

TECHNICAL CHANGE ORDER

CertainTeedCertainTeed Corporation
Pipe and Plastics Group

APPLICABLE TO:

Standard Purchasing Specification

500

DATE OF ISSUE:

T.C.O. NO.:

PAGE NO.:

5

1

DESCRIPTION:

Portland Cement

Purpose:

1. This specification is being revised to reflect the desired quality level of incoming Portland Cement as determined by the most recent technology and experience.
2. The revision applies only to Plant 257. Several more revisions may be anticipated as minor changes in the source (Lehigh Portland Cement Company) are made.
3. With time, the development of an operating specification will be effected as the combined test data and resultant process and product quality define a suitable cement.

Effective Date:

Date of issue.

Disposition of Superseded Pages:

None. This is a new issue but it does replace the requirements on Page 4 of Specification 500, dated May 21, 1971.

Distribution of this Spec. only.

R. Magargal
M. R. Streepy
C. H. Striegel (1)
Standards File (5)

J. P. McGinley
B. H. Jo
R. D. Murphree (6)

PREPARED BY:

APPROVED BY:

SALES:

I.E.:

O/S:

OTHER:

M. R. Streepy

J. P. McGinley

B. H. Jo

R. D. Murphree

C. H. Striegel

Standards File

TECHNICAL SPECIFICATIONS

CertainTeed

CertainTeed Corporation
Pipe and Plastics Group

SPECIFICATIONS CLASSIFICATION:

Standard Purchasing Specification - Appendix

T.C.O. REF. NO.

SPECIFICATION NO:

PAGE NO.:

500

1

SUPERSEDES:

DATE OF ISSUE:

DESCRIPTION:

Portland Cement - Hillsboro Plant

NOT TO BE DISTRIBUTED TO VENDORS

The interim properties for cement supplied by Lehigh Portland Cement Company are as follows:

CHEMICAL ANALYSIS

PHYSICAL TESTS

Property	Min.	Max.	Nom.	Property	Min.	Max.	Nom.
C ₃ S			56.0	Blaine, S.A., cm ² /gm	3000	3600	3400
C ₂ S			19.0	Compressive Strength			
C ₃ A	9.5	11.5	10.0	24 Hrs., psi			1080
C ₄ AF	7.0	8.5	7.5	7 Days, psi			
Na ₂ O			0.15	28 Days, psi			
K ₂ O			0.65	Air Entrained, %*			
Total Na ₂ O Equiv.*				Autoclave Exp., %*			
Free CaO			0.3	Initial Hydration Rate,			
MgO			0.9	mv**	3.0	5.5	4.0
SiO ₂				Alkalinity, ppm			
Fe ₂ O ₃							
Al ₂ O ₃							
Loss on Ignition			0.55				
SO ₃	1.9	2.3	2.2				

SULFATE SOURCE

Gypsum	60%
Anhydrite	40%

*Vendor Supplied Optional Data.

**This number is applicable only to Hillsboro's calorimeter where calibration constant is 0.0083 cal/sec. millivolt. For comparison with other instrument's data, the mv output must be converted into cal unit by a conversion factor of the individual instrument's calibration constant. The technique is described in TM-44.

NOTE - The above descriptions are meant to be used as guidelines for a suitable cement. Cement is not to be rejected via this specification unless there is a gross departure.

PREPARED BY:

M. R. Streep

APPROVED BY:

R & D

MFG.

SALES

I.E.

OTHERS

TECHNICAL CHANGE ORDER

 CertainTeed Corporation Pipe and Plastics Group	APPLICABLE TO: Standard Purchasing Specification 500		
	DATE OF ISSUE: JAN 22 1982	T.C.O. NO.: 5	PAGE NO.: 1

DESCRIPTION:

Portland Cement

Purpose:

1. This specification is being revised to reflect the desired quality level of incoming Portland Cement as determined by the most recent technology and experience.
2. The revision applies only to Plant 257. Several more revisions may be anticipated as minor changes in the source (Lehigh Portland Cement Company) are made.
3. With time, the development of an operating specification will be effected as the combined test data and resultant process and product quality define a suitable cement.

Effective Date:

Date of issue.

Disposition of Superseded Pages:

None. This is a new issue but it does replace the requirements on Page 4 of Specification 500, dated May 21, 1971.

Distribution of this Spec. only.

R. Magargal
 M. R. Streepy
 C. H. Striegel (1)
 Standards File (5)

J. P. McGinley
 B. H. Jo
 R. D. Murphree (6)

CTD010161

PREPARED BY: <i>m. r. Streepy</i>	APPROVED BY: <i>[Signature]</i>	R & D <i>[Signature]</i>	MFG. <i>[Signature]</i>	SALES <i>[Signature]</i>	I.E. <i>[Signature]</i>	OTHERS <i>CAS</i>
--	--	---	--	---	--	--

TECHNICAL SPECIFICATIONS

 CertainTeed Corporation Pipe and Plastics Group	SPECIFICATIONS CLASSIFICATION:		
	Standard Purchasing Specification - Appendix		
	T.C.O. REF. NO.	SPECIFICATION NO:	PAGE NO.:
		500	1
SUPERSEDES:		DATE OF ISSUE:	
		JAN 22 1982	

DESCRIPTION:

Portland Cement - Hillsboro Plant

NOT TO BE DISTRIBUTED TO VENDORS

The interim properties for cement supplied by Lehigh Portland Cement Company are as follows:

C₂S + C₃S > 74 %

CHEMICAL ANALYSIS

Property	Min.	Max.	Nom.
C ₃ S	55	60	56.0
C ₂ S	18	21	19.0
C ₃ A	8.0	10.0	9.0
C ₄ AF	9.5	11.5	10.0
Na ₂ O	7.0	8.5	7.5
K ₂ O			0.15
Total Na ₂ O Equiv.*			0.65
Free CaO			0.3
MgO			0.9
SiO ₂			
Fe ₂ O ₃			
Al ₂ O ₃			
Loss on Ignition			0.55
SO ₃	1.9	2.3	2.2

PHYSICAL TESTS

Property	Min.	Max.	Nom.
Blaine, S.A., cm ² /gm	3200	3600	3400
Compressive Strength			
24 Hrs., psi			1080
7 Days, psi			
28 Days, psi			
Air Entrained, %*			
Autoclave Exp., %*			
Initial Hydration Rate, mv**	3.0	5.5	4.0
Alkalinity, ppm			

SULFATE SOURCE

Gypsum	60%
Anhydrite	40%

*Vendor Supplied Optional Data.

**This number is applicable only to Hillsboro's calorimeter where calibration constant is 0.0083 cal/sec., millivolt. For comparison with other instrument's data, the mv output must be converted into cal unit by a conversion factor of the individual instrument's calibration constant. The technique is described in TM-44.

NOTE - The above descriptions are meant to be used as guidelines for a suitable cement. Cement is not to be rejected via this specification unless there is a gross departure.

PREPARED BY:	APPROVED BY:	R & D	MFG.	SALES	I.E.	OTHERS
<i>M. R. Streeter</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>			