S U P P L E M E N T  N o .  3
T O
T H E  S O V E R E I G N  B A S E  A R E A S  G A Z E T T E
N o .  6 8 1  o f  1 2 t h  A p r i l ,  1 9 8 4 .
S U B S I D I A R Y  L E G I S L A T I O N

C O N T E N T S

The following SUBSIDIARY LEGISLATION is published in this
Supplement which forms part of this Gazette:

No.

The Standards and Control of Quality Ordinance, 1984—
Regulations under Section 3 ... ... ... ... ... ... ... ... ... ... 21

The Powers and Duties (Officers of the Republic of Cyprus)
(Consolidation) Ordinance 1976—
Order under Section 3 ... ... ... ... ... ... ... ... ... ... ... 22
Order under Section 10 ... ... ... ... ... ... ... ... ... ... ... 23

(41)
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 14: Part 1: 1981 — Sands for external renderings, floor screeds and internal plastering with lime (or additive) and Portland Cement.


/APPENDIX
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 CYS ... 2)

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
2) 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
Sampling and testing of aggregates shall be carried out in accordance with the requirements of the appropriate sections of CYS ... 1).

The grading of aggregates shall be determined by the methods for sieve analysis using the following nominal aperture size test sieves complying with the full tolerances of CYS ... 2): 75.0, 63.0, 37.5, 20.0, 14.0, 10.0, 5.0 mm made with square hole perforated plate for coarse aggregate and 5.0, 2.36, 1.18 mm, 600, 300, 150 μm made with woven wire for fine aggregate.

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 Deteriorous substances. The amount of deteriorous 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).

1) CYS ... - Sampling and testing of mineral aggregates - currently under preparation
2) CYS ... - Test sieves - currently under preparation
### Table 1: Delferious substances for coarse aggregate

<table>
<thead>
<tr>
<th>Substance</th>
<th>Maximum permissible limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Clay lumps and friable particles</td>
<td>5.0*</td>
</tr>
<tr>
<td>2. Soft particles</td>
<td>5.0*</td>
</tr>
<tr>
<td>3. Material passing the 75 μm sieve</td>
<td>1.0**</td>
</tr>
<tr>
<td>4. Sulphur in sulphide and/or sulphate minerals expressed as SO$_3$</td>
<td>0.5</td>
</tr>
<tr>
<td>5. Chert and other local deleterious substances</td>
<td>As agreed between the purchaser and supplier</td>
</tr>
</tbody>
</table>

* The sum of these two items should not exceed 5%.
** 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.

#### 4.1.3 Specific gravity and water absorption

The specific gravity when tested in accordance with the requirements of 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 requirements of the relevant section of CYS ...$^1$ 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

1) CYS ... - Sampling and testing of mineral aggregates currently under preparation
2) CYS ... - Test sieves - currently under preparation
Where the purchaser has specified aggregate for concrete wearing surfaces, the aggregate impact value shall not exceed 25%.

4.1.7 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 ...

4.1.8 Flakiness and Elongation indices. When tested in accordance with the requirements of the appropriate sections of CYS ..., 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.

Table 2: Coarse Aggregate

<table>
<thead>
<tr>
<th>CYS...</th>
<th>Percentage by weight passing CYS sieves</th>
</tr>
</thead>
<tbody>
<tr>
<td>test</td>
<td>Nominal size of</td>
</tr>
<tr>
<td>sieve</td>
<td>graded aggregate</td>
</tr>
<tr>
<td>mm</td>
<td>10mm to 5mm</td>
</tr>
<tr>
<td>75.0</td>
<td>100</td>
</tr>
<tr>
<td>63.0</td>
<td>-</td>
</tr>
<tr>
<td>37.5</td>
<td>95-100</td>
</tr>
<tr>
<td>20.0</td>
<td>35-70</td>
</tr>
<tr>
<td>14.0</td>
<td>-</td>
</tr>
<tr>
<td>10.0</td>
<td>10-40</td>
</tr>
<tr>
<td>5.00</td>
<td>0-5</td>
</tr>
<tr>
<td>2.36</td>
<td>-</td>
</tr>
</tbody>
</table>

4.2 Fine aggregate

4.2.1 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.

4.2.2 Detrimental substances

The amount of detrimental substances in fine aggregate shall not exceed

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

Table 3: Deleterious substances for fine aggregate

<table>
<thead>
<tr>
<th>Substances</th>
<th>Maximum Permissible Limit weight percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Clay lumps and friable particles</td>
<td>3.0</td>
</tr>
<tr>
<td>2. Material passing the 75μm sieve</td>
<td>3.0*</td>
</tr>
<tr>
<td>3. Sulphur in sulphide and/or sulphate minerals expressed as $SO_2$</td>
<td>0.5</td>
</tr>
<tr>
<td>4. Chert and other local deleterious substances</td>
<td>as agreed between the purchaser and the supplier</td>
</tr>
</tbody>
</table>

* 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.

h.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).

h.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.

h.2.5 Organic impurities. All fine aggregate shall be free from injurious amount of organic impurities. Aggregate subjected to the colorimetric test for organic impurities as described in the appropriate section of CYS...1) 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...1) is not less than 95 percent.

h.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 h, except that a total tolerance of up to 5% may be applied to the percentages given underlined. This tolerance may be split up; for

1) 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
4% 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. CIS ... 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

<table>
<thead>
<tr>
<th>CIS ... 1)</th>
<th>Percentage by weight passing CIS sieves</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test sieve</td>
<td>Grading Zone 1</td>
</tr>
<tr>
<td>mm</td>
<td></td>
</tr>
<tr>
<td>10.0</td>
<td>100</td>
</tr>
<tr>
<td>5.00</td>
<td>90-100</td>
</tr>
<tr>
<td>2.36</td>
<td>60-25</td>
</tr>
<tr>
<td>1.18</td>
<td>30-70</td>
</tr>
<tr>
<td>μm</td>
<td></td>
</tr>
<tr>
<td>600</td>
<td>15-34</td>
</tr>
<tr>
<td>300</td>
<td>5-20</td>
</tr>
<tr>
<td>150</td>
<td>0-10</td>
</tr>
</tbody>
</table>

NOTE: The commonly used proportions of one part of fine aggregate to
two parts of coarse aggregate, i.e. 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) CIS ... - Test sieves - currently under preparation
by weight were found to require the same water/cement 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

4.3.1 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>
<thead>
<tr>
<th>CYS test sieve</th>
<th>Percentage by weight passing CYS sieves</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>10 mm nominal size</td>
</tr>
<tr>
<td>mm</td>
<td></td>
</tr>
<tr>
<td>75.0</td>
<td>100</td>
</tr>
<tr>
<td>37.5</td>
<td>95-100</td>
</tr>
<tr>
<td>20.0</td>
<td>85-90</td>
</tr>
<tr>
<td>5.0</td>
<td>25-50</td>
</tr>
<tr>
<td>µm</td>
<td></td>
</tr>
<tr>
<td>600</td>
<td>8-36</td>
</tr>
<tr>
<td>150</td>
<td>0-6</td>
</tr>
</tbody>
</table>

1) 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

Ministry of 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.
ASTM-C88 Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate.
SANDS FOR EXTERNAL RENDERINGS, FLOOR SCREEDS AND INTERNAL PLASTERING 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 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

3.1 Sampling and testing of sands shall be carried out in accordance with the requirements of the appropriate sections of CYS...

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...

5.00 mm, 2.36 mm, 1.18 mm, 600 μm, 300+μm, 150+μm 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 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 in pellic form.

Sands shall not contain harmful materials such as iron pyrites, salts, or other organic impurities, mica, shale or similar laminated materials, or flaky or elongated particles 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 sand is composed shall be uniformly distributed throughout the mass.

4.2 The quantity of clay, silt and dust shall not exceed the following.
4.2.1 Sand or crushed gravel sand; 5% by mass, when determined by the determination method given in CYS ... ¹
4.2.2 Crushed stone sand; 10% by mass, when determined by the sedimentation method given in CYS ... ¹

A guide to the uniformity of supplies in respect of the silt and clay content of natural sand and crushed gravel sand during deliveries may be obtained using the field settling test given in CYS ... ¹ and comparing the results with that of a test taken on the accepted sample.

5 GRADE:

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.

¹) CYS ... - Sampling and testing of mineral aggregates - under preparation.
Table 1. Sands for external renderings, internal cement plastering, internal lime undercoats and floor screeds

<table>
<thead>
<tr>
<th>CYS sieves</th>
<th>Percentage by mass passing CYS sieves</th>
</tr>
</thead>
<tbody>
<tr>
<td>mm</td>
<td>%</td>
</tr>
<tr>
<td>5.00</td>
<td>100</td>
</tr>
<tr>
<td>2.36</td>
<td>90-100</td>
</tr>
<tr>
<td>1.18</td>
<td>70-100</td>
</tr>
<tr>
<td>μm</td>
<td></td>
</tr>
<tr>
<td>600</td>
<td>40-60</td>
</tr>
<tr>
<td>300</td>
<td>5-40</td>
</tr>
<tr>
<td>150</td>
<td>0-10†</td>
</tr>
</tbody>
</table>

†In the case of crushed stone, higher proportions of material passing a 150 μm B5 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

<table>
<thead>
<tr>
<th>CYS sieves</th>
<th>Percentage by mass passing CYS sieves</th>
</tr>
</thead>
<tbody>
<tr>
<td>mm</td>
<td>%</td>
</tr>
<tr>
<td>2.36</td>
<td>100</td>
</tr>
<tr>
<td>1.18</td>
<td>90-100</td>
</tr>
<tr>
<td>μm</td>
<td></td>
</tr>
<tr>
<td>600</td>
<td>55-100</td>
</tr>
<tr>
<td>300</td>
<td>5-50†</td>
</tr>
<tr>
<td>150</td>
<td>0-10†</td>
</tr>
</tbody>
</table>

†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.

NOTE 1. 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 undercoats 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 scopped 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 rougher (wet-mashing 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 1).

7.3 External Characteristics
7.3.1 Shape  ) (described according to the classification of
7.3.2 Surface  ) partially shape and of surface texture given in
Texture  ) 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 CYS 1 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 1).
7.5 Grading. A typical sieve analysis determined according to the requirements of clause 3.

1) 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.
ASTM-C88  Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate.
SANDS FOR MORTAR FOR PLAIN AND REINFORCED BRICKWORK, BLOCKWALLING
AND MASONY

1 SCOPE

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

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

3.1 Sampling and testing of sands shall be carried out in accordance
with the requirements of the appropriate sections of CYS ... 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 ... 2

5.00 mm, 2.36 mm, 1.18 mm, 600 μm, 300 μm, 150 μm 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 QUALITY OF SANDS

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

Sands shall not contain harmful materials such as iron pyrites, salts, or other organic inclusions, mica, 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 sand is composed shall be uniformly distributed throughout the mass.

4.2 The quantity of clay, silt 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 ...¹
4.2.2 Crushed stone sand; 10% by mass, when determined by the sedimentation method given in CYS ...¹

A guide to the uniformity of supplies in respect of the silt and clay content of natural sand and crushed gravel sand during deliveries may be obtained using the field settling test given in CYS ...¹ 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 use in mortars 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

<table>
<thead>
<tr>
<th>CYS sieve</th>
<th>Percentage by mass passing CYS sieves</th>
</tr>
</thead>
<tbody>
<tr>
<td>mm</td>
<td></td>
</tr>
<tr>
<td>5.00</td>
<td>100</td>
</tr>
<tr>
<td>2.36</td>
<td>90-100</td>
</tr>
<tr>
<td>1.18</td>
<td>70-100</td>
</tr>
<tr>
<td>μm</td>
<td></td>
</tr>
<tr>
<td>600</td>
<td>40-100</td>
</tr>
<tr>
<td>300</td>
<td>5-70</td>
</tr>
<tr>
<td>150</td>
<td>0-15</td>
</tr>
</tbody>
</table>

**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. Sands for Reinforced Brickwork Mortars

<table>
<thead>
<tr>
<th>CYS sieve</th>
<th>Percentage by mass passing CYS sieves</th>
</tr>
</thead>
<tbody>
<tr>
<td>mm</td>
<td></td>
</tr>
<tr>
<td>5.00</td>
<td>100</td>
</tr>
<tr>
<td>2.36</td>
<td>90-100</td>
</tr>
<tr>
<td>1.18</td>
<td>70-100</td>
</tr>
<tr>
<td>μm</td>
<td></td>
</tr>
<tr>
<td>600</td>
<td>40-60</td>
</tr>
<tr>
<td>300</td>
<td>5-40</td>
</tr>
<tr>
<td>150</td>
<td>0-10</td>
</tr>
</tbody>
</table>

**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.
5.2 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 ... 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 ) given 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 CYS ... 1 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 ... 1).

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

7) 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.
ASTM-C08  Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate.

Dated this 4th day of April, 1984.

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

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

<table>
<thead>
<tr>
<th>Ordinance No.</th>
<th>Ordinance</th>
<th>Sections</th>
<th>Persons</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 of 1984</td>
<td>The Standards and Control of Quality Ordinance 1984.</td>
<td>6, 7, 9 (c)</td>
<td>Area Officer</td>
</tr>
</tbody>
</table>

Dated this 4th day of April, 1984.

By the Administrator's Command,
A. J. CRAGG,
Chief Officer,
(105/14)
Sovereign Base Areas.
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:—

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.

<table>
<thead>
<tr>
<th>No. of Ordinance and Year</th>
<th>Short title of Ordinance.</th>
</tr>
</thead>
</table>

Dated this 4th day of April, 1984.

By the Administrator's Command,

A. J. CRAGG,
Chief Officer,
Sovereign Base Areas.

(105/14)