

DRAFT TANZANIA STANDARD

TBS/CDC 7(5417) P3 Specification for limestone for chemical industries (Revision of TZS 648:2001)

DRAFT FOR STAKEHOLDERS COMMENTS

TANZANIA BUREAU OF STANDARDS

Foreword

This Draft Tanzania Standard is being developed by the Industrial and Laboratory Chemicals Technical Committee under supervision of the Chemicals Divisional Standards Committee and it is in accordance with the procedures of the Bureau.

This second edition after being finalized will cancel and thus replace the first edition of TZS 648:2001 Specification for limestone for chemical industries.

This Draft Tanzania Standard has been prepared with assistance drawn from: IS 3204:2010, *Specification for limestone for chemical industries* published by the Bureau of Indian Standards.

In reporting the test results of a test or analysis made in accordance with this standard, if final value, calculated or observed is to be rounded off, it shall be done in accordance with TZS 4: *Rounding off numerical values*.

Specification for limestone for chemical industries

1. Scope

1.1 This Tanzania Standard covers the requirements for the quality of limestone of various grades. It also covers sea shells and calcite, a crystalline form of naturally occurring calcium carbonate.

1.2 This Tanzania Standard does not cover limestone for building, agricultural, metallurgical, glass and ceramic industries.

2. Normative references

The following referenced documents are indispensable for the application of this document; the latest edition of the referenced document (including any amendments) applies;

TBS/CDC 7 (3736) P3 *Standard terminology relating to Lime and Limestone (as used by the industry)*

TBS/CDC 7(1280) P2, *Methods of test for chemical analysis of limestone and limestone products.*

TBS/CDC 7(5418) P3, *Methods of sampling for lime and limestone products*

3. Terminologies

For the purpose of this standard, terminologies from TBS/CDC-7 (3736) P3 shall apply.

4. Requirements

4.1 General requirements

4.1.1 Grades

Limestone shall be of the following grades depending upon their suitability for various uses on the basis of their chemical properties:

Grade 1 – suitable for the manufacture of bleaching powder, bleach liquor, textiles, paints and varnishes, pulp and paper.

Grade 2 – suitable for the manufacture of soda ash by the Solvay process, caustic soda by the lime-soda process.

Grade 3 – suitable for the manufacture of carbide.

Grade 4 - suitable for the manufacture of sugar

4.1.2 Physical appearance

Limestone shall be in the form of lumps, free from dirt and added impurities.

4.2 Specific requirements

Limestone shall comply with the requirements given in table 1 when tested according to the methods prescribed in TBS/CDC 7(1280) P2 (see clause 2).

Table 1 – Requirements for limestone for chemical industries

S/n	Characteristic	Grades				Method of test TBS/CDC 7(1280) P2 (see clause 2)
		1	2	3	4	
1	Loss on ignition, percent by mass, <i>max</i>	46.0	46.0	46.0	44.0	Clause 6
2	Silica (as SiO ₂), percent by mass, <i>max</i>	0.75	-	1.0	2.0	Clause 10
3	Iron (as Fe ₂ O ₃), percent by mass, <i>max</i>	0.15	-	0.25	-	Clause 11
4	Calcium (as CaO), percent by weight, <i>min</i>	54.0	53.0	54.0	50.0	Clause 12
5	Magnesia (as MgO), percent by mass, <i>max</i>	2.0	1.0	0.8	1.0	Clause 13
6	Manganese (as Mn ₂ O ₃), percent by mass, <i>max</i>	0.06	-	-	-	Clause 16
7	Carbon dioxide (as CO ₂), percent by mass, <i>max</i>	42.0	42.0	42.0	41.0	Clause 17
8	Sulphur (as S), percent by mass, <i>max.</i>	-	-	0.1	-	Clause 14
9	Phosphorus (as P), per cent by mass, <i>max</i>	-	-	0.01	-	Clause 15
10	Alumina (as Al ₂ O ₃) and Ferric oxide (as Fe ₂ O ₃) together, percent by weight, <i>max</i>	-	-	0.5	1.5	Clause 11
11	Silica (as SiO ₂), alumina (as Al ₂ O ₃) together, percent by weight, <i>max.</i>	-	3.0	-	-	Clauses 10 and 11

5. Packing and Labelling

5.1 Packing

The material shall be supplied in small packages or in bulk in open wagons, as agreed between the purchaser and the supplier/manufacturer.

5.2 Labelling

Labelling on the packages or on the documentation of the bulk consignment shall have the following information:

- a) name and grade of the material;
- b) name of the manufacturer/supplier;
- c) recognized trade mark if any;
- d) net content of the material;
- e) batch number and
- f) date of manufacturing.

6. Sampling and testing

6.1 Method for drawing representative samples of the material shall be as prescribed in TBS/CDC 7(5418) P3 (see clause 2).

6.2 Methods of testing samples shall be according to TBS/CDC 7(1280) P3 (see clause 2).

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