

**Test certificate no.:** 43260/01

**Customer:** A.T.P. SRL  
Avanzate Technologie Plastiche  
Via dell' Industria, 3  
70051 Barletta (BA)  
ITALY

**Order:** Long-term internal pressure test on pipes  
made of PP-R at 110°C, 1.9 N/mm<sup>2</sup>, for 8,760 hours,  
according to DIN 8078

**Letter of:** 2001-03-19      **Ref:** ---

**Receipt of sampling:** 2001-03-21      **Sampling:** ---

**Testing period:** 2001-03-04 to 2002-04-04

**Result:** See summary in item 5 on page 3

This test certificate comprises 3 pages.

Würzburg, 2002-06-24  
Ne/we

  
Dipl.-Phys. Günther Poschet



by order



Dr. rer. nat. Jürgen Wüst  
Dipl.-Phys.

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## 1 Order

By its letter of 19 march 2001 the company A.T.P. SRL, Avanzate Technologie Plastiche, Via dell' Industria, 3, C.P. 82, located in 70051 Barletta (BA), Italy, instructed the Süddeutsche Kunststoff-Zentrum (SKZ) to execute long-term internal pressure tests on pipes made of PP for 8,760 hours according to DIN 8078.

## 2 Test material

On 21 March 2001 the SKZ received the following test material:

Dimension [mm]	Quantity [pieces]	Description
20 x 3.4	5 x 1 m	Pipe made of PP, dark green

## 3 Test procedure

The long-term internal pressure test was executed according to the requirements of DIN 8078 (April 1996), section 4.4, for a period of time of 8760 hours at 110°C and by using a stress of 1.9 N/mm<sup>2</sup>.

## 4 Results

### 4.1 Marking

ATP SISTEMA TORO 25 D20x3,4 PN20 PPR TYP E3 2000 DIN 8077 8078

### 4.2 Surface finish: without any objection

### 4.3 Dimensions

		Actual value in mm	
		Maximum value	Minimum value
Outside diamter	d1	20.2	20.2
Wall thickness	s1	3.8	3.6

#### 4.4 Long-term internal pressure test

Test temperature [°C]	Test stress [N/mm <sup>2</sup> ]	Time-to-failure [h]	
		Actual value	Setpoint value
110	1.9	> 8760	≥ 8760

### 5 Summary

According to DIN 8078 the period of time of 8760 hours required for a long-term internal pressure test was reached.