3 to 12)	19		
Polyheed 1725	195 to 780 (3 to 12)	18		
Pozzolith 80*	260 to 650 (4 to 10)	41		
Pozzolith 200N	195 to 325 (3 to 5)	32		
Pozzolith 220N	130 to 325 (2 to 5)	44		
Pozzolith 322N	195 to 455 (3 to 7)	44		
PS 1466	130 to 260 (2 to 4)	40		
Sikament 686	195 to 780 (3 to 12)	20	Sika Corp.	99572
Sikament MP	195 to 780 (3 to 12)	38		
Sikament N	390 to 1300 (6 to 20)	41		
Sikaplast 500	195 to 780 (3 to 12)	33		
ViscoCrete 2100	130 to 1040 (2 to 16)	40		
ViscoCrete 4100	195 to 780 (3 to 12)	40		
ViscoCrete 6100	195 to 1040 (3 to 16)	40		
WRDA 27	130 to 390 (2 to 6)	34	W. R. Grace	99532
WRDA 35	130 to 520 (2 to 8)	41		
WRDA 64	195 to 390 (3 to 6)	44		
WRDA 79	195 to 650 (3 to 10)	35		
WRDA 82	162 to 390 (2.5 to 6)	45		
WRDA PAVE 18	162 to 390 (2.5 to 6)	45		
WRDA with HYCOL	195 to 390 (3 to 6)	42		
ZYLA 610	130 to 260 (2 to 4)	21		

1. These admixtures entrain small amounts of air.

- 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®Tard	196 to 978 (3 to 15)	15	Chryso	98128
Eucon DS	260 to 390 (4 to 6)	26	Euclid Chemical Corp.	99924
Plastiment ES	130 to 260 (2 to 4)	34	Sika Corp.	99572
Pozzolith 200N	260 to 390 (4 to 6)	34	BASF Admixtures	99470
Pozzolith 700N	195 to 450 (3 to 7)	28		
Pozzolith 961R	195 to 325 (3 to 5)	34		
SikaTard 440	130 to 520 (2 to 8)	20	Sika Corp	99572
SikaTard 930	130 to 325 (2 to 5)	23		
V-MAR VSC500	455 to 975 (7 to 15)	16	W. R. Grace	99532
Zyla R	195 to 325 (3 to 5)	34		

- 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 NCA	780 to 4875 (12 to 75)	59		
Chryso TurboCast 650A	397 to 5850 (6 to 90)	47	Chryso	98128
Chryso Turbocast 701	650 to 5850 (10 to 90)	34		
Chryso Turbocast K	3910 to 5850 (60 to 90)	47		
Chryso Turbocast NCT	520 to 5850 (8 to 90)	62		
Daraset 200	650 to 3910 (10 to 60)	47	W. R. Grace	99532
Daraset 400	650 to 3910 (10 to 60)	54		
Daraset HES	520 to 1960 (8 to 30)	38		
Daraset PAVE 20	650 to 3910 (10 to 60)	47		
DCI Corrosion Inhibitor	2730 to 8320 (42 to 128)	33		
Eucon AcN	975 to 3900 (15 to 60)	45	Euclid Chemical Corp.	99924
Eucon AcN200	650 to 3900 (10 to 60)	42		
Eucon CIA	3250 to 9750 (50 to 150)[1]	32		
Gilco Accelerator	650 to 2680 (10 to 40)	45	W. R. Grace	99532
Polarset	520 to 6500 (8 to 100)	42		
Polychem Superset	520 to 2080 (8 to 32)	59	General Resource Tech.	99289
Pozzolith NC 534	650 to 2925 (10 to 45)	50	BASF Admixtures	99470
Pozzutec 20+	325 to 3910 (5 to 60)	48		
Rheocrete CNI	2600 to 5850 (40 to 90)	33		
Sika CNI	3250 to 9750 (50 to 150)[1]	33	Sika Corp.	99572
Sika Rapid – 1	520 to 3120 (8 to 48)	32		
Sika Set NC	650 to 2940 (10 to 60)	46		

1. Do not exceed 17,366 mL/m^3 or 768 oz/CY.

- 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 NutralSet	65 to 2283 (1 to 35)	15	Chryso	98128
Chryso Tard 100R	130 to 260 (2 to 4)	36		
Daratard 17	130 to 260 (2 to 8)	50	W. R. Grace	99532
Daratard 37	130 to 260 (2 to 8)	45		
Daratard PAVE 30	130 to 260 (2 to 8)	45		
Delvo Stabilizer	195 to 325 (3 to 5)	14	BASF Admixtures	99470
Eucon HC	130 to 390 (2 to 6)	39	Euclid Chemical Corp.	99924
Eucon LR[1]	260 to 650 (4 to 10)	40		
Eucon NR	260 to 520 (4 to 8)	43		
Eucon Retarder	520 (8)	42		
Eucon Retarder 75	195 to 325 (3 to 5)	34		
Eucon Retarder 100	130 to 390 (2 to 6)	39		
Eucon TR	195 to 390 (3 to 6)	34		
FR-1	98 to 130 (1-1/2 to 2)	92	Fritz-Pak Corp.	99803
HPS-R[1]	260 to 520 (4 to 8)	38	Hunt Process-Southern	99473
MasterPave RI	130 to 195 (2 to 3)	47	BASF Admixtures	99470
Plastiment	130 to 390 (2 to 6)	33	Sika Corp.	99572
Plastiment ES	130 to 260 (2 to 4)	34		
Polychem R	130 to 325 (2 to 5)	45	General Resource Tech.	99289
Pozzolith 80[1]	455 to 650 (7 to 10)	41	BASF Admixtures	99470
Pozzolith 100XR	130 to 260 (2 to 4)	50		
Pozzolith 200N	260 to 390 (4 to 6)	50		
Pozzolith 300R	195 to 325 (3 to 5)	50		
Pozzolith 700N	195 to 450 (3 to 7)	28		
Pozzolith 961R	195 to 325 (3 to 5)	34		
Recover	130 to 780 (2 to 12)	21	W. R. Grace	99532
Standard Delayed Set	195 to 325 (3 to 5)	93	Fritz-Pak Corp.	99803
V-Mar VSC500	455 to 975 (7 to 15)	16	W. R. Grace	99532

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
WRDA 64	195 to 590 (4 to 9)	44		
Zyla 610	260 to 783 (4 to 7)	20		
Zyla R	195 to 325 (3 to 5)	12		

1. These admixtures entrain a small amount of air.

- 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	W.R. Grace	99532
ADVA 190	195 to 590 (3 to 9)	30		
ADVA 195	195 to 980 (3 to 15)	32		
ADVA Cast 555	400 to 1400 (6 to 20)	16		
ADVA Cast 575	130 to 650 (2 to 10)	40		
ADVA Cast 600	130 to 650 (2 to 10)	38		
Adva Flex	260 to 910 (4 to 14)	29		
Borem 100 HML	650 to 1300 (10 to 20)	42	Boremco Specialty	99268
Chryso Fluid Optima 126	456 to 1304 (7 to 20)	21	Chryso	98128
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	457 to 783 (7 to 16)	36		
Chryso Fluid Premia 180	196 to 522 (3 to 8)	25		
Chryso Fluid Premia 196	392 to 1043 (6 to 16)	25		
Chryso ProPel 3300	520to 1430 (8 to 22)	40		
Chryso ProPel 4600	457 to 1305 (7 to 20)	41		
Chryso ProPel AG	650 to 1300 (10 to 20)	38.5		
Chryso ProPel XL25	325 to 975 (5 to 15)	28		

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
Daracem 19	390 to 1300 (6 to 20)	40	W. R. Grace	99532
Eucon 37	650 to 1040 (10 to 16)	40	Euclid Chemical Corp.	99924
Encon 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		
Eucon SPC	195 to 800 (3 to 12)	40		
Eucon SPJ	260 to 455 (4 to 7)	34		
Eucon SPQ	300 to 1000 (5 to 16)	48		
Eucon X-15	195 to 975 (3 to 15)	43		
Eucon X-20	195 to 980 (3 to 15)	27		
EXP 950	130 to 650 (2 to 10)	40	W. R. Grace	99532
Genesis 112	390 to 1304 (6 to 20)	27	General Resource Tech.	99289
Glenium 3030 NS	390 to 1170 (6 to 18)	20	BASF Admixtures	99470
Glenium 3400 NV	130 to 780 (2 to 12)	45		
Glenium 7101	195 to 780 (3 to 12)	32		
Glenium 7500	130 to 975 (2 to 15)	26		
Glenium 7700	260 to 975 (4 to 15)	34		
Glenium 7710	130 to 975 (2 to 15)	25		
Melchem	390 to 1625 (6 to 25)	34	General Resource Tech.	99289
MIRA 62	390 to 975 (6 to 15)	18	W. R. Grace	99532
MIRA 85	195 to 780 (3 to 12)	44		
MIRA 110	350 to 975 (6 to 15)	17		
MIRA PAVE 11	350 to 975 (6 to 15)	17		
Plastol 5000	195 to 975 (3 to 15)	32	Euclid Chemical Corp.	99924
Plastol 5500	195 to 520 (3 to 8)	40		
Plastol Ultra 109	130 to 780 (2 to 12)	40		
Polychem 775	391 to 1304 (6 to 20)	18	General Resource Tech.	99289
Polychem Paver Plus	190 to 392 (3 to 6)	37		
Polychem SPC	130 to 520 (2 to 8)	38		
Polyheed 1020	195 to 780 (3 to 12)	24	BASF Admixtures	99470
Polyheed 1025	195 to 780 (3 to 12)	25		

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
Polyheed 1720	195 to 780 (3 to 12)	19		
Polyheed 1725	195 to 780 (3 to 12)	18		
PS 1466	260 to 650 (4 to 10)	40		
Rheobuild 1000	650 to 1625 (10 to 25)	41		
Sikament N	390 to 1300 (6 to 20)	41	Sika Corp.	99572
Sikament 686	195 to 780 (3 to 12)	20		
Sikaplast 500	195 to 780 (3 to 12)	33		
SP7000	195 to 980 (3 to 15)	40	Riteks, Inc.	98250
Supercizer 1	325 to 455 (5 to 7)	95	Fritz-Pak Corp.	99803
Supercizer 5	325 to 455 (5 to 7)	91		
ViscoCrete 1000	195 to 780 (3 to 12)	30	Sika Corp.	99572
ViscoCrete 2100	130 to 1040 (2 to 16)	40		
ViscoCrete 2110	195 to 780 (3 to 12)	40		
ViscoCrete 4100	195 to 780 (3 to 12)	40		
ViscoCrete 6100	195 to 1040 (3 to 16)	40		

- 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
Borem RD-1	520 to 1040 (8 to 16)	45	Boremco Specialty	99268
Chryso Fluid Optima 100	195 to 780 (4 to 30)	30	Chryso	98128
Daracem 100	325 to 1300 (5 to 20)	41	W. R. Grace	99532
Eucon 537	650 to 1300 (10 to 20)	43	Euclid Chemical Corp.	99924
Eucon RD-2	390 to 650 (6 to 10)	42		
Supercizer 7	260 to 780 (4 to 12)	89	Fritz-Pak Corp.	99803

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
AEA-92	33 to 65 (1/2 to 1)	6	Euclid Chemical Corp.	99924
AEA-92S	33 to 130 (1/2 to 2)	3		
Air-Mix 200	33 to 65 (1/2 to 1)	15		
Air-In (12%)	33 to 130 (1/2 to 2)	12	Hunt Process-Southern	99473
Air-In –XT	33 to 130 (1/2 to 2)	7		
Air Plus	16 to 81 (1/4 to 1-1/4)	98	Fritz-Pak Corp.	99803
Airalon 3000	30 to 200 (1/2 to 3)	3	W.R. Grace	99532
Chryso Air TX	33 to 130 (1/2 to 2)	10	Chryso	98128
Chryso Air VR	33 to 130 (1/2 to 2)	12.5		
Chryso Air 260	13 to 195 (1/5 to 3.0)	7		
Daravair AT30	15 to 200 (1/4 to 3)	10	W. R. Grace	99532
Daravair AT60	15 to 200 (1/4 to 3)	20		
Daravair-1000	33 to 195 (1/2 to 3)	5		
Daravair PAVE 10	33 to 195 (1/2 to 3)	5		
Darex AEA	49 to 195 (3/4 to 3)	6		
Darex II AEA	33 to 195 (1/2 to 5)	10		
Euco Air Mix	33 to 65 (1/2 to 1)	15	Euclid Chemical Corp.	99924
Eucon Air 30	33 to 260 (1/2 to 4)	3		
Eucon Air 40	16 to 260 (1/4 to 4)	13		
Everair Plus	16 to 260 (1/4 to 4)	8	BASF Admixtures	99470
MB AE 90	16 to 260 (1/4 to 4)	6		
MB-VR	16 to 260 (1/4 to 4)	13		
Micro-Air	8 to 260 (1/8 to 4)	12		

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
Pave-Air	16 to 260 (1/4 to 4)	13		
Polychem AE	16 to 130 (1/4 to 2)	6	General Resource Tech.	99289
Polychem SA	8 to 130 (1/8 to 2)	7		
Polychem SA-50	30 to 200 (1/2 to 3)	3		
Polychem VR	8 to 195 (1/8 to 3)	15		
Quantec PL-466	130 to 325 (2 to 5)	13	W. R. Grace	99532
Sika AEA-14	130 to 195 (1 to 3)	8	Sika Corp.	99572
Sika AEA-15	33 to 98 (1/2 to 1-1/2)	16		
Sika AER	33 to 98 (1/2 to 1-1/2)	17		
Sika Air	65 to 195 (1/2 to 3)	6		
Sika Multi Air 25	13 to 195 (0.2 to 3)	6		
Super Air Plus	16 to 81 (1/4 to 1-1/4)	97	Fritz-Pak Corp.	99803
Terapave	30 to 200 (1/2 to3)	10	W.R. Grace	99532