

San Maurizio d'Opaglio, 25/10/2023

SUPPLIER CONFORMITY DECLARATION

(according to ISO/IEC 17050-1)

Giacomini S.p.A. company, manufacturer of components for heating, cooling and sanitary distribution systems, located in Italy, San Maurizio d'Opaglio (NO), via per Alzo no. 39, whose design and production processes comply with the requirements of the UNI EN ISO 9001:2015 standard,

STATES that

the crosslinked polyethylene pipes (Pe-X) **R996T-5** of the **GIACOTHERM** series

have been properly designed and manufactured, in compliance with EN ISO 21003 standard, and are subjected to the analysis of the mechanical resistance, for cyclic loads of temperature and pressure, following the same procedures expected for pipes manufactured in Pe-Xa and Pe-Xc.

The silane crosslinking method, used for the production of pipes made of Pe-Xb, furthermore allows obtaining the improvement of the chemical and physical characteristics: in this crosslinking method, the dye, the antioxidant stabilizers and the UV rays stabilizers have no influence on the material ability to crosslink (as it happens on the contrary for other methods), by ensuring a higher upkeep of the mechanical resistance in time, even if subjected to the contact with chemical and oxidizing agents. Moreover, a chemical process that does not require the achievement of high temperatures and pressures is made; for this reason, the dimensional stability results improved.

Regarding the mechanical resistance, we report the results of some tests carried out in laboratory:

	TENSILE STRENGTH		BURST TEST
	At 22,8°C	At 82,2°C	At 82,2°C
Pe-Xb	21,1 MPa	12,5 MPa	25,8 bar
Pe-Xa	16,8 MPa	11,4 MPa	21,0 bar
Pe-Xc	19,0 MPa	10,3 MPa	21,7 bar

Moreover, all pipes of R996T Giacotherm series, are extruded with an INTERNAL anti-oxygen barrier, in EVOH complying with DIN 4726 standard.

Eng. Marco Rosa Brusin

Technical Manager



STATEMENT

The PE-X pipe supplied by Giacomini S.p.A. is manufactured in accordance with EN ISO 21003 standard, starting from high density granular polyethylene (HDPE), and submitting it to crosslinking process, according to the silane method.

The pipe is designed for 50 years of use, at the following working conditions (Table 1 of the above-mentioned standard):

Class	Working Temperature T_0 [°C]	Time at T_0 [years]	T_{MAX} [°C]	Time at T_{MAX} [years]	Abnormal temperature due to wrong working T_M [°C]	Time at T_M [hours]	Application range
4	20	2,5	70	2,5	100	100	Floor heating systems and low temperature radiators
	40	20					
	60	25					
5	20	14	90	1	100	100	High temperature radiators
	60	25					
	80	10					

Giacomini guarantees the pipe, in accordance with its own sale conditions and with the prescriptions of the Legislative Decree no.172 21/05/2004, providing that:

- The pipe has the manufacturing date and the customer can prove that, it has been purchased from Giacomini or from a Giacomini's distributor, showing the related sale documents.
- The evidence of the production defect is necessary, in order to make the free replacement of the pipe.

Warranty does not cover following cases:

- When use conditions do not correspond to the ones prescribed by the Company.
- When the pipe is used with incompatible products.
- When the assembly directions have not been followed.
- When the pipe shows an evidence of imperfection before the installation, or when the defects did show up during the running test, and the pipe has not been replaced before proceeding with the installation;
- When the pipe has been manipulated in a different manner as regards to the prescriptions, or installed with tools different from those ones authorized by Giacomini.