

### SUPPLEMENT No. 3

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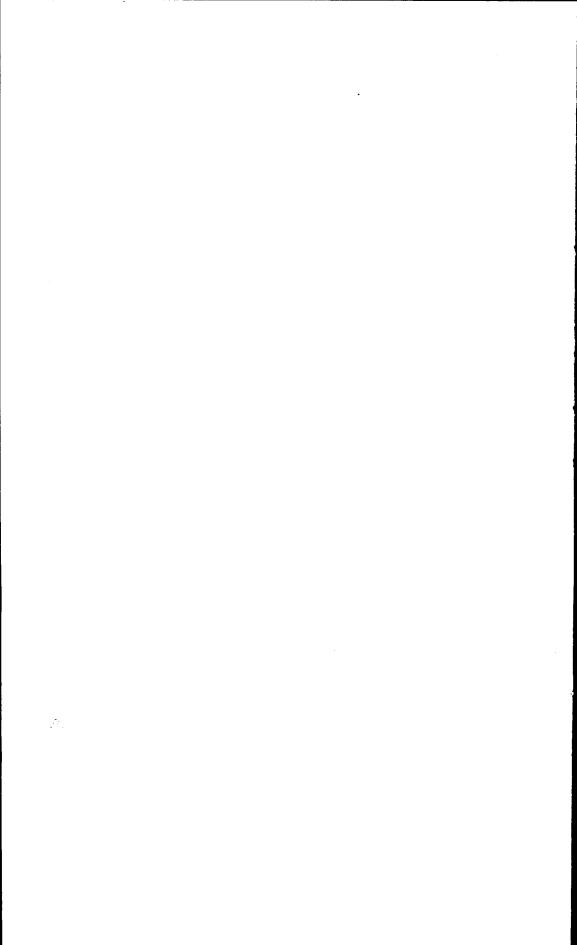
### THE SOVEREIGN BASE AREAS GAZETTE

No. 681 of 12th April, 1984.

### SUBSIDIARY LEGISLATION

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# THE STANDARDS AND CONTROL OF QUALITY ORDINANCE, 1984

(Ordinance 4 of 1984).

## REGULATIONS MADE BY THE ADMINISTRATOR UNDER SECTION 3.

In exercise of the powers vested in him under Section 3 of the Standards and Control of Quality Ordinance, 1984, the Administrator after consultation with Republican legislation dealing with the same matters in the Republic, hereby makes the following Regulations:—

- 1. These Regulations may be cited as the Standards and Control of Quality Regulations, 1984.
- 2. The following Standards which are set out in detail in the Appendix hereto shall be applied without exception throughout the Sovereign Base Areas:—
  - CYS 64: 1978 Aggregates from natural sources for concrete.
  - CYS 14: Part 1: 1981 Sands for external renderings, Floor screeds and internal plastering with lime (or additive) and Portland Cement.
  - CYS 14: Part 2: 1981 Sands for mortar for plain and reinforced brickwork, blockwalling and masonry.

# CYPRUS STANDARD SPECIFICATION FOR AGGREGATES FROM NATURAL SOURCES FOR CONCRETE

#### 1. SCOPE

This specification relates to naturally occurring materials, crushed or uncrushed, used in the production of concrete for normal civil and structural engineering purposes. It does not apply to artificial materials or those employed for special purposes.

#### 2. DEFINITIONS

For the purposes of this Cyprus Standard the following definitions apply:

#### 2.1 Coarse aggregate

Aggregate mainly retained on a 5.00 mm CYS ... 1) test sieve and containing only so much finer material as is permitted for the various sizes in this specification.

Coarse aggregate may be described as uncrushed gravel, defined in 2.1.1, crushed rock or crushed gravel, defined in 2.1.2 or partially crushed gravel when it is the product of the blending of uncrushed and crushed gravels.

- 2.1.1 Uncrushed gravel. Coarse aggregate resulting from the natural disintegration of rock.
- 2.1.2 Crushed gravel. Coarse aggregate produced by crushing hard rock or gravel and which does not contain more than 30% or round particles when tested in accordance with the appropriate section of GYS ...<sup>2</sup>)

#### 2.2 Fine aggregate

Aggregate mainly passing a 5.00°mm CYS ... 1) test sieve and containing only so much coarse material as is permitted for the various grading zones in this specification.

Fine aggregate may be described as natural sand, defined in 2.2.1, crushed rock and/or crushed gravel sand, defined in 2.2.2 or mixed sand when it is the product of the blending of natural sand and crushed rock sand or crushed gravel sand.

1) CYS ... - Test sieves-currently under preparation

<sup>2)</sup> CYS ... - Sampling and Testing of mineral aggregates - currently under preparation

- 2.2.1 Natural sand. Fine aggregate resulting from the natural disintegration of rock.
- 2.2.2 Crushed rock sand and crushed gravel sand. Fine aggregate produced by crushing hard rock and gravel respectively.

#### 2.3 All-in aggregate

Material composed of a mixture of coarse aggregate and fine aggregate.

#### 3. SAMPLING AND TESTING

#### 4. QUALITY OF AGGREGATES

- 4.1 Coarse aggregate
- 4.1.1 General requirements. Coarse aggregate as defined in section
  2.1 of this standard shall have hard, strong, durable and clean pieces,
  free from adherent coatings and conforming to the requirements of this
  specification.
- 4.1.2 Deleterious substances. The amount of deleterious substances in coarse aggregate shall not exceed the maximum limits specified in table 1, when determined in accordance with the requirements of the appropriate sections of CYS ... 1).

<sup>1)</sup> CYS ... - Sampling and testing of mineral aggregatescurrently under preparation

<sup>2)</sup> CYS ... - Test sieves - currently under preparation

Table 1: Deleterious substances for coarse aggregate

And the second s	Maximum permissible liwit
	weight percent
1. Clay lumps and friable particles	5 <b>.</b> 0*
2. Soft particles	5.0*
3. Material passing the 75 µm sieve	140**
4. Sulphur in sulphide and/or sulphate minerals expressed as SO 3	0.5
5. Chert and other local deleterious substances	As agreed between the purchaser and supplier

<sup>\*</sup> The sum of these two items should not exceed 5%.

- 4.1.3 Specific gravity and water absorption. The specific gravity when tested in accordance with the requirements of the relevant section of CYS...<sup>1)</sup> shall be more/less than ... (as specified by the purchaser). The water absorption when tested in accordance with the requirements of the relevant section of CYS...<sup>1)</sup> shall be more/less than ... (as specified by the purchaser).
- 4.1.4 Soundness. When the coarse aggregate is subjected to five alterations of the sodium or magnesium sulphate soundness test as described in the appropriate section of CYS ... 1) the weighted loss shall not exceed 12 or 18 percent respectively.
- 4.1.5 "10% fines" value. When tested in accordance with the requirements of the appropriate section of CYS ... 1), the "10% fines" value shall be not less than 50KN. Where the purchaser has specified aggregate for concrete wearing surfaces, the "10% fines" value shall be not less than 100KN.
- 4.1.6 Aggregate impact value. As an alternative to the "10% fines" test, the aggregate impact test may be carried out according to the requirements of the appropriate section of CYS ... 1). The aggregate impact value shall

<sup>\*\*</sup> In the case of crushed aggregates, if the material finer than the 75 µm sieve consists of the dust of fracture, essentially free from clay or shale, this percentage may be increased to 1.5.

CYS ... - Sampling and testing of mineral aggregates currently under preparation

<sup>2)</sup> CYS ... - Test sieves - currently under preparation

not exceed 30%.

Where the purchaser has specified aggregate for concrete wearing surfaces, the aggregate impact value shall not exceed 25%.

h.1.7 Percentage of wear (use of the Los Angeles Machine). The percentage of wear shall not be more than 25 when tested in accordance with the requirements of the appropriate section of CYS ...1).

4.1.8 Flakiness and Elongation indices. When tested in accordance with the requirements of the appropriate sections of CYS ... 1), the flakiness and elongation indices should not exceed 30%.

4.1.9 Grading of coarse aggregate. The grading of coarse aggregate, when tested in accordance with the requirements of clause 3 of this standard, shall be within the limits given in table 2.

Percentage by weight passing CYS sieves								
test sieve	Nominal size of graded aggregate		. i	. · · · · · · · · · · · · · · · · · · ·			zed	
mm	l40mm te 5mm	20mm to Sam	14mm . to 5mm	63mm	γtΟτωτω	20mm	<b>1</b> Lymn	10mm
75.0	<b>1</b> 00			100	_	-	-	-
63.0	-	-	<b>-</b>	85-100	100	- :	-	-
37.5	95 <b>-1</b> 00	<b>1</b> 00	-	0-30	85-100	100		-
20.0	35-70	5 <b>-1</b> 00	100	0-5	0-25	85-100	100	-
14.0	-	- 1	97-100	-	_	-	85 <b>-1</b> 00	100
10.0	10-40	30-60	50-85	-	0-5	0-25	0-50	85 <b>-1</b> 00
5.00	0-5	0-10	0-10	-	-	0-5	0-10	0-25
2.36		-	-	-	-		-	0-5

Table 2: Coarse Aggregate

The amount of deleterious substances in fine aggregate shall not exceed

<sup>4.2</sup> Fine aggregate

<sup>4.2.1</sup> General requirements. Fine aggregate as defined in section 2.2 of this standard shall have hard, strong, durable particles and shall conform to the requirements of this specification.

<sup>4.2.2</sup> Deleterious substances

CYS ... - Sampling and testing of mineral aggregates-currently under preparation

<sup>2)</sup> CYS ... - Test sieves - currently under preparation

the maximum limits specified in table 3 when tested in accordance with the requirements of the appropriate sections of  $\text{CYS}^1_{***}$ . 1)

Table 3: Deleterious substances for fine aggregate

	Maximum Permissible Limit
•	weight percent
1. Clay lumps and friable particles	3.0
2 Material passing the 75µm sieve	3.0*
3. Sulphur in sulphide and/or sulphate minerals expressed as SO <sub>2</sub>	0.5
4. Chert and other local deleterious substances	as agreed between the purchaser and the supplier

<sup>\*</sup> In the case of crushed sand, from secondary crushing, if the material finer than 75µm sieve consists of the dust of fracture, essentially free from clay or shale, these limits may be increased up to 7 percent.

4.2.3 Specific gravity and water absorption. The specific gravity when tested in accordance with the relevant section of CYS ... 1), shall be more/less than ... (as specified by the purchaser). The water absorption when tested in accordance with the relevant section of CYS ... 1), shall be more/less than ... (as specified by the purchaser). 4.2.4 Soundness. When the fine aggregate is subjected to five alterations of the sodium or magnesium sulphate soundness test as described in the appropriate section of CYS ... 1), the weighted loss shall not exceed 10 or 15 percent respectively.

4.2.5 Organic impurities. All fine aggregate shall be free from injurous amount of organic impurities. Aggregate subjected to the colorimetric test for organic impurities as described in the appropriate section of CYS...<sup>1)</sup> and producing a colour darker than the standard, shall be rejected unless the relative strength of mortar at 7 days as described in the appropriate section of CYS...<sup>1)</sup> is not less than 95 percent.

4.2.6 Grading of fine aggregate. The grading of fine aggregate, when determined by a test according to the requirements of clause 3 of this standard, shall be within the limits of one of the grading zones given in table 4, except that a total tolerance of up to 5% may be applied to the percentages given underlined. This tolerance may be split up; for

CYS ... Sampling and testing of mineral aggregates-currently under preparation

example, it could be 1% on each of three sieves and 2% on another, or 1% on one sieve and 1% on another etc.

The fine aggregate shall be described as fine aggregate of the grading zone into which it falls, eg. CYS ... Grading Zone 1.

NOTE: It is intended that individual zones should not be specified in contract documents relating to concrete; the concrete mixes should be modified to make the best use of the materials readily available.

Table 4: Fine aggregate

1)	Percentage by weight passing CYS sieves			
test sieve	Grading Zone 1	Grading Zone 2	Grading Zone 3	Grading Zone 4
тит.				
10.0	100	100	100	100
5.00	90-100	90-100	90-100	<u>95</u> -100
2,36	60 <u>-95</u>	<u>75</u> –100	<u>85</u> -100	<u>95</u> -100
1.18	30- <u>70</u>	<u>55-90</u>	<u>75</u> -100	<u>90-100</u>
μm				
600	<b>15-</b> 34	35-59	60-19	80-100
300	5-20	<u>8-30</u>	<u>12-40</u>	<u>15</u> -50
150	O <b>-10</b>	0 <b>-<u>10</u></b>	0 <b>-1</b> 0	0 <b>-1</b> 5

NOTE: The commonly used proportions of one part of fine aggregate to two parts of coarse aggregate, ie. a fine aggregate percentage of about 33% by volume of the total aggregate, are not always the most suitable for making concrete of high strength and good durability.

To make concrete of the best quality with the range of aggregates allowed, the mix should be suitably designed and the proportion of fine aggregate in the mix should be reduced as the fine aggregate grading becomes finer.

For example, in an investigation using an irregular shaped gravel of 20 mm maximum size and a natural sand, concrete mixes of 1:6 proportion

1) CYS ... - Test sieves - currently under preparation

by weight were found to require the same water/coment ratio and to have the same workability and strength, when the sand was graded to lie in the middle of Grading Zones 1,2,3 and 4 if the sand contents were approximately 45, 35, 30 and 25% by weight respectively.

The most suitable proportion of fine aggregate to be used for a particular cement/aggregate ratio will, however depend on the actual grading, the particle shape and the surface texture of both the fine and the coarse aggregates, In particular, the correct design of the mix becomes increasingly important as the grading of the fine aggregate approaches the coarser limit of Grading Zone 1 or the finer limit of Grading Zone 4. The suitability of a given fine aggregate for use with the available coarse aggregate should always be ascertained by mix design, this being especially important in respect of reinforced concrete structures.

#### 4.3 All-in-aggregate

#### 4.3.7 General requirements

All-in-aggregate, as defined in section 2.3 of this standard, shall have hard, strong, durable particles and shall conform to the requirements of this specification.

The coarse and fine aggregates constituting the all-in aggregate shall conform to all the requirements of clauses 4.1 and 4.2 of this standard respectively, except those referring to the grading of the aggregate which should be within the limits specified in section 4.3.2 of this standard.

#### 4.3.2 Grading of all-in aggregate

The grading of all-in aggregate when determined by a test according to the requirements of clause 3 of this standard, shall be within the limits given in table 5.

Table 5: Grading of all-in aggregate

cys <sup>1)</sup>	Percentage by weight passing CYS sieves		
test sieve	40 mm nominal size	20 mm nominal size	
mm			
75.0	100		
37.5	95-100	100	
20.0	45-80	95-100	
5.0	25-50	35-55	
μn			
600	8-30	10-35	
150	0-6	0-6	

<sup>1)</sup> CYS ... - Test sieves-currently under preparation

The following organizations collaborated in the preparation of this Standard Specification.

Cyprus Association of Civil Engineers and Architects
Cyprus Association of Building Contractors
Cyprus Association of Professional Engineers
Association of Crushing Plants

Mines Services

BS 410

Department of Town Planning and Housing
Geological Survey Department
Public Works Department
Water Development Department
Cyprus Organization for Standards and Control of Quality

NOTE: For the purposes of this Standard and for all cases where a Cyprus Standard is currently under preparation, reference may be made to the relevant Standards as follows:

Test Sieves.

BS 812 Methods for Sampling and Testing of Mineral Aggregates, Sands and Fillers.

ASTM—C88 Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate.

ASTM—131 Resistance to Abrasion of Small Size Coarse Aggregate by Use of The Los Angeles Machine.

SANDS FOR EXTERNAL HENDERINGS, FLOOR SCREEDS AND INTERNAL PLASTER-ING WITH LIME (OR ADDITIVE) AND PORTLAND CEMENT

#### 1 SCOPE

This Cyprus Standard relates to naturally occurring sands, crushed stone sands and crushed gravel sands used for external renderings, internal plastering using mixes of lime (or additive) and sand (with or without the addition of cement or gypsum plaster), cement and sand (with or without the addition of lime) and for floor screeds of cement and sand.

#### 2 DEFINITIONS

For the purpose of this Cyprus Standard, the following definitions apply.

- 2.1 Sand. A material mainly passing a 5.00 mm CYS test sieve which may be either a natural sand or one obtained by crushing hard rocks or gravels.
- 2.2 Natural Sand. A send produced by the natural disintegration of rock.
- 2.3 Crushed Stone Sand and Crushed Gravel Sand. Sands produced by crushing a hard stone or rock and a gravel respectively.

#### 3 SAMPLING AND TESTING

- 3.1 Sampling and testing of sands shall be carried out in accordance with the requirements of the appropriate sections of CYS  $\dots$  1
- 3.2 The grading of sands shall be determined by the method for sieve analysis but using the following nominal aperture size test sieves, complying with the requirements of CYS  $\dots$ <sup>2</sup>
  - 5.00 mm, 2.36 mm, 1.18 mm,  $600~\mu\text{m}$ ,  $300^+~\mu\text{m}$ ,  $150^+~\mu\text{m}$  woven wire.
- 1) CYS ... Sampling and testing of mineral aggregates under preparation
- 1) CYS ... Test sieves under preparation
- + Full tolerances

Unless otherwise stated in the enquiry, duplicate tests shall in all cases be made and the results of both tests reported.

#### 4 QUALITY OF SANDS

4.1 Sands shall consist of natural sand, crushed stone sand or crushed gravel send, or a combination of any of these. They shall be hard, durable, clean and free from adherent coatings, such as clay, and from any appreciable amount of clay in pellet form.

Sands shall not contain hermful materials such as iron pyrites, salts, or other organic impurities, mice, shale or similar leminated materials, or flaky or elongated perticles in such a form or in sufficient quantity to affect adversely the hardening, the strength, the durability or the appearance of the final product or any materials in contact with it and shall conform to the requirements of the relevant section of CYS 64:1978.

The various sizes of particles of which a send is composed shall be uniformly distributed throughout the mass.

- 4.2 The quantity of clay, sile and dust shall not exceed the following.
- 4.2.1 Sand or crushed gravel sand; 5% by mass when determined by the decantation method given in CYS ...!
- 4.2.2 Crushed stone sand; 10% by mass, when determined by the sedimentation method given in CYS  $\dots$

A guide to the uniformity of supplies in respect of the silt and clay content of natural sand and rrushed gravel sand during deliveries may be obtained using the field settling test given in CYS ... and comparing the results with that of a test taken on the accepted sample.

#### 5 GRADING:

- 5.1 The sand shall be graded within the limits set out for its appropriate application.
- 5.1.1 The grading of sands for external renderings, internal cement plastering, undercoats, for internal lime plastering and for floor screeds when determined according to clause 3 shall be within the limits given in table 1
- 1) CYS ... Sampling and testing of mineral aggregates under preparation

Table 1. Sands for external renderings, internal coment plastering, internal lime undercoats and floor screeds

CYS sieve	Percentage by mass pacsing CYS sieves
mm	(I) /0
<b>5.00</b>	100
2.36	90–100
1.18	70–100
μm	6 6
600	40~60
300	5-40
150	0 <b>-</b> 10 <sup>+</sup>

<sup>\*</sup> In the case of crushed stone, higher proportions of material passing a 150 µm BS sieve may be satisfactory and the amount permitted may be increased to 15%.

5.1.2 The grading of sands for internal lime plastering finishing coats when determined according to clause 3 shall be within the limits given in table 2.

Table 2. Sands for finishing coats, internal lime plastering

Percentage by mass pas— sing CYS sieves			
95			
100			
90-100			
55~100			
5-50			
0-10 <sup>+</sup>			

In the particular case of some crushed stone, higher proportions of material passing a 150 μm CYS sieve may be satisfactory and the amount permitted may be the subject of special agreement between the supplier and the purchaser or his representative.

5.2 A sand whose grading falls outside the above limits on sieves other than the 5.00 mm sieve in table 1 and the 2.36 mm sieve in table 2, by a total amount not exceeding 5% shall be regarded as being within those limits. This 5% can be split up, for example, as 1% on each of three sieves and 2% on another, or 4% on one sieve and 1% on another.

NOTE1. Sands which just fall outside the above limits due to a small excess of coarse particles can often be made to comply with this Cyprus Standard by screening through a suitably sized sieve. Finishing coat sands as specified in table 2 can often be obtained by screening undercoat sands in a similar manner.

The required grading for either undercosts or finishing coats can often be attained by blending together sands which are by themselves unsuitable.

NOTE 2. The most suitable grading of sand for an external rendering will depend, to some extent, upon the finishing treatment. The sand grading specified will, in general, be suitable for the undercoats and for some finishing coats such as the smooth (floated) finishing coats, the scraped finishes and for pebble-dash or dry-dash. For some textured finishes, such as those produced by treatment of the freshly applied final coat with a tool, it may be desirable to remove the coarser particles (e.g. by screening through a 2 mm sieve), while for others such as 'torn texture', some proportion of material coarser than 5 mm may be needed. For roughcast (wetdashing or harling) the grading and maximum size will vary according to the texture required and the type of aggregate: the proportion of coarse material (over 5 mm) to fine should be about 1:2.

#### 6 SUPPLIER'S CERTIFICATE AND COST OF TESTS

The supplier shall satisfy himself that the output at the source of production complies consistently with the requirements of this Cyprus Standard and shall give a certificate to this effect to the purchaser or his representative.

If the purchaser or his representative requires independent tests or the certification of individual consignments, the samples shall be taken before or immediately after delivery at the option of the purchaser or his representative, and these tests shall be carried out in accordance with the appropriate requirements of this Cyprus Standard on the written instructions of the purchaser or his representative.

Unless otherwise specified with the enquiry and order, the supplier shall supply free of charge the material required for testing and the cost of the tests shall be borne:

- (a) by the supplier, in the event of results showing that the material does not comply with the standard;
- (b) by the purchaser, in the event of results showing that the material does so comply.

#### 7 ADDITIONAL INFORMATION TO BE FURNISHED BY THE SUPPLIER

When requested by the purchaser or his representative, the supplier shall provide any of the following additional particulars.

- 7.1 Source of Supply
- 7.1.1 District.
- 7.1.2 Area.
- 7.1.3 Name of quarry or pit.
- 7.1.4 For material dredged from seas, estuaries or rivers, the precise locality from which the material was obtained shall be stated.
- 7.2 Group Classification (determined according to the group classification of aggregates given in CYS  $\dots$ .1).
- 7.3 External Characteristics
- 7.3.1 Shape ) (described according to the classification of 7.3.2 Surface ) particly shape and of surface texture given in CYS ...)
- 7.4 Physical Properties
- 7.4.1 Relative density and water absorption

(determined according to those methods for the determination of relative density and water absorption given in CYS ... <sup>1</sup> appropriate to sand).

7.4.2 Bulk density in kilograms per cubic metre (determined according

- to the method for determination of bulk density of aggregate given in CYS  $\dots^7$ ).
- 7.5 Grading. A typical sieve analysis determined according to the requirements of clause 3.
- 1) CYS ... Sampling and testing of mineral aggregates under prepation

The following organization collaborated in the preparation of this Standard Specification.

Cyprus Association of Civil Engineers and Architects
Cyprus Association of Building Contractors
Cyprus Association of Professional Engineers
Association of Crushing Plants
Mines Services
Department of Town Planning and Housing
Geological Survey Department
Public Works Department
Water Development Department
Cyprus Organization for Standards and Control of Quality

NOTE: For the purposes of this Standard and for all cases where a Cyprus Standard is currently under preparation, reference may be made to the relevant Standards as follows:

BS 410 Test Sieves.

BS 812 Methods for Sampling and Testing of Mineral Aggregates, Sands and Fillers.

ASTM-C88 Soundness of Aggregates by Use of Sodium Sulface or Magnesium Sulface.

ASTM-131 Resistance to Abrasion of Small Size Coarse Aggregate by Use of the Loss Angeles Machine.

SANDS FOR MORTAR FOR PLAIN AND REINFORCED BRICKWORK, BLOCKWALLING AND MASONRY

#### 1 SCOPE

This Cyprus Standard relates to naturally occurring sends, crushed stone sends and crushed gravel sends used for morrars for brickwork (plain and reinforced) for building with clay or concrete blocks and for mesonry.

#### 2 DEFINITIONS

For the purposes of this Cyprus Standard, the following definitions apply.

- 2.1 Sand. A material mainly passing a 5.00 mm CYS test sieve, which may be either a natural sand or one obtained by crushing hard rocks or gravels.
- 2.2 Natural Sand. A sand produced by the natural disintegration of rock.
- 2.3 Crushed Stone Sand and Crushed Gravel Sand. Sands produced by crushing a hard stone or rock and a gravel respectively.

#### 3 SAMPLING AND TESTING

- 3.? Sampling and testing of sands shall be carried out in accordance with the requirements of the appropriate sections of CYS  $\dots$  1
- 3.2 The grading of eards shall be determined by the method for sieve analysis but using the following nominal aperture size test sieves, complying with the requirements of CYS  $\dots$ <sup>2</sup>
  - 5.00 mm, 2.36 mm, 1.18 mm, 600  $\mu$ m, 300 $^{+}$   $\mu$ m, 150 $^{+}$   $\mu$ m woven wire.

Unless otherwise stated in the enquiry, duplicate tests shall in all cases be made and the results of both tests reported.

- 1) CYS ... Sampling and testing of mineral aggregates under preparation
- 2) CYS ... Test sieves under preparation

#### 4 DUALITY OF SANDS

4.1 Sands shall consist of natural sand, crushed stone send or crushed gravel sand, or a combination of any of these. They shall be hard, durable, clean and free from adherent coatings, such as clay and from any appreciable amount of clay is pellet form.

Sands shall not contain harmful materials such as iron pyrites, salts, or other organic impurities, mice, shale or similar laminated materials, or flaky or elongated particles in such a form or in sufficient quantity to affect adversely the hardening, strength or durability of the mortar nor, in addition to the above, for reinforced brickwork, any materials which might attack the reinforcement, and shall conform to the requirements of the relevant section of CYS 64:1978.

The various sizes of particles of which a send is composed shall be uniformly distributed throughout the mass.

- 4.2 The quantity of clay, silt and dust shell not exceed the following.
  4.2.1 Sand or crushed gravel sand; 5% by mass when determined by the decantation method given in CYS ... 1
- 4.2.2 Crushed etone eand; 10% by mess, when determined by the sedimentation method given in CYS  $\dots$  1

A guide to the uniformity of supplies in respect of the silt and clay content of natural send and crushed gravel sand during deliveries may by obtained using the field settling test given in CYS ... and comparing the results with that of a test taken on the occupied sample,

#### 5 GRADING

- 5.1 The sand shall be graded within the limits set out for its appropriate application.
- 5.1.1 The grading of sands for use in morters for purposes other than reinforced brickwork, when determined according to clause 3, shall be within the limits given in table 1.
- 1) CYS ... Sampling and testing of mineral aggregates under preparation

Table 1. Sands for General Purpose Mortars

CYS sieve	Percentage by moss passing CYS sieves
mm	0/ /0
5.00	100
2.36	90–100
1.18	70–100
μm	
600	40-100
300	5-70
150	0-15

NOTE. Sands which fall outside the above limits due to a small excess of coarse particles, can often be made to comply with the requirements of this Cyprus Standard by screening through a suitably sized sieve. The required grading can often be attained by blending together sands which are by themselves unsuitable.

5.1.2 The grading of sands for use in mortars for reinforced brickwork, when determined according to clause 3, shall be within the limits given in table 2.

Table 2. Sames for Reinforced Brickwork Mortars

CYS sieve	Percentage by mess passing CYS sieves
niai	9/
5.00	100
2.36	90-100
1,18	70-100
i im	
600	40-80
300	5-40
150	0-10

NOTE: Sands which fall outside the above limits due to a small excess of coarse particles can often be made to comply with the requirements of this Cyprus Standard by screening through a suitably sized sieve. The required grading can often be attained by blending together sends which are by themselves unsuitable.

5.2 A sand whose grading falls outside the above limits on sieves other than the 5.00 mm sieve by a total amount not exceeding 5% shall be regarded as being within those limits. This 5% can be split up, for example, as 1% on each of three sieves and 2% on another or 4% on one sieve and 1% on another.

#### 6 SUPPLIER'S CERTIFICATE AND COST OF TESTS

The supplier shall satisfy himself that the output at the source of production consistently complies with the requirements of this Cyprus Standard and, shall give a certificate to this effect to the purchaser or his representative.

If the purchaser or his representative requires independent tests or the certification of individual consignments, the samples shall be taken before or immediately after delivery, at the option of the purchaser or his representative, and these tests shall be carried out in accordance with the appropriate requirements of this Cyprus Standard on the written instructions of the purchaser or his representative.

Unless otherwise specified with the enquiry and order, the supplier shall supply free of charge the material required for testing and the cost of the tests shall be borne:

- (a) by the supplier in the event of results showing that the material does not comply with the standard;
- (b) by the purchaser, in the event of results showing that the material does so comply.

#### 7 ADDITIONAL INFORMATION TO BE FURNISHED BY THE SUPPLIER

When requested by the purchaser or his representative, the supplier shall provide any of the following additional particulars.

- 7.1 Source of Supply
- 7.1.1 District.
- 7.1.2 Area.
- 7.1.3 Name of quarry or pit.
- 7.1.4 For material dredged from seas, estuaries or rivers, the precise locality from which the material was obtained shall be stated.

7.2 Group Classification (determined according to the group classification of aggregates given in CYS  $\dots$  1)

7.3 External Characteristics

7.3.1 Shape

(described according to the classification)
of particle shape and of surface texture

7.3.2 Surface Texture

qiven in CYS ... 1)

#### 7.4 Physical Properties

7.4.1 Relative density and water absorption (determined according to those methods for the determination of relative density and water absorption given in  $\Sigma YS$  ... 1 appropriate to sand).

7.4.2 Bulk density in kilograms per cubic metere (determined according to the method for determination of bulk density of aggregate given in CYS  $\dots$  1).

7.5 Grading. A typical sieve enalysis determined according to the requirements of clause 3.

Depend note that one within the ter-

<sup>1)</sup> CYS ... 1 - Sampling and testing of mineral aggregates - under preparation.

The following organization collaborated in the preparation of this Standard Specification.

Cyprus Association of Civil Engineers and Architects
Cyprus Association of Building Contractors
Cyprus Association of Professional Engineers
Association of Crushing Plants
Mines Services
Department of Town Planning and Housing
Geological Survey Department
Public Works Department
Water Development Department
Cyprus Organization for Standards and Control of Quality

NOTE: For the purposes of this Standard and for all cases where a Cyprus Standard is currently under preparation, reference may be made to the relevant Standards as follows:

BS 410	Test Sieves.
BS 812	Methods for Sampling and Testing of Mineral
	Aggrugates, Sends and Fillers.
ASTM-C88	Soundness of Aggregates by Use of Sodium
	Sulfate or Magnesium Sulfate.
ASTM-131	Resistance to Abrasion of Small Size Coerse
	Aggregate by Use of the Los Angeles Machine.

Dated this 4th day of April, 1984.

By the Administrator's Command,
A. J. CRAGG,
Chief Officer,
Sovereign Base Areas.

(105/14)

# THE POWERS AND DUTIES (OFFICERS OF THE REPUBLIC OF CYPRUS) (CONSOLIDATION) ORDINANCE, 1976

(Ordinance No. 4 of 1976).

# ORDER MADE BY THE ADMINISTRATOR UNDER SECTION 3.

In exercise of the powers conferred upon him by Section 3 of the Powers and Duties (Officers of the Republic of Cyprus) (Consolidation) Ordinance, 1976, and of all other powers enabling him in that behalf, the Administrator hereby makes the following Order:—

1. This Order may be cited as the Powers and Duties (Officers of the Republic of Cyprus) (Consolidation) (Amendment) Order, 1984 and shall be read as one with the Powers and Duties (Officers of the Republic of Cyprus) (Consolidation) Order, 1976 as amended from time to time (hereinafter referred to as "the principal Order").

P. Is. Nos. 96/76, 8, 39 and 65/77, 7/78, 21/79, 6, 31, 55, 70, 88, 91/80, 63/81, 14/82, 37/83 and 12/84.

2. The Schedule to the principal Order is hereby amended by adding at the end of Part I thereof the following new items:—

Ordinance No.	Ordinance	Sections	Persons
4 of 1984	The Standards and Control of Quality Ordinance 1984.	6, 7, 9 (c)	Area Officer

Dated this 4th day of April, 1984.

By the Administrator's Command,
A. J. CRAGG,
Chief Officer,
Sovereign Base Areas.

(105/14)

# THE POWERS AND DUTIES (OFFICERS OF THE REPUBLIC OF CYPRUS) (CONSOLIDATION) ORDINANCE, 1976

(Ordinance No. 4 of 1976).

## ORDER MADE BY THE ADMINISTRATOR UNDER SECTION 10.

In exercise of the powers conferred upon him by Section 10 of the Powers and Duties (Officers of the Republic of Cyprus) (Consolidation) Ordinance, 1976, and of all other powers enabling him in that behalf, the Administrator hereby makes the following Order:—

Ordinance 4/76. P. Is. Nos. 7/77, 38/77, 6/78, 30, 54, 69, 87, 90/80, 62/81 and 13/82.

- 1. This Order may be cited as the Powers and Duties (Officers of the Republic of Cyprus) (Consolidation) (Amendment of Schedule) Order, 1984 and shall be read as one with the Schedule to the Powers and Duties (Officers of the Republic of Cyprus) (Consolidation) Ordinance 1976 as amended from time to time.
- 2. The Schedule to the Powers and Duties (Officers of the Republic of Cyprus) (Consolidation) Ordinance, 1976 is hereby amended by adding at the end thereof the following Ordinance.

No. of Ordinance and Year	Short title of Ordinance.
4 of 1984	The Standards and Control of Quality Ordinance, 1984.

Dated this 4th day of April, 1984.

By the Administrator's Command,

A. J. CRAGG,

Chief Officer,

Sovereign Base Areas.

(105/14)