AS 2660—1991

Australian Standard®

Hose and hose assemblies—Air/water—For underground coal mines

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The following interests are represented on Committee RU/1:

Australian Gas Association
Australian Institute of Petroleum
Confederation of Australian Industry
Department of Commercial Services, N.S.W.
Department of Minerals and Energy, N.S.W.
Institution of Mining Electrical and Mining Mechanical Engineers
Plastics and Rubber Institute
Plastics Industry Association
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PREFACE

This Standard was prepared by the Standards Australia Committee on Industrial Hose, under the direction of the Committee on Standards for the Rubber Industry, to supersede AS 2660 — 1983.

The demand for a new edition of this Standard arose principally from the need to permit the use of materials other than rubber. It also provides for hose assemblies and rationalizes the requirements for the hose and its components.

In the preparation of this Standard, account was taken of AS 2554 — 1982, *Hose and hose assemblies for air*, ISO 2398:1987, *Industrial rubber hose for compressed air (up to 2.5 MPa)*, and BS 5118 — 1980, *Specification for rubber hoses for compressed air*.

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SECTION 1 SCOPE AND GENERAL

1.1 SCOPE This Standard specifies requirements for fire-resistant and anti-static (FRAS) hose and hose assemblies for conveying air, stone dust and water in underground coal mines.

The Standard does not apply to hose connected directly to air compressors or to hose for suction purposes.

NOTE: Guidelines and advice on information to be supplied at the time of placing an enquiry or order are set out in Appendix A.

1.2 REFERENCED DOCUMENTS The following documents are referred to in this Standard:

AS
1179 Glossary of terms for rubber hose
1180 Methods of test for hose made from elastomeric materials
1180.1 Part 1: Dimensions
1180.3 Part 3: Accelerated ageing
1 180.4B Part 4B: Ply adhesion—Autographic method
1 180.5A Part 5A: Hydrostatic pressure—Burst test
1 180.5C Part 5C: Hydrostatic pressure—Change-in-length test
1 180.5D Part 5D: Hydrostatic pressure—Leakage test
1 180.5E Part 5E: Hydrostatic pressure—Expansion and distortion test
1 180.7E Part 7E: Resistance to oil
1 180.7F Part 7F: Resistance of lining and cover to ozone
1180.10B Part 10B: Determination of combustion propagation characteristics of a horizontally oriented specimen of hose using surface ignition
1180.11 Part 11: Hose and coupling compatibility—Tensile method
1180.13A Part 13A: Determination of electrical resistance of hose and hose components
1257 Bore sizes, test pressures and tolerances on lengths of elastomeric hose
1683 Methods of test for rubber
1683.21 Part 21: Rubber—Vulcanized—Determination of abrasion resistance using a rotating cylindrical device

1.3 DEFINITIONS For the purpose of this Standard the definitions given in AS 1179 shall apply.

1.4 CLASSIFICATION Air/water hose shall be classified according to its maximum working pressure, proof pressure, minimum burst pressure and duty as shown in Table 1.1.

TABLE 1.1
CLASSIFICATION OF AIR/WATER HOSE

Class	Maximum working pressure MPa	Proof pressure MPa	Minimum burst pressure MPa	Duty
A	1.75	3.5	7.0	Extra heavy
B	1.75	3.5	7.0	Heavy
C	0.7	1.4	2.8	Light

1.5 CONSTRUCTION The internal and external surfaces of the hose shall be uniform and concentric. The materials forming the internal and external surfaces shall comply with the requirements given in Table 1.2 for the appropriate class of hose.

TABLE 1.2
REQUIREMENTS FOR MATERIALS FORMING INTERNAL (LINING) AND EXTERNAL (COVER) SURFACES

Property	Class A		Class B		Class C	
	Lining	Cover	Lining	Cover	Lining	Cover
Adhesion	x	x	x	x	x	x
Abrasion resistance	—	x	—	x	—	—
Resistance to oil	x	x	x	—	x	—
Resistance to ozone	—	x	—	x	—	x

NOTES:
1 Adhesion requirements are not applicable to hose specifically designed as a non-bonded wall construction.
2 ‘x’ indicates relevant properties for which tests are specified in Section 2.