International Standard 6224

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

Plastics hoses, textile-reinforced, for water — Specification

Tuyaux thermoplastiques à armature textile pour l'eau — Spécifications

First edition — 1981-05-15

UDC 678.073 : 621.643 **Ref. No. ISO 6224-1981 (E)**

Descriptors : plastic products, textile glass reinforced plastics, hoses, reinforcing materials, thermoplastic resins, equipment specifications, dimensions, dimensional tolerances, tests, hydrostatic tests, pressure.

Price based on 2 pages

Foreword

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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 6224 was developed by Technical Committee ISO/TC 45, *Rubber and rubber products*, and was circulated to the member bodies in March 1979.

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

Australia	Germany, F.R.	Spain
Austria	Greece	Sri Lanka
Belgium	Hungary	Sweden
Bulgaria	Libyan Arab Jamahiriya	Thailand
Canada	Mexico	Turkey
Czechoslovakia	Netherlands	United Kingdom
Denmark	Poland	USA
Egypt, Arab Rep. of	Romania	USSR
France	South Africa, Rep. of	

No member body expressed disapproval of the document.

Printed in Switzerland

Plastics hoses, textile-reinforced, for water — Specification

1 Scope and field of application

This International Standard specifies requirements for three types of textile-reinforced thermoplastic water hoses, for pressure applications up to a maximum temperature of +55 °C, as follows :

Type 1 — Light service, for use in areas where severe abrasion is not encountered, and with a design working pressure of 0,6 MPa (all sizes).

Type 2 — Heavy service, for use in areas where severe abrasion is expected, and with a design working pressure of 1,0 MPa (all sizes).

Type 3 — Heavy service, for use in areas where high resistance to collapse and crush is necessary, and with a design working pressure of 2,5 MPa (sizes up to 25 mm).

NOTE — Satisfactory methods of test for resistance to abrasion, collapse, crushing and ultra-violet light do not exist at present. Requirements will be added as and when such methods become available.

2 References

ISO/R 36, *Determination of the adhesion strength of vulcanized rubbers to textile fabrics.*

ISO 176, *Plastics — Determination of loss of plasticizers — Activated carbon method.*

ISO 471, *Rubber — Standard temperatures, humidities and times for the conditioning and testing of test pieces.*

ISO 1307, *Rubber hose — Bore sizes, tolerances on length, and test pressures.*

ISO 1402, *Rubber hose — Hydrostatic testing.*

ISO 1746, *Rubber hose — Bending test.*

ISO 4672, *Rubber products — Hoses — Low temperature flexibility tests.*

3 Construction

Hoses shall be as uniform as is commercially practicable in colour, opacity and other physical properties, and shall consist of :

a) a flexible thermoplastic lining;

b) a reinforcing layer, or layers, of natural or synthetic textile applied by any suitable technique;

c) a flexible thermoplastic cover which may have a smooth or fluted finish. The colour may be different from that of the lining.

The cover and lining shall be fully gelled and shall be free from visible cracks, porosity, foreign inclusions or other defects causing the hose to be unserviceable. They shall not contain open cells or porosity.

4 Dimensions and tolerances

4.1 Bore size

Bore sizes and tolerances shall be as shown in table 1, which is in accordance with ISO 1307.

Table 1 — Nominal bores and tolerances

Dimensions in millimetres

Nominal bore	Tolerance
10	± 0,75
12,5	± 0,75
16	± 0,75
20	± 0,75
25	± 1,25
31,5	± 1,25
40	± 1,50
50	± 1,50

NOTE — If special cases call for extra sizes :

a) for smaller or larger dimensions, further numbers should be chosen from the R10 series of preferred numbers, with tolerances as given in ISO 1307;

b) for intermediate dimensions, numbers should be chosen from the R20 series of preferred numbers, with the tolerances as given for the next larger size.