

## COMPOSITE HOSE



Chem 700 HD



Oil 800 HD



PTFE 300 HD



CRYOTEC

Code	Chem 700 HD PZ	Chem 700 HD PX	Chem 700 HD XZ	Chem 700 HD XX
Inner Wire	PP Coated Steel	PP Coated Steel	St. Steel	St. Steel
Outer Wire	Galv. Steel	St. Steel	Galv. Steel	St. Steel
Application	Heavy duty chemicals / solvents liquid transfer			
Colour	Green			
Temperature	- 40° + 100°C			
WP	16 Bar			

Code	Oil 800 HD ZZ	Oil 800 HD ZX	Oil 800 HD XZ	Oil 800 HD XX
Inner Wire	Galv. Steel	Galv. Steel	St. Steel	St. Steel
Outer Wire	Galv. Steel	St. Steel	Galv. Steel	St. Steel
Application	Heavy duty fuel / oil liquid transfer			
Colour	Blue			
Temperature	-40° + 100°C			
WP	16 Bar			

Code	PTFE 300 HD		Nanotec Inside	
	PTFE 300 HD XZ	PTFE 300 HD XX	Nanotec HD XZ	Nanotec HD XX
Inner Wire	St. Steel	St. Steel	St. Steel	St. Steel
Outer Wire	Galv. Steel	St. Steel	Galv. Steel	St. Steel
Application	Heavy duty aggressive chemicals liquid transfer		Heavy duty aggressive chemicals liquid transfer	
Colour	Red		Red	
Temperature	-40° + 100°C		-40° + 125°C	
WP	16 Bar		16 Bar	

Code	CRYOTEC 660 LG			CRYOTEC 661 N		
	Cryotec 660 ZZ	Cryotec 660 ZX	Cryotec 660 XX	Cryotec 661 ZZ	Cryotec 661 ZX	Cryotec 661 X
Inner Wire	Galv. Steel	Galv. Steel	Stain. Steel	Galv. Steel	Galv. Steel	Stain. Steel
Outer Wire	Galv. Steel	Stain. Steel	Stain. Steel	Galv. Steel	Stain. Steel	Stain. Steel
Application	Liquid Petroleum Gas LPG			Liquified Natural Gas LNG extremely low temperatures		
Colour	White			White		
Temperature	-105 + 100°C			-200 + 80°C		
WP	25 bar ( until 8 inch ), 15 bar ( for 10 inch ), 10 bar ( for 12 inch )			16 bar ( until 5 inch ), 13 bar ( for 6 inch - 10 inch ), 10 bar ( for 12 inch )		

# CHEM

**COMPOTEC® CHEM** is a multi-layer thermoplastic hose manufactured from Polypropylene, Polyethylene and Polyester films and Polypropylene fabrics, with a weather-proof and abrasion resistant outer cover made of Polyvinyl coated Polyester fabric. Outer cover is also available in **ELASTOTHANE®**, a special PU coated fabric; its UV, Ozone, Sunlight and weathering resistance, offers superior temperature and abrasion characteristics.

All the different layers are wrapped together and tensioned between internal and external wire spirals. This enables our product to meet the requirement of the Petrol-chemical industry and those of the Oil & Gas industry.

**COMPOTEC® CHEM** assemblies are fitted with an extensive range of couplings readily available, externally swaged with crimping ferrules.

**COMPOTEC® CHEM** assemblies are tested at 1 1/2 times rated working pressures for safety and reliability, in accordance with EN ISO 1402. The securing ferrule, at one end of the hose, is permanently marked by engraving, with manufacturer's name, nominal bore, the hose assembly serial number and the test date. The marking of hose assemblies is made in compliance with **PED** Directive (97/23/ CE). Full test certification can be supplied on request.

**COMPOTEC® CHEM** hoses can be supplied in the **FIRETEC** version with ADR self-extinguish CL1 cover and additional fireproof layers.

Burst pressure indicated, is at ambient temperature when tested in accordance with EN ISO 1402.

Electrical continuity is achieved by the two wires bonded to the end fittings; this helps dissipate accumulated charge and to avoid static flash. Upon request it's possible to manufacture **COMPOTEC® CHEM** hoses in accordance to the Directive 94/9/EC "**ATEX**", with a special outer antistatic black cover and ground connection cable, for explosive environment.

**COMPOTEC® CHEM 700 HD** and **CHEM SD** are chemically compatible and mechanically engineered to handle a wide range of hazardous chemicals. Extremely flexible, easy to handle and bend, all hoses are 100% aromatic resistant, antistatic and can be used for suction or discharge. Vacuum rating is 0,9 bar, according to the EN ISO 7233 method B.

## CHEM 700 HD - HEAVY DUTY

**Applications:** Heavy Duty construction for the transfer of a wide range of chemicals under suction or pressure. Used for Ship to Shore and Ship to Ship, Dockside and in general for the most arduous Industrial and Marine applications.

**Construction:** High strength polypropylene and polyester films and fabrics, high density polyethylene films reinforcement, includes in the construction an high density UHMW PLT seamless tubular extruded film, to avoid any possible leak and guarantee a gas-tight construction. Polyvinyl coated polyester cover fabric, (or **ELASTOTHANE®** upon request) weather and ozone resistant. Available in 40 mt coils from 3/4" to 8" and 25 mt length up to 12'.

**COMPOTEC® CHEM 700 HD** hose assemblies are certified by D N V as complying the requirements of CE Directive 97/23 "PED" and are manufactured in accordance with the requirements of Par. 2:12 and 5:7 of the IMO Chemical Carrier Code. **CHEM 700 HD** hoses are Type approved by Lloyd's with Certificate n° 13/002.

## CHEM SD - STANDARD DUTY

**Applications :** General purpose Standard Duty hose suitable for the safe transfer of a wide variety of chemicals under suction or pressure. Commonly used for loading and unloading of road and rail tankers, storage tank and in-plant applications. Suitable as flexible terminal hose for Top Loading arms. Available in 40 mt coils from 1 1/2" up to 8".

**Construction:** High strength polypropylene films and fabrics, high density polyethylene film reinforcements, Polyvinyl coated polyester fabric cover, weather and ozone resistant.

## VAPORCHEM LD - LIGHT DUTY

**Applications:** General purpose Light Duty hose, is ideal for use for petrochemical vapor recovery systems in Ship to Shore, Ship to Ship, bottom loading and tank truck operations.

Complies with USCG Marine Vapour control system 33CFR Part 154.810

All **COMPOTEC®** hoses are 100% Antistatic - Electrically continuous, meets the EN, CE, AS, U.S. Coast Guard requirements, NAHAD Guidelines, are Lloyds and DNV approved and ATEX certificate can be released on request.

# COMPOTEC®



## HEAVY DUTY CHEMICAL SUCTION & DISCHARGE HOSE EN 13765:2015 TYPE 3

Size	Working Pressure		Bend Radius EN ISO 1746	Weight	Length
	mm	Inch	SF 4:1	SF 5:1	
20	3/4"	20 / 300	16 / 230	75	0,63
25	1"	20 / 300	16 / 230	100	0,77
32	1 1/4"	20 / 300	16 / 230	125	1,05
40	1 1/2"	20 / 300	16 / 230	140	1,33
50	2"	20 / 300	16 / 230	180	2,04
65	2 1/2"	20 / 300	16 / 230	220	2,75
75/80	3"	20 / 300	16 / 230	280	3,15
100	4"	20 / 300	16 / 230	400	4,74
125	5"	20 / 300	16 / 230	485	7,25
150	6"	20 / 300	16 / 230	575	10,00
200	8"	20 / 300	16 / 230	800	12,85
250	10"	20 / 300	16 / 230	1000	23,85
300	12"	20 / 300	16 / 230	1200	31,69

## CHEM 700 HD

Code	CHEM 700HD PZ	CHEM 700HD PX	CHEM 700HD XZ	CHEM 700HD XX
Applications	Heavy Duty Chemicals/Solvents liquid transfer			
Colour	Green			
Temperature	-40 +100°C			
Inner wire	PP Coated Steel	PP Coated Steel	St.Steel	St.Steel
Outer wire	Galv.Steel	St.Steel	Galv.Steel	St.Steel

## STANDARD DUTY CHEMICAL SUCTION & DISCHARGE HOSE EN 13765:2015 TYPE 2

Size	Working Pressure		Bend Radius EN ISO 1746	Weight	Length
	mm	Inch	SF 4:1	SF 5:1	
40	1 1/2"	14 / 200	10 / 150	100	1,04
50	2"	14 / 200	10 / 150	150	1,56
65	2 1/2"	14 / 200	10 / 150	200	1,87
75/80	3"	14 / 200	10 / 150	250	2,23
100	4"	14 / 200	10 / 150	300	3,62
125	5"	14 / 200	10 / 150	401	5,40
150	6"	14 / 200	10 / 150	500	8,91
200	8"	14 / 200	10 / 150	740	11,16

## CHEM SD

Code	CHEM SD PZ	CHEM SD PX	CHEM SD XZ	CHEM SD XX
Applications	Standard Duty Chemicals/Solvents liquid transfer			
Colour	Green			
Temperature	-30 +80°C			
Inner wire	PP Coated Steel	PP Coated Steel	St.Steel	St.Steel
Outer wire	Galv.Steel	St.Steel	Galv.Steel	St.Steel

## LIGHT DUTY CHEMICAL VAPOURS SUCTION AND DISCHARGE HOSE EN 13765:2015 TYPE 1

Size	Maximum W.P.		Vacuum rating	Bend Radius EN ISO 1746	Weight	Maximum Length
	mm	Inch	Bar	P.S.I.		
40	1 1/2"	5	70	0,7	100	1,01
50	2"	5	70	0,7	150	1,33
65	2 1/2"	5	70	0,7	200	1,85
75/80	3"	5	70	0,7	250	2,13
100	4"	5	70	0,7	300	2,97
125	5"	5	70	0,7	400	5,25
150	6"	5	70	0,7	500	6,83
200	8"	5	70	0,7	740	9,91
250	10"	5	70	0,7	1000	14,79
300	12"	5	70	0,7	1200	19,96

## VAPORCHEM LD

Code	VAPORCHEM PZ	VAPORCHEM PX	VAPORCHEM XZ	VAPORCHEM XX
Applications	Light Duty Chemicals/Solvents Vapours			
Colour	Yellow			
Temperature	-30 +80°C			
Inner wire	PP Coated Steel	PP Coated Steel	St.Steel	St.Steel
Outer wire	Galv.Steel	St.Steel	Galv.Steel	St.Steel

DNV Det Norske Veritas Cert. n. CERT-04193-99-AQ IND-SINCERT  
EN 13765:2015, approved from CEN  
Directive 2014/68/EU "PED" with operating Procedures certified from DNV - CE PED 117361-2012-CE-ITA-ACCREDIA  
Directive 94/9/CE "ATEX" hose for explosive atmospheres, Cert. held by DNV Rec. nr. CE ATE 08.0117.06/2617 - (AS 2430.1-1987)  
AS 2683-2000 (Hose & hose assemblies for distribution of petroleum and petroleum products)  
AS 2117-1991 (Hose & hose assemblies for petroleum and petroleum products - Marine suction and discharge)  
NAHAD Guidelines (NAHAD 600/2005)

Test procedures:

EN ISO 1402 - EN 8031  
AS1180.5-1999 (method 5)  
AS 1180.13B (Electrical resistance)  
AS1180.13C (Electrical continuity)

Type Approval

Lloyd's Register Type Approved - Cert. N° 13/00002  
DNV - Det Norske Veritas - Type Approval Cert. N° P-12369  
RINA - Registro Italiano Navale - Cert. N° MAC/81398/1/TO/99  
Russian Maritime Register of Shipping  
IBC Code Chapter 5 - Ship's Cargo hoses  
IMO Chemical Carrier Code - Paragraphs 2:12 and 5:7

Welding Process

in according to EN 15608:2005 - EN 439:1996 - EN 15614-1:2005 - EN 9606-1:2013  
EN 6848:2005 - EN 12072:2001 certified by DNV - Det Norske Veritas  
in according to ASME IX certified by RINA



COMPANY WITH  
QUALITY SYSTEM  
CERTIFIED BY DNV GL  
= ISO 9001 =

Lloyd's  
Register  
Type  
approved  
[www.lr.org](http://www.lr.org)

**NAHAD**  
Composite Hose  
Listed Provider

**MATEC GROUP SRL**

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# CHEMICALS



# COMPOTEC®

# CRYOTEC

# COMPOTEC®

**COMPOTEC® CRYOTEC** hoses are designed for use with cryogenic products at temperatures down to -200°C and pressures up to 25 bar.

**COMPOTEC® CRYOTEC** hoses has been designed around multilayers of polyamide fabrics and films, polyester films, reinforced with inner & outer wire spirals in 316 Stainless Steel. Additional Polyester fabrics and specific bi-oriented Polypropylene films are provided to guarantee flexibility even at minus 200°C, ensuring the assemblies better performances than other type of hoses or loading arms, when accommodating for vessel movements during transfer operation.

**COMPOTEC® CRYOTEC** hoses includes in the construction FEP extruded tubular and Mylar® films. **COMPOTEC® CRYOTEC** hoses are manufactured according to EN 13766:2010, in two types: Type 1 for LPG and Type 2 for LNG, each type is subdivided in two classes, one for onshore use (Class A), and one for offshore use (Class B).

To transport LPG or LNG gases it is standard economic practice to liquefy them either by means of pressure or refrigeration. Hoses for this application must be ductile at low temperatures. **COMPOTEC® CRYOTEC** hoses for liquid gas transfer form an important part of the extensive range on non-metallic flexible hoses offered by the COMPOTEC® division of Matec group. The hoses are certified by DNV as complying the requirements of CE Directive 97/23 "PED" and are made to comply the requirements of EN13766; Paragraphs 5:4 and 5:7 of the IMO Gas Carrier Code, and 5:3 and 5:7 of the IMO Chemical Carrier Code. Meets EN, CE, PED, U.S. Coast Guard requirements, DNV Approved. ATEX Cert. Directive 94/EC on request.

**CRYOTEC 660 LG** is suitable for transferring fully refrigerated conveyants such as **LPG**, Propane and Butane down to -105°C, as well as liquid Ethane and liquid Ethylene. Suitable for fluids included in Chap XIX, Gas carrier Code.

**CRYOTEC 661 N** hose is suitable for handling **LNG** Liquefied Natural Gas, Liquid Methane and liquid Nitrogen at -200°C.

**COMPOTEC® CRYOTEC** hoses assemblies are tested, in accordance with EN ISO 1402. The ferrule is embossed, with manufacturer's name, nominal bore, serial number and test date. Burst pressure indicated, is at ambient temperature when tested in accordance with EN ISO 1402. Electrical continuity is achieved by the two wires bonded to the end fittings, this helps dissipate accumulated charge and to avoid static flash. The electric resistance of hose assemblies is less than 1 ohm/mt, as required by EN ISO 8031:2009 – 4.7.

**CRYOTEC Nanogel® – Patented design by Matec® Group**

**FLEXIBLE COMPOTEC® HOSE WITH INTEGRAL INSULATION VAPOR BARRIER FOR SUB-AMBIENT AND CRYOGENIC APPLICATIONS.**

**Nanogel®** is a flexible aerogel blanket insulation with an integral vapor barrier. It is engineered to deliver maximum thermal protection with minimal weight and thickness, and zero water vapor permeability. **Nanogel®**'s unique properties, extremely low thermal conductivity, superior flexibility, compression resistance, hydrophobicity, and ease of use, make it essential for those seeking the ultimate in thermal protection for cryogenic applications. Using patented nanotechnology, **Nanogel®** insulation combines a silica aerogel with reinforcing fibers to deliver industry-leading thermal performance in an easy-to-handle and environmentally safe product. **Nanogel®**'s extremely low thermal conductivity reduces heat gain and its inherent flexibility makes the product durable and resistant to mechanical abuse. Additional protection (**ARAMEX** braid and **PU** Red cover) on the outer diameter is available to minimize the abrasion damages and for further protection and insulation. **CRYOTEC** Hoses with **Nanogel®** patented insulation, can achieve an outer temperature of 23°C on hoses carrying **LNG** at -175 inside.

## ADVANTAGES

- Superior Thermal Performance
- Up to 5 times better thermal performance than competing insulation products
- Reduced Thickness and Profile
- Equal thermal resistance at a fraction of the thickness
- Zero Permeability due to Integral Vapor Barrier
- Provides ice formation on outer diameter
- Physically Robust
- Soft and flexible but with excellent springback, **Nanogel®** recovers its thermal performance even after compression.
- Eliminates Expansion Joints because it remains flexible even at cryogenic temperatures,
- Environmentally Safe
- Landfill disposable, shot-free, with no respirable fiber content
- Flexible hoses are usually uninsulated due to severe stresses of cycling between ambient and **LNG** (-175°C) temperatures. This can result in heavy ice formation during operation, and dangerous ice falls during the subsequent warm up. **CRYOTEC** hoses insulated with **Cryogel® Z** are impervious to cryogenic cycling.



## TYPE LG: Hoses for Liquid Petroleum Gas (LPG) handling

Size	Maximum W.P.		Safety Factor	Bend Radius (ENISO1746)		Weight Kg. / mt	Maximum Length Mt. Feet
	mm	Inch		Bar	P.S.I.		
20	¾"	25	360	5:1	80	3	0,8 40 132
25	1"	25	360	5:1	100	4	1,0 40 132
32	1 ¼"	25	360	5:1	125	5	1,3 40 132
40	1 ½"	25	360	5:1	140	6	1,5 40 132
50	2"	25	360	5:1	180	7	2,5 40 132
65	2 ½"	25	360	5:1	200	8	3,3 40 132
75/80	3"	25	360	5:1	260	10	4,0 40 132
100	4"	25	360	5:1	380	15	6,8 40 132
150	6"	25	360	5:1	500	20	13,2 40 132
200	8"	25	360	5:1	750	30	18,0 40 132
250	10"	15	200	5:1	900	36	26,0 25 82
300	12"	10	150	5:1	1500	60	34,0 25 82

## CRYOTEC 660 LG

Code	CRYOTEC 660 ZZ	CRYOTEC 660 ZX	CRYOTEC 660 XX
Applications	Liquid Petroleum Gas LPG		
Colour	White		
Temperatures	-105 + 100°C		
Inner wire	Galv. Steel	Galv. Steel	Stain. Steel
Outer wire	Galv. Steel	Stain. Steel	Stain. Steel

## TYPE N: Hoses for Liquefied Natural Gas (LNG) at extremely low temperatures

Size	Maximum W.P.		Safety Factor	Bend Radius (ENISO1746)		Weight Kg. / mt	Maximum Length Mt. Feet
	mm	Inch		Bar	P.S.I.		
20	¾"	15	200	8:1	80	3	0,8 40 132
25	1"	15	200	8:1	100	4	1,0 40 132
32	1 ¼"	15	200	8:1	125	5	1,3 40 132
40	1 ½"	15	200	8:1	140	6	1,5 40 132
50	2"	15	200	8:1	180	7	2,5 40 132
65	2 ½"	15	200	8:1	200	8	3,3 40 132
75/80	3"	15	200	8:1	260	10	4,0 40 132
100	4"	15	200	8:1	380	15	6,8 40 132
150	6"	13	185	8:1	500	20	13,2 40 132
200	8"	13	185	8:1	750	30	18,0 40 132
250	10"	13	185	8:1	900	36	26,0 25 82
300	12"	10	150	8:1	1500	60	34,0 25 82



## CRYOTEC 661 N

Code	CRYOTEC 661 ZZ	CRYOTEC 661 ZX	CRYOTEC 661 XX
Applications	Liquefied Natural Gas LNG at extremely low temperatures		
Colour	White		
Temperatures	-200 + 80°C		
Inner wire	Galv. Steel	Galv. Steel	Stain. Steel
Outer wire	Galv. Steel	Stain. Steel	Stain. Steel



# CRYOGENICS



DNV Det Norske Veritas Cert. n. CERT-04193-99-AQ IND-SINCERT

EN 13765:2010, approved from CEN

Directive 97/23/CE "PED" with operating Procedures certified from DNV - CE PED 07.0056.06/2585

Directive 94/9/CE "ATEX" hose for explosive atmospheres, Cert. held by DNV Rec. nr. CE ATE 08.0117.06/2617 - (AS 2430.1-1987)

BS 5842:1980 (Conf. 1986)

BS 3492:1987

AS 2683-2000 (Hose & hose assemblies for distribution of petroleum and petroleum products)

AS 2117-1991 (Hose & hose assemblies for petroleum and petroleum products - Marine suction and discharge)

NAHAD Guidelines (NAHAD 600/2005)

Test procedures:

BS 5173-102.10:1990 section 102.10 - (EN ISO 1402)

AS1180.5-1999 (method 5)

AS 1180.13B (Electrical resistance)

AS1180.13C (Electrical continuity)

Type Approval

Lloyd's Register Type Approved - Cert. N° 13/00002

DNV - Det Norske Veritas - Type Approval Cert. N° P-12369

RINA - Registro Italiano Navale - Cert. N° MAC/81398/1/TO/99

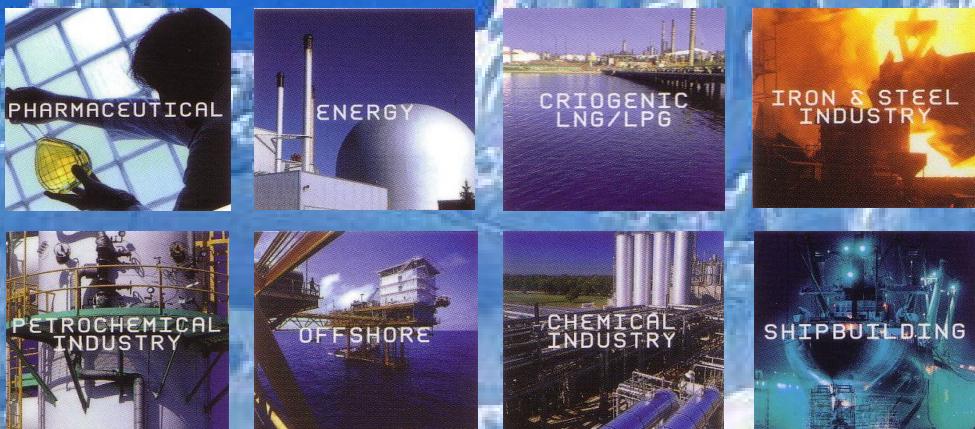
Russian Maritime Register of Shipping

IBC Code Chapter 5 - Ship's Cargo hoses

IMO Chemical Carrier Code - Paragraphs 2:12 and 5:7

Welding Process

in according to EN 15608:2005 - EN 439:1996 - EN 15614-1:2005 - EN 6848:2005 - N. 12072/2001 certified by DNV - Det Norske Veritas  
in according to ASME IX certified by RINA



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# COMPOTEC®

# OIL & FUEL

**COMPOTEC®**

**COMPOTEC® OIL** is a multi-layer thermoplastic hose manufactured from Polypropylene, Polyethylene and Polyester films and Polypropylene fabrics, with a weather-proof and abrasion resistant outer cover made of Polyvinyl coated Polyester fabric. Outer cover is also available in **ELASTOTHANE®**, a special PU coated fabric; its UV, Ozone, Sunlight and weathering resistance, offers superior temperature and abrasion characteristics.

All the different layers are wrapped together and tensioned between internal and external wire spirals. This enables our product to meet the requirement of the Petrol-chemical industry and those of the Oil & Gas industry.

**COMPOTEC®** assemblies are fitted with an extensive range of couplings readily available, externally swaged with crimping ferrules.

**COMPOTEC® OIL** assemblies are tested at 1 1/2 times rated working pressures for safety and reliability, in accordance with EN ISO 1402 (BS 5842:1980 clause 6.4). The securing ferrule, at one end of the hose, is permanently marked by engraving, with manufacturer's name, nominal bore, the hose assembly serial number and the test date. The marking of hose assemblies is made in compliance with PED Directive (97/23/ CE). Full test certification can be supplied on request.

**COMPOTEC® OIL** hoses can be supplied in the **FIRETEC** version with ADR self-extinguish CL1 cover.

Burst pressure indicated, is at ambient temperature when tested in accordance with EN ISO 1402 (BS 5173 section 102.10:1990).

Electrical continuity is achieved by the two wires bonded to the end fittings, this helps dissipate accumulated charge and to avoid static flash. The electric resistance of hose assemblies is less than 1 ohm/mt, as required by EN ISO 8031:2009 - 4.7. Upon request it's possible to manufacture **COMPOTEC®** hoses in accordance to the Directive 94/9/EC **"ATEX"**, with a special outer antistatic black cover, ground connection cable, for explosive environment.

**COMPOTEC® OIL 800 HD** and **OIL SD** hoses are specially engineered for the transfer of hydrocarbons, including oil, petrol, diesel, lubricating oils, MTBE, paraffin and 100% aromatics, in all kinds of transfer. The range includes:

## OIL 800 HD - HEAVY DUTY

**Applications:** Heavy Duty construction for the transfer of a wide variety of hydrocarbon conveyant under suction or pressure. Used for black oils and heavier lubricating products, Ship to Shore and Ship to Ship, Dockside and in general for the most arduous Industrial and Marine applications. Commonly used for all hose loading arms in Bottom Loading operations, thanks to the special reinforcement for minimal elongation. Fully suitable for 100% aromatics & MTBE transfer.

**Construction:** High strength polypropylene and polyester films and fabrics, high density polyethylene films reinforcement, includes in the construction an High Density UHMW PLT seamless tubular extruded film, to avoid any possible leak and guarantee a gas-tight construction, Polyvinyl coated polyester fabric cover, weather and ozone resistant Available in 40 mt coils from 3/4" to 8" and 25 mt length up to 12"

**COMPOTEC® OIL 800 HD** hose assemblies are certified by D N V as complying the requirements of CE Directive 97/23 "PED" and are manufactured in accordance with the requirements of Paragraphs 2:12 and 5:7 of the IMO Chemical Carrier Code.

**COMPOTEC® OIL 800 HD** hoses are Type approved by Lloyd's with Certificate n° 13/0002

## OIL SD - STANDARD DUTY

**Applications :** General purpose Standard Duty hose suitable for the safe transfer of a wide variety of hydrocarbons, including fuel oils, petrol, diesel, lubricating oils, kerosene, MTBE, and 100% aromatics under suction or pressure. Commonly used for road and rail tanker loading and discharging, storage tank and in-plant use. Suitable as flexible hose for Top Loading arms.

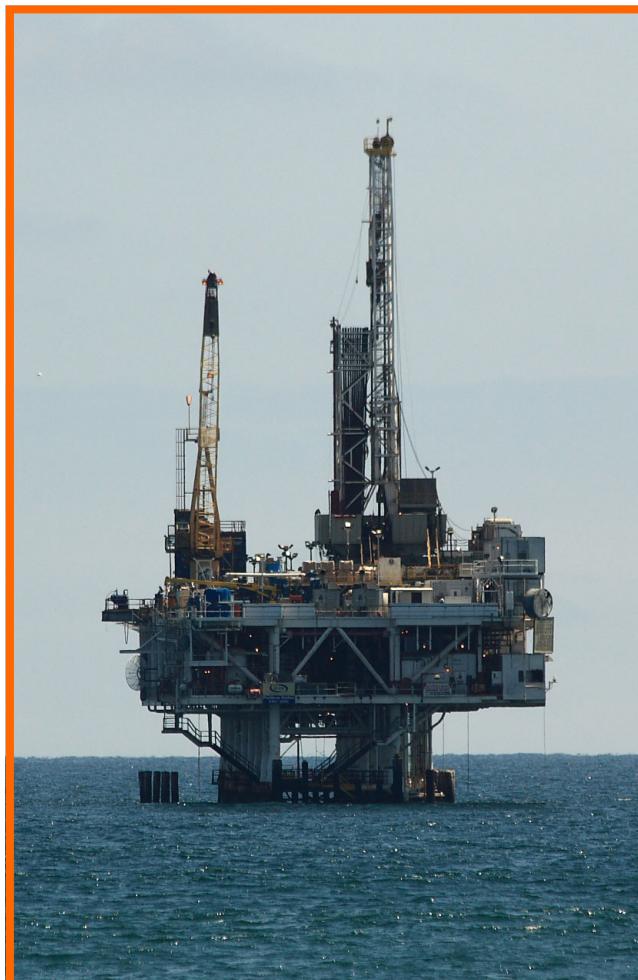
Available in 40 mt coils from 1 1/2" up to 8".

**Construction:** High strength polypropylene films and fabrics, high density polyethylene film reinforcements, Polivinyl coated polyester fabric cover, weather and ozone resistant.

## VAPOROIL - LIGHT DUTY

**Applications:** General purpose Light Duty hose is ideal for use in petroleum and petrochemical vapor recovery systems in ship to shore, ship to ship, bottom loading and tank truck operations. Complies with USCG Marine Vapour control system 33CFR Part 154.810.

All **COMPOTEC®** hoses are 100% Antistatic - Electrically continuous, meets the EN, CE, AS, U.S. Coast Guard requirements, NAHAD Guidelines, are Lloyds and DNV approved and ATEX certificate can be released on request.



### HEAVY DUTY HYDROCARBON SUCTION & DISCHARGE HOSE EN 13765:2010 TYPE 3

Size	Maximum W.P.	Safety Factor	Bend Radius EN ISO 1746	Weight Kg/mt	Maximum Length				
mm	Inch	Bar	P.S.I.	mm	Inch	Kg. / mt	Mt.	Feet	
20	3/4"	15	200	5:1	75	3	0,73	40	132
25	1"	15	200	5:1	100	4	0,90	40	132
32	1 1/4"	15	200	5:1	125	5	1,27	40	132
40	1 1/2"	15	200	5:1	140	5 1/2	1,49	40	132
50	2"	15	200	5:1	180	7	2,18	40	132
65	2 1/2"	15	200	5:1	220	8,5	3,09	40	132
75/80	3"	15	200	5:1	280	11	3,66	40	132
100	4"	15	200	5:1	400	16	5,28	40	132
150	6"	15	200	5:1	575	23	11,90	40	132
200	8"	15	200	5:1	800	32	15,65	40	132
250	10"	15	200	5:1	1000	40	22,53	25	82
300	12"	15	200	5:1	1200	48	31,78	25	82

### STANDARD DUTY HYDROCARBON SUCTION & DISCHARGE HOSE EN 13765:2010 TYPE 2

Size	Maximum W.P.	Safety Factor	Bend Radius	Weight Kg/mt	Maximum Length						
mm	Inch	Bar	P.S.I.	mm	Inch	ZZ/XX	AZ	AA	Mt.	Feet	
40	1 1/2"	10	150	5:1	140	5 1/2	1,23	0,98	0,67	40	132
50	2"	10	150	5:1	180	7	1,66	1,35	0,97	40	132
65	2 1/2"	10	150	5:1	220	8,5	2,10	1,71	1,25	40	132
75/80	3"	10	150	5:1	180	11	2,53	2,05	1,53	40	132
100	4"	10	150	5:1	400	16	4,10	3,29	2,38	40	132
150	6"	10	150	5:1	575	23	9,85	7,50	5,58	40	132
200	8"	10	150	5:1	800	32	13,31	9,71	6,94	40	132

### OIL 800 HD

Code	OIL 800HD ZZ	OIL 800HD ZX	OIL 800HD XX	OIL 800HD XX
Applications	Heavy Duty Fuel/Oil liquid transfer			
Colour	Blue / Black			
Temperature	-40 +100°C			
Inner wire	Galv.Steel	Galv.Steel	St.Steel	St.Steel
Outer wire	Galv.Steel	St.Steel	Galv.Steel	Aluminium

### OIL SD

Code	OIL SD ZZ	OIL SD ZX	OIL SD XX	OIL SD AZ	OIL SD AA
Applications	Standard Duty Fuel/Oil liquid transfer				
Colour	Blue			Orange	
Temperature	-30 +80°C				
Inner wire	Galv.Steel	Galv.Steel	St.Steel	Aluminium	Aluminium
Outer wire	Galv.Steel	St.Steel	St.Steel	Galv.Steel	Aluminium

### VAPOROIL LD

Code	VAPOROIL ZZ	VAPOROIL AZ	VAPOROIL AA
Applications	Light Duty Fuel/Oil Vapours		
Colour	Yellow		
Temperature	-30 +80°C		
Inner wire	Galv.Steel	Aluminium	Aluminium
Outer wire	Galv.Steel	Galv.Steel	Aluminium

DNV Det Norske Veritas Cert. n. CERT-04193-99-AQ IND-SINCERT

EN 13765:2010, approved from CEN

Directive 97/23/CE "PED" with operating Procedures certified from DNV - CE PED 07.0056.06/2585

Directive 94/9/CE "ATEX" hose for explosive atmospheres, Cert. held by DNV Rec. nr. CE ATE 08.0117.06/2617 - (AS 2430.1-1987)

BS 5842:1980 (Conf. 1986)

BS 3492:1987

AS 2683-2000 (Hose & hose assemblies for distribution of petroleum and petroleum products)

AS 2117-1991 (Hose & hose assemblies for petroleum and petroleum products - Marine suction and discharge)

NAHAD Guidelines (NAHAD 600/2005)

Test procedures:

BS 5173-102.10:1990 section 102.10 - (EN ISO 1402)

AS1180.5-1999 (method 5)

AS 1180.13B (Electrical resistance)

AS1180.13C (Electrical continuity)

Type Approval

Lloyd's Register Type Approved - Cert. N° 13/00002

DNV - Det Norske Veritas - Type Approval Cert. N° P-12369

RINA - Registro Italiano Navale - Cert. N° MAC/81398/1/TO/99

Russian Maritime Register of Shipping

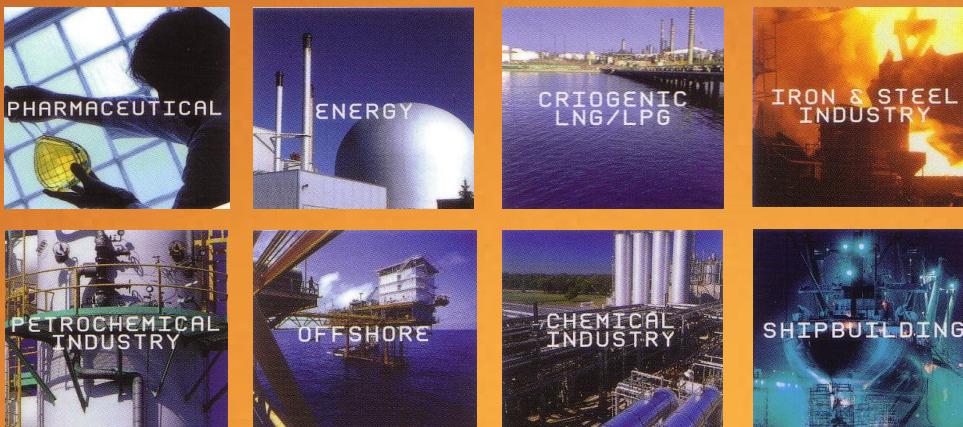
IBC Code Chapter 5 - Ship's Cargo hoses

IMO Chemical Carrier Code - Paragraphs 2:12 and 5:7

Welding Process

in according to EN 15608:2005 - EN 439:1996 - EN 15614-1:2005 - EN 6848:2005 - EN 12072:2001 certified by DNV - Det Norske Veritas

in according to ASME IX certified by RINA



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# HYDROCARBONS OILS



# COMPOTEC®

# PTFE

The superior chemically inert quality of Fluoropolymers, make COMPOTEC® PTFE hoses ideals for the transfer of a wide range of very hazardous chemicals. This universal hose can help eliminate the costly redundancy of inventory to maintain the various hose constructions usually required. COMPOTEC® PTFE assemblies are fitted with an extensive range of couplings that can also be PTFE tafted or treated with the exclusive EPTAFLON BLUE coating, resistant to almost all chemicals. COMPOTEC® PTFE hoses can be supplied in the FIRETEC version with ADR self-extinguish CL1 cover.

All COMPOTEC® hoses are available in 40 mt coils from 3/4" to 8" and 25 mt length up to 12". Outer cover is also available in ELASTOTHANE®, a special PU coated fabric; its UV, Ozone, Sunlight and weathering resistance, offers superior temperature and abrasion characteristics.

Electrical continuity is achieved by the two wires bonded to the end fittings, this helps dissipate accumulated charge and to avoid static flash. The electric resistance of hose assemblies is less than 1 ohm/mt, as required by EN ISO 8031:2009 - 4.7. Upon request it's possible to manufacture COMPOTEC® PTFE hoses in accordance to the Directive 94/9/EC "ATEX", with a special outer antistatic black cover.

All COMPOTEC® PTFE hoses are 100% Antistatic - Electrically continuous, meets the PED, EN, CE, AS, U.S. Coast Guard requirements, NAHAD Guidelines, are Lloyds and DNV approved and ATEX certificate can be released on request.

Heavy Duty PTFE 300 HD, is offered in two versions, the first using as inner layer in contact with the product, a pure Skived film of PTFE, the second is manufactured around the new NANOTEC® TEFLON® film PATENTED BY MATEC.



## PTFE 300 HD

**Applications:** PTFE 300 HD, Heavy Duty construction for aggressive chemicals Suction & Delivery. Used for Ship to Shore and Ship to Ship, Dockside and in general for the most arduous Industrial and Marine applications.

**Construction:** COMPOTEC® PTFE 300 HD is a multi-layer thermoplastic hose designed to resist to the most aggressive chemicals. Includes in the construction an FEP tubular extruded film to avoid any possible leak and guarantee a gas-tight construction. All the different layers are wrapped together and tensioned between internal and external wire spirals.

## PTFE 300 HD-NANOTEC INSIDE

### (Patent Design)

NANOTEC® is obtained with the latest and highest standard of Nanotechnology, ensuring unique mechanical strength and ZERO porosity. NANOTEC® is a flexible, tear resistant material with superior capabilities compared to other PTFE products. NANOTEC® is made of 100% TEFLON® Du Pont, making it impervious to "chemical attack" and eliminating the need for reinforcements. Regardless of the chemical environment NANOTEC® retains all of its physical properties. Using an innovative nanotechnology cross-lamination process, results in NANOTEC® having an incredible 360° tear strength, superb durability and operating temps of up to 316°C (600°F). The NANOTEC® technology is a PATENTED DESIGN exclusive and unique, belonging to MATEC® GROUP.

## CHEMCHLOR 900HD NANOTEC INSIDE

### (Patent Design)

**Applications:** CHEMCHLOR 900 is a specific hose designed for very aggressive chemicals. It is used in such applications as transfer of all the Chlorine derivates, Hydrochloric acid, Nitric and Sulphuric acid. Heavy Duty construction, can be used in general for the most arduous Industrial and Marine applications.

**Construction:** Inner first layer in contact with the wet parts, is made with the unique NANOTEC® TEFLON® film, PATENTED BY MATEC, ensuring the highest mechanical strength, ZERO porosity and superior chemical inertness. Internal wire is made in Stainless Steel 1.4307, sheathed in a white PVDF high wall thickness material. Includes in the construction an FEP seamless tubular extruded film, to avoid any possible leak and guarantee a gas-tight construction.

## PTFE SD - STANDARD DUTY

**Applications :** General purpose Standard Duty hose suitable for the safe transfer of a wide variety of Chemicals under suction or pressure where the chemical resistance of polypropylene is inadequate. Commonly used for loading and unloading of road and rail tankers, storage tank and in-plant applications.

**Construction:** Inner first layer in contact with the fluid is made with ECTFE films. High strength polypropylene films and fabrics, high density polyethylene films reinforcement, Polivinyl coated polyester fabric cover, fire resistant, abrasion, weather and ozone resistant. PTFE SD, the Standard Duty hose has a WP of 10 Bar and a W.T. from -30 to +80°C



# COMPOTEC®



## HEAVY DUTY PTFE SUCTION & DISCHARGE HOSE EN 13765:2010 TYPE 3

Size	Maximum W.P.	Safety Factor	Bend Radius EN ISO 1746	Weight	Maximum Length				
mm	Inch	Bar	P.S.I.	mm	Inch	Kg. / mt	Mt.	Feet	
20	3/4"	15	200	5:1	75	3	0,63	40	132
25	1"	15	200	5:1	100	4	0,77	40	132
32	1 1/4"	15	200	5:1	125	5	1,05	40	132
40	1 1/2"	15	200	5:1	140	5 1/2	1,33	40	132
50	2"	15	200	5:1	180	7	2,04	40	132
65	2 1/2"	15	200	5:1	220	8,5	2,75	40	132
75/80	3"	15	200	5:1	280	11	3,15	40	132
100	4"	15	200	5:1	400	16	4,74	40	132
150	6"	15	200	5:1	550	22	10,50	40	132
200	8"	15	200	5:1	800	32	12,85	40	132
250	10"	15	200	5:1	1000	40	20,96	25	82
300	12"	15	200	5:1	1200	48	31,69	25	82

## PTFE 300 HD

## PTFE 300 HD NANOTEC INSIDE

Code	PTFE 300HD XZ	PTFE 300HD XX
Applications	Heavy Duty aggressive chemicals liquid transfer	
Colour	Red	
Temperature	-40 +100°C	
Inner wire	Stainless Steel	Stainless Steel
Outer wire	Galvanized Steel	Stainless Steel

Code	NANOTEC HD XZ	NANOTEC HD XX
Applications	Heavy Duty aggressive chemicals liquid transfer	
Colour	Red	
Temperature	-40 +125°C	
Inner wire	Stainless Steel	Stainless Steel
Outer wire	Galvanized Steel	Stainless Steel

## HIGHLY AGGRESSIVE / HEAVY DUTY SUCTION & DISCHARGE HOSE EN 13765:2010 TYPE 3

Size	Maximum W.P.	Safety Factor	Bend Radius EN ISO 1746	Weight	Maximum Length				
mm	Inch	Bar	P.S.I.	mm	Inch	Kg. / mt	Mt.	Feet	
20	3/4"	20	300	5:1	75	3	0,63	40	132
25	1"	20	300	5:1	100	4	0,77	40	132
32	1 1/4"	20	300	5:1	125	5	1,05	40	132
40	1 1/2"	20	300	5:1	140	5 1/2	1,33	40	132
50	2"	20	300	5:1	180	7	2,04	40	132
65	2 1/2"	20	300	5:1	220	8,5	2,75	40	132
75/80	3"	20	300	5:1	180	11	3,15	40	132
100	4"	20	300	5:1	400	16	4,74	40	132
150	6"	20	300	5:1	575	23	10,00	40	132
200	8"	20	300	5:1	800	32	12,85	40	132
250	10"	20	300	5:1	1000	40	20,96	25	82
300	12"	20	300	5:1	1200	48	31,69	25	82

Code	CHEMCHLOR 900HD FX	CHEMCHLOR 900HD FP
Applications	Heavy Duty, highly aggressive chemical transfer	
Colour	Yellow / Purple	
Temperature	-40 +125°C	
Inner wire	PVDF Coated Stainless Steel	PVDF Coated Stainless Steel
Outer wire	Stainless Steel	PP Coated Steel

## STANDARD DUTY PTFE SUCTION & DISCHARGE HOSE EN 13765:2010 TYPE 2

Size	Maximum W.P.	Safety Factor	Bend Radius EN ISO 1746	Weight	Maximum Length				
mm	Inch	Bar	P.S.I.	mm	Inch	Kg. / mt	Mt.	Feet	
40	1 1/2"	10	150	5:1	100	4	1,04	40	132
50	2"	10	150	5:1	150	6	1,56	40	132
65	2 1/2"	10	150	5:1	200	8	1,87	40	132
75/80	3"	10	150	5:1	250	10	2,23	40	132
100	4"	10	150	5:1	300	12	3,62	40	132
150	6"	10	150	5:1	500	20	8,91	40	132
200	8"	10	150	5:1	740	29	11,16	40	132

Code	PTFE SD XZ	PTFE SD XX
Applications	Standard Duty aggressive chemical liquid transfer	
Colour	Red	
Temperature	-30 +80°C	

DNV Det Norske Veritas Cert. n. CERT-04193-99-AQ IND-SINCERT  
EN 13765:2010, approved from CEN  
Directive 97/23/CE "PED" with operating Procedures certified from DNV - CE PED 07.0056.06/2585  
Directive 94/9/CE "ATEX" hose for explosive atmospheres, Cert. held by DNV Rec. nr. CE ATE 08.0117.06/2617 - (AS 2430.1-1987)  
BS 5842:1980 (Conf. 1986)  
BS 3492:1987  
AS 2683-2000 (Hose & hose assemblies for distribution of petroleum and petroleum products)  
AS 2117-1991 (Hose & hose assemblies for petroleum and petroleum products - Marine suction and discharge)  
NAHAD Guidelines (NAHAD 600/2005)

Test procedures:

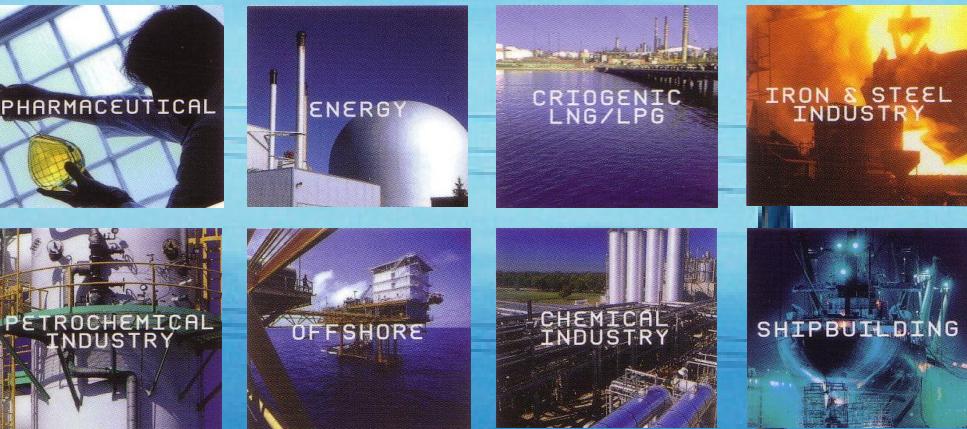
BS 5173-102.10:1990 section 102.10 - (EN ISO 1402)  
AS1180.5-1999 (method 5)  
AS 1180.13B (Electrical resistance)  
AS1180.13C (Electrical continuity)

Type Approval

Lloyd's Register Type Approved - Cert. N° 13/00002  
DNV - Det Norske Veritas - Type Approval Cert. N° P-12369  
RINA - Registro Italiano Navale - Cert. N° MAC/81398/1/TO/99  
Russian Maritime Register of Shipping  
IBC Code Chapter 5 - Ship's Cargo hoses  
IMO Chemical Carrier Code - Paragraphs 2:12 and 5:7

Welding Process

in according to EN 15608:2005 - EN 439:1996 - EN 15614-1:2005 - EN 6848:2005 - EN 12072:2001 certified by DNV - Det Norske Veritas  
in according to ASME IX certified by RINA



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Rev. 1/14

# AGGRESSIVE CHEMICALS PTFE



# COMPOTEC®