

## Platinum Silicone

Silicone is widely used in pharmaceutical applications for two major reasons. First, and foremost, is safety. Silicone does not contain plasticizers or other additives that could leach into a drug product and cause toxicological issues. Second, silicone is highly flexible and tear-resistant, making it a good choice for sealing fluids in downstream processes.

In order to make silicone gaskets there are two cure system options with silicones, however, that produces materials with different characteristics, whose impact should be considered before selection. Silicone materials may be cured using free radical (peroxide) or addition (platinum) cure mechanisms.

Platinum-cured and peroxide-cured silicone gaskets can both be made to USP Class VI and other industry specifications, but a platinum-cured gasket has a higher purity and lower leachability than peroxide-cured silicone.



### General Advice

SIP -----Very good  
 CIP ----- Very good  
 Minerals Oils & Grease ----- Poor  
 WFI ----- Good  
 Sterilization ----- Excellent  
 Steam Sterilization----- Excellent

**Working temperature and pressure**  
 The working range of platinum silicone is -60°C to 200°C. Platinum Silicone gaskets can be used up to 10 Bar at 20°C.

Typical general characteristics	Inspection Method	Requirements	Value
Hardness (Shore A)	ISO 7619-1	75±5	76
Appearance			Transparent
Tensile strength (N/mm <sup>2</sup> )	ISO 37 Type 1	7.0(min)	8.2
Elongation (%)	ISO 37 Type 1	200 (min)	268
Tear strength (N/mm)	ASTM D 624 B	10.0(min)	12
Specific Gravity (g/cm <sup>3</sup> )	ISO 1183-1		1.15