

## *Dow Corning*<sup>®</sup> QP1-30 Silicone Elastomer *Dow Corning*<sup>®</sup> QP1-50 Silicone Elastomer *Dow Corning*<sup>®</sup> QP1-60 Silicone Elastomer *Dow Corning*<sup>®</sup> QP1-70 Silicone Elastomer

### **FEATURES**

- No phthalates or latex additives
- Solventless
- Can be post-cured
- Pigmentable

### **BENEFITS**

- Flexible Cure System
- United States Pharmacopeia (USP) Class VI
- Tissue Culture testing warranted

### **COMPOSITION**

- One-part uncatalyzed silicone elastomer raw material

Translucent, Uncatalyzed Silicone Rubber Base

### **APPLICATIONS**

*Dow Corning*<sup>®</sup> QP1 Silicone Elastomer Bases are an uncatalyzed material designed for compounding into elastomer used for part fabrication of medical devices and device components including those intended for implantation in humans for less than 30 days and non-implant applications.

### **DESCRIPTION**

*Dow Corning* QP1 Silicone Elastomers are a one-part high consistency rubber base which is supplied absent any catalyst. Once compounded with peroxide or platinum masterbatch ingredients it can be used to fabricate parts by extrusion, calendaring or molding. When compounded and cured as indicated, the resulting elastomer consists of cross-linked dimethyl and methyl-vinyl siloxane copolymers and reinforcing silica.

### **HOW TO USE**

These silicone elastomers are supplied as a one-part uncatalyzed silicone high consistency rubber that must be thoroughly mixed with a catalyst.

When choosing to work with platinum catalyzed products, Dow Corning provides platinum masterbatch ingredients, *Dow Corning*<sup>®</sup> QP1-47 Cross Linker, *Dow Corning*<sup>®</sup> QP1-48 Cure Controller and *Dow Corning*<sup>®</sup> QP1-51 Catalyst which can be mixed into the *Dow Corning* QP1 Silicone Elastomer.

Typically, a two-roll mill is used for the blending process.

### **BLENDED**

When using a two roll mill, it is recommended to first mix *Dow Corning* QP1-XX Silicone Elastomer with *Dow Corning* QP1-51 Catalyst and *Dow Corning* QP1-48 Cure Controller. When the three parts are mixed sufficiently, *Dow Corning* QP1-47 Cross Linker can be added to the mill and blended together.

### **CAUTION**

Curing with platinum components may be inhibited by traces of amines, sulfur, nitrogen oxide, organotin compounds and carbon monoxide. Because organic rubbers often contain these substances, they should not come into contact with the uncured elastomer. Catalyst residues from some room temperature vulcanized and peroxide-cured silicone elastomers may also inhibit the cure.

**HANDLING PRECAUTIONS**  
PRODUCT SAFETY INFORMATION REQUIRED FOR SAFE USE IS NOT INCLUDED IN THIS DOCUMENT. BEFORE HANDLING, READ PRODUCT AND MATERIAL SAFETY DATA SHEETS AND CONTAINER LABELS FOR SAFE USE, PHYSICAL AND HEALTH HAZARD INFORMATION. THE MATERIAL SAFETY DATA SHEET

IS AVAILABLE ON THE DOW CORNING WEB SITE AT DOW CORNING.COM, OR FROM YOUR DOW CORNING SALES APPLICATION ENGINEER, OR DISTRIBUTOR, OR BY CALLING DOW CORNING CUSTOMER SERVICE.

## USABLE LIFE AND STORAGE

When stored at or below 50°C (122°F) in the original unopened containers, these products have useable life of 15 months from the date of production.

## PACKAGING INFORMATION

If sourced from the Americas, *Dow Corning* QP1-Silicone Elastomer is supplied in 22.6 kg (50 lb) and 453.5 kg (1000 lb) boxes.

If sourced from Europe, *Dow Corning* QP1 Silicone Elastomer is supplied in 20 kg (44 lb) and 500 kg (1102 lb) boxes.

The platinum masterbatch products are provided in the following package sizes. *Dow Corning* QP1-47 Cross Linker is supplied in 1 kg (2.2 lb) and 20 kg (44 lb) boxes; *Dow Corning* QP1-48 Cure Controller in 1 kg (2.2 lb) and 13.6 kg (30 lb) pails; *Dow Corning* QP1-51 Catalyst in 1 kg (2.2 lb) and 20 kg (44 lb) boxes.

## TESTING

*Dow Corning* has completed testing of *Dow Corning* QP1 Silicone Elastomers according to the United States Pharmacopeia (USP) Class VI. Documentation which supports compliance can be obtained from *Dow Corning*.

## IMPORTANT INFORMATION THE USER'S ATTENTION IS IN PARTICULAR DRAWN TO THE FOLLOWING STATEMENT:

*It is the User's responsibility to ensure the safety and efficacy of these materials for all intended uses. Dow Corning makes no representation concerning the suitability of these products for any healthcare or pharmaceutical application. Under no circumstances should these materials be considered for implantation into the human body for periods that exceed 30 days in duration.*

## HEALTH AND ENVIRONMENTAL INFORMATION

To support Customers in their product safety needs, *Dow Corning* has an extensive Product Stewardship organization and a team of Product Safety and Regulatory Compliance (PS&RC) specialists available in each area.

For further information, please see our Web site, [dowcorning.com](http://dowcorning.com), or consult your local *Dow Corning* representative.

## LIMITED WARRANTY INFORMATION – PLEASE READ CAREFULLY

The information contained herein is offered in good faith and is believed to be accurate. However, because conditions and methods of use of our products are beyond our control, this information should not be used in substitution for customer's tests to ensure that our products are safe, effective, and fully satisfactory for the intended end use. Suggestions of use shall not be taken as inducements to infringe any patent.

*Dow Corning's* sole warranty is that our products will meet the sales specifications in effect at the time of shipment.

Your exclusive remedy for breach of such warranty is limited to refund of purchase price or replacement of any product shown to be other than as warranted.

**DOW CORNING SPECIFICALLY DISCLAIMS ANY OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE OR MERCHANTABILITY.**

**DOW CORNING DISCLAIMS LIABILITY FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES.**

*We help you invent the future.™*

[dowcorning.com](http://dowcorning.com)

## TYPICAL PROPERTIES

Specification Writers: These values are not intended for use in preparing specifications. Please contact your local Dow Corning sales office or your Global Dow Corning Connection to learn more about physical properties before writing specifications on this product.

### Cure conditions:

As Molded conditions (PD-50S): (5 minutes @ 116°C)

As Molded conditions (Platinum Masterbatch): (5 minutes @ 170°C)

Post Cure conditions: (4 hours @ 200°C)

### PERKADOX PD-50S<sup>1</sup>

Dow Corning® QP1 Silicone Elastomer Bases			QP1-30		QP1-50		QP1-60		QP1-70	
			As Molded	Post Cured	As Molded	Post Cured	As Molded	Post Cured	As Molded	Post Cured
Specific Gravity	NA	CTM0022	1.09	NA	1.13	NA	1.16	NA	1.20	NA
Durometer	Shore A	CTM0099	28	28	49	48	56	57	66	68
Tensile Strength	Mpa	CTM0137A	10.8	9.6	11.8	11.9	12.8	13.0	12.7	12.7
	psi	CTM0137A	1569	1394	1713	1729	1853	1891	1835	1836
Modulus at 200%	Mpa	CTM0137A	0.8	0.8	2.4	2.4	3.1	3.0	4.1	4.3
	psi	CTM0137A	120	122	348	349	447	440	601	628
Elongation	%	CTM0137A	858	798	552	547	543	539	474	472
Tear Die B	kN/m	CTM0159A	13.5	12.8	18.0	16.8	22.6	21.7	24.7	24.5
	ppi	CTM0159A	77	73	103	96	129	124	141	140
Compression Set 22HR/177°C	%	CTM0085	38.7	41.9	43	39	63	45	75	53

### PLATINUM MASTERBATCH<sup>2</sup>

Dow Corning® QP1 Silicone Elastomer Bases			QP1-30		QP1-50		QP1-60		QP1-70	
			As Molded	Post Cured	As Molded	Post Cured	As Molded	Post Cured	As Molded	Post Cured
Specific Gravity	NA	CTM0022	1.09	NA	1.13	NA	1.17	NA	1.20	NA
Durometer	Shore A	CTM0099	20	34	41	47	51	57	65	70
Tensile Strength	Mpa	CTM0137A	7.3	7.0	10.7	9.5	10.1	10.0	10.2	9.8
	psi	CTM0137A	1066	1012	1547	1380	1461	1402	1485	1428
Modulus at 200%	Mpa	CTM0137A	0.5	1.0	1.1	1.6	1.5	2.0	2.8	3.6
	psi	CTM0137A	67	152	166	225	215	283	406	526
Elongation	%	CTM0137A	1171	702	883	722	809	838	612	602
Tear Die B	kN/m	CTM0159A	31.7	18.4	38.7	33.8	46.9	37.5	43.8	32.4
	ppi	CTM0159A	181	105	221	193	268	214	250	185
Compression Set 22HR/177°C	%	CTM0085	86	20	63	18	60	18	56	21

<sup>1</sup>100 parts Dow Corning® QP1-XX Silicone Elastomer  
1.2 parts PD-50

<sup>2</sup>100 parts Dow Corning® QP1-XX Silicone Elastomer  
2.0 parts Dow Corning® QP1-47 Cross Linker  
0.3 parts Dow Corning® QP1-48 Cure Controller  
1.4 parts Dow Corning® QP1-51 Catalyst

\*CTM: (Corporate Test Method) corresponds to American Standard Test Methods (ASTM) Copies of CTMs are available upon request.

NA: Not Applicable