GITA MARKETING CO.

TECHNICAL DATA SHEET

TDS
THERMOPLASTIC HOSE

SAE 100R7 / 100R8 · Polyester Braid · Compact High-Pressure

Gita Marketing Co.

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THERMOPLASTIC HOSE

Technical Data Sheet — SAE 100R7 / 100R8

Thermoplastic hoses combine a polyester-elastomer or nylon inner tube with one or two layers of high-tenacity synthetic fibre braid and a polyurethane outer cover. Compared to equivalent rubber hoses, they are significantly lighter, offer a tighter minimum bend radius, and maintain consistent bore dimensions under pressure. Manufactured by Polyhose India Pvt Ltd and distributed by Gita Marketing Co.

Construction

Inner Tube	Polyester elastomer (R7) or nylon/PA (R8) — smooth bore, oil-resistant
Reinforcement	One (R7) or two (R8) layers of high-tenacity polyester fibre braid
Cover	Polyurethane (PU) — abrasion, UV, and oil resistant
Colour	Black (standard); other colours available on request
End Fittings	Crimped or swaged: JIC, BSP, NPT, SAE, DIN — specify on order

Size & Pressure Range — SAE 100R7 (Single Braid)

Ratings per SAE J517 100R7. Values are for ambient temperature (20 degrees C). De-rate by 25% above 60 degrees C.

Dash	ID (mm)	ID (inch)	OD (mm)	W.P. (bar)	W.P. (psi)	Burst (bar)	Min. BR (mm)
-3	4.8	3/16"	9.5	207	3,000	830	65
-4	6.4	1/4"	11.1	207	3,000	830	75
-5	7.9	5/16"	12.7	172	2,500	690	90
-6	9.5	3/8"	14.3	172	2,500	690	115
-8	12.7	1/2"	17.5	138	2,000	550	150
-10	15.9	5/8"	21.0	103	1,500	414	190
-12	19.1	3/4"	24.6	83	1,200	330	230
-16	25.4	1"	31.8	69	1,000	276	305

Size & Pressure Range — SAE 100R8 (Double Braid)

R8 double-braid construction provides higher working pressure in the same compact envelope as R7.

Dash	ID (mm)	ID (inch)	OD (mm)	W.P. (bar)	W.P. (psi)	Burst (bar)	Min. BR (mm)
-3	4.8	3/16"	10.3	345	5,000	1,380	65
-4	6.4	1/4"	12.7	345	5,000	1,380	75
-5	7.9	5/16"	14.3	310	4,500	1,240	90

Dash	ID (mm)	ID (inch)	OD (mm)	W.P. (bar)	W.P. (psi)	Burst (bar)	Min. BR (mm)
-6	9.5	3/8"	15.9	280	4,000	1,120	115
-8	12.7	1/2"	19.1	250	3,625	1,000	150
-10	15.9	5/8"	22.2	210	3,000	840	190
-12	19.1	3/4"	25.4	175	2,500	700	230
-16	25.4	1"	33.3	140	2,000	560	305

Technical Specifications

Temperature Range	-40 degrees C to +100 degrees C continuous service
Peak Temperature	+120 degrees C (brief excursions only — de-rate pressure accordingly)
Low Temperature	Flexible to -40 degrees C; avoid pressurising a frozen hose
Fluid Compatibility	Petroleum-based hydraulic oils, synthetic fluids, water-glycol, water-oil emulsions
Cover Resistance	Excellent abrasion, UV, ozone, and oil resistance (polyurethane cover)
Standard (R7)	SAE J517 100R7
Standard (R8)	SAE J517 100R8
Safety Factor	Minimum 4:1 (burst : working pressure)
Advantages vs rubber	Lighter weight, tighter bend radius, consistent bore under pressure

Applications

- Mobile hydraulics — excavators, cranes, agricultural machinery
- Compact machinery where tight bend radii are required
- High-flex applications — machine tools, robotic arms
- Medium to high-pressure hydraulic circuits (up to 345 bar on R8)
- Return lines and drain lines in hydraulic systems
- Wind energy — hydraulic pitch and yaw control systems

Fluid Compatibility

Suitable	Petroleum hydraulic oils (HH, HL, HM, HV, HG types) | Water-glycol (HFC) | Water-oil emulsions (HFB) | Biodegradable hydraulic fluids
Not Suitable	Brake fluid (DOT 3/4) | Phosphate ester fluids | Concentrated acids or alkalis | Aromatic solvents | Steam

Installation & Handling

- Use only crimped or swaged fittings matched to the hose OD and wall — clamp fittings are not suitable.

- Respect minimum bend radius at all times. Thermoplastic hose does not recover from kinking.
- Route hoses away from exhaust systems and heat sources — sustained heat above 100 degrees C damages the cover.
- Do not twist the hose during installation. Mark the hose before fitting to check for twist.
- Support long horizontal runs at 500 mm intervals to prevent sag.
- Protect hose from abrasion at contact points using sleeves or clamps.
- De-pressurise before disconnecting fittings. Thermoplastic hoses can store energy.

Important

Working pressure must be de-rated when operating above 60 degrees C. Apply a 25% de-rating above 60 degrees C and do not exceed +100 degrees C for continuous service. Always confirm fluid compatibility before use with non-standard media. Contact Gita Marketing Co. for application review.

Standards & Compliance

R7 Hose Standard	SAE J517 100R7
R8 Hose Standard	SAE J517 100R8
Fitting Standard	SAE J516 | ISO 12151 | DIN 20078
Manufacturer ISO	ISO 9001:2015 | ISO 14001:2015 -- Polyhose India Pvt Ltd
Distributor ISO	ISO 9001:2015 | ISO 14001:2015 | ISO 45001:2018 -- Gita Marketing Co.

Ordering & Supply

Manufacturer	Polyhose India Pvt Ltd
Product Series	SAE 100R7 / 100R8 Thermoplastic Hose
Distributor	Gita Marketing Co., Bangalore
Supply	Cut hose | Assembled with crimped end fittings | Tested assemblies with certificate
Custom Lengths	Available -- contact for pre-cut kits and bulk reels
Lead Time	In-stock sizes: same day or next day | Custom assemblies: 24-48 hours
Contact	+91-89040-35515 | info@gitamarketing.com
Website	www.gitamarketing.com

Sources: Polyhose India Pvt Ltd · SAE J517 100R7 / 100R8 Standard · www.gitamarketing.com