Test Safe
AUSTRALIA

REPORT

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Prepared for:

BALFLEX PORTUGAL SA

FRAS Testing of DIN EN 2SN / SAE 100R2AT Steel Reinforced Hose with Fire Resistant Cover to AS 2660-1991

ilac-MRA

NATA
Accredited Laboratory
No. 1032

Accredited for compliance with ISO/IEC 17025. The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

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TESTSAFE AUSTRALIA

Dealing with

FRAS TESTING OF HOSING

TO

AS 1180.10B-1982 & AS 1180.13A-1983 as referenced by

AS2660-1991

CLIENT:	Balflex Portugal SA
ADDRESS:	Rua Bouca Estilhadouros, N226/254 – Zona Industrial Alto Vilar – 4445-044 Alfena – PORTUGAL
DATE OF APPLICATION:	29 November 2013
TESTSAFE JOB No:	M16972
PRODUCT:	Hydraulic hose
SAMPLE DESCRIPTION:	Steel Reinforced Hose with Fire Resistant Cover DIN EN 2SN / SAE 100R2AT
APPLICATION:	Hydraulic Equipment
MANUFACTURER:	Balflex Portugal – Componentes Hidraulicos E Industriais, S.A.
NOMINAL DIMENSIONS:	29.4mm O.D x 19.0mm I.D
HOSE ITEM NUMBER:	10.1004.12
COLOUR & LABELLING:	Black with Red & White
TEST SPECIFICATION:	AS 1180.10B-1982 AS 1180.13A-1983 Acceptance Criteria as given in Clauses 2.1 and 2.2 of AS 2660-1991 *Fire resistant and antistatic requirements for conveyor belting used in underground coal mines*
OVERALL RESULT:	Pass

1. TEST EQUIPMENT

- Flame Test Apparatus
- Tape Measure, Craftech, TS-5
- Stop Watch, Hart Sport, s/no. Mech Stop 2
- Temperature/Humidity Indicator, TSI, s/no. 97040434
- Resistance Bridge, Megger, s/no. 000713
- Vernier, Mitutoyo, s/no. 0025652

2. TEST RESULTS

2.1 Test to AS1180.13A-1983

Test Date: 17/01/2014

Sample Length: 1050 mm

Surface Measurement:
Ambient Temperature: 22.8 °C
Relative Humidity: 65.0 %

TEST DATA:

Outer Surface

Sample Number	Surface Resistance (MΩ/m)
S8868ER-1	0.026
S8868ER-2	0.050
Total	0.076
Average	0.038

Inner Surface

Sample Number	Surface Resistance (MΩ/m)
S8868ER-1	0.001
S8868ER-2	0.001
Total	0.002
Average	0.001

Acceptance Criteria: AS2660-1991 Clause 2.2:

'When hose is tested in accordance with 1180.13A, using the flexible ring electrodes for the external surface and the plug electrodes for the internal surface, the electrical resistance shall not be greater than 1 MΩ/m'

RESULTS: Pass

COMMENTS: Nil

2.2 Tests to AS1180.10B-1982

Test Date: 22/01/2014

Sample Length: 300 mm

TEST DATA:

Sample Number	Duration of Flame (sec)	Duration of Glowing (sec)	Maximum Charred Length (mm)
S8867F-1	0	0	42
S8867F-2	0	0	45
S8867F-3	0	0	54
S8867F-4	0	0	51
S8867F-5	1	0	56
S8867F-6	0	0	49
Total	1	0	297
Average	0.17	0	49.5

Acceptance Criteria: AS2660-1991 Clause 2.1:

'When hose is tested in accordance with 1180.10B, the average duration of flaming and glowing shall not exceed 30 s'

RESULTS: Pass

COMMENTS:

1. AS 1180.10B requires charred length to be recorded, therefore, the maximum charred lengths have been included in this report.

2. AS2660 Clause 2.1 requires only the flame and afterglow duration to be used as criteria for pass/fail.

Signatory: _____
(L.Gerisch)



Photo of Sample DIN EN 2SN / SAE 200R1AT