



# Cristallo Extra



**GB**

**APPLICATIONS AND REGULATIONS**

Hose for food liquids transport without pressure, in compliance with the European regulation Reg. (EU) 10/2011, for simulants A, B and C. In compliance with the KTW guidelines for the contact with drinkable water.

**STRUCTURE**

Flexible PVC hose without reinforcement.

**WORKING TEMPERATURE**

From -20°C to +60°C

**D**

**ANWENDUNGEN UND RICHTLINIEN**

Schlauch für den durchgang von flürrigen lebensmitteln ohne druck nach der Europäischen Richtlinie Reg. (EU) 10/2011, für Simulanten A-B-C und der Richtlinie KTW für das Trinkwasser.

**STRUKTUR**

Flexibler PVC-Schlauch, ohne erstärkung.

**TEMPERATURBESTÄNDIGKEIT**

Von -20°C bis +60°C

**I**

**APPLICAZIONI E NORMATIVE**

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

**STRUTTURA**

Tubo flessibile in PVC non rinforzato.

**TEMPERATURA D'UTILIZZO**

Da -20°C a +60°C

**F**

**APPLICATIONS ET DIRECTIVES**

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

**STRUCTURE**

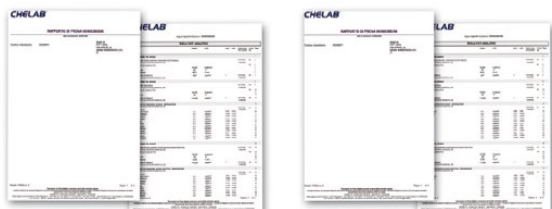
Tuyau flexible en PVC sans renforcement textile.

**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
2	4	1	-	-	100	12	200	80x120
3	5	1	-	-	100	15	150	80x120
3	6	1,5	-	-	100	26	120	80x120
4	6	1	-	-	100	19	120	80x120
4	7	1,5	-	-	50	32	96	80x120
4	7	1,5	-	-	100	32	110	80x120
5	7	1	-	-	100	23	64	80x120
5	8	1,5	-	-	50	37	96	80x120
5	8	1,5	-	-	100	37	48	80x120
6	8	1	-	-	100	27	48	80x120
6	9	1,5	-	-	50	43	96	80x120
6	9	1,5	-	-	100	43	48	80x120
6	10	2	-	-	100	62	48	80x120
7	9	1	-	-	100	30	54	80x120
7	10	1,5	-	-	100	49	48	80x120
8	10	1	-	-	100	35	42	80x120
8	10	1	-	-	50	35	54	80x120
8	11	1,5	-	-	100	55	42	80x120
8	12	2	-	-	100	77	42	80x120
8	12	2	-	-	50	77	64	80x120
9	13	2	-	-	100	84	30	80x120
9	13	2	-	-	50	84	60	80x120
10	13	1,5	-	-	50	66	36	80x120
10	14	2	-	-	50	92	42	80x120
12	16	2	-	-	50	107	42	80x120
13	17	2	-	-	50	112	36	80x120
13	19	3	-	-	50	184	36	80x120
14	18	2	-	-	50	123	36	80x120
15	19	2	-	-	50	130	24	80x120
16	20	2	-	-	50	138	24	80x120
18	23	2,5	-	-	50	196	16	80x120
19	24	2,5	-	-	50	206	12	80x120
20	25	2,5	-	-	50	212	10	80x120
20	26	3	-	-	50	260	10	80x120
22	28	3	-	-	50	282	8	80x120
25	31	3	-	-	50	318	8	80x120
25	33	4	-	-	50	436	8	80x120
30	38	4	-	-	25	514	7	80x120

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%



Test report obtained from a qualified institute  
 Test report conseguito da laboratorio accreditato.  
 Testbericht wurde von einem anerkannten Institut ausgestellt  
 Rapports d'essais obtenus par le laboratoire accrédité.

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
32	40	4	-	-	25	543	8	80x120
35	43	4	-	-	25	590	7	80x120
38	48	5	-	-	25	808	6	80x120
40	49	4,5	-	-	25	752	5	120x120
50	60	5	-	-	25	1032	5	120x120
60	70	5	-	-	25	1226	5	2 plt 80x160

\* Working and bursting pressure at 20°C



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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 CRISTALLO EXTRA (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
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**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:
- PVC Plasticized (contact side).
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:

- o 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.

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 dm<sup>2</sup> of product. We remind that the Migration Limit is 60 mg/Kg food [ppm], also expressed as 10 mg/dm<sup>2</sup> (if the certificate reports mg/kg it is possible to convert it into mg/dm<sup>2</sup> 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/dm<sup>2</sup>).

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 from 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: 12LA00706-13LA01992

Date: 29/03/2013

*This document and its attachments are addressed solely to the person or company above and contain confidential information.*



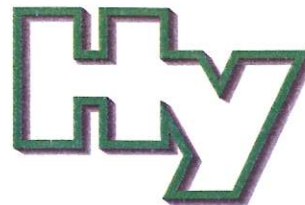
Società soggetta a direzione e coordinamento di EUROCONDOTTE SpA - c.f. 00792620247

# 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.



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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  $\varnothing_a$  6 mm  $\varnothing_i$  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 $\leq$ DN < 300 mm (supply pipes)	---	---	---
Pipes of diameter DN $\geq$ 300 mm (main pipes)	---	---	---
Fittings for pipes with DN < 80 mm	passed	---	---
Fittings for pipes with 80 mm $\leq$ DN < 300 mm	passed	---	---
Fittings for pipes with DN $\geq$ 300 mm	passed	---	---
Sealings for pipes with DN < 80 mm	passed	---	---
Sealings for pipes with 80 mm $\leq$ DN < 300 mm	passed	---	---
Sealings for pipes with DN $\geq$ 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



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.



Deutsche  
Akkreditierungsstelle  
D-PL-13042-02-00

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

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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-house 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)

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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.

## 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.



# ZERTIFIKAT

LW-BU0440

## über die Anerkennung als DVGW-Prüflaboratorium

*Das Prüflaboratorium*

**Hygiene-Institut des Ruhrgebiets -Umwelthygiene-  
Rotthaus 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 St. A

Datum, Bearbeiter, bratt, 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*

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### **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.