Transil Gel 20

Fast-Curing Platinum Cured Silicone Rubber suitable for Spray Application

1. Introduction

Transil Gel 20 is a two component platinum cured silicone rubber that crosslinks at room temperature by a poly- addition reaction. The polymerisation can be accelerated by heat (max. 150 °C).

The silicone components are delivered as two component low viscous liquids, which once mixed and cured, cures to a transparent, elastic and resistant material. Polymerisation occurs without formation of heat.

2. Benefits

- Moderate shore hardness (20 A) with good mechanical properties
- Easy mixing (1 : 1) and easy processing due to the low viscosity
- Outstanding transparency
- Accurate reproduction of details

3. Typical Properties (liquid)

Property	Units	Transil Gel 20 Part A	Transil Gel 20 Part B
Viscosity @25°c	cps	~700-1200	~600 -1200
Specific Gravity @25°c	g/cm^3	~1.08-1.1	~1.08-1.1
Appearance	-	Translucent, colourless thin liquid	Translucent, colourless thin liquid

4. Typical Properties (cured)

Property	Units	Test Method	Transil Gel 20 Part A
Shore A hardness	°	DIN 53 505	20
Tensile strength	N/mm2	DIN 53 504 – specimen S3A	>5.0
Elongation	%	DIN 53 504 – specimen S3A	~300-350 %
Tear strength	N/mm	ASTM D 624 – die B	> 10.0 N/mm
Shrinkage After 7d/23 °C	%	-	< 0.1 %

5. Mixing ratios, curing times

Property	Units	Value
Mixing Ratio	Pbw	Transil Gel 20 Part A - 100
	Pbw	Transil Gel 20 Part B - 100
Mixed viscosity at 23°C	Cps	~800-1200
Working time at 23°C	Minutes	4-5
Tack-free time at 23 °C	Hours	<1
De-mould time at 23°C	House	30/40

Description
Versatile Addition Curing Silicone Rubber

Form
Two component liquid curing system

Cured Hardness
20 Shore A

Mix Ratio
1:1

Reactivity
Pot life ~ 4 minutes
De-mould ~30-40 mins

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6. Instructions for use

i. Mixing the two components

Transil Gel 20 A and Transil Gel 20 B are mixed by weight in a fixed ratio given above.

The two components may be thoroughly mixed either by hand or using a low-speed electric or pneumatic mixer to minimise the introduction of air and to avoid any temperature increase.

Note: It is also possible to use a special mixing and dispensing machine for the two silicone components. Further information is available upon request.

ii. Moulding

The mixture should be degassed preferably at 30 to 50 mbar to eliminate any entrapped air. If a dispensing machine is used, the two components are degassed separately prior to mixing.

The silicone mixture expands to 3 to 4 times of its initial volume and bubbles rise to the surface. The bubbles progressively disappear and the mixture returns to its initial volume after 5 minutes or so. Wait a few minutes to complete the degassing and then flash the vacuum. The silicone is ready for pouring, either by gravity or under low pressure.

Note: Flashing the vacuum once or twice accelerates the degassing. It is recommended to use a container with a high diameter / height ratio (3 to 4 times of the initial volume)

iii. Polymerisation

The RTV-system, as indicated in the technical data, polymerises at 23 °C. The curing may be slowed down at lower temperature and contrary accelerated by applying heat.

Note: In general contact with certain materials can inhibit the crosslinking of RTV. See list below:

Natural rubbers vulcanised with sulphur,
RTV elastomers catalysed with metal salts, e.g. tin-compounds,
PVC stabilised with tin salts and additives, epoxy catalysed with amines, certain organic solvents, e.g. ketones, alcohols, ether etc.

In case of doubts, it is recommended to test the substrate by applying a small quantity of the mixed silicone on a restricted area.

7. Packaging, storage and shelf-life

Transil Gel 20 is available in a range of kit sizes:- 2kg, 10kg and 20kg. Larger sizes can be provided upon request.

Transil Gel 20 should be stored below 30°c. Under these conditions, shelf-life in the original, unopened containers is twelve months

8. Safety Considerations

The usual safety precaution have to be taken into consideration in case of contact with Transil Gel 20 A/B.

Detailed information is given in the Material Safety Data Sheet.

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