



SHRIRAM INSTITUTE FOR INDUSTRIAL RESEARCH

(A Unit of Shriram Scientific and Industrial Research Foundation)

TEST CERTIFICATE

19, University Road, Delhi-110007

Telephone: 91-011-27667267, 27667983, 27667860

Fax: 91-011-27667676, 27667207 E.mail: sridlhi@vsnl.com.

Visit us at [Http://www.shriraminstitute.org](http://www.shriraminstitute.org)

ISO-9001 Certified Institute

000082278

Issued to :

YEEKAY TECHNOCRAT PVT. LTD.
101-C, (GR. FLOOR),
KUNDAN HOUSE,
HARI NAGAR ASHRAM, (BEHIND NAFED BUILDING)
NEW DELHI - 110014

Kind Attn: UJJAWAL KUMAR, -

Sample Particulars :

One sample described as PPR-pipes & fittings brand name "FUSION", PPR-C polypropylene random copolymer & material used VESTOLIN P 9421 (DSM Germany), 40 mm dia, was received.
(Supplementary report of report No. 81689 dated 17.06.2004)

J.O.No. 406-141-1217
Reg.No. 1129367
Date 24-06-2004
GC-01 (REV-03)

Your Ref.No. -

Date 11.06.2004

TEST RESULTS

(As per IS: 9845-198)

S.No.	Test	Result Obtained	Requirement as per IS: 10910-1984	Conformity
1.	Migration test Extractive residue with:			
	a) Distilled water at 121°C for 2 hours, mg/l	18	60 Maximum	Yes
		mg/dm ² 1.8	10 Maximum	Yes
	b) Distilled water at 100°C for 2 hours, mg/l	14	60 Maximum	Yes
		mg/dm ² 1.4	10 Maximum	Yes
	c) Distilled water at 40°C for 10 days, mg/l	22	60 Maximum	Yes
		mg/dm ² 2.2	10 Maximum	Yes

DOR: 11.06.2004

DOC: 24.06.2004

AUTHORISED SIGNATORY

By: Director/AD-Test

Sr.Scientist/Signature

NOTE 1. The result listed refer only to the tested sample(s) and applicable parameter(s). Endorsement of products is neither inferred nor implied.

2. Total liability of our Institute is limited to the invoiced amount.

3. Samples will be destroyed one month from the date of issue of test certificate unless otherwise specified.

4. This report is not to be reproduced wholly or in part and cannot be used as an evidence in any Court of law, unless



SHRIRAM INSTITUTE FOR INDUSTRIAL RESEARCH

(A Unit of Shriram Scientific and Industrial Research Foundation)

TEST CERTIFICATE

000081689

19, University Road, Delhi-110007

Telephone: 91-011-27667267, 27667983, 27667860

Fax: 91-011-27667676, 27667207 E.mail: sridlhi@vsnl.com.

Visit us at <http://www.shriraminstitute.org>

ISO-9001 Certified Institute

Issued to :

YEEKAY TECHNOCRAT PVT. LTD.

101-C, (GR. FLOOR),

KUNDAN HOUSE,

HARI NAGAR ASHRAM, (BEHIND NAFED BUILDING)

NEW DELHI - 110014

Kind Attn: UJJAWAL KUMAR, -

Sample Particulars :

One sample described as PPR-pipes & fittings, brand name "FUSION", PPR-C polypropylene random copolymer & material used VESTOLIN P 9421 (DSM Germany), 40 mm dia, was received.

J.O.No. 406-141-1217

Reg.No. 1129367

Date 17-06-2004

GC-01 (REV-03)

Your Ref.No. -

Date 11.06.2004

TEST RESULTS

<u>S.No.</u>	<u>Test</u>	<u>Result obtained</u>	<u>Protocol adopted</u>
1.	<u>Internal hydrostatic pressure test</u> At room temperature (30°C) and 25 bars pressure for 1 hour	Sample does not crack or burst during the test	As per guidelines of IS: 4985-2000

Note: Remaining tests shall be reported later.

DOR: 11.06.2004

DOC: 17.06.2004

Technical Note



RAPPORT

Utfärdad av ackrediterat laboratorium
Report issued by an accredited laboratory

Restricted Distribution

Project identification P-7763	Date 2003-11-04	Report No P-03/209
---	--------------------	-----------------------

Title and author

Control point testing according to DIN 8078 of Topilene R200P from Hyosun Corporation

Mattias Svedberg

Abstract

The aim of this report is to show that Topilene R200P meets the requirements regarding resistance to internal pressure according to DIN 8078. Details of the pipes tested are found in Appendix A.

The data is generated in project P-7467, in which Topilene R200P is tested at 20, 60, 95 and 110°C and evaluated according to ISO 9001 with a conditioning time of 3 hours. The tests have been performed using two types of fittings. Brass fittings (Beulco) have been used at 20 and 95°C and PVDF-fittings, manufactured by Bodycote Polymer, at 110°C. Further details of the test conditions and the results obtained, are found in Appendix B. Please note that the results in Appendix B is only an extract from the results in P-7467.

A summary of the requirements for PP-R pipes and the results obtained are given in the table below.

CHARACTERISTIC	REQUIREMENT (DIN 8078:1996-04)	RESULT Topilene R200P
Creep strength	20°C 16.0 MPa ≥1 h	>1 h pass
	95°C 3.5 MPa ≥1 000 h	>1 000 h pass
	110°C 1.9 MPa ≥8 760 h	>8 760 h pass

The test data obtained on the Topilene R200P pipes are in conformity with the requirements regarding creep strength according to DIN 8078:1996-04, paragraph 4.4.

Responsible for the report Mattias Svedberg	Reviewed by Jarno Hassinen	Approved by Daniel Johansson
--	-----------------------------------	-------------------------------------

Laboratories are accredited by the Swedish Board for Accreditation and Conformity Assessment (SWEDAC) under terms of Swedish legislation. The accredited laboratory activities meet the requirements in ISO/IEC 17025 (2000). This report may not be reproduced other than in full, except with the prior written approval of SWEDAC and the issuing laboratory.

Swedish Board for Accreditation and Conformity Assessment (SWEDAC) is one of the signatories to the Multilateral Agreements of the European co-operations for Accreditation (EA) for the mutual recognition of calibration certificates and test reports.

