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DRAFT UGANDA STANDARD

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Steel wool — Specification

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Foreword

Uganda National Bureau of Standards (UNBS) is a parastatal under the Ministry of Trade, Industry and Cooperatives established under Cap 327, of the Laws of Uganda, as amended. UNBS is mandated to co-ordinate the elaboration of standards and is

(a) a member of International Organisation for Standardisation (ISO) and

(b) a contact point for the WHO/FAO Codex Alimentarius Commission on Food Standards, and

(c) the National Enquiry Point on TBT Agreement of the World Trade Organisation (WTO).

The work of preparing Uganda Standards is carried out through Technical Committees. A Technical Committee is established to deliberate on standards in a given field or area and consists of key stakeholders including government, academia, consumer groups, private sector and other interested parties.

Draft Uganda Standards adopted by the Technical Committee are widely circulated to stakeholders and the general public for comments. The committee reviews the comments before recommending the draft standards for approval and declaration as Uganda Standards by the National Standards Council.

The committee responsible for this document is Technical Committee UNBS/TC 108, *Steel and Aluminium*.

Steel wool — Specification

1 Scope

This working draft Uganda standard covers the requirements for commercial steel wool of different grades. The commercial steel wool shall be of the following grades,

Grade 0000 (Super fine)

Grade 000 (Extra fine)

Grade 00 (Very fine)

Grade 0 (Fine)

Grade 1 (Medium)

Grade 2 (Coarse)

Grade 3 (Very coarse)

2 Normative references

There are no normative references in this document.

3 Terms and definitions

No terms and definitions are listed in this document.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at http://www.iso.org/obp

4. General Requirements:

4.1. Individual fibres shall have uniform sharp cutting edges and the edges of fibres shall not be blunt, when examined under a microscope of magnification 50X.

4.2. The length of the fibres shall be such that wool will cling together in handling without excessive unravelling.

4.3. Finished wool shall present a smooth uniform appearance. The fibres shall be free from saw - teeth, ruggedness spirals or whirls, when examined under a magnification of 50X.

4.4. The width of Steel Wool Fibres **s**hall be in accordance with Table 1, when tested as in 7.1.

5. Material

Steel wool shall be produced from suitable carbon steel or alloy steel meeting the requirements laid down in 7.4.

6. Manufacturing

Steel wool fibre shall be of uniform width as per Table 1. long fibre strands of steel having sharp, smooth cutting edges and shall be free from chips, short ends and materials other than steel fibres, examined under a magnification of 50X.

7. Tests:

7.1 *Width of fibre*

A specimen of 20 fibres shall be selected at random from a lot. Each fibre shall be measured under a 50X magnification microscope, graduated in micrometres. Not more than one fibre in each specimen shall have a value less than the value specified in column 3 of Table 1. Not more than one fibre in each specimen shall have a width greater than the values specified in column 4 of Table 1 and if this one fibre has width greater than the values specified in column 5 of Table 1 the specimen shall be declared as fail.

7.2 *Ductility*

A single fibre of each grade of steel wool shall be capable of winding in a single loop tightly around the mandrel of size 1.5mm in diameter.

7.3 *Moisture and Oil Content*

The loss in mass of a 50g sample of steel wool after drying in an oven at 120^0C for an hour shall not exceed 1.5 percent.

7.4 Corrosion Resistance

7.4.1 For Steel Wool (used for filteration purposes) - Prepare a nitric acid solution by adding 5 ml concentrated nitric acid and 95 ml of distilled water. Put two drops of this solution on a compressed tuft of the steel wool and observe for any evidence of corrosion attack. Steel wool shall not show sign of corrosion attack.

TABLE 1. Width of steel wool fibres

Grade	Mean Width of Fibre µm	Not more than 5 percent Under µm	Not more than 5 percent Over µm	Not Fibre to Exceed µm
(1)	(2)	(3)	(4)	(5)

0000	15.25	5	75	150
000	20.35	5	100	200
00	30.50	5	125	250
0	50.75	10	200	300
1	50.100	15	250	400
2	100.150	25	350	635
3	150.250	50	450	1000

7.4.2 For steel wool (used for other purposes except filteration) - A tuft of steel wool shall be tightly compressed in a ball shape about 20mm in diameter and then slightly flattened. Dip a small sheet of white blotting paper in distilled water and then remove from water, shaking off the excess water. Place it at the bottom of a glass container. Place the wool specimen on top of the blotting paper and cover the container. The temperature of the container shall be maintained at 27 ± 2.5ºC for a period of 5 hour. Steel wool shall not show sign of corrosion attack.

8. Sampling:

8.1 Unless otherwise agreed between the supplier and the purchaser, the procedure as given in ISO 2859 (part 1) shall be followed for sampling inspection. The sampling plan and inspection level as given in 8.2 and 8.3 shall be followed.

8.2 For inspection of which of fibres, cutting edge of fibres and foreign materials in fibres, the sampling plan with inspection level II and acceptance quality level (AQL). 4 percent given in ISO 2859-1 shall be followed.

8.3 For inspection of ductility, moisture and oil contents and corrosion resistance, the sampling plan with inspection level II and AQL 65 percent given in ISO 2859-1 shall be followed.

9. Packing

The packing of commercial steel wool shall be as decided by the purchaser and the supplier. However, standard packages shall be 25g pads, 250g and 500g rolls, 5kg, 10kg and 20kg industrial coils.

10. Marking

The packages shall be marked with the name of the material, the grade, the quality, manufacturers' initial trade-mark and month and year of manufacture.

Annex A
(informative)
INTENDED USES OF COMMERCIAL STEEL WOOL

A-1. Steel wool complying with this specification is intended to be used as an abrasive material for the following purposes:

Grade 0000	For the rubbing down paint, varnish, polish or shellac before final coat on any surface for quality job.
Grade 000	For work on anodized surfaces and rubbing down paint, varnish, etc, also on furniture before polishing and for aluminium and aluminium utensil. In dairies, for bottles and stainless steel equipment.
Grade 00	For polishing of surfaces and household uses.
Grade 0	For polishing and buffing surfaces.
Grade 1	For cleaning of metal surfaces and light stripping of floor waxes and polishes, and for the preparation of wood surfaces for first coats or fillers.
Grade 2	For general abrasive cleaning, for example, removal of rust and old paint, and rapid stripping of floor waxes and polishes.
Grade 3	For heavy abrasive cleaning, smoothing of rough surfaces. Also for cleaning of rubber mould in tyre factories, cleaning of bottoms of ships.

A-2. Steel wool of grades 1, 2 and 3 also meeting the requirements of 7.4.1 are used for filteration purposes in the chemical industry.

Bibliography

[1] ISO #####-#, *General title — Part #: Title of part*

[2] ISO #####-##:20##, *General title — Part ##: Title of part* .

Certification marking

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