

## OFFSHORE FLAT

HOSES › Flattenable tubes

### Extremely robust extruded TPU flat fuel and oil drain hose

- Specially designed for heavy fuel and oil transportation in marine and offshore environments
- Fully anti-static: 2 grounding wires fully encapsulated within the external black straps to prevent static electricity build-up
- Low weight and flexibility for rapid deployment and recovery
- Fully Approved Drinking Water Blue and Black Color Options - NSF/ANSI/CAN Standard 61 Certified

### Color:

Image:

High visibility orange cover is standard. Blue (NSF certified version), black (NSF certified version) and NATO green options are available upon request and minimum order quantity.

### Electrical performance:

The OFFSHORE FLAT hose contains 2 electrical wires embedded within the hose to prevent the build-up of static electricity. Each static wire has a cross section of  $0.5 \text{ mm}^2$  and is fully encapsulated within a black cable tie along the tube. This construction makes the tube highly conductive yet flexible, with an electrical resistance much lower than the 4.9 ohm/m listed in the MIL-PRF-370K/2017 standard. \*

\* 1 1/4" hose has only 1 electrical wire.

### Attacks:

As requested by buyer: Crimp ferrule joints, segmented joints, tapered joints, Camlock, Victaulic, Storz, etc. The hose must be properly connected to conductive joints and properly grounded when transferring fuels to avoid electricity buildup. To do this, the 2 electrical wires twisted into the body of the hose must be electrically connected to the fittings.

### Applications:

Designed and recommended for fuel and oil unloading operations in refineries, bunkering, offshore industry, chemical plants and military installations. Ideal for brackish and sea water transfer, brine transfer, ship-to-shore discharge, ship-to-ship bunkering, bulk fuel unloading/loading, tank-to-tank transfer, offshore platform supply, drilling water, drilling mud, cement, dust, high pressure bypass and potable water transportation (NSF approved versions).

### Construction:

Made from circularly woven 100% high tenacity synthetic yarn, fully protected and blocked by a tough and highly resistant thermoplastic polyurethane extruded through the weave,



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forming a single homogeneous construction without the use of glues or adhesives. Includes 2 fully encapsulated electrical ground wires within the external black straps along the tube to help prevent static electricity buildup. The construction of the tube does not allow corrosion or scaling, while still providing high resistance to abrasion and cuts. Easy handling, storage and transportation, allowing for quick installation and recovery. Maximum hose elongation of 2% and maximum hose expansion of 15%.

**Lengths:**

Standard lengths 100m and 200m. Longer lengths may be available upon request.

**Abrasion resistance:**

The hose will extend the life of your application in extreme conditions, where abrasion is the primary concern. Thermoplastic polyurethane is considered the most abrasion resistant elastomeric material.

**Service temperature range:**

From -50°C to 65°C, with peaks up to 80°C. Special versions for higher and lower temperatures available on request.

**Ozone resistance:**

No visible signs of ozone cracking. Excellent resistance to atmospheric agents and UV rays.

**Chemical resistance:**

Exposure to seawater and contamination by most chemicals, hydrocarbons, oils and greases has no effect on the short or long term performance of the hose. A chemical resistance chart is available and TIPSA will provide specific chemical resistance data when requested by the purchaser for unique applications.

**Coating Properties:**

Maximum tensile strength of the coating: minimum guaranteed value of 40 MPa.  
Final elongation: minimum 500%.

Diameter nominal	Thickness of wall	Oil or fuel pressure	Prssion others fluids	Burst pressure	Tensile strength	Weight
mm	mm	Cafe	Cafe	Cafe	Kg	Kg/m
32	2.2	20	40	80	3.0	0.29
40	2.2	18	35	70	3.5	0.35
52	2.7	16	31	62	5.5	0.59
65	3.4	15	29	58	6.0	0.87
76	3.5	15	29	58	8.0	1.02
102	3.5	15	29	58	12.0	1.38
127	4.3	15	29	58	18.0	1.94
152	4.5	15	29	58	29.0	2.63
203	4.3	11	21	42	35.0	3.30