

Soft, oil resistant.

Workshop hose to meet the most demanding requirements.

Extremely flexible (even at low temperatures), good resistance to oil and chemicals, long service life and excellent resistance to mechanical stresses (deformation under pressure, bending cycles, pressure pulses).

Material:                   Soft PVC cover, black, oil-resistant  
                                   Soft PVC interlayer, black  
                                   Braid made from high-strength polyester fabric  
                                   Soft PVC interlayer, black  
                                   Soft PVC inner tube, red, oil-resistant

Temperature range:       -20 °C to +60 °C

Coil length:                50 m



193.09

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Art. No.	Ident No.	Tube I.D. mm	Tube O.D. mm	max. operating pressure at 23 °C bar	Burst pressure bar	Bending radius mm	Weight kg/m
193.06	113857	6.3	11	16	64	18	0.077
193.08	113858	8	13	16	64	25	0.100
193.09	113859	9	14.5	16	64	25	0.123
193.10	113860	10	15.5	16	64	35	0.134
193.13	113861	12.7	19	16	64	50	0.190
193.16	113862	16	23	16	64	70	0.254
193.19	113863	19	26.5	16	64	70	0.323
193.25	113864	25	33.5	16	64	120	0.469

## Essential conditions for secured application of hose assemblies

### 1. Selection of hose and fittings according demand (specification) by medium and application (working circumstances).

- Particles of liquid or solid agents may physically penetrate, respectively cause chemical reactions.
- Physical effects: causing change in volume of the hose material, consequently causing a change in its characteristics i.e. hardness, tensile strength, elongation.
- Chemical effects: causing change in chemical construction of hose material, causing change in properties (e.g.: plasticizers or ageing-protectors are decomposed causing possible spill or leakage).
- The permitted working pressure and vacuum are not to be exceeded.
- The permitted working temperature in interdependence with the medium is not to be exceeded.
- In case of abrasion always consider wear and tear, and regular checking of the hose is required.
- Hose assemblies may, in the process of use, never absorb dangerous electrical charges and where applicable the electrical resistance (measured over the hose from fitting to fitting) may not exceed the value of  $10^6 \Omega$ .
- The indicated overpressure on the plastic spiral hoses refers to a short-term pressure at 20°C. Multiple overpressure usage will lead to a weakened hose and will also reduce the lifetime of the hose.

### 2. Professional assembly

- The selection of hose and fittings must be made in correct sizes and attuned to each other.
- Assemblies of fittings may only be executed by experts and is always subjected to prevailing directives.

### 3. Correct storage

- Always keep the hoses dry and clean.
- Avoid influences from radiation of Ultra Violet and sunshine.
- Store tension free and kink free.
- Avoid temperatures under -10°C and over 30°C.

#### 4. Correct utilization

- Hose-assemblies must always be installed accessible for persons, in its natural position and unobstructed. Take into account that hoses under vacuum suffer from decrease in length, under pressure change in length and diameter will occur (non-reinforced PVC spiral hoses may elongate till 40% of its original length when maximum working pressure is applied).
- Hose-lengths may, in essence, not be claimed on their ability of torsion, elongation and pulling strength.
- Hose lengths may not be put under torsion, compression and extension.
- Hose lengths may not be bended below its bending radius, especially not behind its fittings.
- Hose lengths must be protected against exterior mechanical- thermal- or chemical affection.
- When required inspect and check electrical resistance of the hose lengths.

#### 5. Registration of procedure of instructions meeting regular education of employees. Readiness and use of appropriate personal safety equipments.

- To operate hose-lengths safely it is necessary to implement technical, personal and organisational measures for protection. Preference must be given to the technical and organisational measures. Should these not avoid all dangers, effective personal safety equipment must be provided and used.

#### 6. Regular inspections

- Hose-assemblies must be inspected by an expert prior to putting into use. Regular inspections are recommended then-after.
- Essential details of inspections should be:
  - Visual inspection of the hose:
    - sufficiently cleaned before inspection
    - kinks, bruises, deformations
    - chemical porosity or mechanical damage to inner tube and/or cover
    - damage, deformation or corrosion to the fittings
    - damage, deformation or missing of seals and washers
  - Pressure test, leak proof tests:
    - pores, leaks, kinks, bruises, blisters, deformations
    - unacceptable elongation, overextended torsion
    - leakage in hose-connection or fitting(s)
  - Inspection of electrical conductivity:
    - Testing results must be documented

Source: BG Chemie Merkblatt T002