



CERTIFICATO DI PROVA PER LA DETERMINAZIONE DEL PRODOTTO-TIPO

0051-CPR-1784

Ai sensi del Regolamento (UE) N. 305/2011 del Parlamento Europeo e del Consiglio del 9 marzo 2011 che fissa condizioni armonizzate per la commercializzazione dei prodotti da costruzione, si certifica che la prestazione del prodotto:

Assemblaggi di tubi metallici ondulati di sicurezza per il collegamento di apparecchi domestici che utilizzano combustibili gassosi

avente designazione di tipo: SITEGAS DN12 / TIPO 1

e fabbricato da **SITEF SERVICE SRL**

è stata valutata sulla base di prove sul prodotto (sulla scorta del campionamento effettuato dal fabbricante anzi citato) eseguite ai sensi del punto 1.4 dell'Allegato V al Regolamento (UE) 305/2011 (**Sistema 3 di valutazione e verifica della costanza della prestazione**) come dettagliato nell'allegato rapporto di prova N. **CG19-0036547-01**

e che le prescrizioni dell' Allegato ZA alla norma EN 14800:2007 sono state soddisfatte.

Milano, 2019.07.03

IMQ SpA

Direttore Tecnico CPR
(Dr. Ing. Valberto Baggio)

Questo Certificato può essere riprodotto solo integralmente, pertanto con incluso il rapporto di prova sopra citato. Esso è soggetto alle condizioni previste dal Regolamento IMQ Marcatura CE Regolamento (UE) n. 305/2011 "Prodotti da costruzione" per le quali IMQ opera come Organismo Notificato. Questo certificato non implica alcuna valutazione circa l'effettiva prestazione dei prodotti fabbricati.



TEST CERTIFICATE FOR THE DETERMINATION OF THE PRODUCT-TYPE

0051-CPR-1784

In accordance with Regulation (EU) 305/2011 of the European Parliament and of the Council of 9 March 2011 laying down harmonized conditions for the marketing of construction products it is hereby certified that the performance of the product:

Corrugated safety metal hose assemblies for the connection domestic appliances using gaseous fuels

having type designation: SITEGAS DN12 / TIPO 1

and manufactured by **SITEF SERVICE SRL**

has been assessed on the basis of testing (based on sampling carried out by the above mentioned manufacturer) carried out according to item 1.4 of Annex V to Regulation (EU) 305/2011 (**System 3 of Assessment and Verification of Constancy of Performance**) as detailed in the attached test report N. **CG19-0036547-01**

and that the requirements of Annex ZA to EN 14800:2007 have been met.

Milan, 2019.07.03

IMQ SpA

CPR Technical Manager
(Dr. Ing. Valberto Baggio)

This Certificate may only be reproduced in its entirety, in association with the above mentioned test report. It is subjected to the provisions laid down in IMQ Rules CE Marking European Regulation (EU) No 305/2011 "Construction Products" for which IMQ acts as Notified Body. This certificate does not imply any judgment about the performance of the real production.

TEST REPORT

Following test report has been issued by IMQ (Notified Laboratory n° 0051) according to DPR 246/93 European Regulation No 305/2011

Report Reference No.....:	CG19-0036547-01
Date of issue.....:	19/06/2019
Total number of pages :	13 (inclusi allegati/ <i>including attachments</i>)
Testing Laboratory :	IMQ S.p.A.
Address	Via Quintiliano, 43 – 20138 Milano – ITALY
Applicant's name...:	SITEF SERVICE SRL
Address	Via A. Di Sante – Nucleo ind.le Sant'Atto – 64100 TERAMO
Manufacturer's name :	SITEF SERVICE SRL
Address	Via A. Di Sante – Nucleo ind.le Sant'Atto – 64100 TERAMO
Test specification	EN 14800:2007 (<i>see page 2 for details</i>)

Test Report Form No.:	TRF 1836_2
Test Report Form(s) Originator.....:	IMQ
Date	2015_03

Test item description	Assemblaggi di tubi metallici ondulati di sicurezza per il collegamento di apparecchi domestici che utilizzano combustibili gassosi/Corrugated safety metal hose assemblies for the connection domestic appliances using gaseous fuels
Trade Mark	SITEGAS
Manufacturer	SITEF SERVICE
Type reference	1
Nominal size	DN 12

IMQ BEM No.:	94521
Date of receipt of test item(s).....:	27/02/2019 (Campionato/i e spedito/i dal richiedente/ <i>Item(s) sampled and sent by applicant</i>)
Number of test item(s).....:	17
Date(s) of performance of tests	12/03/2019 – 19/06/2019

Tested by: (name and signature)	Vincenzo Miglio <i>(Laboratory Technician)</i>	 <small>cosign</small>
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Approved by: (name and signature)	Alberto Bovo <i>(Laboratory Manager)</i>	 <small>cosign</small>
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List of attachments (including a total number of pages in each attachments):

Attachment No. 1 – Photographic documentation (1 page)

Attachment No. 2 – Measurement equipment and instrumentation (1 page)

Summary of testing:

Unless otherwise specified the tests were performed under the following environment conditions:

- Temperature range: 15 – 25 °C
- Air Pressure: 86 – 106 kPa
- Relative humidity: 25 - 75 %

Tests performed	Clause	Samples N.	Test Result
Leak-tightness test	5.3	1 to 17	P
Structural strength test	5.4	2	P
Flow rate test	5.5	1	P
Electrical continuity test	5.6	1	P
Tension	5.7	16	P
Durability of marking	5.8	1	N.A.
Working temperature	5.9	1, 2	P
Corrosion resistance test	5.10	1, 2	P
Reaction to fire	5.11	10 to 15	P
Resistance to high temperature test	5.12	17	P
Suppleness	5.13	6	P
Bending performance	5.14	3, 4, 5	P
Flexing resistance	5.15	7, 8, 9	P
Torsion resistance	5.16	6	P
Impact/crushing resistance test	5.17	6	P
Penetration resistance	5.18	1	P
End fittings	5.19	2	P

Remarks:

Testing location:

IMQ S.p.A.

Via Quintiliano, 43 – 20138 – Milano – ITALY

Possible test case verdicts:

- **N/A** - test case does not apply to the test object.
- **N/C** - test case has not been checked.
- **P(ass)** - test object does meet the requirement.
- **F(ail)** - test object does not meet the requirement.

General remarks:

The test results presented in this report relate only to the object tested. This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.

Throughout this report a comma / point is used as the decimal separator.

Unless otherwise stated the uncertainties for the tests and measurements are evaluated in according to IMQ Operational Instruction IO-LAB-001 and IO-LAB-004.

The uncertainties evaluation has been carried out in accordance with IEC Guide 115 “Application of Uncertainty of measurement’s to Conformity Assessment Activity in the Electrotechnical Sector” and IECCE CTL decision sheet DSH 251.

Internal Procedure PI-037 ensures that the requirements for traceability of calibrations, of all test equipment requiring calibration, and calibration intervals are met.

The ability or reliability of this product to perform its intended function in a particular application has not been investigated.

General product information:

Pipe material: AISI 316L

Plait material: AISI 304

Covering material: PVC

Swivel nut: NICKEL-PLATED BRASS (GFN150508-GFN150758-GFN151008-GFN151258-GFN151508-GFN152008) – (GMN150508-GMN150758-GMN151008-GMN151258-GMN151508-GMN152008)

Swivel nut: STAINLESS STEEL (GFN150500-GFN150750-GFN151000-GFN151250-GFN151500-GFN152000) – (GMN150500-GMN150750-GMN151000-GMN151250-GMN151500-GMN152000)

Copy of marking plate:



Clause	Requirement + Test	Result - Remark	Verdict
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REQUIREMENTS TABLES

4	CONSTRUCTION REQUIREMENTS		—
4.1	General		P
4.2	Nominal size		P
4.3	Materials		P
4.4	Requirements for the connection between hose and fittings		P
4.5	End fittings design requirements		P
4.6	CMG hose assembly lengths		P
4.7	Corrosion requirements		P
4.8	Insulation requirements		P
4.9	Electric conductivity requirements		P
4.10	Hygiene		P
4.11	Cover materials		P
4.12	Dangerous substances		P

5	PERFORMANCE REQUIREMENTS AND TESTS		—
5.3	Leak-tightness		P
5.4	Structural strength		P
5.5	Flow rate		P
5.6	Electric continuity		P
5.7	Tension		P
5.8	Durability of marking		P
5.9	Working temperature		P
5.10	Corrosion resistance		P
5.11	Reaction to fire		P
5.12	Resistance to high temperature		P
5.13	Suppleness		P
5.14	Bending performance		P
5.15	Flexing resistance		P
5.16	Torsion resistance		P
5.17	Impact/crushing resistance		P
5.18	Penetration resistance		P
5.19	End fittings		P

TEST TABLES

5.3	TABLE: Leak-tightness		P
	Test pressure.....:	3 bar	
		—	
	Leakage	Measured (cm ³ /h)	Max. allowed(cm ³ /h)
	Sample 1	0	10
	Sample 2	0	10
	Sample 3	0	10
	Sample 4	0	10
	Sample 5	0	10
	Sample 6	0	10
	Sample 7	0	10
	Sample 8	0	10
	Sample 9	0	10
	Sample 16	0	10
Supplementary information: tests performed on samples with swivel nut in stainless steel and nickel-plated brass			

5.4	TABLE: Structural strength		P
	Test pressure.....:	6 bar	
		—	
	Initial length.....:	94.0 cm	
		—	
	Length after release of pressure	Measured (cm)	Max. allowed (cm)
	Sample 2	94,1	96,8
	Leakage	Measured (cm ³ /h)	Max. allowed(cm ³ /h)
	Sample 2	0,0	10
Supplementary information: tests performed on samples with swivel nut in stainless steel and nickel-plated brass			

5.5	TABLE: Flow rate			P
	Inlet pressure.....:	20 mbar	—	
	Pressure drop.....:	1 mbar	—	
	Air temperature.....:	22 °C	—	
	Ambient pressure.....:	1008 mbar	—	
Flow rate		Measured (m ³ /h)	Calculated (m ³ /h)	Min. Allowed (m ³ /h)
Sample 1		2.37	2.35	1,5
Supplementary information: tests performed on samples with swivel nut in stainless steel and nickel-plated brass				

5.6	TABLE: Electric continuity			P
	Test current.....:	25 A	—	
	Test time.....:	1 min	—	
Resistance		Measured (Ω/m)	Max. Allowed (Ω/m)	
Sample 1		0,18	1	
Supplementary information: tests performed on samples with swivel nut in stainless steel and nickel-plated brass				

5.7	TABLE: Tension			P
	Test tension.....:	1000 N	—	
	Feed rate.....:	100±5 mm/min	—	
	Initial length.....:	45,6 cm	—	
Length during test		Measured (cm)	Max. allowed (cm)	
Sample 16		47	50,1	
Length after test		Measured (cm)	Max. allowed (cm)	
Sample 16		45,7	46.9	
Leakage		Measured (cm ³ /h)	Max. allowed (cm ³ /h)	
Sample 16		0	10	
Supplementary information: tests performed on samples with swivel nut in stainless steel and nickel-plated brass				

5.8	TABLE: Durability of marking		P.
	Friction movements with dry cotton cloth.....:	20	—
	Friction movements with cotton cloth wetted.....:	20	—
Readability of each character		Observed	Allowed
Sample 1		Yes	Yes
Supplementary information: tests performed on samples with swivel nut in stainless steel and nickel-plated brass			

5.9	TABLE: Working temperature		P
	Test temperature.....:	120°C	—
	Test duration.....:	72 h	—
Visible cracking or deterioration		Observed	Allowed
Sample 1		None	None
Sample 2		None	None
Supplementary information: tests performed on samples with swivel nut in stainless steel and nickel-plated brass			

5.10.2.1 - 5.10.2.2	TABLE: Corrosion resistance – Salt spray test and hydrochloric acid test		P
	Saline solution concentration.....:	5±0,5 %	—
	Test temperature.....:	35±1 °C	—
	Test time.....:	96±2 h	—
	Hydrochloric acid concentration.....:	4 %	
	Test time.....:	72 h	
Sign of corrosion, penetration, or deterioration		Observed	Requirement
Sample 1		None	None
Leakage		Measured (cm ³ /h)	Max. allowed(cm ³ /h)
Sample 1		0	10
Supplementary information: tests performed on samples with swivel nut in stainless steel and nickel-plated brass			

5.10.2.3	TABLE: Corrosion resistance – Household cleaning agent test		P
	Sodium hypochlorite concentration.....:	9 %	—
	Test temperature.....:	23 °C	—
	Test time.....:	72 h	—
Sign of corrosion, penetration, or deterioration		Observed	Requirement
Sample 2		None	None
Leakage		Measured (cm ³ /h)	Max. allowed(cm ³ /h)
Sample 2		0	10
Supplementary information: tests performed on samples with swivel nut in stainless steel and nickel-plated brass			

5.11	TABLE: Reaction to fire			P
Classification	Fire behaviour	Smoke production		
Sample 10, 11, 12, 13, 14, 15	B	s 1	d 0	
Supplementary information: tests performed on samples with swivel nut in stainless steel and nickel-plated brass				

5.12	TABLE: Resistance to high temperature		P
	Test temperature.....:	650°C	—
	Test pressure.....:	500 mbar	—
	Test gas.....:	Nitrogen	
Leakage		Measured (dm ³ /h)	Max. allowed (dm ³ /h)
Sample 17		60	150
Supplementary information: tests performed on samples with swivel nut in stainless steel and nickel-plated brass			

5.13	TABLE: Suppleness		P
	Mass.....:	2 kg	—
Diameter of the loop		Measured (mm)	Max. allowed (mm)
Sample 6		60	250
Supplementary information: tests performed on samples with swivel nut in stainless steel and nickel-plated brass			

5.14	TABLE: Bending		P
	Load mass.....:	20 kg	—
	Number of cycles.....:	50	—
	Rate (cycles per minute).....:	10±1	—
Leakage		Measured (cm ³ /h)	Max. allowed(cm ³ /h)
Sample 3		0	10
Sample 4		0	10
Sample 5		0	10
Supplementary information: tests performed on samples with swivel nut in stainless steel and nickel-plated brass			

5.15	TABLE: Flexing		P
	Load mass.....:	5 kg	—
	Number of cycles.....:	10000	—
	Rate (cycles per minute).....:	30±2	—
Leakage		Measured (cm ³ /h)	Max. allowed(cm ³ /h)
Sample 7		0	10
Sample 8		0	10
Sample 9		0	10
Supplementary information: tests performed on samples with swivel nut in stainless steel and nickel-plated brass			

5.16	TABLE: Torsion		P
	Number of cycles.....:	10000	—
	Rate (cycles per minute).....:	30±2	—
Leakage		Measured (cm ³ /h)	Max. allowed(cm ³ /h)
Sample 6		0	10
Supplementary information: tests performed on samples with swivel nut in stainless steel and nickel-plated brass			

5.17	TABLE: Impact/crushing resistance			P
	Mass.....:	5 kg		—
	Height.....:	600 mm		—
Flow rate	Measured (m ³ /h)	Calculated (m ³ /h)	Min. Allowed (m ³ /h)	
Sample 1	2.37	2.35	1,35	
Leakage	Measured (cm ³ /h)		Min. Allowed (cm ³ /h)	
Sample 1	0		10	
Supplementary information: tests performed on samples with swivel nut in stainless steel and nickel-plated brass				

5.18	TABLE: Penetration resistance			P
	Test pressure.....:	3 bar		—
Leakage	Measured (cm ³ /h)		Max. allowed(cm ³ /h)	
Sample 1	0		10	
Supplementary information: tests performed on samples with swivel nut in stainless steel and nickel-plated brass				

5.19	TABLE: End fittings			P
5.19.2.1	Drop test			—
Leakage	Measured (cm ³ /h)		Max. allowed(cm ³ /h)	
Sample 2	1		10	
Supplementary information: tests performed on samples with swivel nut in stainless steel and nickel-plated brass				

5.19.2.2	Crush test			P
	Mass.....:	400 N		—
	Test time.....:	1 min.		—
Leakage	Measured (cm ³ /h)		Max. allowed(cm ³ /h)	
Sample 2	1		10	
Supplementary information: tests performed on samples with swivel nut in stainless steel and nickel-plated brass				

PHOTOGRAPHIC DOCUMENTATION



MEASUREMENT EQUIPMENT AND INSTRUMENTATION

INSTRUMENTS	MANUFACTURER	MODEL	IMQ Ref.
Misuratore di perdite/ <i>Leakage detector</i>	Furness	FCO730	S-04511
Barometro/ <i>Barometer</i>	Deltaohm	HD 9408T BARO	S-04239
Manometro/ <i>Manometer</i>	Thommen	HM 18	S-01511
Manometro/ <i>Manometer</i>	DPM	TT470S	S-02698
Manometro/ <i>Manometer</i>	Lutron	PM-9100	S-04602
Contatore/ <i>Flowmeter</i>	Elster	G4-6	S-02136
Contatore/ <i>Flowmeter</i>	Elster	GR0R	S-05633
Forno a muffola/ <i>Oven</i>	F.lli Galli	MF350-120X600	P-02657
Termometro/ <i>Thermometer</i>	Fluke	52 II	S-03659
Termometro/ <i>Thermometer</i>	Baggi	Checktemp	S-02455
Apparecchiatura sicurezza elettrica/ <i>Electrical safety equipment</i>	ETL Pruftechnik	RS36	S-03119
Apparecchiatura prova d'urto/ <i>Impact test equipment</i>	ATS	-	P-02590
Cronometro/ <i>Cronometer</i>	ACCTIM	-	S-04152
Test rig bending/flexing/torsion			I.G. n°362209 I.G. n°362210

END OF TEST REPORT