



ARTIFICIAL LIFT ROD GUIDE COMPOUNDS

STRUCTURAL PRODUCT

FEATURES

- Rod guide compounds for high temperature applications.
- Compounds for high wear applications and chemically aggressive environments.
- Cost optimized compounds for marginal wells.

BENEFITS

- Longer life and more reliable rod guides.
- Reduced friction and abrasion resistant compounds.
- Increasing production with less down time for more profitability.
- Compounds for all levels of artificial lift requirements.
- RTP Company has a 30+ year history of supporting the oil and gas industry with engineered thermoplastic compounds.



RELIABILITY, LONGER LIFE

Imagine rod guide compounds designed specifically to provide the strength, wear performance and durability demands of oil field operators around the globe. At RTP Company, we not only imagined them, we've made them a reality.

Rod guides centralize the lifting rod in beam pumps and rotating rod in progressive cavity artificial lift pumps. By centralizing the rod they act as wear resistant bushings, limiting the amount of contact between the rod and production tubing. Rod guides also help to clear wax and debris from inside the tubing. RTP Company compounds are designed to meet the friction and abrasive wear resistance requirements for rotating and reciprocating rod applications.

In deviated wells and horizontally drilled unconventional wells, contact between production tubing and the sucker rod is a greater concern. RTP Company compounds designed for these applications increase mean time between failures, increasing well profitability and decreasing artificial lift cost.

INDUSTRY LEADING, HIGH PERFORMANCE COMPOUNDS

RTP Company engineers have formulated compounds specifically for all levels of downhole artificial lift requirements. Our rod guide compounds include RTP 1300 (PPS), RTP 4000 (PPA) and RTP 2200 (PEEK) series compounds designed for the extreme operating environments found in higher temperature wells. For lower temperature wells, RTP Company has developed lower cost RTP 2099X series compounds and an injection moldable UHMW-PE alloy RTP 700 series compound for customers looking to control costs on marginal wells.

Compounds presented in this bulletin are optimized for performance and provide a range of options to meet the needs of most customers. RTP Company excels at developing compounds specifically for your particular set of requirements regardless of geography, well type, or well depth.



RTP Company Corporate Headquarters • 580 East Front Street • Winona, Minnesota 55987 USA website: www.rtpcompany.com • email: rtp@rtpcompany.com

TELEPHONE:	U.S.A. +1 507-454-6900	SOUTH AMERICA +55 11 4193-8772	MEXICO +52 81 8134-0403	EUROPE +33 380-253-000	SINGAPORE +65 6863-6580	CHINA +86 512-6283-8383	Wiman Corporation +1 320-259-2554	ESP™ +1 800-432-2386
------------	---------------------------	-----------------------------------	----------------------------	---------------------------	----------------------------	----------------------------	--------------------------------------	-------------------------



ARTIFICIAL LIFT ROD GUIDE COMPOUNDS

PROPERTY AND CHEMICAL RESISTANCE

Please note mechanical properties and chemical resistance of a material decline as temperature increases. The below information is for general reference only and should not be used as the sole determining factor for material selection. Downhole conditions vary and should be addressed on a case-by-case basis to determine the best material for a specific set of conditions.

		Product Code:	RTP 799 X 138861 D	RTP 2099 X 140642	RTP 4099 X 135792	RTP 1399 X 138885 B	RTP 2205 HF
		Base Resin:	PE UHMW/GF/Alloy	Nylon 6/6 Alloy	PPA	PPS	PEEK
Property	ASTM						
Specific Gravity	D792	g/cm3	1.1	1.3	1.6	1.68	1.52
Izod Notched	D256	ft-lbs/in	5	1.8	1.2	1.4	2.2
Izod Unnotched	D4812	ft-lbs/in	15	12	11	8	17
Tensile Strength	D638	PSI	7,500	17,000	19,000	21,000	25,000
Tensile Elongation	D638	%	8.00%	2.5 - 4.0%	2%	1.5%	2.5%
Tensile Modulus	D790	x106 PSI	0.42	1.30	1.80	2.3	1.7
Flexural Strength	D790	PSI	8,000	25,000	27,000	30,000	37,000
Flexural Modulus	D790	x106 PSI	0.37	1.20	1.40	2.1	1.6
HDT	D648	@66psi	257F	394F			
		@264psi			520F	500F	600F
		Acceptable for:					
		Hot Oiling	No	Yes	Yes	Yes	Yes
		Sweet Crude	Yes	Yes	Yes	Yes	Yes
		Sour Crude	Yes	No	Yes	Yes	Yes
		Sand	Yes	Yes	Yes	Yes	Yes
		Water	Yes	Yes	Yes	No	Yes
		Brine	Yes	Yes	Yes	Yes	Yes

Other data on specific properties and RTP Company compounds are available on our website at www.rtpcompany.com

RTP COMPANY: YOUR GLOBAL COMPOUNDER OF CUSTOM ENGINEERED THERMOPLASTICS



No information supplied by RTP Company constitutes a warranty regarding product performance or use. Any information regarding performance or use is only offered as suggestion for investigation for use, based upon RTP Company or other customer experience. RTP Company makes no warranties, expressed or implied, concerning the suitability or fitness of any of its products for any particular purpose. It is the responsibility of the customer to determine that the product is safe, lawful and technically suitable for the intended use. The disclosure of information herein is not a license to operate under, or a recommendation to infringe any patents.