

HIGRADE 101



COMPOTEC® HIGRADE 101 hose it's an High purity Fuel hose. Multi-layer thermoplastic hose manufactured from Polypropylene, Polyester and Polyethylene 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 **ELASTAR**, 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 tank truck industry. **COMPOTEC® HIGRADE 101** is manufactured according to the requirement specified by the European Standards EN 13765:2010 Type 3 (BS 5842:1980), and in accordance with Australian Standards AS 2683. Complies the recommendations of NAHAD Guidelines (NAHAD 600/2005).

Specifically designed for the transfer of special Aviation fuels, Jet Fuel (JET A-1 and JP-6), Jet biofuels, Synthetic jet fuel (SPK) or Aviation Turbine fuel (ATF).

Manufactured with special procedures, designed to eliminate any contaminants, COMPOTEC® HIGRADE 101 hoses fully complies BS 3492:1987 for carrying gasoline, kerosene, fuel and lubrication oils, including aviation fuels with high aromatic content at a temperature up to 100°C. Bore material (first layer in contact with fluid) is made in an high purity, Ultra High Molecular Weight Polyethylene (**UHMW PLT**) to avoid any possible absorption or contamination. Stainless steel inner wire is included to ensure that no metallic flakes are deposited into the conveyed products. During all the phases of production, the hose is controlled and no lubricants or oils are used in the manufacturing process. Extremely flexible, easy to handle and bend, **COMPOTEC® HIGRADE 101** hoses are used in such applications as transfer, loading and discharging, storage tank and in-plant use, all hoses are 100% aromatic resistant and perfectly antistatic and can be used for delivery or suction of vapours. **COMPOTEC® HIGRADE 101** assemblies are fitted with an extensive range of couplings readily available, externally swaged with Stainless Steel or Aluminium ferrules.

Jet fuel or **aviation turbine fuel (ATF)** is a type of aviation fuel designed for use in aircraft powered by gas turbine engines. It is colourless to straw-colored in appearance. The most commonly used fuels for commercial aviation are **Jet A** and **Jet A-1**, which are produced to a standardized international specification. The only other jet fuel commonly used in civilian turbine-engine powered aviation is **Jet B**, which is used for its enhanced cold-weather performance.

Commonly used for High performance fuels 109 octane for F1 racing cars, and for alcohol-based fuels used in American open-wheel racing (Firetec version).

COMPOTEC® HIGRADE 101 assemblies are tested at 1 ½ 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 embossing, with manufacturer's name, nominal bore, serial number and the test date. Full test certification including Electrical continuity test, can be supplied on request.

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 **HIGRADE 101** hoses in accordance to the Directive 94/9/EC **"ATEX"**, with a special outer antistatic black cover and cable for ground connection.

Assemblies are suitable for use with a vacuum not exceeding 0.9 Bar. According to the Standard description, **COMPOTEC® HIGRADE 101** hose meets the requirements for type AX & BX, for all products included in "Class 1". **COMPOTEC® HIGRADE 101** hoses can be supplied in the **FIRETEC** version to meet the Fire retardand performance criteria acc. to European Standards EN 13765:2010 Normative, Annex G, and ADR self-extinguish CL1 characteristics.

FIRETEC hose utilize a series of fire retardant barriers and an outer cover made of special ADR self extinguish CL 1 coated fabric. **COMPOTEC® HIGRADE 101** hose can be supplied, on request, in the HIPRESS version, with extra **ARAMEX** fabric reinforcements, to withstand higher pressures, WP 20, 25 up to 40 Bar, for special applications. All **COMPOTEC®** meets the EN, CE, AS, U.S. Coast Guard requirements, NAHAD Guidelines, are Lloyd's and DNV approved



HEAVY DUTY AVIATION FUEL HOSE EN 13765:2010 - TYPE 3

Size		Max. W.P.		Safety	Bend Radius		Weight		Maximum length
mm	inch	Bar	Psi		mm	inch	Kg/mt	Mt	Feet
20	3/4"	15	200	5:1	75	3	0,78	40	132
25	1"	15	200	5:1	100	4	0,94	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	180	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	16,20	40	132
250	10"	15	200	5:1	1000	40	22,78	25	82
300	12"	15	200	5:1	1200	48	31,78	25	82

HIGRADE 101 HD

Code	HYGRADE 101 HD ZZ	HYGRADE 101 HD ZX	HYGRADE 101 HD XZ	HYGRADE 101 HD XX
Applications	AVIATION FUEL /OIL LIQUIDS			
Colour	NATO Green / Black			
Temperature	-40 +100°C			
Inner wire	Galv.Steel	Galv.Steel	St.Steel	St.Steel
Outer wire	Galv.Steel	St.Steel	Galv.Steel	St.Steel

STANDARD DUTY AVIATION FUEL HOSE EN 13765:2010 - TYPE 2

Size		Max. W.P.		Safety	Bend Radius		Weight		Maximum length
mm	inch	Bar	Psi		mm	inch	Kg/mt	Mt	Feet
40	1 1/2"	10	150	5:1	100	4	1,23	40	132
50	2"	10	150	5:1	150	6	1,66	40	132
65	2 1/2"	10	150	5:1	200	8	2,10	40	132
75/80	3"	10	150	5:1	250	10	2,53	40	132
100	4"	10	150	5:1	300	12	4,10	40	132
150	6"	10	150	5:1	500	20	9,85	40	132
200	8"	10	150	5:1	740	29	13,31	40	132

HIGRADE SD

Code	HYGRADE SD ZZ	HYGRADE SD ZX	HYGRADE SD XZ	HYGRADE SD XX
Applications	AVIATION FUEL /OIL LIQUIDS			
Colour	NATO Green / Black			
Temperature	-40 +100°C			
Inner wire	Galv.Steel	Galv.Steel	St.Steel	St.Steel
Outer wire	Galv.Steel	St.Steel	Galv.Steel	St.Steel



HIGRADE

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:

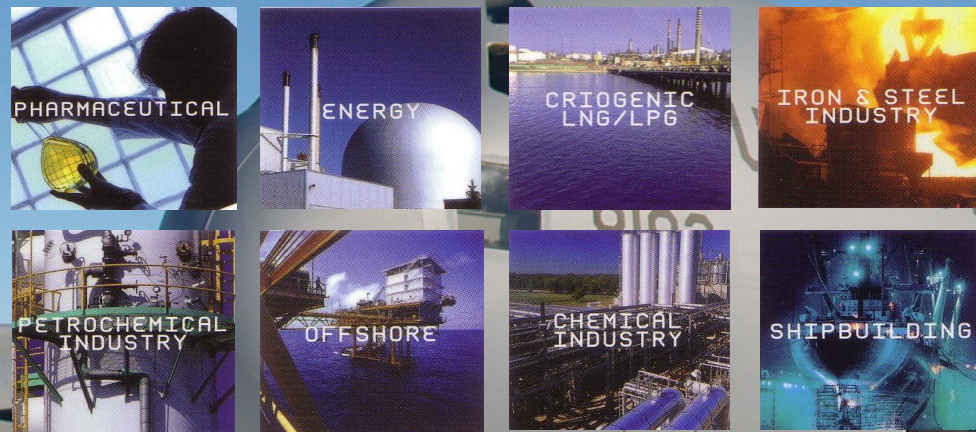
BS 5173-102.10:1990 section 102.10 - (EN ISO 1402)
AS1180.5-1999 (method 5)
AS 1180.13B (Electrical resistance)
AS1180.13C (Electrical continuity)

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



MATEC GROUP SRL
VIA I MAGGIO, 7 - PESCHIERA BORROMEO (MILANO) - ITALIA
Tel. +39 02 55 30 17 88 - Fax +39 02 54 72 158
matec@matecgroup.com
www.matecgroup.com

COMPOTEC®