

INTRODUCTION

When processing foodstuffs you want to ensure that there are no contaminations, alterations in the taste or smell, or even migration of hazardous substances to the processed material.

Materials that are in contact with food or potable beverages during processing, packaging or storage – otherwise known as Food Contact Materials (FCM) – must comply with strict regulations and follow the relative certification process. Flexible hoses used in the processing of foodstuffs or the manufacture of packaging materials for foodstuffs are classified as Food Contact Materials (FCM) and must comply as above. Selecting the right hose according to the norms and guidelines covering your application and market legislation is of key importance.

This guide will help you understand in a simple way what regulations exist governing Food Contact Materials (FCM), what has to be considered when selecting a hose and what we as manufacturers of hoses for the food processing industry are offering for your needs.

For more details, please check each individual case with your technical sales consultant or send an email to foodsafety@schauenburg-hose.com



Food safe standards



EU 10/2011 Approved
Bold letters highlight simulant



21 CFR 177.2600
& 178.2010

Additional product attributes



microbe resistant



hydrolysis resistant



grounding wire



permanently antistatic



abrasion resistant



very smooth inside



FOOD SAFE

The glass and fork icon is the international symbol that depicts food safe materials and products, indicating that these will not change the food they are in contact with or endanger human health.

Globally, different markets maintain their own regulations and as a result, what is labelled as Food Safe in one country might not be acceptable by another.

The glass and fork symbol is mandatory for all food contact materials circulating in the European Union, and all (FCM) must comply with the European Framework Regulation EC 1935/2004 and – in the case of plastics additionally, with the Commission Regulation EU 10/2011.

NON TOXIC

Care should be taken when hoses are listed as non-toxic. A "Non-Toxic" imprint simply informs that there are no toxic materials used. However, it does not confirm whether these materials are also food safe and that the hose when in contact with food will not contaminate, or affect its taste, smell, or nature.



NON TOXIC HOSES ARE NOT NECESSARILY FOOD SAFE!

FRAMEWORK REGULATION (EC) 1935/2004

The European Union in an effort to harmonize the rules and guidelines concerning FCMs within the member states introduced in 2004 the Framework Regulation (EC) 1935/2004.

Under this regulation food contact materials made from plastic:

- Must not:
- a) Endanger human health;
 - b) Lead to an unacceptable change in the composition of the food in contact;
 - c) Alter the organoleptic (smell, taste, sight, and touch) properties of the food in contact.

- Must be manufactured in compliance to Good Manufacturing Practice(GMP) according to Commission Regulation (EC) 2023/2006.
- Be able to be identified as FCM and be traceable.
- Be accompanied with a Declaration of Compliance (DOC).
- Follow the Commission Regulation (EU) 10/2011 - as amended.

COMMISSION REGULATION (EC) No 2023/2006 ON GMP

The GMP follows a chain beginning at approval and acceptance of the starting materials for polymer production and ending when the materials or articles come into contact with food and meet legal compliance. Under GMP we are able to provide among other things:

- Full traceability of materials used in the production of hoses designated for Food Contact;
- Elimination of contamination by other materials;
- Use of approved processing materials and lubricants.

COMMISSION REGULATION (EU) No 10/2011 ON PLASTIC MATERIALS

The regulation was first introduced in January 2011 and has been amended several times since. For reasons of simplicity (EU) No 10/2011 referenced in this brochure refers to the latest edition in force at the time of printing of the brochure. This regulation lays down the requirements on plastics used for food contact applications. In details it :



- Lists the authorized substances that can be used in the materials used for the production of plastics intended for food contact (FCMs)
- Identifies the testing procedures on the FCMs to monitor the migration of these substances with the use of simulants. The simulants used, and the conditions of testing may differ according to the food category of the material in contact and the application conditions (time and temperature). Six different food simulants (test substances) are identified according to the type of food that will be in contact:
 - Food simulants A, B and C are assigned for foods that have a hydrophilic character and are able to extract hydrophilic substances
 - Food simulants D1 and D2 are assigned for foods that have a lipophilic character and are able to extract lipophilic substances
 - Simulant E is assigned for testing specific migration into dry foods

Simulant Abbreviation	Food Simulant	Food Types
Simulant A	10% ethanol	Mainly used for products made out of fruits, vegetables, eggs, meat and fish.
Simulant B	3% acetic acid	Concerns foods which have a pH below 4.5. Examples include juices, ciders, vinegar, liquid chocolate, fermented milk.
Simulant C	20% ethanol	For alcoholic foods with an alcohol content up to 20% like wine, beer, and foods which contain a relevant amount of organic ingredients that make the food more lipophilic ("fat-soluble"), like coffee, compote, syrup, ice cream.
Simulant D1	50% ethanol	Shall be used for alcoholic foods with an alcohol content of above 20% including cream liquors, and for oil in water emulsions, like milk and cheese.
Simulant D2	Any vegetable oil containing less than 1 % unsaponifiable matter - OR-95% Ethanol for undenatured ethyl alcohol solutions	Shall be used for foods which contain free fats at the surface, for example vegetable oils, roasted foods. It can be substituted with 95% ethanol for undenatured ethyl alcohol solutions.
Simulant E	poly(2,6-diphenyl-p-phenylene oxide), particle size 60-80 mesh, pore size 200 nm	Assigned for testing specific migration into dry food like cereal, milk powder.



ASSIGNMENT OF SIMULANTS TO FOODS

ANNEX III of the Commission Regulation EU 10/2011 provides a table showing the specific assignment of food simulants for each food category. A simplified version of this table can be found at the end of the brochure. When studying this table, one has to understand and consider that the Controls and Test Methods vary according to the:

- type and nature of the food material in contact: For example, Whole Milk, Milk Powder and Fermented Milk have different simulant testing;
- the conditions in terms of contact time and temperature used during the testing.

DECLARATION OF COMPLIANCE

Upon successful completion of all testing of the FCM with simulants, the manufacturer issues the Declaration of Compliance (DOC); a selfissued document that demonstrates how the FCM is safe and doesn't contain or transfer restricted chemicals or heavy metals.

This is the document all users must request from the manufacturer or the distributor of the FCM as among other things it contains information on.

- type or types of food with which it is intended to be put in contact;
- time and temperature of treatment and storage in contact with the food;
- ratio of food contact surface area to volume used to establish the compliance of the material or article.

All food safe hoses produced and distributed by Schauenburg Hose Technology Group complying with EC 1935/2004 and EU 10/2011:

- Have been tested in terms of possible organoleptic alterations, by an independent and accredited testing institute
- Are accompanied by a Declaration of Compliance indicating the testing conditions and simulants that they comply with
- Are manufactured following GMP

A detailed table showing each hose tested and qualified according to each of the six simulants can be found in the table following the product presentations.



FDA TITLE 21 CFR

FDA was among the first regulations established to monitor and regulate food contact substances since 1957. Although it is a US Regulation, it has been adopted directly or indirectly in a number of countries, and to many is synonymous to a global food grade regulation standard.

FDA determines the appropriate use of materials for potable beverage and foodstuff processing, handling and packaging. A material meeting FDA standards is FDA compliant. Title 21 section of the Code of Federal Regulations (CFR). FDA 21 CFR 177, "Indirect food additives: polymers" and FDA 21 CFR 178, "Indirect food additives: Adjuvants, Production Aids and Sanitizers" concern the materials used for the production of hoses in food contact applications.

For many of our food hoses we can confirm that the raw materials and components used also comply with the relevant FDA standards (for our hoses FDA standard 21 CFR 177.2600 and 178.2010). FDA is not the only regulation used in the US. There are several other regulations application or industry specific, like NSF, 3-A Sanitary Standards, USDA to name just a few.

REGIONAL, COUNTRY & APPLICATION SPECIFIC REGULATIONS

Many regions or countries around the world have their own localized regulations. Some of them are similar or based to the above regulations, some might require a different set of testing according to local guidelines, norms and specifications.

Similarly, certain applications, even within the EU or the US, might require a specific testing procedure under a different norm – for example applications linked to potable water.

Therefore, for use outside the European Union and the US as well as for applications that are not listed in the following pages, we strongly advise to check with local requirements and testing procedures on:



1. The acceptance of the Declaration of Compliance (DOC) presented.
2. The local or special application requirements that are needed to be followed up.

GENERAL REGULATIONS REGARDING CHEMICAL SUBSTANCES

All food safe hoses produced and distributed by Schauenburg Hose Technology Group follow REACH Regulation and RoHS Directive:

REACH EC 1907/2006

The Regulation concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH), establishing a European Chemicals Agency (ECHA) was adopted by the European Union, to improve the protection of human health and the environment from the risks that can be posed by chemicals.

REACH addresses the production and use of chemical substances in the plastic materials we are using for the production of our hoses.

As converters of plastic material, we are obliged to ensure that all chemical substances used in the plastic materials we are processing are following REACH Regulation. This is done through the compliance reports we receive from the suppliers of our materials and their updates upon each revision of the regulation.

RoHS 2011/65/EU

The Restriction of Hazardous Substances Directive 2011/65/EU, short for Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment, was adopted in February 2003 by the European Union

As it predated REACH it was widely adopted in other fields of applications outside the electrical and electronic applications, since for example it was the first to abolish the use of heavy metals. We, as converters of raw materials, are obliged to ensure that the plastic material we are processing are following the restrictions listed under the RoHS directive and its updates.

As such all our raw material suppliers confirm that all materials used for the production of our hoses are following the RoHS directive.



PHTHALATES AS PLASTICIZERS IN PVC

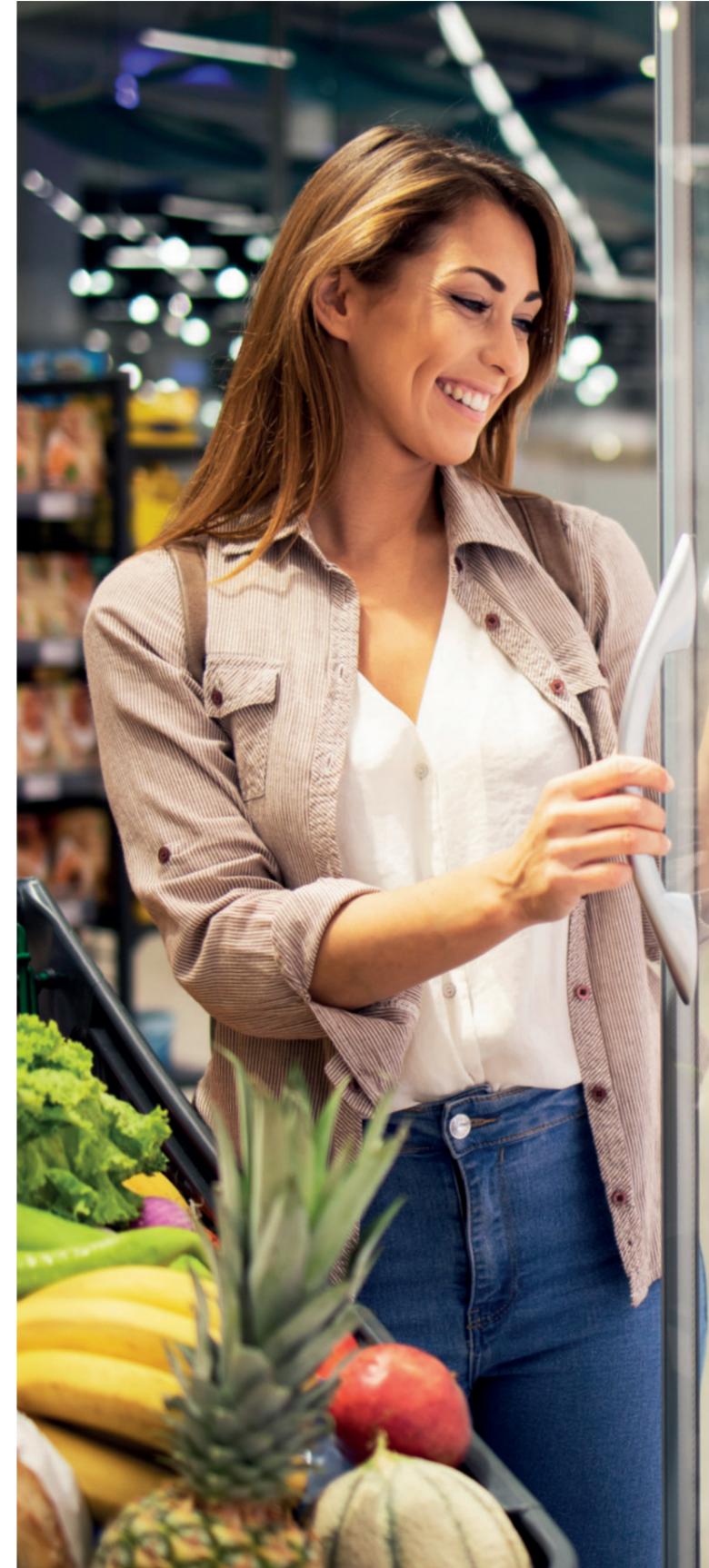
Ortho-phthalates vs. Terephthalates

PVC based products are made with plasticized compounds. Phthalates used as plasticizers are discussed from time to time and have a bad reputation. Here, however, we have to take a closer look and differentiate between

- Ortho-phthalates – DEHP / Di (2-ethylhexyl) Phthalate / DOP Dioctyl Phthalate
- Terephthalates – DEHT / Di (2-ethylhexyl) Terephthalate / DOTP Dioctyl Terephthalate

Concerns about the potential risk of DEHP have led all Schauenburg Hose Technology Group companies to replace DEHP with DEHT. DEHT is free from ortho-phthalates. It is widely available and tested, and has a comprehensive toxicological portfolio, which indicates that it can be used in toys, foodstuff packaging and medical devices.

All food safe PVC hoses produced and distributed by Schauenburg Hose Technology Group are DEHP free i.e. ortho-phthalate free.



APDatec 840



Properties and Applications

Light weight and flexible single layer hose for the transport of liquid food or additives in food processing and as level hose in liquid food tanks, suitable for transfer of alcohol up to 20 %, ortho-phthalate-free

Structure

Soft PVC, transparent

Temperature Range

- 20°C up to + 65°C

Lactolit 842



Properties and Applications

Light weight and flexible single layer hose for the transport of air and liquid food, suitable for transfer of alcohol up to 50 % long-term and milk in liquid form - can also be used for milking machines, ortho-phthalate-free

Structure

Soft PVC, transparent

Temperature Range

- 20°C up to + 65°C

APDatec 81



Properties and Applications

Multi purpose pressure hose for the food industry with working pressure resistance up to 20 bar, suitable for transport of alcohol up to 20 %, ortho-phthalate-free. Available in variable outer diameters for the same inner diameters to ensure a perfect fit

Structure

Soft PVC, transparent, with Polyester yarn reinforcement

Temperature Range

- 20° C up to + 65°C

Lactoflex 823



Properties and Applications

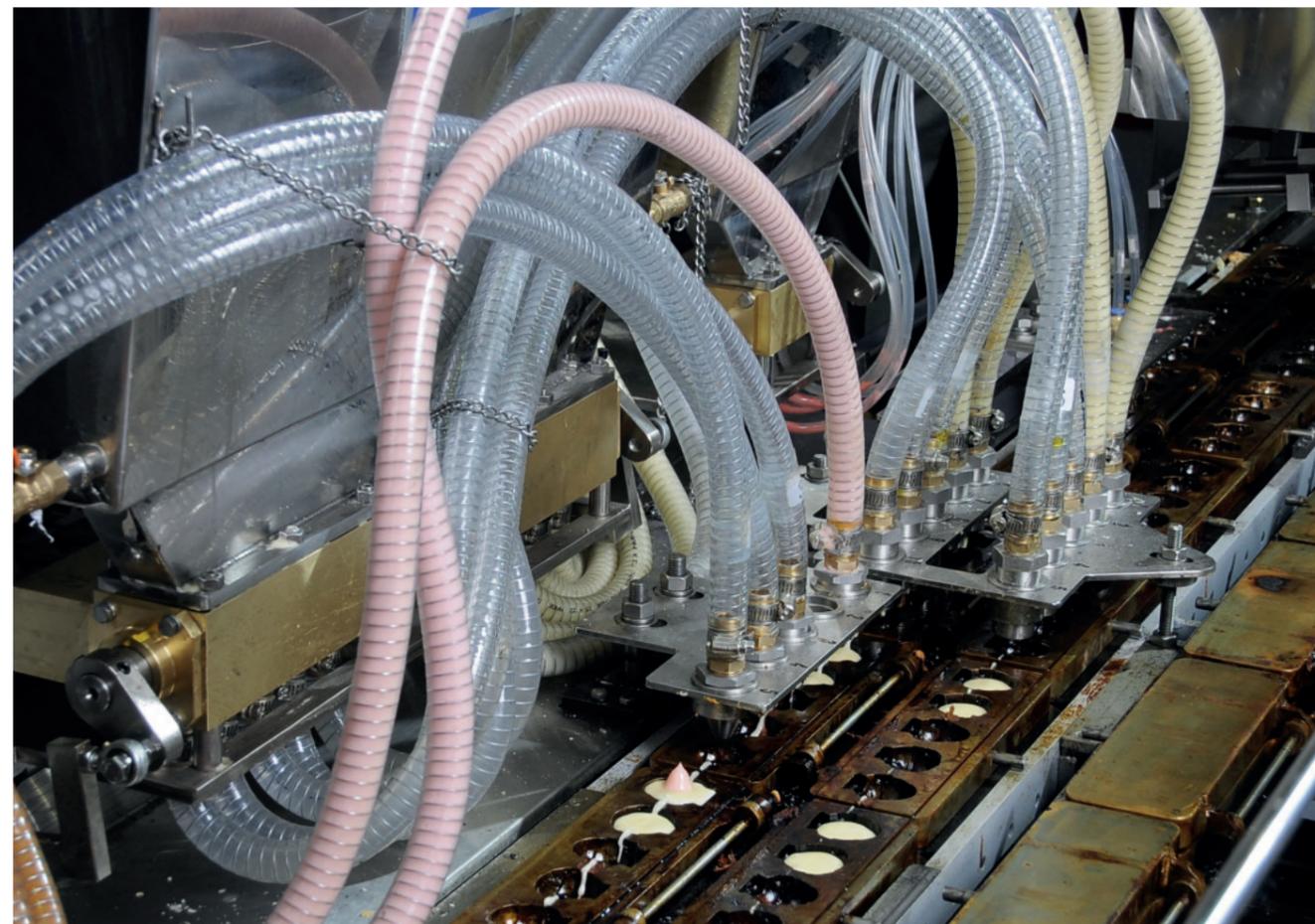
Light weight and flexible pressure hose with working pressure up to 20 bar. Wall material in compliance for transport of liquid food including milk and alcohol up to 50 %, ortho-phthalate-free

Structure

Soft PVC, transparent, with Polyester yarn reinforcement

Temperature Range

- 20° C up to + 65°C



FLEXACIER® LT FOOD



Properties and Applications

Galvanised steel wire reinforced PVC suction and delivery hose with smooth inner and outer wall. For processing of liquids in food processing including alcohol up to 20 %, ortho-phthalate-free

Structure

Soft-PVC, galvanized steel wire, clear

Temperature Range

- 5°C up to + 65°C

FLEXACIER® LT MILK



Properties and Applications

Medium duty flexible PVC suction and delivery hose with galvanized steel wire reinforcement, suitable for processing of solutions containing milk and dairy products like cheese, in the food industry. Also suitable for alcohol solutions with up to 50 %. Smooth bore, smooth outside. Ortho-phthalate free

Structure

Soft-PVC, galvanized steel wire, clear

Temperature Range

- 5°C up to + 65°C

FLEXACIER® STD



Properties and Applications

Medium duty flexible PVC suction and delivery hoses with galvanized steel wire reinforcement suitable for liquids in food processing, smooth bore, smooth outside. FLEXACIER® STD is suitable for applications with high content alcohol up to 50 % and in processing of milk and cheese and dairy based products. Ortho-phthalate-free

Structure

Soft-PVC, transparent with galvanized steel wire

Temperature Range

- 15°C up to + 65°C

Optional

APDatec 27 complying with simulants A, B, C

FLEXACIER® SUPER SPH



Properties and Applications

Medium duty and flexible hose for suction and delivery of high quality liquids and foodstuffs, including alcohol up to 50 %, milk and other dairy products. Featuring a PVC covered steel spiral that creates a barrier against corrosion and providing an excellent bonding to the PVC wall. Smooth inner and outer wall, ortho-phthalate-free

Structure

Soft-PVC, transparent with PVC coated steel wire

Temperature Range

- 10°C up to + 65°C

FLEXACIER® LT PU FOOD



Properties and Applications

Medium duty flexible PU suction and delivery hose with galvanized steel wire reinforcement, smooth inner and outer wall. Hydrolysis and microbe resistant ideal for processing of liquids in the food industry, including alkaline or acidic solutions or liquids with highly abrasive particles. High temperature resistance allows for cleaning with sterilisation

Structure

Polyether-Polyurethane, transparent with galvanized steel wire

Temperature Range

- 40°C up to + 100°C

FLEXACIER® LT PE FOOD



Properties and Applications

Medium duty flexible PE suction and delivery hose with smooth inner and outer wall. Due to PE wall, the hose is neutral in taste and odour being the best solution for potable food stuffs in their final stage of processing. Additionally, PE allows for a good resistance to a number of chemicals

Structure

Polyethylene, translucent with galvanized steel wire

Temperature Range

- 40°C up to + 50°C

REDSPIR L SPH



Properties and Applications
Light duty hose for suction and delivery of high quality liquids and foodstuffs e.g. fruit juice, wine, beer and alcoholic solutions with up to 50% concentration, ortho-phthalate-free

Structure
Soft-PVC, transparent with PVC spiral, red

Temperature Range
- 5°C up to + 60°C

Optional
Cold resistant version down to -25°C available

REDSPIR STD SPH



Properties and Applications
Medium duty hose for suction and delivery of high quality liquids and foodstuffs e.g. fruit juice, wine, beer and alcoholic solutions with up to 50% concentration, ortho-phthalate-free

Structure
Soft-PVC, transparent with PVC spiral, red

Temperature Range
- 5°C up to + 60°C

Optional
Cold resistant version down to -25°C available

REDSPIR SUPER SPH



Properties and Applications
Heavy duty hose for suction and delivery of high quality liquids and foodstuffs e.g. fruit juice, wine, beer and alcoholic solutions with up to 50% concentration, ortho-phthalate-free

Structure
Soft-PVC, transparent with PVC spiral, dark red

Temperature Range
- 25°C up to + 60°C

CRISTALSPIR SAF SPH



Properties and Applications
Medium duty hose for suction and delivery of premium quality liquids and foodstuffs e.g. fruit juice, wine, beer up to 50% alcohol concentration. Ortho-phthalate-free

Structure
Soft-PVC, transparent with PVC spiral, transparent

Temperature Range
- 25°C up to + 60°C

Optional
Heavy duty version

APDatec 12



Properties and Applications
Standard duty hose for suction and delivery of liquids, usable in water supply or for the extraction and conveying of liquids such as drinks, juices, vinegar and alcohol solutions up to 20% alcohol concentration, good ozone- and UV-resistance, ortho-phthalate-free

Structure
Soft-PVC, transparent with rigid PVC spiral, white

Temperature Range
- 5°C up to + 60°C

MONOFLEX SPH



Properties and Applications
Standard duty hose for suction and delivery of liquids, usable in water supply or for the extraction and conveying of liquids such as drinks, juices, vinegar and alcohol solutions up to 50% alcohol concentration and dairy products like milk. Good ozone- and UV-resistance, ortho-phthalate-free

Structure
Soft-PVC, transparent with PVC spiral, white

Temperature Range
- 5°C up to + 60°C

Optional
Light and very light duty version

FLEXANT



Properties and Applications
Standard duty hose for suction and delivery of liquids or low abrasion materials in dry form such as powder or pellets. Usable in water supply or for the extraction and conveying of liquids such as drinks, juices, vinegar and alcohol solutions up to 50% alcohol concentration, good ozone- and UV-resistance. Featuring a copper braid for grounding, ortho-phthalate-free

Structure
Soft-PVC, transparent with rigid-PVC spiral, ivory and copper braid

Temperature Range
- 5°C up to + 60°C

GENESIS® COMMERCIAL D2

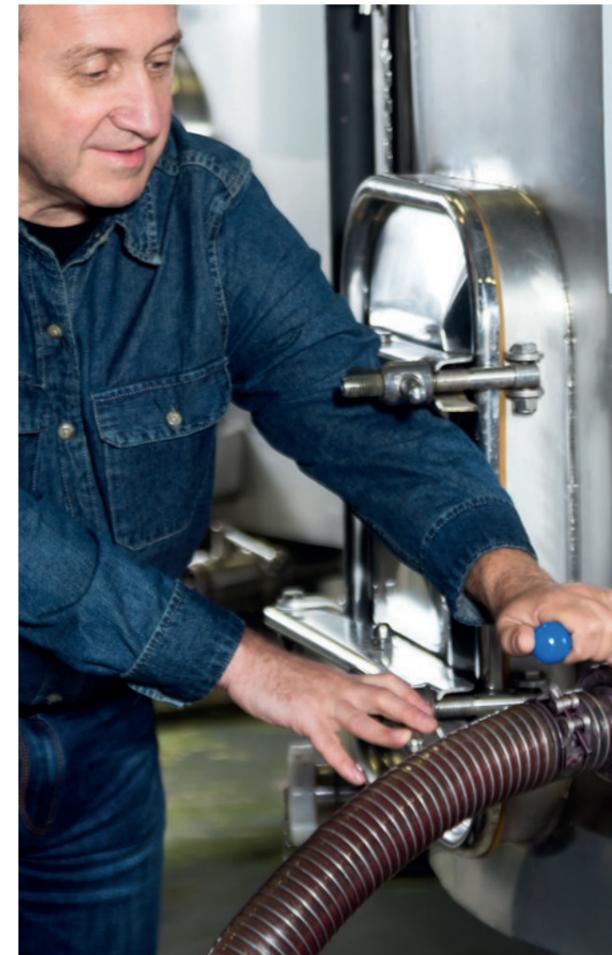


Properties and Applications
Medium duty suction hose made from PE for suction and delivery of foodstuffs in liquid form. Smooth bore, crush recoverable, good chemical resistance, excellent vacuum resistance, rot-proofed. Suitable for processing of fatty food, vegetable oil, like olive oil and foodstuffs with free fats on the surface. Suitable for solutions with high alcohol content up to 95%

Structure
Polyethylene (PE), full plastic profile hose, translucent

Temperature Range
- 40° C up to + 60°C

Optional
Also available in heavy duty version



PUREFLEX



Properties and Applications
Light weight and very flexible PU hose, colorant free, suitable for transport of abrasive particles or granules, liquids or paste, hydrolysis and microbe resistant, very smooth bore

Structure
Polyether-Polyurethane, transparent with rigid PVC spiral, transparent

Temperature Range
- 30°C up to + 80°C

SERIE 3 PUR S AL



Properties and Applications
Light weight and very flexible PU hose for suction and delivery of liquids and light abrasive material, solid construction, smooth bore, hydrolysis and microbe resistant, variable wall thickness according to the diameter

Structure
Polyether-Polyurethane, transparent with rigid PVC spiral, grey.

Temperature Range
- 30°C up to + 80°C

Optional
With copper braid for grounding

SMOOTHFLEX PU FOOD



Properties and Applications
Light weight and very flexible PU hose hydrolysis and microbe resistant, for the transport of abrasive particles or granules in the food industry; good flexibility, very smooth bore and outer convolution allowing for a smoother passage of materials

Structure
Polyether-Polyurethane, transparent with rigid PVC spiral.

Temperature Range
- 30°C up to + 80°C

Optional
Also available according to FDA regulations

SMOOTHFLEX X-TRA PU FOOD



Properties and Applications
Medium weight and very flexible hose hydrolysis and microbe resistant, suitable for the transport of abrasive particles or granules in the food industry; good flexibility, very smooth bore

Structure
Polyether-Polyurethane, transparent with rigid PVC spiral.

Temperature Range
- 30°C up to + 80°C

Optional
With 2.0 mm wall thickness, also available according FDA regulations

SMOOTHFLEX PU FOOD ANT



Properties and Applications
Light weight and very flexible PU hose resistant to hydrolysis and microbes, for the transport of abrasive particles or granules in dry form in the food industry; good flexibility, very smooth bore and outer convolution allowing for a smoother passage of materials. Copper braid for grounding to prevent clogs and explosions.

Structure
Polyether-Polyurethane, transparent with rigid PVC spiral and a copper braid for grounding.

Temperature Range
- 30°C up to + 80°C

Optional
Also available according to FDA regulations

SMOOTHFLEX X-TRA PU FOOD ANT

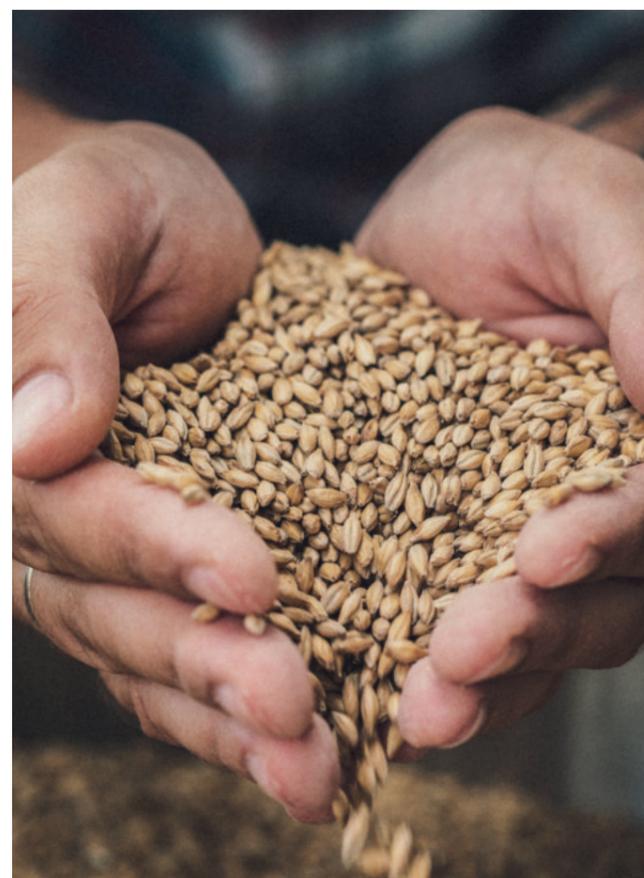


Properties and Applications
Medium weight and very flexible hose, hydrolysis and microbe resistant, suitable for the transport of abrasive particles or granules also in dry form in the food processing industry. Good flexibility, very smooth bore. Copper braid for grounding to prevent clogs and explosions.

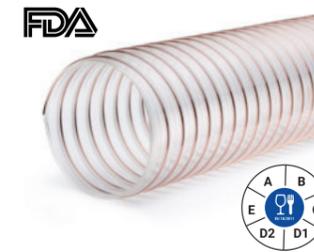
Structure
Polyether-Polyurethane, transparent with rigid PVC spiral and a copper braid for grounding.

Temperature Range
- 30°C up to + 80°C

Optional
With 2.0 mm wall thickness, also available according FDA regulations



FLEXADUX® P2 PU FOOD

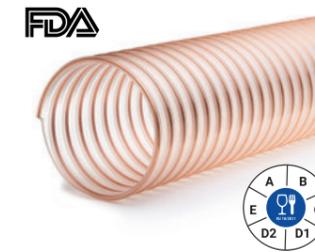


Properties and Applications
Very light weight and very flexible PU ducting with a 0.4 mm wall for transport of light abrasion materials or vegetable oil, powder or other dry food even with fatty substances on the surface, hydrolysis and microbe resistant, excellent flexibility, good compressibility and abrasion resistance, free of halogen and softeners

Structure
Polyether-Polyurethane, transparent with copper coated spring steel wire

Temperature Range
- 40°C up to + 100°C (short term up to + 125°C)

FLEXADUX® P7 OL PU FOOD

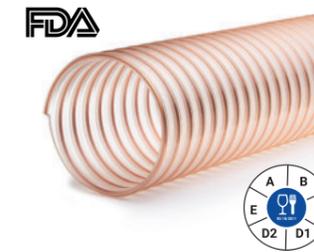


Properties and Applications
Light weight and very flexible PU ducting with a 0.7 mm wall and a smoother inner bore, ideal for suction and conveying of foodstuffs by air or in liquid solutions including vegetable oils, very good flexibility and good abrasion resistance, free of halogen and softeners

Structure
Polyether-Polyurethane, transparent with copper coated spring steel wire

Temperature Range
- 40°C up to + 100°C (short term up to + 125°C)

FLEXADUX® P7 ML PU FOOD

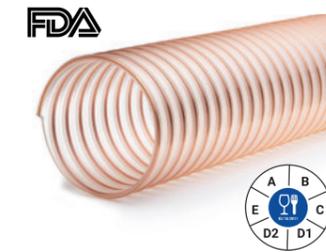


Properties and Applications
Medium weight and flexible PU ducting with a 1.0 mm wall, suitable for suction and conveying of dry food e.g. rice, milk, powder, corn, coffee, or tea, as well as foodstuffs in liquid solutions including vegetable oil, good flexibility and good abrasion resistance, free of halogen and softeners

Structure
Polyether-Polyurethane, transparent with copper coated spring steel wire

Temperature Range
- 40°C up to + 100°C (short term up to + 125°C)

FLEXADUX® P7 M PU FOOD



Properties and Applications
Heavy weight and flexible PU ducting with a 1.4 mm wall, suitable for suction and conveying of dry food e.g. rice, milk, powder, corn, coffee, or tea, as well as foodstuffs in liquid solutions including vegetable oil, good flexibility and good abrasion resistance, free of halogen and softeners

Structure
Polyether-Polyurethane, transparent with copper coated spring steel wire

Temperature Range
- 40°C up to + 100°C (short term up to + 125°C)

SERIE 5 PUR M AL



Properties and Applications
Light weight and very flexible PU ducting ideal for suction and conveying of light weight materials (dust, splinters and fibers) in food, pharmaceutical and paper industry. Very good flexibility and good abrasion resistance, free of halogen and softeners

Structure
Polyether-Polyurethane, transparent with PVC coated spring steel wire

Temperature Range
- 40°C up to + 100°C

FLEXADUX® P2 PU PAS FOOD



Properties and Applications
Very light weight and very flexible PU ducting with a 0.4 mm wall and a stainless steel spiral for suction of air, dust and fibres, in food and pharmaceutical industry. Permanently antistatic (R ≤ 10⁹ Ohm), conform to TRGS 727, hydrolysis and microbe resistant, excellent flexibility, good compressibility and abrasion resistance, free of halogen and softeners

Structure
Polyether-Polyurethane, transparent with stainless steel wire (INOX)

Temperature Range
- 40°C up to + 100°C (short term up to + 125°C)

FLEXADUX® P7 L PU PAS FOOD



Properties and Applications
Light weight and very flexible PU ducting with a 0.7 mm wall and a stainless steel spiral for suction and discharging of abrasive and granular materials, in food- and pharmaceutical industry. Permanently antistatic (R ≤ 10⁹ Ohm), conform to TRGS 727, hydrolysis and microbe resistant, excellent flexibility, abrasion resistance, free of halogen and softeners

Structure
Polyether-Polyurethane, transparent with stainless steel wire (INOX)

Temperature Range
- 40°C up to + 100°C (short term up to + 125°C)

FLEXADUX® P7 M PU PAS FOOD



Properties and Applications
Medium weight and flexible PU ducting with a 1.4 mm wall, suitable for suction of very abrasive materials, in food and pharmaceutical industry. Permanently antistatic (R ≤ 10⁹ Ohm), conform to TRGS 727, hydrolysis and microbe resistant, excellent flexibility and abrasion resistance, free of halogen and softeners

Structure
Polyether-Polyurethane, transparent with stainless steel wire (INOX)

Temperature Range
- 40°C up to + 100°C (short term up to + 125°C)

OVERVIEW OF COMPLIANCE TO EU 10/2011 & FDA CFR 21

Your Specialist for Hoses in Food Processing

Here you can find a list of all food safe hoses produced and distributed by Schauenburg Hose Technology Group companies presented in the previous pages or listed as alternatives. For Data Sheets & Declarations of Compliance please inquire at foodsafe@schauenburg-hose.com

	Product Name	EU 10/2011					FDA TITLE 21 CFR
		A	B	C	D1	D2	
Air-Liquids Pressure	APDatec 840	●	●	●			
	Lactolit 842	●	●	●	●		
	APDatec 81	●	●	●			
	Lactoflex 823	●	●	●	●		
Liquids Suction	FLEXACIER® LT FOOD	●	●	●			
	FLEXACIER® LT MILK	●	●	●	●		
	FLEXACIER® STD SPH	●	●	●	●		
	APDatec 27	●	●	●			
	FLEXACIER® SUPER SPH	●	●	●	●		
	FLEXACIER® LT PU FOOD						●
	FLEXACIER® LT PE FOOD	○	○	○	○	○	
	REDSPIR L SPH	●	●	●	●		
	REDSPIR STD SPH	●	●	●	●		
	REDSPIR SAF SPH	●	●	●	●		
	REDSPIR SUPER SPH	●	●	●	●		
	CRISTASPIR SAF SPH	●	●	●	●		
	CRISTASPIR SUPER SPH	●	●	●	●		
	APDatec 12	●	●	●			
	MONOFLEX SPH	●	●	●	●		
	MONOFLEX ECO	●	●	●			
	MONOFLEX ECO LIGHT	●	●	●			
	FLEXANT	●	●	●			
	GENESIS® Commercial D2	●	●	●	●	●	
	PUREFLEX	●	●	●	●	●	○
SERIE 3 PUR S AL	●	●	●	●	●	●	
SERIE 3 PUR ANT	●	●	●	●	●	●	
SMOOTHFLEX PU FOOD	●	●	●	●	●	○	
SMOOTHFLEX X-TRA PU FOOD	●	●	●	●	●	○	
SMOOTHFLEX ULTIMATE PU FOOD	●	●	●	●	●	○	
SMOOTHFLEX PU FOOD ANT	●	●	●	●	●	○	
SMOOTHFLEX X-TRA PU FOOD ANT	●	●	●	●	●	○	
SMOOTHFLEX ULTIMATE PU FOOD ANT	●	●	●	●	●	○	
FLEXADUX® P2 PU FOOD	○	○	○	○	○	●	
SERIE 4 PUR L AL	○	○	○	○	○	●	
FLEXADUX® P7 OL PU FOOD	○	○	○	○	○	●	
SERIE 5 PUR LM AL	○	○	○	○	○	●	
FLEXADUX® P7 ML PU FOOD	○	○	○	○	○	●	
FLEXADUX® P7 M PU FOOD	○	○	○	○	○	●	
SERIE 5 PUR M AL	○	○	○	○	○	●	
FLEXADUX® P2 PU PAS FOOD	○	○	○	○	○	●	
FLEXADUX® P7 L PU PAS FOOD	○	○	○	○	○	●	
FLEXADUX® P7 M PU PAS FOOD	○	○	○	○	○	●	

- is standard certified
- is available upon request (material change)

Products listed in grey are optional products to the respective product listed above them



FOOD CATEGORY SPECIFIC ASSIGNMENT OF FOOD SIMULANTS ACCORDING EU 10/2011

ANNEX III of EU 10/2011 as updated, lists in detail the simulants to be used for testing for individual food categories as presented in Table 2 and summarized below. For FCMs in contact with different food categories or a combination of food categories, combinations of simulants will have to be applied as indicated in in ANNEX III of EU 10/2011

	Simulant A	Simulant B	Simulant C	Simulant D1	Simulant D2	Simulant E
Non-alcoholic beverages						
Mineral waters		●	●			
Juices and nectars		●	●			
Juices, nectars and fruit musts with pulp		●	●			
Lemonades, sodas						
Syrups		●	●			
Vegetable juice		●		●		
Coffee		●	●			
Tea		●	●			
Infusions		●		●		
Liquid chocolate		●		●		
Alcoholic solutions with less than 5% alcohol						
Ciders		●	●			
Pulp		●		●		
Beers		●	●			
Bitters		●	●			
Alcoholic solutions with 6% to 20% alcohol						
Wines			●			
Spirits, liquors			●			
Cream liqueurs				●		
Alcoholic solutions up to 50% alcohol						
Spirits, liquors				●		
Undenatured ethyl alcohol solutions up to 95% alcohol						
Spirits, liquors					●	
Bakery products						
Cereals, starches & yeast						●
Flour & semolina						●
Dried & fresh fat-containing substances						●
Dried & fresh nonfat substances						●
Cocoa powder					●	
Cocoa paste					●	
Processed foodstuffs						
Chocolate & chocolate-coated products					●	
With fatty substances					●	
As a non-greasy dough						●
Sugar & sugar products in solid form						●
Molasses, sugar syrups, honey	●					
Fruits & Vegetables						
Dried or dehydrated						●
Jams, compotes, puree		●	●			
Preparations in water or in juice		●	●			
Preparations in oil					●	
Preparations in alcohol				●		

	Simulant A	Simulant B	Simulant C	Simulant D1	Simulant D2	Simulant E
Walnuts, hazelnuts, peanuts (etc...)						
Dried, flaked or powdered						●
Peeled and roasted						●
As a paste or cream	●				●	
Liquids or thick soups						
Containing fatty products					●	
Fat products					●	
Dehydrated soup powder						
Containing fatty products						●
Fat free products						●
Fats & oils						
Plants and animals in all their forms					●	
Butters and margarines					●	
Meat & fish						
Fresh, chilled, salted, smoked	●				●	
Canned fish in water		●	●			
Canned fish in oil	●				●	
Meats	●				●	
Meat paste form or cream	●				●	
Eggs						
Powder, dried or frozen						●
Liquid and cooked				●		
Dairy						
Milk and milk drinks				●		
Dried milk powder						●
Fermented milk and yoghurt		●		●		
Cream		●		●		
Mozzarella		●		●		
Ice Cream			●			
Condiments						
Salt						●
Vinegar		●				
Fatty sauces, mayonnaise	●	●			●	
Non-fat sauces		●	●			
Mustard	●	●			●	
Aromatic plants						●
Spices & aromates						●
Spices & aromates in oily environments					●	

All data and allocations in this leaflet are made to the best of our knowledge and are based on the current state of the regulations at the time of printing. For further information please consult with our sales advisors or send an email to foodsafety@schauenburg-hose.com





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