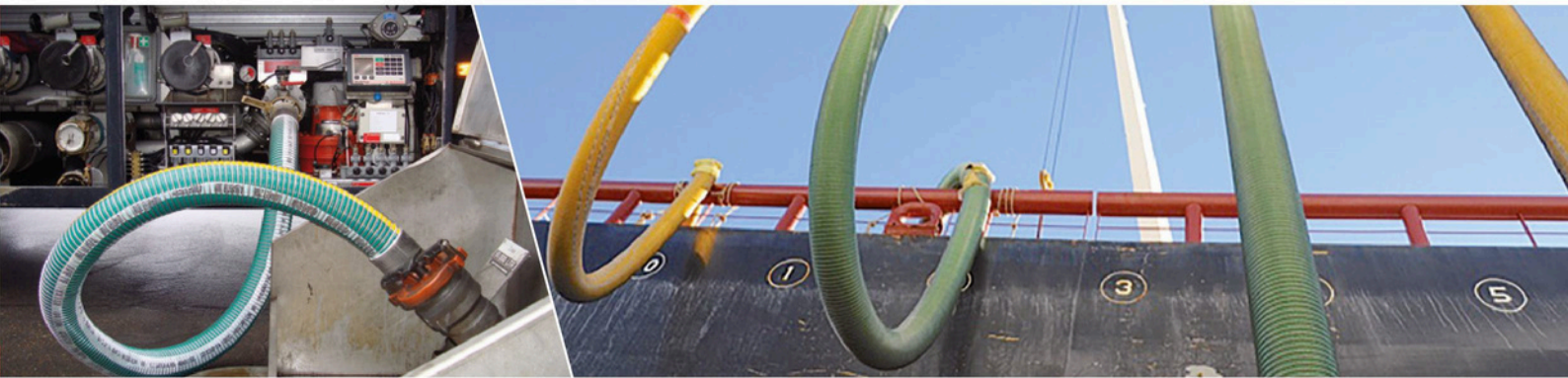




WORLD WIDE LEADER IN COMPOSITE HOSES  
& TRANSFER RISK MANAGEMENT

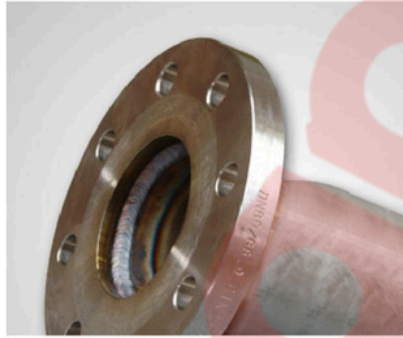


## COMPANY INFO

- HOSES
- FITTINGS
- HOSE HANDLING EQUIPMENT



## OUR PRODUCT RANGE



### HOSES

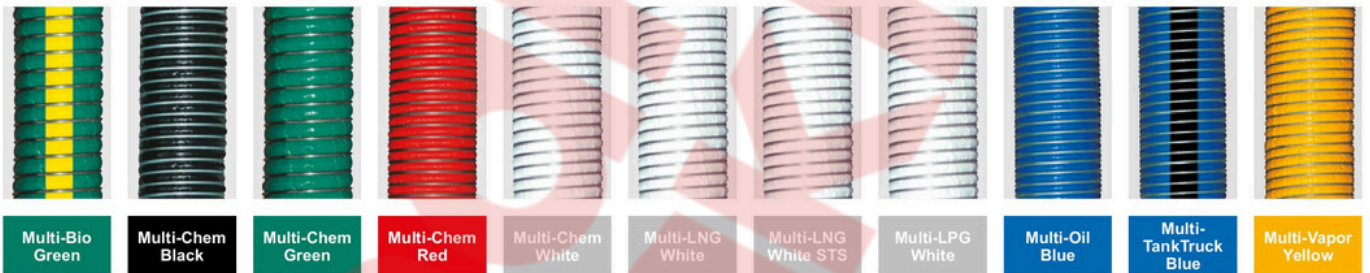
You name it, we make it. Our range of products includes more than 200 different types of composite hoses from 1" to 16" in standard lengths up to 30,00 meter for a wide range of applications.

### FITTINGS

All your needs for high quality industrial hose fittings. We provide fittings made by full qualified welders for all kind of applications.

### HOSE HANDLING EQUIPMENT

Gutteling slings and hosebuns are designed to support Gutteling Composite Hoses and other type of hoses in the safest way. All slings can be delivered with CE certification.



### Hoses

Gutteling provides a full range of high quality composite hoses for a large variety of applications and operations. For each kind of operation Gutteling can provide a safe and reliable composite hose. Our range of products includes more than 200 different types of composite hoses from 1" to 16" in standard lengths up to 30,00 meter.

Our composite hoses are produced with an internal and external wire of Stainless Steel 316, Galvanized Steel, Aluminum or special coated Steel. Depending on the chemical compatibility we can produce our hoses with a Polypropylene, PTFE or Hostafion lining. For special applications we can also provide high and low temperature resistant layers. Custom made design is also a possibility to meet specific needs.

### Fittings

With our in house machine shop, we are able to produce industrial hose fittings for many different applications. Our extensive machining abilities help to ensure that we are always ready to meet our customer's needs. Specialty products can be developed by our R&D department, after which they can be taken directly into production.

We can provide fittings in many different materials, such as, Carbon Steel, Stainless Steel 316 and Polypropylene. Special materials like Aluminum, Brass and Duplex are also available upon request. With our experienced and certified welders we deliver our industrial fittings according to the highest, international standards like EN13480. Connections can be manufactured according ASME B16.5, EN1092, BSP and NPT.

### Hose handling Equipment

When operating industrial hoses, Gutteling always recommends the use of proper lifting devices. This will ensure a safe handling as well as help to extend the life expectancy of the hose. Special hose slings and Hosebuns are available in sizes from 1" up to 12".

All lifting devices can be delivered with CE marking and slings are tested according to EN 1492. Our Slings are designed to help prevent hose kinking and crushing. For heavy lifting we advise the use of a Hosebun with an approved sling. Hosebuns are designed in such a way that they eliminate hose slippage.



## Multi-LNG White STS Composite Hose

Multi-LNG White STS is especially designed for Offshore use in rough conditions, such as ship to ship operations where fully refrigerated conveyants like LNG will be offloaded. Multi-LNG White STS hoses can be used in different operations such as side by side and tandem offloading. Multi-LNG White STS hoses are also suitable as Vapor Return line in combination with other transfer systems, like loading arms and flexible pipelines.

### Reliable

Reliable An extended test program has proven that Multi-LNG White STS hoses are reliable and safe to use in rough offshore conditions. Multi-LNG White STS hoses have a high resistance against any damage.

### Certifications

Multi-LNG White STS hoses have been tested and approved according EN 13766, IMO IGC Code and EN 1474-II by several classification societies, such as DNV, ABS, Bureau Veritas and Class NK.

### Lengths and sizes

Multi-LNG White STS hoses are available in sizes from 4" up to 10" in lengths up to 30,00 meter. Multi-LNG White STS in size 12" and 16" only on customer request.

### End connections

Multi-LNG White STS hoses are equipped with end fittings to customer requests. All types of ERC, QCDC and other special requirements can be connected directly to the hose fitting. The fittings have been swaged to Gutteling BV's special mounting procedure and have been fully tested on their resistance against low temperature and high external loads.

### Test / qualification program

The qualification program essentially covers, strength and stiffness of the Multi-LNG White STS hoses, fatigue due to bending and thermal cycles and flow and damage tolerance. Tests are performed at both ambient and cryogenic conditions.



8" Multi-LNG White STS crushed with external loads up to 160 kN. Internal hose pressure of 6 bar. Done both ambient and cryogenic without any leakage.



Hose filled with LIN during 9 weeks.



# Multi-LNG White STS Composite Hose

## Multi-LNG White STS 8"

Bore diameter		Max. work. pressure		Weight		Available lengths	
inches	mm	PSI	bar	lbs/Ft	Kg/m	Ft	m
8	200	150	10,5	13,5	20,1	100	30

Min. Bendradius*		Burstpressure*		Pressure losses**		Elongation	Twist
inches	mm	PSI	bar	PSI/m	bar/m	%	%
35,8	910	2580	178	2,9	0,2	6	<1

\* Performed at cryogenic conditions

\*\* Performed at cryogenic conditions and at maximum allowable flow speed of 14 m/s

## Multi-LNG White STS 10"

Bore diameter		Max. work. pressure		Weight		Available lengths	
inches	mm	PSI	bar	lbs/Ft	Kg/m	Ft	m
10	250	150	10,5	16	23,9	100	30

Min. Bendradius*		Burstpressure*		Pressure losses**		Elongation	Twist
inches	mm	PSI	bar	PSI/m	bar/m	%	%
59	1500	1810	125	1,4	0,1	5	<1

\* Performed at cryogenic conditions

\*\* Performed at cryogenic conditions and at maximum allowable flow speed of 14 m/s



Ambient burst test on prototype Multi-LNG White 16"



Bending of a Multi-LNG White 16"

**This information is for guidance only, dimensions and weights shown are approximate.**

We reserve the right to alter or amend specifications as deemed necessary.

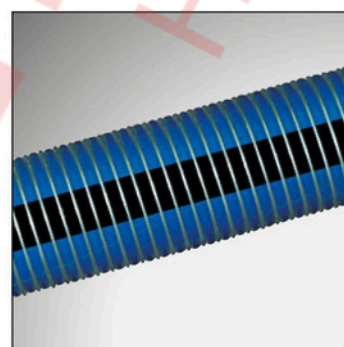




## Multi-TankTruck Blue

Multi-TankTruck Blue hoses are specially designed for conveying hydrocarbons and aromatics, for tanktruck applications. The hoses are light weighted and have a high flexibility, therefore the Multi-TankTruck hoses are easy to handle by operators and truck drivers.

Multi-TankTruck Blue hoses are obtainable in two types, with galvanized steel inner wire and with aluminium inner wire to obtain a lower weight.



### Certifications

Multi-TankTruck Blue hoses are produced and tested according international standards like EN 13765, AS 2683 & BS 3492.

### Construction

<b>Inner wire:</b>	Galvanized steel or aluminium
<b>Lining:</b>	Polypropylene
<b>Outer cover:</b>	Polyester PVC coated blue with black stripe or orange stripe
<b>Outer wire:</b>	Galvanized steel or aluminium

### Physical properties

<b>Maximum elongation:</b>	10% on proof pressure
<b>Electrical resistance:</b>	2,5 Ohm p/mtr < 2" 1,0 Ohm p/mtr >= 2"
<b>Maximum twist:</b>	<10° p/m
<b>Vacuum range:</b>	0,9 bar
<b>Min. burst pressure:</b>	4x working pressure (safety fact 4:1)
<b>Max flowrate:</b>	on request
<b>Temperature range:</b>	-30°C upto +80°C

# Multi-TankTruck Blue

Multi-TankTruck Blue GG Standard Duty, Code 221012100 with black stripe

Bore diameter		Max. work. pressure		Bend radius		Weight		Maximum length	
inches	mm	PSI	bar	inches	mm	lbs/Ft	Kg/m	Ft	m
1	28	150	10,5	4,9	125	0,5	0,75	100	30
1,5	40	150	10,5	5,9	150	0,65	0,95	100	30
2	50	150	10,5	7,9	200	0,7	1,1	100	30
2,5	65	150	10,5	8,3	210	1,2	1,8	100	30
3	80	150	10,5	11,8	300	1,4	2,1	100	30
4	100	150	10,5	15,7	400	2,0	3,1	100	30

Multi-TankTruck Blue AA Standard Duty, Code 221052500 with orange stripe

Bore diameter		Max. work. pressure		Bend radius		Weight		Maximum length	
inches	mm	PSI	bar	inches	mm	lbs/Ft	Kg/m	Ft	m
1	28	150	10,5	4,9	125	0,3	0,4	100	30
1,5	40	150	10,5	5,9	150	0,4	0,6	100	30
2	50	150	10,5	7,9	200	0,6	0,9	100	30
2,5	65	150	10,5	8,3	210	0,8	1,2	100	30
3	80	150	10,5	11,8	300	1,0	1,5	100	30
4	100	150	10,5	15,7	400	1,3	1,9	100	30

*This information is for guidance only, dimensions and weights shown are approximate.*

*We reserve the right to alter or amend specifications as deemed necessary.*





## Multi-Vapor Yellow

Multi-Vapor Yellow is designed specifically for chemicals as well as for hydrocarbon vapor recovery service on ship, barges and in marine terminals. It can also be used to recover vapors in tank and railcar applications.

### Certifications

Multi-Vapor Yellow hoses are produced and tested according international standards like EN 13765 & IMO IBC code.

### Construction

<b>Inner wire:</b>	Stainless steel 316 or PP coated
<b>Lining:</b>	Polypropylene / PTFE
<b>Outer cover:</b>	Polyester PVC coated yellow
<b>Outer wire:</b>	Galvanized- or Stainless steel 316

### Physical properties

<b>Maximum elongation:</b>	10% on proof pressure
<b>Electrical resistance:</b>	2,5 Ohm p/mtr < 2" 1,0 Ohm p/mtr >= 2"
<b>Maximum twist:</b>	10° p/m
<b>Vacuum range:</b>	0,5 bar
<b>Min. burst pressure:</b>	5x working pressure (safety fact 5:1)
<b>Max flowrate:</b>	on request
<b>Max tensile strength:</b>	on request
<b>Pressure losses:</b>	on request
<b>Temperature range:</b>	-30°C upto +80°C



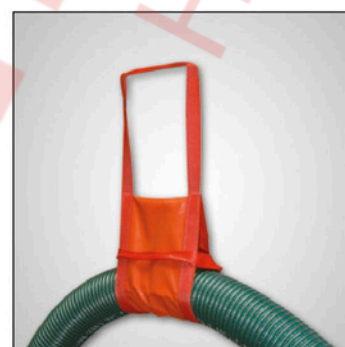




## Hose Handling Slings

In the case of Gutteling 'Heavy Duty' loading and unloading hoses (ship to shore applications), the use of at least one wide support sling is recommended for hoses with a maximum length of 6 mtr and an inner diameter between 100 m/m and 300 m/m. For longer hoses, at least two wide support slings per hose must be used and in the case of diameters above 200 m/m the use of a so-called 'saddle' is required.

All hose handling slings can be delivered with CE-certificate.



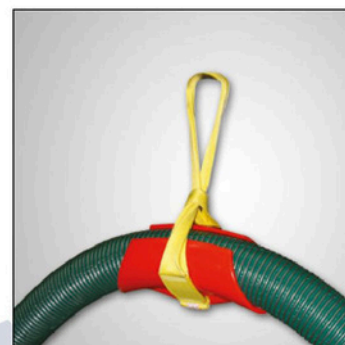
**Never use rope slings as severe hose damage will be the result.**

Code number	39100210100	39100210150	39100210200	39100210250	39100210300
Hose diameter	4"	6"	8"	10"	12"
Max. hose length	6m/20 ft	6m/20 ft	6m/20 ft	6m/20 ft	6m/20 ft

## Wide Support Hosebuns

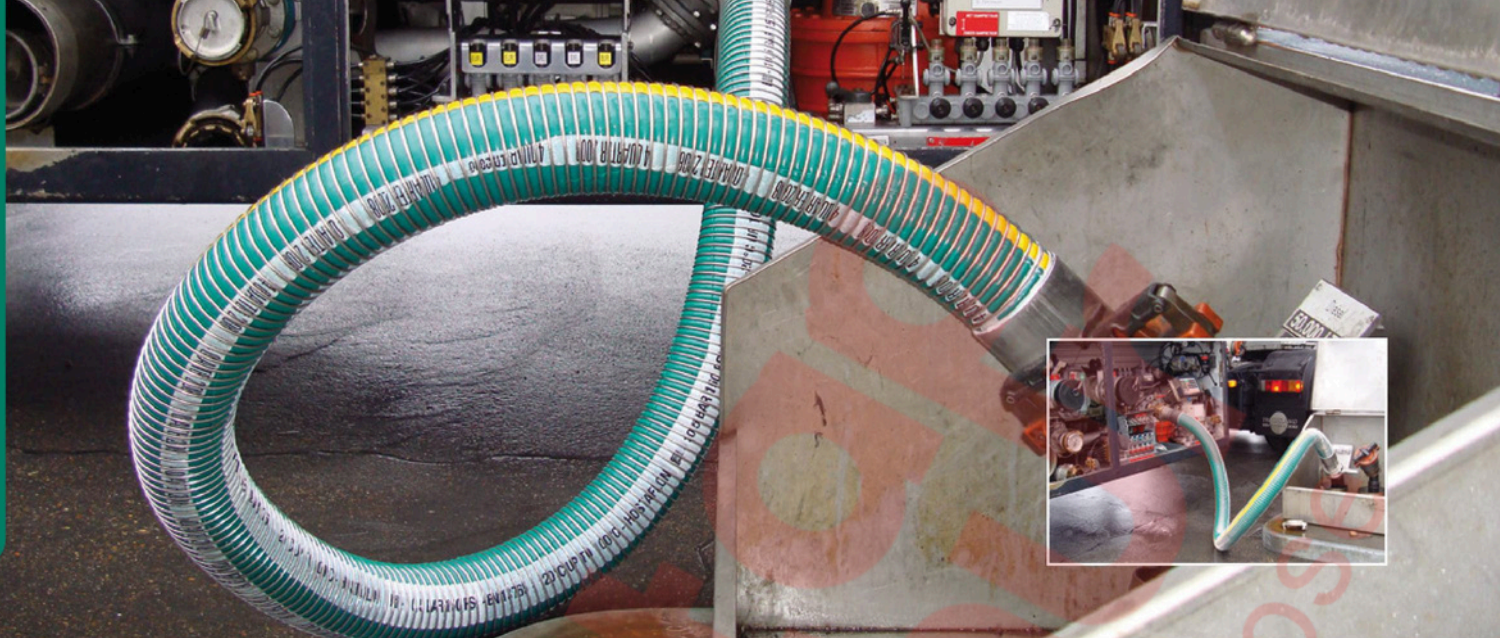
Gutteling hosebuns are composed of a red polymer and are used with latex-treated yellow web slings uniquely engineered for each specific model of hosebun. Sling rated capacities are established using a 5:1 safety factor. All slings are used in a choker hitch position to eliminate hose slippage.

All hosebuns can be delivered with CE-certificate.



**Never use rope slings as severe hose damage will be the result.**

Hose size	3"	4"	6"	8"	10"	12"
Hosebun model	HB300	HB400	HB600	HB800	HB1000	HB1200
Length (inches)	9,8	11,5	21,5	30	41	41
Weight (lbs.)	2,5	3,75	13,75	29,75	53	60
Sling width (inches)	1,75	1,75	4	6	8	10
Sling length (inches)	30,5	34,5	39	50	62	75
Rated capacity (lbs.)	1500	1500	8000	12000	15000	15000



## Multi-Bio Green

Multi-Bio Green hoses are designed specially for conveying continuous Bio-Diesel Products. The hose is lined with material which will not be effected by the Esterified Vegetable Oils, which are an ingredient of Bio-Diesel Products. There are two different types of hoses depending on application: Multi-Bio Green lined with nylon for intermittent service only. Nylon is porous and product can not be left in the hose while not in service. Multi-Bio Green lined with P.T.F.E for an indefinite service life. The P.T.F.E. liner prevents the hose against any absorption of the product. The hose is easy to flush and to clean and therefore quickly reusable for other applications.



Multi-Bio Green	P.T.F.E. lining	Nylon	Application
Light duty	Code nr. 310713100	Code nr. 31071917100	Tank truck and railcar
Standard duty	Code nr. 311013100	Code nr. 31101917100	Tank truck, railcar and in plant transfer
Heavy duty	Code nr. 311413100	Code nr. 31141917100	Heavy duty marine operations and ship and barge loading and unloading

### Certifications

Multi-Bio Green hoses are produced and tested according international standards like EN 13765. The lining material has been tested on there resistance against Biofuel.

### Construction

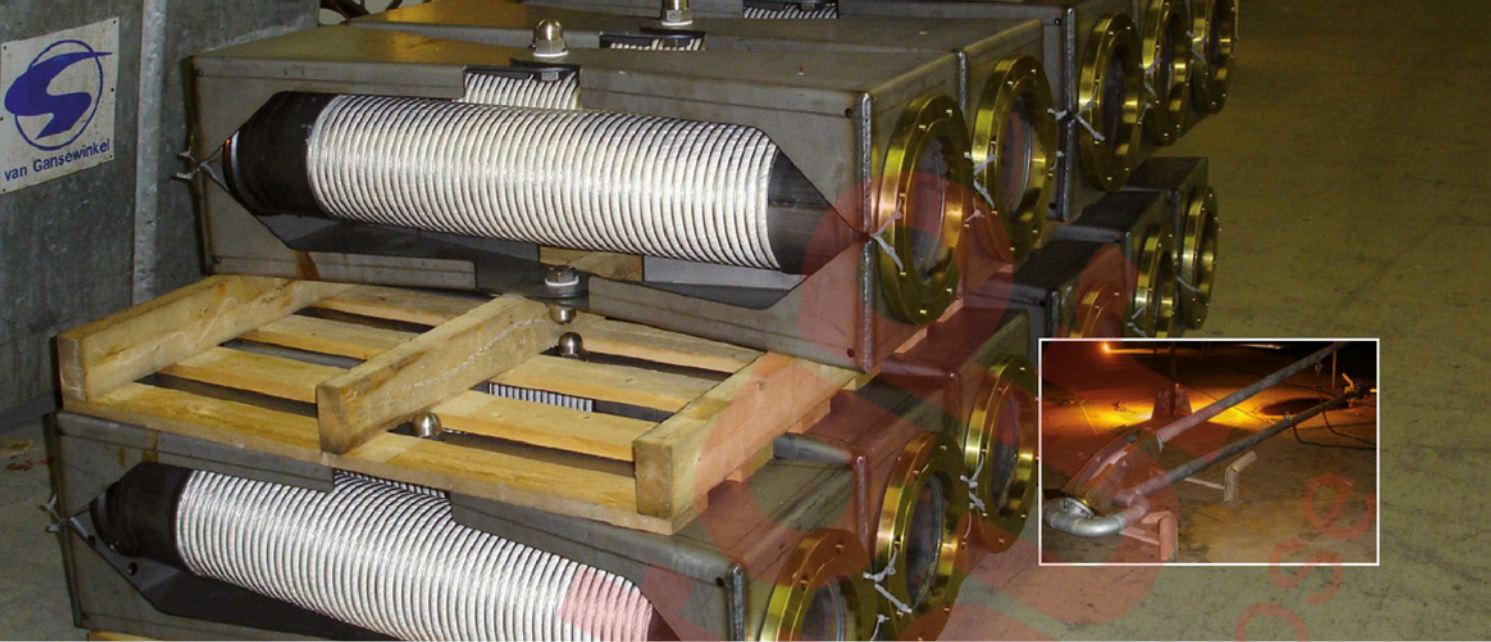
<b>Inner wire:</b>	Galvanized steel
<b>Lining:</b>	Nylon or P.T.F.E.
<b>Outer cover:</b>	Polyester PVC coated green with yellow stripe
<b>Outer wire:</b>	Galvanized steel

### Physical properties

<b>Maximum elongation:</b>	10% on proof pressure
<b>Electrical resistance:</b>	2,5 Ohm p/mtr < 2" 1,0 Ohm p/mtr >= 2"
<b>Maximum twist:</b>	10° p/m
<b>Vacuum range:</b>	0,9 bar
<b>Min. burst pressure:</b>	5x working pressure (safety fact 5:1)

<b>Max flowrate:</b>	on request
<b>Max tensile strength:</b>	on request
<b>Pressure losses:</b>	on request
<b>Temperature range:</b>	-30°C upto +80°C





## Multi-Chem White

Multi-Chem White hoses are designed for Submersible use in chemicals which do not affect the lining and cover and the stainless steel inner and outer wire.



There are three different types, depending on pressure and application, namely:

Multi-Chem White	Code number	Application
Light duty	240732379	Tank truck and railcar
Standard duty	241031379	Tank truck, railcar and in plant transfer
Heavy duty	241431379	Heavy duty marine operations and ship and barge loading and unloading

### Certifications

Multi-Chem White hoses are produced and tested according international standards like EN 13765 & IMO IBC code.

### Construction

<b>Inner wire:</b>	Stainless steel 316
<b>Lining:</b>	Polypropylene / PTFE / ECTFE
<b>Outer cover:</b>	Polypropylene white / ECTFE
<b>Outer wire:</b>	Galvanized- or Stainless steel 316

### Physical properties

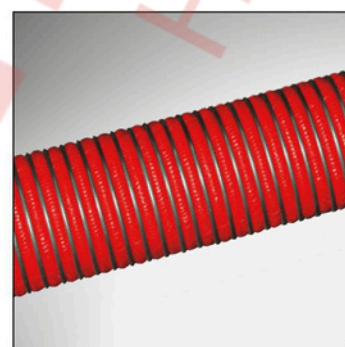
<b>Maximum elongation:</b>	10% on proof pressure	<b>Max flowrate:</b>	on request
<b>Electrical resistance:</b>	2,5 Ohm p/mtr < 2"	<b>Max tensile strength:</b>	on request
	1,0 Ohm p/mtr >= 2"	<b>Pressure losses:</b>	on request
<b>Maximum twist:</b>	10° p/m	<b>Temperature range:</b>	Polypropylene lined -30°C upto +80°C
<b>Vacuum range:</b>	0,9 bar		PTFE / ECTFE lined -30°C upto +100°C
<b>Min. burst pressure:</b>	5x working pressure (safety fact 5:1)		





## Multi-Chem Red

Multi-Chem Red hoses are designed for those chemicals and acids which do not affect the lining and the stainless steel inner wire.



There are three different types, depending on pressure and application, namely:

Multi-Chem Red	Code number	Application
Light duty	250733300	Tank truck and railcar
Standard duty	251033300	Tank truck, railcar and in plant transfer
Heavy duty	251433300	Heavy duty marine operations and ship and barge loading and unloading

### Certifications

Multi-Chem Red hoses are produced and tested according international standards like EN 13765 & IMO IBC code.

### Construction

<b>Inner wire:</b>	Stainless steel 316
<b>Lining:</b>	PTFE, Fep or ECTFE (hostafion)
<b>Outer cover:</b>	Polyester PVC coated red
<b>Outer wire:</b>	Galvanized- or Stainless steel 316

### Physical properties

<b>Maximum elongation:</b>	10% on proof pressure
<b>Electrical resistance:</b>	2,5 Ohm p/mtr < 2" 1,0 Ohm p/mtr >= 2"
<b>Maximum twist:</b>	10° p/m
<b>Vacuum range:</b>	0,9 bar
<b>Min. burst pressure:</b>	5x working pressure (safety fact 5:1)

<b>Max flowrate:</b>	on request
<b>Max tensile strength:</b>	on request
<b>Pressure losses:</b>	on request
<b>Temperature range:</b>	-30°C upto +100°C PTFE lining -30°C upto +100°C ECTFE lining





## Multi-LNG White

Multi-LNG White is especially designed for use with fully refrigerated conveyants down to - 196°C such as LNG in rail, railcars, inplant, ship to shore and (LPG)bunker operation.

### Certifications

Multi-LNG White hoses are produced and tested according international standards like EN 13766, IMO IGC and EN 12434.



### Construction

- Inner wire:** Stainless steel 316
- Lining:** Polyester fabrics and films
- Outer cover:** Polyamide
- Outer wire:** Stainless steel 316

### Physical properties

- Maximum elongation:** 10% on proof pressure
- Electrical resistance:** 2,5 Ohm p/mtr < 2"  
1,0 Ohm p/mtr >= 2"
- Maximum twist:** 10° p/m
- Min. burst pressure:** 5x working pressure (safety fact 5:1)
- Max flowrate:** on request
- Max tensile strength:** on request
- Pressure losses:** on request
- Temperature range:** -196°C upto +50°C

# Multi-LNG White

## Multi-LNG White, Code 281039300

Bore diameter		Max. work. pressure		Bend radius		Weight		Maximum length	
inches	mm	PSI	bar	inches	mm	lbs/Ft	Kg/m	Ft	m
1	28	150	10,5	5,9	150	0,6	0,9	100	30
1,5	40	150	10,5	7,9	200	1,1	1,6	100	30
2	50	150	10,5	7,9	200	1,6	2,4	100	30
2,5	65	150	10,5	7,9	200	2,1	3,2	100	30
3	80	150	10,5	9,8	250	3,3	4,9	100	30
4	100	150	10,5	19,6	500	6	9	100	30
6	150	150	10,5	25,9	660	8,4	12,6	100	30
8	200	150	10,5	35,8	910	13,5	20,1	100	30
10	250	150	10,5	59,1	1500	16	23,9	100	30
12	300	150	10,5	98,4	2500	24,1	36	59	18

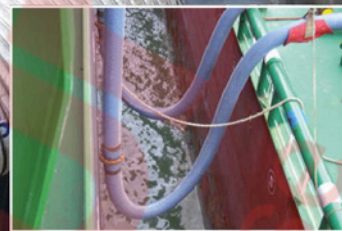
## Multi-LNG White, Code 282139300

Bore diameter		Max. work. pressure		Bend radius		Weight		Maximum length	
inches	mm	PSI	bar	inches	mm	lbs/Ft	Kg/m	Ft	m
1	28	300	21	6,5	165	0,7	1,1	65	20
1,5	40	300	21	8,3	210	1,3	1,9	100	30
2	50	300	21	8,5	215	1,7	2,5	100	30
2,5	65	300	21	9,4	240	2,2	3,3	100	30
3	80	300	21	11,6	295	3,6	5,3	100	30
4	100	300	21	21,3	540	6,4	9,4	100	30
6	150	300	21	29,5	750	8,9	13,1	100	30
8	200	300	21	39,3	1000	14,1	21,2	100	30
10	250	300	21	59,1	1500	24,7	36,5	100	30

*This information is for guidance only, dimensions and weights shown are approximate.*

*We reserve the right to alter or amend specifications as deemed necessary.*





## Multi-Oil Blue

Multi-Oil Blue Hoses are designed for conveying hydrocarbons, solvents, 100% aromatics, etc. Multi-Oil Blue hoses are highly flexible and reliable in all kind of transfer operations.



There are three different types, depending on pressure and application, namely:

Multi-Oil Blue	Code number	Application
Light duty	220712100	Tank truck and railcar
Standard duty	221011100	Tank truck, railcar and in plant transfer
Heavy duty	221411100	Heavy duty marine operations and ship and barge loading and unloading

### Certifications

Multi-Oil Blue hoses are produced and tested according international standards like EN 13765 & IMO IBC code.

### Construction

<b>Inner wire:</b>	Galvanized steel
<b>Lining:</b>	Polypropylene
<b>Outer cover:</b>	Polyester PVC coated blue
<b>Outer wire:</b>	Galvanized steel

### Physical properties

<b>Maximum elongation:</b>	10% on proof pressure
<b>Electrical resistance:</b>	2,5 Ohm p/mtr < 2" 1,0 Ohm p/mtr >= 2"
<b>Maximum twist:</b>	10° p/m
<b>Vacuum range:</b>	0,9 bar
<b>Min. burst pressure:</b>	5x working pressure (safety fact 5:1)

<b>Max flowrate:</b>	on request
<b>Max tensile strength:</b>	on request
<b>Pressure losses:</b>	on request
<b>Temperature range:</b>	-30°C upto +80°C



## Flange Couplings

### Fixed Flanges ASA or DIN or TTMA or JIS

**Size:** 1" to 12"  
**Material:** Carbon Steel / Stainless Steel  
**Ferrule:** Carbon / Stainless Steel



### Floating Flanges ASA or DIN or TTMA or JIS

**Size:** 1" to 12"  
**Material:** Stub End Carbon Steel / Stub End Stainless Steel / Stub End Brass /  
 Stub End Polypropylene / Flange Carbon Steel /  
 Flange Stainless Steel / Flange Polypropylene  
**Ferrule:** Carbon / Stainless Steel



## Threaded Couplings

### Male threaded nipple NPT or BSP

**Size:** 1" to 8"  
**Material:** Carbon Steel / Stainless Steel / Aluminium / Brass / Polypropylene  
**Ferrule:** Carbon / Stainless Steel



### Female threaded swivel nut coupling NPT or BSP

**Size:** 1" to 8"  
**Material:** Carbon Steel / Stainless Steel / Aluminium / Brass / Polypropylene  
**Ferrule:** Carbon / Stainless Steel



*All Gutteling end fittings are reusable and are assembled according Gutteling unique swaging method with GCH Epoxy.*

*Fittings in other material combinations or to customer's specifications are available on request.*



## Multi-Chem Black

Multi-Chem Black hoses are designed for those chemicals which do not affect the polypropylene lining and the polypropylene coated steel inner wire.



There are three different types, depending on pressure and application, namely:

Multi-Chem Black	Code number	Application
Light duty	230742100	Tank truck and railcar
Standard duty	231041100	Tank truck, railcar and in plant transfer
Heavy duty	231441100	Heavy duty marine operations and ship and barge loading and unloading

### Certifications

Multi-Chem Black hoses are produced and tested according international standards like EN 13765 & IMO IBC code.

### Construction

- Inner wire:** Polypropylene coated steel
- Lining:** Polypropylene
- Outer cover:** Polyester PVC coated black
- Outer wire:** Galvanized- or Stainless steel 316

### Physical properties

- Maximum elongation:** 10% on proof pressure
- Electrical resistance:** 2,5 Ohm p/mtr < 2"  
1,0 Ohm p/mtr >= 2"
- Maximum twist:** 10° p/m
- Vacuum range:** 0,9 bar
- Min. burst pressure:** 5x working pressure  
(safety fact 5:1)

- Max flowrate:** on request
- Max tensile strength:** on request
- Pressure losses:** on request
- Temperature range:** -30°C upto +80°C

# Multi-Chem Black

## Multi-Chem Black Light Duty, Code 230742100

Bore diameter		Max. work. pressure		Bend radius		Weight		Maximum length	
inches	mm	PSI	bar	inches	mm	lbs/Ft	Kg/m	Ft	m
1	28	100	7	4,9	125	0,55	0,85	100	30
1,5	40	100	7	5,9	150	0,75	1,15	100	30
2	50	100	7	7,9	200	0,85	1,3	100	30
2,5	65	100	7	8,3	210	1,45	2,2	100	30
3	80	100	7	11,8	300	1,8	2,7	100	30
4	100	100	7	15,7	400	2,95	4,4	100	30

## Multi-Chem Black Standard Duty, Code 231041100 type 2

Bore diameter		Max. work. pressure		Bend radius		Weight		Maximum length	
inches	mm	PSI	bar	inches	mm	lbs/Ft	Kg/m	Ft	m
1	28	150	10,5	4,9	125	0,65	0,95	100	30
1,5	40	150	10,5	5,9	150	1,15	1,7	100	30
2	50	150	10,5	7,9	200	1,2	1,8	100	30
2,5	65	150	10,5	7,9	200	1,95	2,9	100	30
3	80	150	10,5	11,8	300	2,35	3,5	100	30
4	100	150	10,5	15,7	400	3,65	5,5	100	30

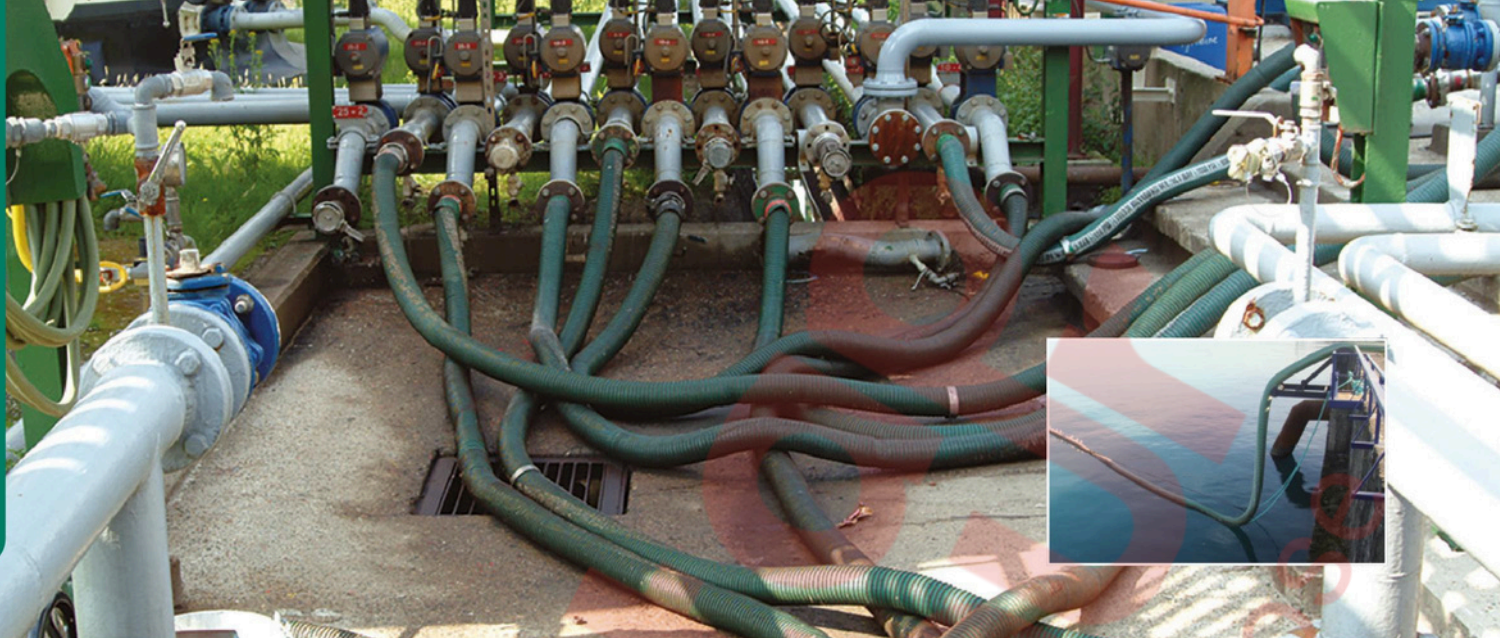
## Multi-Chem Black Heavy Duty, Code 231441100 type 3

Bore diameter		Max. work. pressure		Bend radius		Weight		Maximum length	
inches	mm	PSI	bar	inches	mm	lbs/Ft	Kg/m	Ft	m
3	80	200	14	13,8	350	3	4,5	100	30
4	100	200	14	15,7	400	5,25	7,9	100	30
5	125	200	14	20,1	510	6,45	9,7	100	30
6	150	200	14	22,6	575	8,25	12,4	100	30
8	200	200	14	31,5	800	14,55	21,8	100	30

*This information is for guidance only, dimensions and weights shown are approximate.*

*We reserve the right to alter or amend specifications as deemed necessary.*





## Multi-Chem Green

Multi-Chem Green hoses are designed for those chemicals which do not affect the polypropylene lining and the stainless steel inner wire.



There are three different types, depending on pressure and application, namely:



Multi-Chem Green	Code number	Application
Light duty	240732300	Tank truck and railcar
Standard duty	241031300	Tank truck, railcar and in plant transfer
Heavy duty	241431300	Heavy duty marine operations and ship and barge loading and unloading

### Certifications

Multi-Chem Green hoses are produced and tested according international standards like EN 13765 & IMO IBC code.

### Construction

<b>Inner wire:</b>	Stainless steel 316
<b>Lining:</b>	Polypropylene
<b>Outer cover:</b>	Polyester PVC coated green
<b>Outer wire:</b>	Galvanized- or Stainless steel 316

### Physical properties

<b>Maximum elongation:</b>	10% on proof pressure
<b>Electrical resistance:</b>	2,5 Ohm p/mtr < 2" 1,0 Ohm p/mtr >= 2"
<b>Maximum twist:</b>	10° p/m
<b>Vacuum range:</b>	0,9 bar
<b>Min. burst pressure:</b>	5x working pressure (safety fact 5:1)

<b>Max flowrate:</b>	on request
<b>Max tensile strength:</b>	on request
<b>Pressure losses:</b>	on request
<b>Temperature range:</b>	-30°C upto +80°C

# Multi-Chem Green

## Multi-Chem Green Light Duty, Code 240732300

Bore diameter		Max. work. pressure		Bend radius		Weight		Maximum length	
inches	mm	PSI	bar	inches	mm	lbs/Ft	Kg/m	Ft	m
1	28	100	7	4,9	125	0,55	0,85	100	30
1,5	40	100	7	5,9	150	0,75	1,15	100	30
2	50	100	7	7,9	200	0,85	1,3	100	30
2,5	65	100	7	8,3	210	1,45	2,2	100	30
3	80	100	7	11,8	300	1,8	2,7	100	30
4	100	100	7	15,7	400	2,95	4,4	100	30

## Multi-Chem Green Standard Duty, Code 241031300 type 2

Bore diameter		Max. work. pressure		Bend radius		Weight		Maximum length	
inches	mm	PSI	bar	inches	mm	lbs/Ft	Kg/m	Ft	m
1	28	150	10,5	4,9	125	0,65	0,95	100	30
1,5	40	150	10,5	5,9	150	1,15	1,7	100	30
2	50	150	10,5	7,9	200	1,2	1,8	100	30
2,5	65	150	10,5	7,9	200	1,95	2,9	100	30
3	80	150	10,5	11,8	300	2,35	3,5	100	30
4	100	150	10,5	15,7	400	3,65	5,5	100	30

## Multi-Chem Green Heavy Duty, Code 241431300 type 3

Bore diameter		Max. work. pressure		Bend radius		Weight		Maximum length	
inches	mm	PSI	bar	inches	mm	lbs/Ft	Kg/m	Ft	m
3	80	200	14	13,8	350	3	4,5	100	30
4	100	200	14	15,7	400	5,25	7,9	100	30
5	125	200	14	20,1	510	6,45	9,7	100	30
6	150	200	14	22,6	575	8,25	12,4	100	30
8	200	200	14	31,5	800	14,55	21,8	100	30
10	250	200	14	39,37	1000	17,8	26,7	100	30
12	300	150	10,5	47,24	1200	21,1	32	59	18

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## Multi-LPG White

Multi-LPG White is especially designed for use with fully refrigerated conveyants down to -50°C on ship, barges and in marine terminals. This application is including the following mediums: Ammonia, Acetaldehyde, Butadiene, Butane, Propane, Butylene, Dimethylamide, Ethylamine, Ethyl Chloride, Methyl Acetylene, Methyl Bromide Propane, Propadiene, Propylene, Vinyl Chloride, Refrigerant Gases.



**Multi-LPG White is also suitable for:**  
Liquid Ethylene at -105°C, Liquid Ethane at -88°C.

Multi-LPG White	Code number	Application
Medium duty	271439374	Onshore applications
Heavy duty	272139374	Onshore & offshore applications
Heavy duty	272539374	Offshore applications

### Certifications

Multi-LPG White hoses are produced and tested according international standards like EN 13766 & IMO IGC code.

### Construction

- Inner wire:** Stainless steel 316
- Lining:** Polyamide fabrics and BOPP films
- Outer cover:** Polyamide
- Outer wire:** Stainless steel 316

### Physical properties

- Maximum elongation:** 10% on proof pressure
- Electrical resistance:** 2,5 Ohm p/mtr < 2"  
1,0 Ohm p/mtr >= 2"
- Maximum twist:** 10° p/m
- Min. burst pressure:** 5x working pressure  
(safety fact 5:1)

- Max flowrate:** on request
- Max tensile strength:** on request
- Pressure losses:** on request
- Temperature range:** -50°C upto +50°C  
-105°C upto +50°C  
(for liquid ethylene)

# Multi-LPG White

## Multi-LPG White, Code 271439374

Bore diameter		Max. work. pressure		Bend radius		Weight		Maximum length	
inches	mm	PSI	bar	inches	mm	lbs/Ft	Kg/m	Ft	m
1	28	200	14	5,9	150	0,6	0,9	100	30
1,5	40	200	14	7,9	200	1,1	1,6	100	30
2	50	200	14	7,9	200	1,6	2,4	100	30
2,5	65	200	14	7,9	200	2,1	3,2	100	30
3	80	200	14	9,8	250	3,3	4,9	100	30
4	100	200	14	19,6	500	6	9	100	30
6	150	200	14	25,9	660	8,4	12,6	100	30
8	200	200	14	35,8	910	13,5	20,1	100	30
10	250	200	14	59,1	1500	16	23,9	100	30
12	300	150	10,5	98,4	2500	24,1	36	59	18

## Multi-LPG White, Code 272139374

Bore diameter		Max. work. pressure		Bend radius		Weight		Maximum length	
inches	mm	PSI	bar	inches	mm	lbs/Ft	Kg/m	Ft	m
1	28	300	21	6,5	165	0,7	1,1	100	30
1,5	40	300	21	8,3	210	1,3	1,9	100	30
2	50	300	21	8,5	215	1,7	2,5	100	30
2,5	65	300	21	9,4	240	2,2	3,3	100	30
3	80	300	21	11,6	295	3,6	5,3	100	30
4	100	300	21	21,3	540	6,4	9,4	100	30
6	150	300	21	29,5	750	8,9	13,1	100	30
8	200	300	21	39,3	1000	14,1	21,2	100	30
10	250	300	21	59,1	1500	16,5	24,5	100	30

## Multi-LPG White, Code 272539374

Bore diameter		Max. work. pressure		Bend radius		Weight		Maximum length	
inches	mm	PSI	bar	inches	mm	lbs/Ft	Kg/m	Ft	m
1	28	360	25	6,5	165	1,0	1,4	65	20
1,5	40	360	25	8,3	210	1,6	2,2	100	30
2	50	360	25	8,5	215	2,0	2,8	100	30
2,5	65	360	25	9,4	240	2,6	3,6	100	30
3	80	360	25	11,6	295	3,9	5,6	100	30
4	100	360	25	21,3	540	6,7	9,7	100	30
6	150	360	25	29,5	750	9,7	13,8	100	30
8	200	360	25	39,3	1000	14,9	22,2	100	30
10	250	360	25	59,1	1500	16,7	24,9	100	30

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*We reserve the right to alter or amend specifications as deemed necessary.*

