



# Padsil-A20

High Performance Silicone Rubber for Industrial Prototyping

## Product Technical data sheet

### PRODUCT DESCRIPTION

**PADSIL-A20** is a *premium* grade addition curing type Silicone RTV, recommended for pad printing application. This is a flowable grade, having high mechanical strength and cures with various catalyst options (depending on the application requirements) at room temperature to a flexible elastomer, well suited for pad printing applications. PADSIL-A20 will reproduce the finest detail of the master and is suitable for a variety of pad printing applications.



### PRODUCT FEATURES

- Flowable type high strength silicone rubber curing at room temperature – Excellent detail reproduction.
- Good mechanical properties - leading to long service Life.
- Highly elastic and excellent release properties – for high number of impressions and good printing effects .
- Excellent chemical resistance – compatible with most printing media.
- Good Resiliency.
- Excellent Transfer from the pad to the substrate.

### APPLICATIONS

- ❑ PADSIL-A20 offers a good combination of good flow, high mechanical properties and excellent detail reproduction with good service life in pad printing applications.
- ❑ PADSIL-A20 is compatible with several print media.
- ❑ PADSIL-A20 is well suited for *pad printing* applications used in printing on curved surfaces.

### TECHNICAL OVERVIEW

#### UNCURED PROPERTIES OF PADSIL-A20

PROPERTY	STANDARD	UNITS	VALUE
Colour Part A Part B			Translucent Transparent
Viscosity Part A Part B		m.Pa.s	9000 2000
Mixing Ratio A: B		W:W	10:1
Work-life (23°C)		min.	90
Demold time (23°C)	ASTM D-2471	hr.	~24

#### CURED PROPERTIES\* (72 hours@ 23°C)

PROPERTY	STANDARD	UNITS	VALUE
Hardness	ASTM D-2240	Shore A	20
Specific Gravity (23°C)	ASTM D-1475		1.09
Tensile Strength	ASTM D-412	MPa	4
Elongation	ASTM D-412	%	280
Tear Strength	ASTM D-624	N/mm	18
Linear Shrinkage		(%)	<0.1

\*Typical Properties, should not be used as specification

## INSTRUCTIONS FOR USE

- ❑ **Surface Preparation:** For prototyping or reproduction the master surface should be clean, free of loose materials and dust particles. With porous substrates use a suitable release agent such as petroleum jelly or soap solution. Contact with certain materials such as sulfur containing rubbers (natural rubber) chlorinated rubbers, Tin cured silicone RTVs, should be avoided as these materials can cause cure inhibition.
- ❑ **Mixing of Components:** Thoroughly stir Pasil-A20<sub>1</sub> before use. Select a container for mixing which is 4-5 times larger than the total material to be mixed. Weigh the A and B components in the desired ratio<sub>2</sub> (ex: 100:10). Stir vigorously for several minutes scraping the sides and the bottom of the container to produce a homogeneous mix. Hand or mechanical (power) mixing can be used but do not mix for an extended period of time to avoid entrapping large amounts of air or causing over heating resulting in shorter work life.
- ❑ **De-aeration :** It is recommended that entrapped air be removed under vacuum (about 20 mm of mercury) to eliminate voids in the final product. This process will make the mixture to expand and then collapse. A volume increase of about 4-5 times occur will during the de-aeration. Therefore, a large container should be used to accommodate this volume change. De-aeration is usually continued for about 2 minutes after frothing ceases.
- ❑ **Pouring the Mix and Curing:** The mix should be poured as soon as possible on to the original master to avoid air entrapment This system is sensitive to temperature and therefore can influence the cure speed. However, the material will cure to a flexible rubber within 24 hours at room temperature.

## HANDLING PRECAUTIONS AND SAFETY

Padsil-A20 contains constituents that have been found to be neither toxic nor aggressive and are safe for use. Hence special handling precautions except general industrial hygiene need to be followed. Adequate protective measures are recommended. Refer to Material Safety Data Sheet (MSDS) for safe use of the product

## USABLE LIFE AND STORAGE

The shelf life of Padsil-A20 and the catalyst is 6 months from the date of manufacturing if stored below 27° C in original unopened containers. Store the material in a cool place out of direct sunlight. Keep the material out of the reach of children.

## PACKING

Padsil-A20 is available in following kit forms :

- Kit of 11.0 kg (10 kg Padsil-A20 Part A + 1kg Padsil-A20 Part B)
- Kit of 5.50 kg (5 kg Padsil-A20 Part A + 500 gram Padsil-A20 Part B)  
4 such kits (22 kg) packed in a cardboard box
- Kit of 1.10 kg (1 kg Padsil-A20 Part A + 100 grams Padsil-A20 Part B)  
10 such kits (11 kg) packed in a cardboard box

## LIMITATIONS

It is the responsibility of the user to determine the suitability of this product for the intended application. The contents of this data sheet are subjected to change without notice.

**Padsil-A20** is manufactured in India by :

### Performance Polymers

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Limited Warranty : The information mentioned in this data sheet is a description of the product to the best of our knowledge. Recommendations for use do not constitute a warranty of the fitness for a particular use. It is the user's responsibility to thoroughly test the product in a particular application to determine its performance and safety.