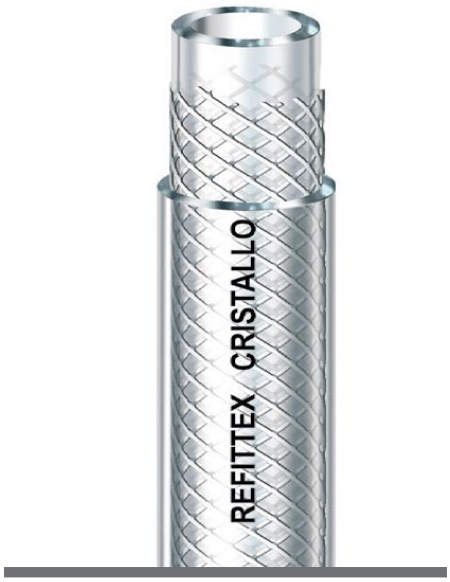
HIfitt TECHNOLOGY FLOW

Refittex Cristallo

phthalate free



GB

APPLICATIONS AND REGULATIONS
Phthalate free hose suitable for food liquids passage without pressure in compliance with the EU Directive Reg.(EU) 10/2011 A-B-C-D2. In compliance with the KTW guidelines for the contact with drinkable water.

STRUCTURE
Flexible PVC hose with textile reinforcement.

WORKING TEMPERATURE
From -20°C to +60°C

D

ANWENDUNGEN UND RICHTLINIEN
Phthalatfreier Schlauch für den Durchfluss von flüssigen Lebensmitteln ohne Druck unter Beachtung der Europäischen Richtlinie Reg.(EU) 10/2011 für Simulanten A-B-C-D2 und der Richtlinie KTW für das Trinkwasser.

STRUKTUR
Flexibler PVC-Schlauch mit Textilverstärkung.

TEMPERATURBESTÄNDIGKEIT
Von -20°C bis +60°C

I

APPLICAZIONI E NORMATIVE
Tubo senza ftalati per passaggio di liquidi alimentari non in pressione secondo la Direttiva Europea Reg. (EU) 10/2011 A-B-C-D2. Conforme alla linee guida per il contatto con acqua potabile KTW.

STRUTTURA
Tubo flessibile in PVC con rinforzo tessile.

TEMPERATURA D'UTILIZZO
Da -20°C a +60°C

F

APPLICATIONS ET DIRECTIVES
Tuyau sans phtalates pour le passage de liquides alimentaires sans pression selon la Directive Européenne Reg.(EU) 10/2011 pour les simulants A-B-C-D2. Conforme aux directives KTW pour le contact avec l'eau potable.

STRUCTURE
Tuyau flexible en PVC avec renforcement textile.

TEMPERATURE D'EMPLOI
À partir de -20°C jusqu'à +60°C

Ø Inside mm	Ø Outside mm	Thickness mm	Working pressure bar *	Bursting Pressure bar *	Length m	Weight per meter g/m	PCS pallet	Pallet size
4	10	3	30	90	100	79	30	80x120
5	11	3	26	78	100	92	30	80x120
6	12	3	20	60	25	103	110	80x120
6	12	3	20	60	50	103	48	80x120
6	12	3	20	60	100	103	42	80x120
8	14	3	20	60	25	126	80	80x120
8	14	3	20	60	50	126	48	80x120
8	14	3	20	60	100	126	24	80x120
9	15	3	20	60	100	138	24	80x120
9	15	3	20	60	50	138	36	80x120
9	15	3	20	60	25	138	80	80x120
10	16	3	20	60	50	149	36	80x120
10	16	3	20	60	25	149	48	80x120
12	18	3	12	36	50	172	24	80x120
12,5	18,5	3	-	-	50	178	24	80x120
13	19	3	12	36	50	184	24	80x120
13	19	3	12	36	25	184	48	80X120
13	20	3,5	12	36	50	221	20	80x120
15	21	3	12	36	50	207	20	80x120
15	21	3	12	36	25	207	36	80x120
16	22	3	10	30	50	218	20	80x120
16	24	4	10	30	50	302	16	80x120
19	26	3,5	10	30	25	296	20	80x120
19	26	3,5	10	30	50	296	14	80x120
19	27	4	10	30	50	346	10	80x120
20	28	4	10	30	50	362	12	80x120
25	33	4	8	24	25	436	10	80x120
25	33	4	8	24	50	436	8	80x120
25	34	4,5	12	24	25	498	10	80x120
25	34	4,5	12	24	50	498	8	80x120
30	38	4	7	21	25	514	12	80x120
30	38	4	7	21	50	514	7	80x120
32	40	4	7	21	25	543	8	80x120
32	40	4	7	21	50	543	5	80x120
32	42	5	7	21	25	695	8	80x120
32	42	5	7	21	50	695	5	80x120
38	48	5	6	18	25	808	5	120x120
40	50	5	6	18	25	846	6	120x120
45	55	5	5	15	25	940	5	120x120
50	60	5	5	15	25	1032	5	120x120
50	64	7	5	15	25	1500	5	120x120
50	66	8	5	15	25	1740	5	120x120

* Working and bursting pressure at 20°C

Inner diameters and corresponding tolerances according to the norm UNI EN ISO 1307:2008

It is to emphasize that since thermoplastic products are subject to deformations and shrinkings also due to the outside temperature, the length tolerance is ± 5%

TECHNOLOGY FLOW

FITT S.p.A. - SOCIETÀ UNIPERSONALE
Via Piave, 8 - 36066 Sandrigo (VI) Italy
Tel. +39 0444 461000 - Fax +39 0444 461099
www.fitt.it - info@fitt.it

Reg. Imp. / C.F. 00162620249
R.E.A. Vicenza N. 113648
P.IVA IT 00162620249 - Cap. Soc. Euro 5.200.000,00 i.v.

DECLARATION OF COMPLIANCE FOR MATERIALS AND ARTICLES INTENDED TO COME INTO CONTACT WITH FOOD

1. We hereby certify that the supplied hose REFITTEX CRISTALLO

(notes and/or simulants used in the migration tests, as indicated in point 3 of this declaration, allow to determine foodstuffs which may come into contact with the product according to the Annex III of Regulation (EU) n. 10/2011 and D.M. 26/04/1993, n°. 220 and following revisions and amendments)

produced by:

Fitt S.p.A.
Via Piave, 8
36066 Sandrigo, VI (Italy)
Tel. +39 0444 46 10 00
Fax +39 0444 46 10 99

complies

with all relevant regulations, and particularly with the following:

- Regulation (EU) 10/2011,
- Regulation 1935/2004/EC,
- Directive 2002/72/EC, 2007/19/EC and following amendments,
- Regulation EC 2023/2006 (GMP),
- Regulation 1895/2005/EC

and with the following Italian Regulations:

- Ministerial Decree 174 of 24/09/2008 amending D.M. 21/03/1973 and following revisions and amendments,
- DPR 777/82 and following revisions and amendments.

2. The above mentioned product is manufactured with the following materials suitable for food contact:
   - Inside layer made of PVC plasticized (contact side).
   - Reinforcement in polyester thread.
   - Outside layer made of PVC plasticized.

3. The following substances subject to restrictions and/or specifications are used in the above mentioned products:

Substance name	Ref. No	CAS No	SML [mg/kg]	Group restriction No	Restrictions and specifications
Terephthalic acid, bis(2-ethylhexyl)ester	92200	0006422-86-2	LMS = 60 mg/Kg	(32)	-
Soybean oil, epoxidised	88640	0008013-07-8	LMS = 60.0mg/Kg LMS = 30.0 mg/Kg*	-	(*) In the case of PVC gaskets used to seal glass jars containing infant formulae and follow-on formulae as defined by Directive 2006/141/EC or processed cereal-based foods and baby foods for infants and young children as defined by Directive 2006/125/EC, the SML is lowered to 30 mg/kg.
					Oxirane < 8 %, iodine number < 6.
Polyethylene waxes, oxidised	80077	0068441-17-8	LMS = 60 mg/Kg	-	-
Calcium salts of fatty acid	-	-	-	-	no SML, DUAL USE (art. 11 3a)
Zinc salts	-	-	LMS = 25mg/Kg as Zinc	-	-
Octadecyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate	68320	0002082-79-3	LMS = 6mg/Kg	-	-
Vinyl chloride	26050	0000075-01-4	ND*	-	(*) 1 mg/kg in final product

4. We certify that:
   - The article meets the overall migration limits and specific migration limits under the following test conditions:
     - Simulant A: AQUEOUS SOLUTION OF ETHANOL at 10% v/v (for aqueous foodstuffs). Testing time and temperature: 10 days at 40°C,
     - Simulant B: AQUEOUS SOLUTION OF ACETIC ACID at 3% p/v (for acid foodstuffs). Testing time and temperature: 10 days at 40°C,
     - Simulant C: AQUEOUS SOLUTION OF ETHANOL at 20% v/v (for alcoholic foodstuffs). Testing time and temperature: 10 days at 40°C.
     - Simulant D2: VEGETABLE OIL (for fatty foodstuffs). Testing time and temperature: 2 hours at 40°C, for repeated use.

The product complies with the overall migration limits and other specific restrictions under which the monomers and/or additives contained in the material can be submitted, at the abovementioned usage conditions. All declared is supported by analytical tests carried out in compliance with the DM 21/03/1973 and articles 17 and 18 of Regulation (EU) 10/2011 in conjunction with Annex V or based on calculations made taking into account the % of the substances submitted to migration limits in the test conditions. Calculations presume that 1 kg of food enters into contact with 6 dm² of product. We remind that the Migration Limit is 60 mg/Kg food [ppm], also expressed as 10 mg/dm² (if the certificate reports mg/kg it is possible to convert it into mg/dm^2 dividing the value by 6) and we underline that the change in the analytical tolerance is between 10 and 20% (12 mg/kg or 2 mg/dm²).

5. We suggest giving notice to the writing Society if the usage conditions of the product do not correspond to the advice here supplied or whether the foodstuff which come into contact with the product (Food Contact Material) is different from the applicable conditions and from the simulants listed above.
6. The user of the product which is intended to come into contact with food has the responsibility of informing the writing Company about any restriction due to particular component characteristics (additives and aromas) of the foodstuff which has to be transported.
7. This declaration complies with art. 16 of the 1935/2004/EC Regulation.

8. Industrial or commercial usage of the product concerned in this declaration is subject to the evaluation of its compliance to actual regulations and to the technological suitability to the declared final usage.
9. This declaration is valid as form the date indicated below and will be renewed when substantial changes in the processing (final product/raw material) will bring about modifications in some necessary requirements or when new amendments to the regulations mentioned at point 1) will require new controls to verify the compliance.
10. Moreover, we inform that all necessary support documents are at the disposal of the control authorities, in accordance with art. 16, par. 1 of Regulation 1935/2004/EC.
11. Declaration Code: 13LA01993-13LA05091-14LA01341

Date: 28/02/2014

Hygiene-Institut des Ruhrgebiets
Institut für Umwelthygiene und Toxikologie
Direktor: Prof. Dr. rer. nat. L. Dunemann

HYGIENE-INSTITUT · Postfach 10 12 55 · 45812 Gelsenkirchen / GERMANY

FITT S.p.A.
Via Piave, 8
36066 SANDRIGO (VI)
ITALY

Visitor-/Parcel Address:
Rotthauser Str. 21
45879 Gelsenkirchen

Telephone +49 (0) 209 9242-0
Extension +49 (0) 209 9242-210
Telefax +49 (0) 209 9242-212
E-Mail a.koch@hyg.de
Internet www.hyg.de

Reference-No.: **K-216445-12-Ko**
Contact person: Dr. Andreas Koch

Gelsenkirchen, 09.05.2012

TEST CERTIFICATE
according to the KTW-Guideline

Product: **hose Refittex® Cristallo**

Test specimen: fibre reinforced hose, inner diameter: 6 mm outer diameter: 12 mm, uncolored

The test specimen meets the requirements according to the test report **Ref.-No.: K-216445-12-Ko** dated **09.05.2012** for the following applications and temperatures:

Applications:	**cold water (23°C)**	**warm water (60°C)**	**hot water (85°C)**
Pipes with DN < 80 mm (domestic distribution)	---	---	---
Pipes of diameter 80 mm ≤ DN < 300 mm (supply pipes)	---	---	---
Pipes of diameter DN ≥ 300 mm (main pipes)	---	---	---
Fittings for pipes with DN < 80 mm	passed	---	---
Fittings for pipes with 80 mm ≤ DN < 300 mm	passed	---	---
Fittings for pipes with DN ≥ 300 mm	passed	---	---
Sealings for pipes with DN < 80 mm	passed	---	---
Sealings for pipes with 80 mm ≤ DN < 300 mm	passed	---	---
Sealings for pipes with DN ≥ 300 mm	passed	---	---
Tanks in the domestic installations including repair systems	---	---	---
Tanks other than in domestic installations including repair systems	---	---	---

as far as technically suited.

If pipes, sealings or fittings and ancillaries do not differ in their material composition and process of manufacture, testing of the smallest diameter of the product range is sufficient.

This test certificate is valid beginning with the date of issue and is ending by **09.05.2017** as far as there are no changes in the formula. After this time it can be extended for further 5 years if demanded.

The Director of the Hygiene-Institute
on behalf of

Dr. rer. nat. Andreas Koch
Head of the Dept. for water
hygienic material testing

HYGIENE-INSTITUT DES RUHRGEBIETS Institut für Umwelthygiene und Toxikologie

The assessment was based on the assumption that the used starting substances and monomers used to manufacture the product may completely known and no other substances are present in the product. The validity of this document expires in case of modifications in the composition of the product or the processing conditions. The results and evaluations refer to the groups of test items. This document may not be published without our written permission only complete and unchanged or duplicated.

ilac-MRA DAkkS Deutsche Akkreditierungsstelle D-PL-13042-02-00

Hygiene-Institut des Ruhrgebiets
Institut für Umwelthygiene und Toxikologie
Direktor: Prof. Dr. rer. nat. L. Dunemann

HYGIENE-INSTITUT · Postfach 10 12 55 · 45812 Gelsenkirchen / GERMANY

FITT S.p.A.
Via Piave, 8
36066 SANDRIGO (VI)
ITALY

Visitor-/Parcel Address:
Rotthauser Str. 21
45879 Gelsenkirchen

Telephone +49 (0) 209 9242-0
Extension +49 (0) 209 9242-210
Telefax +49 (0) 209 9242-212
E-Mail a.koch@hyg.de
Internet www.hyg.de

Reference-No.: **K-216445-12-Ko**
Contact person: Dr. Andreas Koch

Gelsenkirchen, 09.02.2012

TEST REPORT
according to the KTW-Guideline

Order of:	13.02.2012
Field of application:	Fittings for pipes with DN < 80 mm cold water (23°C)
Product:	**hose Refittex® Cristallo**
Test Specimen:	fibre reinforced hose, inner diameter: 6 mm outer diameter: 12 mm, uncolored
Date of receipt:	17.02.2012
Sampler:	transmitted by mail
Start of migration test:	28.02.2012
End of test:	08.05.2012

The Director of the Hygiene-Institute
on behalf of

Dr. rer. nat. Andreas Koch
Head of the Dept. for water
hygienic material testing

This test report consists of 2 pages.

The assessment was based on the assumption that the used starting substances and monomers used to manufacture the product may completely known and no other substances are present in the product. The validity of this document expires in case of modifications in the composition of the product or the processing conditions. The results and evaluations refer to the groups of test items. This document may not be published without our written permission only complete and unchanged or duplicated.

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TEST RESULTS
cold water area (23°C)

Product: **hose Refittex® Cristallo**

Test Specimen: fibre reinforced hose, inner diameter: 6 mm outer diameter: 12 mm, uncolored

Formula: submitted and checked (No.: 3252)

S/V-ratio migrationtest: 94,25 dm^2 / 1,40 dm^3 ≙ 67,32 dm^{-1}

S/V-ratio odour/flavour test: 94,25 dm^2 / 1,40 dm^3 ≙ 67,32 dm^{-1}

Test / Parameter	test steps each 3 days (72 hours) 1.-3. d	4.-6. d	7.-9. d	Requirements for Fittings for pipes with DN < 80 mm
colour	colourless	colourless	colourless	n.s.e.
turbidity	clear	clear	clear	n.s.e.
tendency to foam formation	none	none	none	n.s.e.
TON (23°C) **	2 *)	2 *)	1	< 2
TFN (23°C) **	n.e.	n.e.	1	< 2
total organic carbon (TOC) mg/dm^2 x d	0,023	0,020	0,018	≤ 0,125
parameter with limitations	QM/DWPLL-values, as far as analysed, are complied			

*) temporary detection of TON

** calculated for cat. Fittings for pipes with DN < 80 mm

n.s.e. = no significant effect
n.e. = not examined

TON = threshold odour number
TFN = threshold flavour number

HYGIENE-INSTITUT DES RUHRGEBIETS, GELSENKIRCHEN
Institut für Umwelthygiene und Toxikologie

Test methods used in qualification tests of materials in contact with potable water

Parameter	Test method
Odour / taste threshold (TON / TFN)	DIN EN 1622
Qualitative determination of colour, turbidity and foaming tendency	In-house test method Hy-KTW-5 (visual assessment)
Total organic carbon (TOC)	EN 1484
Chlorine demand	In-house test method KTW-14.6 after the BGA recommendation 1977 (photometric method)
Formaldehyde	In-house test method KTW-14.7 (photometric method)
Primary aromatic amines	In-house test method KTW-14.8 according to Section 35 (§ 35) of the German Federal Food and Consumer Goods Act (LMBG) (photometric method)
Phenols	DIN 38409 H16
Zinc	DIN 38406 E8
Lead	DIN 38406 E6
Epichlorohydrine	DIN EN 14207:2003
3-Mono-chloro-1,2-propanediol	In-hose test method Hy-AW-13 (gas chromatographic method)
Bisphenol A BADGE and Hydrolysis products BFDGE and Hydrolysis products	} In-house method Hy-W-37 (HPLC)

For the above-mentioned methods we are accredited.

We reserve the right to submit samples to qualified subcontractors for the verification of specific migration limits.

DAkkS
Deutsche
Akkreditierungsstelle

Deutsche Akkreditierungsstelle GmbH
German Accreditation Body

Entrusted according to Section 8 subsection1 AkkStelleG in connection with Section 1 subsection 1 AkkStelleGBV
Signatory to the Multilateral Agreements of
EA, ILAC and IAF for Mutual Recognition

Accreditation

The Deutsche Akkreditierungsstelle GmbH (German Accreditation Body) attests that the testing laboratory

Hygiene-Institut des Ruhrgebiets
Institut für Umwelthygiene und Umweltmedizin
Rotthauser Straße 19, 45879 Gelsenkirchen

is competent under the terms of DIN EN ISO/IEC 17025:2005 to carry out tests in the following fields:

Physical, physicochemical, chemical, biological and specific ecotoxicological analyses of water, surface water, natural water, leachate, swimming pool water, waste water, sludge, sediments, solid wastes, matters for recycling and soils; microbiological analyses of water, surface water, swimming pool water as well as mineral and table water; analyses of drinking water as specified by the Trinkwasser-verordnung (German drinking water ordinance) from 2001 excluding radiological parameters; specific physicochemical, chemical and microbiological analysis of non-metallic materials in potable water supply; specific microbiological examination of disinfectants and materials; analyses of organic trace elements in water, aqueous migrates and plastics by means of HPLC-MS; analyses of organic trace elements in water, aqueous migrates and solid matters (i.a. plastics) by means of gas chromatography (GC-MS); sampling of water, natural, potable and waste water, leachate, swimming pool water, water from aquifers and flowing water bodies, soil vapour and sludges; determination (sampling and analysis) of airborne organic gaseous particles, fibrous particles and microbiological substances within the frame of indoor measurements; determination (sampling and analysis) of airborne fibrous particles within the frame of measurements at workplace; determination (sampling and analysis) of particle precipitations within the frame of immission measurements; analysis of solid matters and dust with regard to fibrous particles; determination (sampling and analysis) of inorganic and organic gaseous or particulate air constituents in immission; determination (sampling and analysis) of fibrous particles in immission; sampling of airborne polyhalogenated Dibenzo-p-Dioxins and Dibenzofuranes in immission; modul immission control; technical modules water, soil and contaminated sites as well as waste

The accreditation certificate shall only apply in connection with the notice of accreditation of 12.11.2010 with the accreditation number D-PL-13042-02 and is valid until 18.06.2014. It comprises the cover sheet, the reverse side of the cover sheet and the following annex with a total of 66 pages.

Registration number of the certificate: **D-PL-13042-02-00**

Berlin, 12.11.2010

p. p. Valbuena
Andrea Valbuena
Head of Division

This document is a translation. The definitive version is the original German accreditation certificate.

See notes overleaf.

DVGW
CERT GMBH

ZERTIFIKAT

LW-BU0440

über die Anerkennung als DVGW-Prüflaboratorium

Das Prüflaboratorium

Hygiene-Institut des Ruhrgebiets -Umwelthygiene-
Rotthauser Str. 19, 45879 Gelsenkirchen
DEUTSCHLAND

ist als

DVGW-Prüflaboratorium Wasser

anerkannt und damit berechtigt, Produktprüfungen für die DVGW CERT GmbH in dem bescheinigten Bereich durchzuführen. Die Anerkennung ist an die Person der Leitung des Prüflaboratoriums bzw. dessen Stellvertretung gebunden.

Leitung des Prüflaboratoriums: **Dr. rer. nat. Andreas Koch**

Stellvertretung: **Dr. rer. nat. Georg-Joachim Tuschewitzki**
Dr. rer. nat. Christiane Schell

Die Anerkennung gilt nur in Verbindung mit der gültigen Anlage zum anerkannten Prüfumfang, sowie der aktuellen Geschäftsordnung zur DVGW-Zertifizierung von Produkten. Sie gilt bis zum 04.01.2015, sofern die Voraussetzungen, die zur Anerkennung geführt haben, unverändert bleiben. Die Erstanerkennung erfolgte am 04.01.2010.

13.01.2010 Sh A
Datum, Bearbeiter, Blatt, Leiter der Zertifizierungsstelle

DVGW CERT GmbH - allgemein anerkannte Zulassungsstelle für die Prüflaboratorien im Gas- und Wasserfach

DVGW CERT GmbH - commonly recognized approval body for testing laboratories in the German gas and water industry

DVGW CERT GmbH
Josef-Wirmer-Straße 1-3
53123 Bonn
Telefon: +49 228 91 88-888
Telefax: +49 228 91 88-993
eMail: info@dvgw-cert.com

Warranty/Damages for Default

The Association, its legal representatives, agents and employees are liable to the Principal and third parties which are protected by the Agreement, for all claims for default, irrespective of which legal reason, which arise under this Agreement or due to an offence (Art. 823 BGB [*German Civil Code*]) only in case of intent or gross negligence but not in case of ordinary negligence.

The personal liability of the legal representatives, agents and employees of the Association to the Principal shall be excluded except in case of intent or gross negligence.

The exemption from liability shall apply especially to claims for damages which arise from positive breach of the Agreement and from unlawful acts. The exemption from liability comprises any and all property damages, deficiency losses and consequential damages as well as indirect and direct financial damages of the Principal and the persons which are protected under this Agreement.

In case of Agreements with a consumer (consumer agreements) the above mentioned legal limitations shall not apply to the liability for damages arising from the injury of life, body or health which were caused by the negligent breach of obligations of the Association or an intended or negligent breach of obligations of a legal representative, agent or employee of the Association.

If individual parts of this exemption from liability or this limitation of liability are invalid, the validity of the clause shall not be affected.

Hygiene-Institut des Ruhrgebiets
Institut für Umwelthygiene und Toxikologie
Direktor: Prof. Dr.rer.nat. Lothar Dunemann
Träger: Verein zur Bekämpfung der Volkskrankheiten im Ruhrkohlengebiet e.V.

HYGIENE-INSTITUT · Postfach 10 12 55 · 45812 Gelsenkirchen / GERMANY

FITT S.p.a.
Via Piave, 4
36066 SANDRIGO (VI)
ITALY

Visitors-/Parcel Address:
Rotthauser Str. 21
45879 Gelsenkirchen

Telephone +49 (0) 209 9242-0
Extension +49 (0) 209 9242-351
Telefax +49 (0) 209 9242-212
E-Mail a.bernoussi@hyg.de
Internet www.hyg.de

Reference-No.: K-232227-13-Bs/st
Contact person: Anasse Bernoussi (Eng.)

Gelsenkirchen, 17.07.2013

TEST CERTIFICATE
according to the KTW-Guideline

Product: **CRISTALLO Extra** without yarn and cover layer

Test Specimen: inner hose $Ø_a$ 6 mm $Ø_i$ 4 mm (transparent)

The test specimen meets the requirements according to the test report no.: **K-232227-13-Bs/st dated 17.07.2013** for the following application(s) and temperature(s), as far as technically suited:

Applications:	**cold water (23°C)**	**warm water (60°C)**	**hot water (85°C)**
Pipes with DN < 80 mm (domestic distribution)	---	---	---
Pipes of diameter 80 mm ≤ DN < 300 mm (supply pipes)	---	---	---
Pipes of diameter DN ≥ 300 mm (main pipes)	---	---	---
Fittings for pipes with DN < 80 mm	passed	---	---
Fittings for pipes with 80 mm ≤ DN < 300 mm	passed	---	---
Fittings for pipes with DN ≥ 300 mm	passed	---	---
Sealings for pipes with DN < 80 mm	passed	---	---
Sealings for pipes with 80 mm ≤ DN < 300 mm	passed	---	---
Sealings for pipes with DN ≥ 300 mm	passed	---	---
Tanks in the domestic installations including repair systems	---	---	---
Tanks other than in domestic installations including repair systems	---	---	---

If pipes, sealings or fittings and ancillaries do not differ in their material composition and process of manufacture, testing of the smallest diameter of the product range is sufficient.

This test certificate is valid beginning with the date of issue and is ending by **17.07.2018** as far as there are no changes in the formula.

The Director of the Hygiene-Institute
on behalf of

Dr.rer.nat. Andreas Koch
Head of the Dept. for water
hygienic material testings

HYGIENE-INSTITUT DES RUHRGEBIETS Institut für Umwelthygiene und Toxikologie

The assessment was based on the assumption that the used starting substances and monomers used to manufacture the product may completely known and no other substances are present in the product. The validity of this document expires in case of modifications in the composition of the product or the processing conditions. The results and evaluations refer to the groups of test items. This document may not be published without our written permission only complete and unchanged or duplicated.

ilac-MRA DAkkS Deutsche Akkreditierungsstelle D-PL-13042-02-00

HYGIENE-INSTITUT DES RUHRGEBIETS, GELSENKIRCHEN
Institut für Umwelthygiene und Toxikologie

Test methods used in qualification tests of materials in contact with potable water

Parameter	Test method
Odour / taste threshold (TON / TFN)	DIN EN 1622 (B3)
Qualitative determination of colour, turbidity and foaming tendency	In-house test method Hy-KTW-5 (visual assessment)
Total organic carbon (TOC)	EN 1484 (H3)
Chlorine demand	In-house test method KTW-14.6 after the BGA recommendation 1977 (photometric method)
Formaldehyde	In-house test method KTW-14.7 (photometric method)
Primary aromatic amines	In-house test method KTW-14.8 according to Section 35 (§ 35) of the German Federal Food and Consumer Goods Act (LMBG) (photometric method)
Phenols	DIN EN ISO 14402 (H37)
Zinc	DIN EN ISO 17294-2 (E29)
Lead	DIN EN ISO 17294-2 (E29)
Epichlorohydrine	DIN EN 14207 (P9)
3-Mono-chloro-1,2-propanediol	In-hose test method Hy-AW-13 (gas chromatographic method)
Bisphenol A BADGE and Hydrolysis products BFDGE and Hydrolysis products	} In-house method Hy-W-37 (HPLC)

For the above-mentioned methods we are accredited.

We reserve the right to submit samples to qualified subcontractors for the verification of specific migration limits.

DAkkS
Deutsche
Akkreditierungsstelle

Deutsche Akkreditierungsstelle GmbH

Entrusted according to Section 8 subsection 1 AkkStelleG in connection with Section 1 subsection 1 AkkStelleGBV
Signatory to the Multilateral Agreements of
EA, ILAC and IAF for Mutual Recognition

Accreditation

The Deutsche Akkreditierungsstelle GmbH attests that the testing laboratory

Hygiene-Institut des Ruhrgebiets
Institut für Umwelthygiene und Toxikologie
Rotthauser Straße 21, 45879 Gelsenkirchen

is competent under the terms of DIN EN ISO/IEC 17025:2005 to carry out tests in the following fields:

physical, physicochemical, chemical, biological and specific ecotoxicological analyses of water, surface water, natural water, leachate, swimming pool water, waste water, sludge, sediments, biowaste, solid wastes, matters for recycling, solid matters and soils; microbiological analyses of water, surface water, swimming pool water as well as mineral and table water; analyses of drinking water as specified by the Trinkwasserverordnung (German drinking water ordinance) excluding radiological parameters; specific physicochemical, chemical and microbiological analysis of non-metallic materials in potable water supply; specific microbiological examination of disinfectants and materials; selected procedures for the determination of overall migration of food contact materials; analyses of organic trace elements in water, migrates and solid matters (i.a. food contact materials) by means of HPLC-MS; analyses of organic trace elements in water, migrates and solid matters (i.a. food contact materials) by means of gas chromatography (GC-MS); sampling of water, waste water, surface water, ground water, natural and potable water, leachate, swimming pool water, sludges, biowaste, sediments, solid waste and matters for recycling as well as soil vapour; determination (sampling and analysis) of airborne organic gaseous particles, fibrous particles and microbiological substances within the frame of indoor measurements; determination (sampling and analysis) of airborne fibrous particles within the frame of measurements at workplace; determination (sampling and analysis) analysis of particle precipitations within the frame of immission measurements; analysis of solid matters and dust with regard to fibrous particles; determination (sampling and analysis) of inorganic and organic gaseous or particulate air constituents in immission; determination (sampling and analysis) of fibrous particles in immission; sampling of airborne polyhalogenated Dibenzo-p-Dioxins and Dibenzofuranes in immission; modul immission control; technical modules water, soil and contaminated sites as well as waste

The accreditation certificate shall only apply in connection with the notice of accreditation of 21.05.2012 with the accreditation number D-PL-13042-02 and is valid until 18.06.2014. It comprises the cover sheet, the reverse side of the cover sheet and the following annex with a total of 68 pages.

Registration number of the certificate: **D-PL-13042-02-00**

Berlin, 15.06.2012

Andrea Valbuena
Head of Division

This document is a translation. The definitive version is the original German accreditation certificate.

See notes overleaf.

DVGW
CERT GMBH

ZERTIFIKAT

LW-BU0440

über die Anerkennung als DVGW-Prüflaboratorium

Das Prüflaboratorium

Hygiene-Institut des Ruhrgebiets -Umwelthygiene-
Rotthauser Str. 19, 45879 Gelsenkirchen
DEUTSCHLAND

ist als

DVGW-Prüflaboratorium Wasser

anerkannt und damit berechtigt, Produktprüfungen für die DVGW CERT GmbH in dem bescheinigten Bereich durchzuführen. Die Anerkennung ist an die Person der Leitung des Prüflaboratoriums bzw. dessen Stellvertretung gebunden.

Leitung des Prüflaboratoriums: **Dr. rer. nat. Andreas Koch**

Stellvertretung: **Dr. rer. nat. Georg-Joachim Tuschewitzki**
Dr. rer. nat. Christiane Schell

Die Anerkennung gilt nur in Verbindung mit der gültigen Anlage zum anerkannten Prüfumfang, sowie der aktuellen Geschäftsordnung zur DVGW-Zertifizierung von Produkten. Sie gilt bis zum 04.01.2015, sofern die Voraussetzungen, die zur Anerkennung geführt haben, unverändert bleiben. Die Erstanerkennung erfolgte am 04.01.2010.

13.01.2010 Sh A
Datum, Bearbeiter, Blatt, Leiter der Zertifizierungsstelle

DVGW CERT GmbH - allgemein anerkannte Zulassungsstelle für die Prüflaboratorien im Gas- und Wasserfach

DVGW CERT GmbH - commonly recognized approval body for testing laboratories in the German gas and water industry

DVGW CERT GmbH
Josef-Wirmer-Straße 1-3
53123 Bonn
Telefon: +49 228 91 88-888
Telefax: +49 228 91 88-993
eMail: info@dvgw-cert.com

Warranty/Damages for Default

The Association, its legal representatives, agents and employees are liable to the Principal and third parties which are protected by the Agreement, for all claims for default, irrespective of which legal reason, which arise under this Agreement or due to an offence (Art. 823 BGB [*German Civil Code*]) only in case of intent or gross negligence but not in case of ordinary negligence.

The personal liability of the legal representatives, agents and employees of the Association to the Principal shall be excluded except in case of intent or gross negligence.

The exemption from liability shall apply especially to claims for damages which arise from positive breach of the Agreement and from unlawful acts. The exemption from liability comprises any and all property damages, deficiency losses and consequential damages as well as indirect and direct financial damages of the Principal and the persons which are protected under this Agreement.

In case of Agreements with a consumer (consumer agreements) the above mentioned legal limitations shall not apply to the liability for damages arising from the injury of life, body or health which were caused by the negligent breach of obligations of the Association or an intended or negligent breach of obligations of a legal representative, agent or employee of the Association.

If individual parts of this exemption from liability or this limitation of liability are invalid, the validity of the clause shall not be affected.

3A Laboratori

Test report number: **13LA05091** of **08/07/2013**

Spett.
FITT Spa
Via Piave, 8
36066 SANDRIGO (VI)

Sample information

Test subject: **Polymers**
Description: **ANALISI 134 - REFITTEX CRISTALLO**
Registration date: **19/06/2013**
Date of arrival: **19/06/2013**
Date analysis commenced: **19/06/2013** Date analysis completed: **27/06/2013**

Sampling data

Date: **19/06/2013**
Sample supplied by: **client**

Transport: **client**

Parameter *Method*	Unit	Result
Overall migration into olive oil by article filling *UNI EN 1186-1:2003 + UNI EN 1186-8:2003*		
Simulant used		**Vegetable oli**
Temperature of the test	°C	**40**
Duration of contact		**3 x 2 hours**
Global migration of the sample 1 in oil	mg/dm²	**< 1,0**
Global migration of the sample 2 in oil	mg/dm²	**< 1,0**
Global migration of the sample 3 in oil	mg/dm²	**< 1,0**
Global migration of the sample 4 in oil	mg/dm²	**< 1,0**
Average Global migration in oil	mg/dm²	**< 1,0**

Opinion:

Based on results obtained in the above test conditions, the sample is SUITABLE to come into contact with food substances based on the liquid simulants used; this does not consider the verification of compositional formulation.

Legislative References: Reg. EU/10/2011 dated 14/01/2011

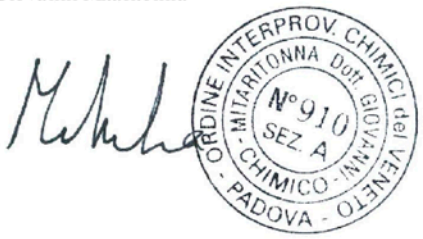
Laboratory management system certified UNI EN ISO 9001:2008 by CSQA with n° 14270.
Inclusion on the list of regional laboratories carrying out analysis in the context of self-control procedures for the Food Industry No. 52.
Registered laboratory for the analysis of food or contact materials intended for export to Japan.

3A-Laboratori SRL
Via A.Volta 1/d Maserà di Padova - 35020 (PD) Email amministrazione1@3alaboratori.it Tel. 049 0994658-0994671 Fax. 049 8868430
Cap. Soc. €100000,00 I.V. - REA di PD 378402 - Codice Fiscale, Iscriz. Reg .Imprese di Padova e Partita Iva 04296730288

3A Laboratori

follows Test report number: **13LA05091** del **08/07/2013**

Head of Chemistry	Technical Director
Dr.ssa Sandra Salvò	Dr. Giovanni Mitaritonna



The analytical results are exclusively referred to the sample tested.
The test report can not be reproduced in part without the written permission of the laboratory.

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