## Mandate M/114

### MANDATE TO CEN/CENELEC

### CONCERNING THE EXECUTION OF STANDARDISATION WORK

### FOR HARMONIZED STANDARDS ON

# CEMENT, BUILDING LIMES AND OTHER HYDRAULIC BINDERS

RELATED TO THE FOLLOWING END USE PREPARATION OF CONCRETE, MORTAR, GROUT AND OTHER MIXES FOR CONSTRUCTION AND FOR THE MANUFACTURE OF CONSTRUCTION PRODUCTS

# **ANNEX 1**

FIELD OF APPLICATION

# **CEMENT, BUILDING LIMES AND OTHER HYDRAULIC BINDERS**

LIST OF PRODUCTS TO BE INCLUDED IN THE MANDATE TO BE USED IN: PREPARATION OF CONCRETE, MORTAR, GROUT AND OTHER MIXES FOR CONSTRUCTION AND FOR THE MANUFACTURE OF CONSTRUCTION PRODUCTS

	PRODUCTS FOR CONSIDERATION
nent clinker	Common cements:
olastfurnace slag	Portland cements
naterial	Portland composite cements
	Portland-slag cements
	A-S
	B-S
	Portland-silica fume cements
ional constituents	A-D
phate	Portland-pozzolana cements
	natural A-P
	natural B-P
	artificial A-Q
	artificial B-Q
	Portland-fly ash cements
	siliceous A-V
	siliceous B-V
	calcareous A-W
	calcareous B-W
	Portland-burnt shale cements
	A-T
	B-T
	Portland-limestone cements
	A-L
	nent clinker plastfurnace slag naterial ional constituents phate

B-L
Portland composite cements
A-M
B-M
Blastfurnace cements
А
В
С
Pozzolanic cements
А
В
Composite cements
A
В
Special cements:
Low heat cements
Sulfate resisting cement
White cement
Sea water resisting cement
Low alkali cements

FORM	MATERIALS	PRODUCTS FOR CONSIDERATION
Formless	Portland cement clinker Inorganic mineral materials Organic material	Masonry cements
Formless	Calcium aluminate clinker Grinding aids	Calcium aluminate cements
	Portland cement clinker Granulated blastfurnace slag Pozzolanic material Fly ash Burnt shale Limestone Lime Minor additional constituents Calcium sulphate Additives	Hydraulic road binders
Formless	Burnt limestone Burnt shell Burnt dolomitic limestone Hydraulic lime Pozzolanic or hydraulic materials Additives	<b>Building limes</b> Calcium limes Dolomitic limes Hydraulic limes

## ANNEX 2

TECHNICAL TERMS OF REFERENCE

# CEMENT, BUILDING LIMES AND OTHER HYDRAULIC BINDERS

TO BE USED IN:

PREPARATION OF CONCRETE, MORTAR, GROUT AND OTHER MIXES FOR CONSTRUCTION AND FOR THE MANUFACTURE OF CONSTRUCTION PRODUCTS

### Family

COMMON CEMENTS

Hydraulic binders composed of specified finely ground inorganic material constituents containing a specified minimum reactive CaO + reactive SiO2 and which, when mixed with water, form a paste which sets and hardens by means of hydration reactions and processes and which, after hardening, retains its strength and stability even under water. They are produced using continuous mass production and are uniform in properties and hogeneous in composition.

Clinker for cements included in this family shall not have a content of MgO by mass exceeding 5%.

### **Subfamilies**

1. PORTLAND CEMENTS

A cement made of clinker (95-100%) and minor additional constituents (0-5%).

2. PORTLAND-COMPOSITE CEMENTS

**Cements made of clinker (65-94%), other main constituents** (according to cement, see below) (6-35%) and minor additional constituents (0-5%):

2aPortland-slag cement: other main constituent: blastfurnace slag; (A-S) and (B-S)

**2bPortland-silica fume cement**: other main constituent: silica fume (< 10%); (A-D)

**2cPortland-pozzolana cement**: other main constituents: natural or industrial pozzolana; (natural A-P), (natural B-P), (artificial A-Q) and (artificial B-Q);

**2dPortland-fly ash cement**: other main constituents: siliceous or calcareous fly ashes; (siliceous A-V), (siliceous B-V), (calcareous A-W) and (calcareous B-W)

**2ePortland-burnt shale cement**: other main constituent: burnt shale; (A-T) and (B-T)

**2fPortland-limestone cement**: other main constituent: lime stone; (A-L) and (B-L)

**2gPortland-composite cement**: other main constituents: one, some or all of the above mentioned (*silica fume < 10%*); (A-M) and (B-M);

### **3. BLASTFURNACE CEMENT**

A cement made of clinker (5-64%), blastfurnace slag (36-95%) and minor additional constituents (0-5%) (A), (B) and (C).

### 4. POZZOLANIC CEMENT

A cement made of clinker (45-89%), 11-55% of silica fume and/or pozzolana and/or siliceous (and/or calcareous) fly ashes (*having sílica fume limited to < 10%*) and minor additional constituents (0-5%) (A) and (B)

### **5. COMPOSITE CEMENT**

A cement made of clinker (20-64%), blastfurnace slag (18-50%) pozzolana and siliceous fly ashes (18-50%) and minor additional constituents (0-5%)

### (A) and (B)

Characteristics of COMMON CEMENTS to be covered by the harmonised standard will be:

ER	PERFORMANCE CHARACTERISTICS	Durability
1	Compressive strength (early and	Y
	standard)	(against freeze-thaw, sulfate attack,carbonation,, as relevant)
	Setting time	
	Insoluble residue	
	Loss on ignition	
	Soundness (expansion and SO3 content)	
	Shrinkage	
	Chloride content	

**Pozzolanicity** (for pozzolanic cements only)

**2 to 6**.

Family

SPECIAL CEMENTS

Hydraulic binders composed of specified finely ground inorganic material constituents containing a specified minimum reactive CaO + reactive SiO2 and which, when mixed with water, forms a paste which sets and hardens by means of hydration reactions and processes and which, after hardening, retains its strength and stability even under water. In addition, these cements have specific requirements to deal with special performance requirements. They are produced using continuous mass production and are uniform in properties and homogeneous in composition.

Clinker for cements included in thisfamily shall not have a content of MgO by mass exceeding 5%

#### **Subfamilies**

6. SULFATE RESISTING CEMENTS

Selected common cements either with or without additional specified composition for resistance to sulfate

#### 7. SEA WATER RESISTING CEMENTS

Selected common cements either with or without additional specified composition for resistance to sea water 8. WHITE CEMENTS

Selected common cements with specified composition to obtain whiteness maintaining specified performance characteristics

### 9. LOW HEAT CEMENTS

Any of the above mentioned cements with specified low heat of hydration

**10. LOW ALKALI CEMENTS** 

Selected common cements with additional specified composition regarding alkali content

Characteristics of SPECIAL CEMENTS to be covered by the harmonised standard will be:

ER	PERFORMANCE	Durability
	CHARACTERISTIC	
1	Compressive strength (early and	Y
	standard)	(against freeze-thaw, sulfate attack, sea water, carbonation,,as
	Setting time	relevant)
	Insoluble residue	
	Loss on ignition	
	Soundness (expansion and SO3	
	content)	
	Chloride content	
	Alkali content (for low alkali cements	
	only)	
	Shrinkage	
	<b>Pozzolanicity</b> (for pozzolanic cements	
	only)	
	Heat of hydration (for low heat	
	cement only)	
2 to (	б.	

#### Family

#### MASONRY CEMENTS

Finely powdered hydraulic binders which rely essentially upon the presence of Portland cement clinker to develop strength. When mixed with sand and water only and without the addition of further materials, they produces a workable mortar suitable for use in rendering, plastering and masonry work. They are produced using continuous mass production and are uniform in properties

### Subfamilies

### **11.- MASONRY CEMENT**

A cement made of portland clinker (100-25%), inorganic material (0-75%) and, where appropriate, organic material

#### (<1%)

Characteristics of MASONRY CEMENTS to be covered by the harmonised standard will be:

ER	PERFORMANCE	Durability
	CHARACTERISTIC	
1	Compressive strength (early and	Y
	standard)	(against freeze-thaw, sulfate attack, carbonation,,,as relevant)
	Resistance to suction (water	
	retentivity)	
	Air content	
	Setting time	
	Fineness	
	Soundness (expansion and SO3	
	content)	
	Chloride content	
<mark>2 to 6</mark>	· · · · · · · · · · · · · · · · · · ·	

Family

### CALCIUM ALUMINATE CEMENTS

Hydraulic binders consisting mainly of monocalcium aluminate

#### Subfamily

<b>12 CALCIUM ALUMINATE CEMI</b>
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A cement made of calcium aluminate clinker and little quantities of grinding aids (< 0.2%) Characteristics of CALCIUM ALUMINATE CEMENTS to be covered by the harmonised standard will be:

ER	PERFORMANCE	Durability
	CHARACTERISTIC	
1	<b>Compressive strength</b>	Y
	Setting time	(against freeze-thaw, sulfate attack, humidity and temperature, carbonation,as
	Aluminia content	relevant)
	Alkali content	
	Sulfate content	
	Sulfide content	
	Chloride content	
2 to 6		

2100

#### Family

#### **BUILDING LIMES**

Factory made binders mainly on the basis of different limestones and, in some cases, of pozzolanic or hydraulic materials (the latter only in hydraulic limes). After burning the limestone and slaking the quicklime, building limes harden either by absorbing carbon dioxide and/or hydraulically. By mixing with sand and water they produce a workable mortar suitable for use in rendering, plastering and masonry work Their main constituents, on chemical analysis, are the oxides and hydroxides of calcium, with lesser amounts of magnesium, silicon, aluminium and iron.

**Two are the main families of building limes:** a) **air limes** (limes mainly consisting of calcium oxide or hydroxide which harden slowly in air; generally, they do not harden under water as they have no hydraulic properties. They can be quicklimes and slaked limes) **and b) hydraulic limes** (limes consisting of calcium silicates, calcium aluminates and calcium hydroxide. They set and harden under water)

#### **Subfamilies**

#### **13. CALCIUM BUILDING LIMES (CL)**

Air limes consisting mainly calcium oxide or hydroxide (CaO + MgO > 70%)

**14. DOLOMITIC BUILDING LIMES (DL)** 

Air limes mainly consisting of calcium and magnesium oxide or calcium hydroxide and magnesium oxide or hydroxide (5-30%)

**15.- HYDRAULIC BUILDING LIMES (HL) and (NHL)** 

Limes consisting of calcium silicates, calcium aluminates and calcium hydroxide. Natural hydraulic limes. NHL, are hydraulic limes to be also included in this subfamily. NHL may be added, up to 20% by mass, with

suitab	le pozzolanic or hydraulic materials They all have the <b>j</b>	property of setting and hardening under water.
Charac	teristics of BUILDING LIMES to be covered by the harm	onised standard will be:
E R	PERFORMANCE CHARACTERISTIC	Durability
1	Compressive strength (for hydraulic limes only)	Y
	Setting time (for hydraulic limes only)	(against freeze-thaw,as relevant)
	Air content (for hydraulic limes only)	
	Content of active constituents (for air limes only)	
	Soundness-maximum expansion	
	Fineness	
	Penetration	
<mark>2 to 6</mark>	••••••••••••••••••••••••••••••••••••••	· · · · · · · · · · · · · · · · · · ·

#### Family

### **OTHER HYDRAULIC BINDERS**

#### Subfamily

#### **16. HYDRAULIC ROAD BINDERS**

A binder consisting of a powder, blend of different materials but statistically homogeneous in composition. When mixed with water, hardens both in the air and under water and remains solid, even under water. Characteristics of HYDRAULIC ROAD BINDERS to be covered by the harmonised standard will be:

ER	PERFORMANCE	Durability
	CHARACTERISTIC	
1	Compressive strength (early and	Y
	standard)	(against freeze-thaw, sulfate attack, reactive aggregates, as relevant)
	Setting time	
	Fineness	
	Soundness - maximum expansion	
	Sulfate content	
<mark>2 to 6</mark>	<u>5</u> .	

### COMPREHENSIVE TABLE OF CHARACTERISTICS

### CEMENT, BUILDING LIMES AND OTHER HYDRAULIC BINDERS

			Р	0	U	ΤS		
			R	D	С			
ER	Performance characteristics	1-5	6-	11	12	13-	1	Durability
			10			15	6	
1	Compressive strength	Y	Y	Y	<b>Y</b> (	<b>Y(1</b>	Y	YY
	(early and standard)	Y	Y	Y	<b>4</b> )	)	Y	against freeze-thaw, sulfate attack, reactive aggregate,
	Setting time	Y	Y	-	Y	<b>Y(1</b>		carbonation,, as relevant
	Insoluble residue	Y	Y	-	-	)	-	
	Loss on ignition	Y	Y	Y	-	-	-	
	Soundness (expansion and	Y	Y	Y	-	-	-	
	SO3 content)	Y(	Y(	-	Y	-	-	
	Chloride content	2)	2)	-	-	-	-	
	Pozzolanicity	-	Y(	-	-	-	-	
	Heats of hydration	Y	3)	Y	-	-	Y	,
	Shrinkage	-	Y	Y	-	-	-	
	Fineness	-	-	-	-	Y	-	
	Resistance to suction	-	-	-	Y	-	-	
	(water retentivity)	-	-	-	Y	-	Y	,
	Alumina content	-	Y(	-	Y	-	-	
	Alkali content	-	6)	-	Y	-	-	
	Sulfate content	-	-	Y	-	-	-	
	Sulfide content	-	-	-	-	Y	Y	
	Penetration	-	-	-	-	Y(1	-	

Air content Soundness-maximum		-	) V		
expansion			Y(5		
Content of active constituents			)		
2 to .	 				
6					

Notes:

- (1) Only for hydraulic limes
- (2) Only for pozzolanic cements
- (3) Only for low heat cements
- (4) At different ages
- (5) Only for air limes
- (6) Only for low alkali cements

# ANNEX 3

ATTESTATION OF CONFORMITY Product family :

## Cements, building limes and other hydraulic binders (1/6)

### 1. Levels and classes for product performances

1.1 For the time being, the differences specified in Article 3 (2) of the CPD, do not seem to give rise to the need of a classification system for products.

Where for such needs it is recognised that a classification of product performance is the means of expressing the range of requirement levels of the works, the Commission will give the appropriate guidance or will request CEN/CENELEC to make the appropriate proposal through a modification to this mandate.

### 2. Systems of attestation of conformity

For the product(s) and intended use(s) listed below, CEN/CENELEC are requested to specify the following system(s) of attestation of conformity in the relevant harmonised standard(s) :

Product(s)	Intended use(s)		Level(s)	Attestatio
			or	n
			class(es)	) of
				conformit
				у
				system(s)
Common cements	,Preparation of concrete, mortar, grout and other mixe	s for construction and		1+
including:	for the manufacture of construction products			
- Portland cements				
- Portland				
composite				

cements:
Portland-slag
cement
Portland-silica
fume cement
Portland-pozzolana
cement de la companya
Portland-fly ash
cement de la companya
Portland-burnt
shale cement
Portland-limestone
cement de la companya
Portland composite
cement de la companya
- Blastfurnace
cements
- Pozzolanic
cements
- Composite
cements

System 1+ : See Annex III Section 2 point (i) of Directive 89/106/EEC, with audit-testing of samples taken at the factory

# **3.** Conditions to be applied by CEN on the specifications of the attestation of conformity system

3.1 The specification for the system should be such that it can be implemented even where performance does not need to be determined for a certain characteristic, because at least one Member State has no legal requirement at all for such characteristic [*see Article 2.1 of the CPD and, where applicable, clause 1.2.3 of the Interpretative Documents*]. In those cases the verification of such a characteristic must not be imposed on the manufacturer if he does not wish to declare the performance of the product in that respect.

3.2 For the initial type testing [see Annex III.1.a) of the CPD], the following characteristics shall be of the interest of the approved body:

### Compressive strength (early and standard)

Setting time

Insoluble residue

Loss on ignition

Shrinkage

Soundness (expansion and SO3 content)

**Chloride content** 

### Pozzolanicity (for pozzolanic cements only)

3.3 For the continuous surveillance, assessment and approval of the factory production control [see Annex III.1.g) of the CPD] and for the initial inspection of the factory and of the factory production control [see Annex III.1.f) of the CPD], parameters related to the following characteristics shall be of the interest of the approved body:

Compressive strength (early and standard) Setting time Insoluble residue Loss on ignition Shrinkage Soundness (expansion and SO3 content) Chloride content Pozzolanicity (for pozzolanic cements only)

Product family :

# Cements, building limes and other hydraulic binders (2/6)

### 1. Levels and classes for product performances

1.1 For the time being, the differences specified in Article 3 (2) of the CPD, do not seem to give rise to the need of a classification system for products.

Where for such needs it is recognised that a classification of product performance is the means of expressing the range of requirement levels of the works, the Commission will give the appropriate guidance or will request CEN/CENELEC to make the appropriate proposal through a modification to this mandate.

### 2. Systems of attestation of conformity

For the product(s) and intended use(s) listed below, CEN/CENELEC are requested to specify the following system(s) of attestation of conformity in the relevant harmonised standard(s) :

Product(s)	Intended use(s)	Level(s) Attestatio	
		or	n
		class(es	) of
			conformit
			у
			system(s)
Special cements,	Preparation of concrete, mortar, grout and other mixes for construction and		1+
including:	for the manufacture of construction products		
- Low heat cements	3		
- Sulfate resisting			
cements			
- White cements			
- Sea water			
resisting cements			
- Low alkali			
cements			

System 1+ : See Annex III Section 2 point (i) of Directive 89/106/EEC, with audit-testing of samples taken at the factory

### 3. Conditions to be applied by CEN on the specifications of the attestation of conformity system

3.1 The specification for the system should be such that it can be implemented even where performance does not need to be determined for a certain characteristic, because at least one Member State has no legal requirement at all for such characteristic [*see Article 2.1 of the CPD and, where applicable, clause 1.2.3 of the Interpretative*]

*Documents*]. In those cases the verification of such a characteristic must not be imposed on the manufacturer if he does not wish to declare the performance of the product in that respect.

3.2 For the initial type testing [see Annex III.1.a) of the CPD], the following characteristics shall be of the interest of the approved body:

#### Compressive strength (early and standard)

Setting time

Insoluble residue

Loss on ignition

Soundness (expansion and SO3 content)

**Chloride content** 

Alkali content (for low alkali cements only)

Shrinkage

**Pozzolanicity** (for pozzolanic cements only)

### Heats of hydration (for low heat cement only)

3.3 For the continuous surveillance, assessment and approval of the factory production control [see Annex III.1.g) of the CPD] and for the initial inspection of the factory and of the factory production control [see Annex III.1.f) of the CPD], parameters related to the following characteristics shall be of the interest of the approved body:

Compressive strength (early and standard)

Setting time Insoluble residue Loss on ignition Soundness (expansion and SO3 content) Chloride content Alkali content (for low alkali cements only) Shrinkage Pozzolanicity (for pozzolanic cements only)

Heats of hydration (for low heat cement only)

Product family :

## Cements, building limes and other hydraulic binders (3/6)

### **1.** Levels and classes for product performances

1.1 For the time being, the differences specified in Article 3 (2) of the CPD, do not seem to give rise to the need of a classification system for products.

Where for such needs it is recognised that a classification of product performance is the means of expressing the range of requirement levels of the works, the Commission will give the appropriate guidance or will request CEN/CENELEC to make the appropriate proposal through a modification to this mandate.

### 2. Systems of attestation of conformity

For the product(s) and intended use(s) listed below, CEN/CENELEC are requested to specify the following system(s) of attestation of conformity in the relevant harmonised standard(s) :

Product(s)	Intended use(s)	level(s)	Attestatio
	C	r	n
	с	lass(es)	of
			conformit
			у
			system(s)
<b>Calcium</b>	Preparation of concrete, mortar, grout and other mixes for construction and for -		1+
aluminate	the manufacture of construction products		
cements,			

System 1+ : See Annex III Section 2 point (i) of Directive 89/106/EEC, with audit-testing of samples taken at the factory

# **3.** Conditions to be applied by CEN on the specifications of the attestation of conformity system

3.1 The specification for the system should be such that it can be implemented even where performance does not need to be determined for a certain characteristic, because at least one Member State has no legal requirement at all for such characteristic [*see Article 2.1 of the CPD and, where applicable, clause 1.2.3 of the Interpretative Documents*]. In those cases the verification of such a characteristic must not be imposed on the manufacturer if he does not wish to declare the performance of the product in that respect.

3.2 For the initial type testing [see Annex III.1.a) of the CPD], the following characteristics shall be of the interest of the approved body:

### **Compressive strength**

Setting time

Aluminia content

Alkali content

Sulfate content

Sulfide content

### **Chloride content**

3.3 For the continuous surveillance, assessment and approval of the factory production control [see Annex III.1.g) of the CPD] and for the initial inspection of the factory and of the factory production control [see Annex III.1.f) of the CPD], parameters related to the following characteristics shall be of the interest of the approved body:

Compressive strength Setting time Aluminia content Alkali content Sulfate content Sulfide content Chloride content

Product family :

# Cements, building limes and other hydraulic binders (4/6)

### 1. Levels and classes for product performances

1.1 For the time being, the differences specified in Article 3 (2) of the CPD, do not seem to give rise to the need of a classification system for products.

Where for such needs it is recognised that a classification of product performance is the means of expressing the range of requirement levels of the works, the Commission will give the appropriate guidance or will request CEN/CENELEC to make the appropriate proposal through a modification to this mandate.

### 2. Systems of attestation of conformity

For the product(s) and intended use(s) listed below, CEN/CENELEC are requested to specify the following system(s) of attestation of conformity in the relevant harmonised standard(s) :

Product(s)	Intended use(s)	Level(s)	Attestatio
		or	n
		class(es)	of
			conformit
			у
			system(s)
<b>Masonry</b>	Preparation of concrete, mortar, grout and other mixes for construction and for the		1+
cements,	manufacture of construction products		

System 1+ : See Annex III Section 2 point (i) of Directive 89/106/EEC, with audit-testing of samples taken at the factory

# **3.** Conditions to be applied by CEN on the specifications of the attestation of conformity system

3.1 The specification for the system should be such that it can be implemented even where performance does not need to be determined for a certain characteristic, because at least one Member State has no legal requirement at all for such characteristic [*see Article 2.1 of the CPD and, where applicable, clause 1.2.3 of the Interpretative Documents*]. In those cases the verification of such a characteristic must not be imposed on the manufacturer if he does not wish to declare the performance of the product in that respect.

3.2 For the initial type testing [see Annex III.1.a) of the CPD], parameters related to the following characteristics shall be of the interest of the approved body:

### Compressive strength (early and standard)

Resistance to suction, (water retentivity)

Air content

Setting time

Fineness

Soundness (expansion and SO3 content)

### Chloride content

3.2 For the continuous surveillance, assessment and approval of the factory production control [see Annex III.1.g) of the CPD] and for the initial inspection of the factory and of the factory production control [see Annex III.1.f) of the CPD], parameters related to the following characteristics shall be of the interest of the approved body:

### **Compressive strength (early and standard)**

**Resistance to suction,(water retentivity)** 

Air content

Setting time

Fineness

Soundness (expansion and SO3 content)

**Chloride content** 

Product family :

## Cements, building limes and other hydraulic binders (5/6)

### **1.** Levels and classes for product performances

1.1 For the time being, the differences specified in Article 3 (2) of the CPD, do not seem to give rise to the need of a classification system for products.

Where for such needs it is recognised that a classification of product performance is the means of expressing the range of requirement levels of the works, the Commission will give the appropriate guidance or will request CEN/CENELEC to make the appropriate proposal through a modification to this mandate.

### 2. Systems of attestation of conformity

For the product(s) and intended use(s) listed below, CEN/CENELEC are requested to specify the following system(s) of attestation of conformity in the relevant harmonised standard(s) :

Product(s)	Intended use(s)	Level(s)	Attestatio
		or	n
		class(es)	of
			conformit
			у
			system(s)
<b>Building limes,</b>	Preparation of concrete, mortar, grout and other mixes for construction and for	·	2
including:	the manufacture of construction products		
Calcium limes			

System 2 : See Annex III Section 2 point (ii) of Directive 89/106/EEC, First possibility, including certification of the factory production control by an approved body on the basis of initial inspection of factory and of factory production control (without continuous surveillance, assessment and approval of factory production control)

# **3.** Conditions to be applied by CEN on the specifications of the attestation of conformity system

3.1 The specification for the system should be such that it can be implemented even where performance does not need to be determined for a certain characteristic, because at least one Member State has no legal requirement at all for such characteristic [*see Article 2.1 of the CPD and, where applicable, clause 1.2.3 of the Interpretative Documents*]. In those cases the verification of such a characteristic must not be imposed on the manufacturer if he does not wish to declare the performance of the product in that respect.

3.2 For the initial inspection of the factory and of the factory production control [see Annex III.1.f) of the CPD], parameters related to the following characteristics shall be of the interest of the approved body:

Compressive strength (for hydraulic limes only)

Initial and final setting time (for hydraulic limes only)

Air content (for hydraulic limes only)

Content of active constituents (for air limes only)

Soundness-maximum expansion

Fineness

Penetration

Product family :

# Cements, building limes and other hydraulic binders (6/6)

### 1. Levels and classes for product performances

1.1 For the time being, the differences specified in Article 3 (2) of the CPD, do not seem to give rise to the need of a classification system for products.

Where for such needs it is recognised that a classification of product performance is the means of expressing the range of requirement levels of the works, the Commission will give the appropriate guidance or will request CEN/CENELEC to make the appropriate proposal through a modification to this mandate.

### 2. Systems of attestation of conformity

For the product(s) and intended use(s) listed below, CEN/CENELEC are requested to specify the following system(s) of attestation of conformity in the relevant harmonised standard(s) :

Product(s)	Intended use(s)	Level(s) or class(es	Attestation s) of
			conformity system(s)
Hydraulic road binders	Preparation of concrete, mortar, grout and other mixes for road base stabilisation		2+

System 2+: See Annex III Section 2 point (ii) of Directive 89/106/EEC, first possibility, including certification of the factory production control by an approved body on the basis of initial inspection of factory and of factory production control as well as of continuous surveillance, assessment and approval of factory production control

# **3.** Conditions to be applied by CEN on the specifications of the attestation of conformity system

3.1 The specification for the system should be such that it can be implemented even where performance does not need to be determined for a certain characteristic, because at least one Member State has no legal requirement at all for such characteristic [*see Article 2.1 of the CPD and, where applicable, clause 1.2.3 of the Interpretative Documents*]. In those cases the verification of such a characteristic must not be imposed on the manufacturer if he does not wish to declare the performance of the product in that respect.

3.2 For the continuous surveillance, assessment and approval of the factory production control [see Annex III.1.g) of the CPD] and for the initial inspection of the factory and of the factory production control [see Annex III.1.f) of the CPD], parameters related to the following characteristics shall be of the interest of the approved body:

Compressive strength (early and standard)

Initial setting time

Fineness

Soundness - maximum expansion

Sulfate content

## ANNEX 4

DANGEROUS SUBSTANCES

# **CEMENT, BUILDING LIMES AND OTHER HYDRAULIC BINDERS**

European technical specifications must be adopted taking into account necessary legislation on substances classified as dangerous.

This results from the Interpretative Documents, where it is noted, in the introduction note to all six of them, that: "Concerning dangerous substances which are in construction products, classes and/or levels of performance to which technical specifications will refer, shall allow the levels of protection needed by the works to be guaranteed, taking into account the purpose of the works."

In addition, outside the scope of the Directive, writers of technical specifications must take into account legislation which affects materials to be used for construction products and which are regulated for reasons not related to the incorporation of the construction products into the works.

In order to permit technical specifications writers to take into account the necessary legislation, a working document was elaborated by the Commission services (doc. CONSTRUCT 95/148 Rev. 1 of January 4, 1996). Specification writers should use this document as a guide but must also take account of any other relevant or dangerous substances which the working document does not yet include.

Notes

(1) O.J N·C 62, 28.02.1994