Product Datasheet

SP&S
Specialty Polymers and Services

Silfex 380A/B

55A –60A Durometer, Addition Curing, High Strength Moldmaking Material

Product Description
Silflex 380A/B is a two-component, room temperature, addition curing silicone material. The cured rubber has excellent mechanical properties and good shelf-life stability. This material is an excellent choice for the molding of furniture, picture frame, architectural decorations, and other applications where high durometer, dimensional stability and an extremely tough rubber are required.

Key Features
- High Durometer
- Resistant to attack by most casting resins
- Fast demold time
- Excellent dimensional stability
- RoHS and REACH Compliant

Main Applications
- Rubber Roller production
- Molds for statues & decorative applications
- Molds for polyester, epoxy, and polyurethane castings, including foaming systems
- Molds for technical articles and prototypes
- Molds for furniture and picture frame replication

Typical Properties

UNCATALYZED PROPERTIES		
Parameter	**Silflex 258A (Base)**	**Silflex 258B (catalyst)**
Appearance	Beige	Green
Viscosity at 25°C	125,000 cps	5,000 cps
Specific Gravity	1.28	1.03

CATALYZED PROPERTIES: Mix ratio 10A:1B parts by weight	
Catalyzed Color	Light Green
Initial Viscosity	100,000 cps
Specific Gravity	1.28
Work-life*	60 minutes
Demold Time	12-18 hours
Shore A Hardness, 24 hours at 25°C	55A

*Work-life is defined as the time at which the catalyzed viscosity has doubled.

TYPICAL CURED PROPERTIES (cured 3 Days @ 25°C or 30 minutes at 150°C)	
Property	**Results**
Shore A Hardness	62A
Tensile strength	930 psi
Tensile Elongation	>230%
Tear Strength	110 ppi
Linear Shrinkage	< 0.1
Temperature Range of Use	-55°C to + 204°C (-67°F to +400°F)

Note: Not for Product Specification Purposes – these are typical values. Please contact us for assistance in writing purchasing specifications.

Curing Characteristics

The curing process begins as soon as the catalyst is mixed with the base. Under normal temperature (25°C) and humidity (50% RH) conditions, the material will cure as described in the data above. Because this system is sensitive to heat and humidity, a change in cure speed may be seen if one or both of these variables are altered. A large difference in temperature (+/-5°C) or humidity (>60-70%) may change the cure profile of the material. In addition, if the product is to be used with aggressive resins such as high styrene content polyester resins, it is recommended that the rubber be allowed to cure for at least 48 hours prior to use.

Mixing and De-aeration

The following procedure should be followed for obtaining optimal performance from the Silflex 380A/B. Mix each component thoroughly in its own container. Once uniform, add 100 parts, **by weight**, of Silfex 380A and 10 parts**, by weight**, of Silflex 380B into a clean, compatible metal or plastic container. The volume of the container should be at least 3-4 times the volume of the material to be mixed. This allows for expansion of the material as it de-gasses.

Mix thoroughly by hand or with mixing equipment until a homogeneous mixture is obtained. This will occur when the material takes on a uniform color with no visible striations. Once mixing is complete it is recommended that the material be de-aired. A vacuum level of > 29 inches of mercury will typically be sufficient to de-air the material. The material will expand as it is placed under vacuum. Breaking the vacuum 2-3 times may help to break the air bubbles. After a couple of minutes the foam will typically begin to break and collapse. Once this occurs, continuing to vacuum de-gas for about 2-4 minutes is normally sufficient to achieve excellent results. Material mixed by automated meter-mix equipment or from dual syringe dispensing cartridges typically does not need to be vacuum de-gassed.

Shelf-life and Storage

Silflex 380A/B should be stored in their original, sealed containers in an environment that does not exceed 38°C (100°F). Under these conditions the expected shelf-life of the material is 12 months.

FIRST AID
In case of contact:
Skin – Immediately wash skin thoroughly with mild soap and water. Remove contaminated clothing and wash before reuse. Destroy contaminated shoes and other articles made of leather.
Eyes – Immediately flush eyes with plenty of water for 15 minutes and get prompt medical attention.
Inhalation - Remove person to fresh air. Administer oxygen or artificial respiration if necessary. Call a physician.
Ingestion - Do not induce vomiting. Dilute with plenty of water and contact physician immediately. Never give anything by mouth to an unconscious person.

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