International Standard 2883

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION•МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ•ORGANISATION INTERNATIONALE DE NORMALISATION

Rubber, vulcanized — Antistatic and conductive products for industrial use — Electrical resistance limits

Caoutchouc vulcanisé — Produits antiélectrostatiques et conducteurs à usage industriel — Limites pour la résistance électrique

First edition — 1980-08-01

UDC 678.063 : 614.89 : 537.311 **Ref. No. ISO 2883-1980 (E)**

Descriptors : rubber, vulcanized rubber, rubber products, antistatic agents, electric conductors, electrical resistance, industrial products.

Price based on 2 pages

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO member bodies). The work of developing International Standards is carried out through ISO technical committees. Every member body interested in a subject for which a technical committee has been set up has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 2883 was developed by Technical Committee ISO/TC 45, *Rubber and rubber products*, and was circulated to the member bodies in January 1978.

It has been approved by the member bodies of the following countries :

Austria	India	Sweden
Belgium	Italy	Switzerland
Brazil	Mexico	Thailand
Bulgaria	Netherlands	Turkey
Czechoslovakia	Romania	United Kingdom
Egypt, Arab Rep. of	South Africa, Rep. of	USA
Greece	Spain	USSR
Hungary	Sri Lanka	Yugoslavia

The member bodies of the following countries expressed disapproval of the document on technical grounds :

Australia
France

Printed in Switzerland

Rubber, vulcanized — Antistatic and conductive products for industrial use — Electrical resistance limits

1 Scope and field of application

This International Standard specifies limits for electrical resistance for certain antistatic and conductive products for industrial use.

These limits are generally appropriate for the products listed but, when an International Standard has been issued for an individual product, the limit and the test method specified therein shall be used in place of the limits and test method specified in this International Standard.

This International Standard applies neither to articles the relevant surfaces of which are composed of mixtures of insulating and conducting areas nor to articles with a substantial surface area of insulating material.

The tests are carried out on the finished product using a defined system of electrodes, by a system suited to factory inspection or service testing.

2 Reference

ISO 2878, *Rubber, vulcanized — Antistatic and conductive products — Determination of electrical resistance.*

3 Methods of test

The product shall be tested in accordance with ISO 2878.

4 Requirements

The electrical resistance of the products as manufactured shall comply with the requirement given in the table.

NOTE — The electrical resistance of antistatic rubbers increases with age and use. The permissible upper limit resulting from the increase will depend on the purpose for which the product is used.

WARNING NOTE — Products which achieve their antistatic properties by a thin conductive surface coating may lose these properties during use as a result of wear or solvent action.

Item No.	Product	Electrical resistance Ω		Method of test (Reference to sub-clause in ISO 2878)
		min.	max.	
1	Flooring material for explosives-handling areas	—	5×10^4	6.2
2	Flooring material for antistatic purposes	5×10^4	10^8	6.1
3	Footwear conducting, for explosives-handling areas	—	$1{,}5 \times 10^5$	6.9.1
4	Hose	3×10^3 per metre	10^6 per metre	6.4.1 or 6.4.2
5	Hose with conducting lining only	3×10^3 per metre	10^6 per metre	6.4.3
6	Hose with conducting cover only	3×10^3 per metre	10^6 per metre	6.4.4
7	Non-wire reinforced hose with permanently attached metal end fittings	3×10^3 per metre	10^6 per metre	6.4.5
8	Tyres for explosives-handling vehicles (solid or pneumatic)	—	5×10^5	6.3.1 or 6.8
9	Antistatic tyres (solid or pneumatic)	5×10^4	10^7	6.3.1 or 6.8
10	Textile cots and aprons	—	10^8	6.7
11	Sheeting and articles made from sheeting; both surfaces to be tested	—	10^6	6.1
12	Footwear, antistatic	5×10^4	5×10^7	6.9.1 and 6.9.2

5 Marking

If marking is to be provided, it shall be indelible and clearly visible but of the smallest practicable area to avoid the introduction of unnecessary insulating material. The position of the marking shall be such that it will not materially affect the electrical resistance of the discharge path. The marking of any sheeting, hose or other material intended for cutting into lengths shall be applied throughout the length at intervals of not more than 3 m (9 m for conveyor belts).

Each article for which no lower limit for resistance is specified, shall be marked with the words "electrically conducting", preferably in red.

NOTE — It is preferable that a floor should be marked with one installation test plate.