

RHODORSIL[®]

RTV 4082/8 A - RTV 140/8 B

Sub-market and range

Description	<p>Rhodorsil RTV 4082/8 A and RTV 140/8 B is a two component silicones elastomer which cures at room temperature by a polyaddition reaction. Cure can be accelerated by heating.</p> <p>Rhodorsil RTV 4082/8 and RTV 140/8 B are supplied in the form of liquid products which are transformed after mixing and curing of part A and part B into a strong elastic material</p>
--------------------	--

Examples of applications	<ul style="list-style-type: none"> • Coating and encapsulation in electro-technical and electronics applications • Production of electrical insulators (e.g. electrical cable terminations)
---------------------------------	---

Advantages	<ul style="list-style-type: none"> • Good Mechanical Properties combined with high Shore A hardness • Good Dielectric Properties • Good Flame and Thermal Properties • Fast mixing and easy processing (10:1)
-------------------	---

Characteristics (non cured product)	Properties	RTV 4082/8 A	RTV 140/8 B
	Aspect	Viscous Liquid	Viscous Liquid
	Colour	Black	Transparent
	Viscosity, at 23°C, mPa.s approx.	30.000	1.500
	Specific gravity at 23°C, g/cm ³ approx.	1,30	1,10

Mixing and Processing		RTV 4082/8 A	RTV 140/8 B
	Mixing Ratio	100 parts	10 parts
	Colour	Black	
	Pot Life (at 23°C 50% RH , minutes)	120	
	Demoulding Time (at 23°C 50% RH , hours)	8	

RHODORSIL[®] RTV 4082/8 A - RTV 140/8 B

Higher temperatures reduce pot life while lower temperatures increase pot life. If curing is accelerated by heat properties of **RTV 4082/8 – 140/8 A+B** are not modified; however dimensional changes do occur during post curing and users should take in account of it.

Remix each of the 2 components (part A and part B) every time before using.

Manual Mixing of the two component

Add **100 parts of Rhodorsil RTV 4082/8 A to 10 parts of RTV 140/8 B**. The two components must be intimately mixed either by hand or using a low speed electric or pneumatic mixer to minimize the introduction of the air into the mixture.

Degassing

The mixture of the two components should be degassed to remove air bubbles which would reduce mechanical and dielectric properties.

Degassing is generally performed in a vacuum of 30 to 50 mbars. When the vacuum is applied product expands 3-4 times its initial volume and bubbles appear at the surface. Once bubbles disappear the mixture collapses back to its initial volume. Releasing the vacuum once or twice during the operation will improve and facilitate air removal. To complete degassing simply wait several minutes before releasing definitively the vacuum, then product will be ready to use. Use of a container with high diameter/height ratio will ease the operation as well.

Automatic Mixing Machine

Rhodorsil RTV 4028/8 A and 140/8B can be used in automatic metering and mixing devices using both dynamic or static mixer enabling the right blending ratio and accurate mixing of the components.

Pouring

Pour the degassed material slowly in a steady stream from one edge of the mould in order to minimize air entrapment,

Crosslinking

At room temperature (23° C) Rhodorsil RTV 4082/8 – 140/8 A&B cures in approx 24 hours regardless the thickness of the mould. Room temperature curing assure the lowest possible shrinkage, if accelerated cure is required, mild heat should be preferred. To minimize shrinkage cure the elastomer at a maximum temperature of 60°C for 3-4 hours, higher temperatures will cause higher shrinkage.

Conversely at lower temperatures cure speed slows down; at 20° C 36 hours may be necessary to achieve the complete cross-linking.

Inhibition

Be aware that contact with certain material can inhibit the curing of this RTV. Common contaminants to be avoided are:

- Natural or synthetic rubbers vulcanized with sulphur derivatives
- Policondensation RTV catalysed with metallic salts
- PVC stabilizing agents
- Amine cured epoxies
- Sulphur, Tin and Amines derivatives

In case of doubt it's recommended to carry out a small test by pouring the mixture onto a small area of the object.

Be also aware of possible cross-contamination; it's highly recommended to use only dedicated gear when processing polyaddition RTVs (including degassing devices)

Ensure that the packaging is hermetically sealed again each time it is used.

RHODORSIL[®] RTV 4082/8 A - RTV 140/8 B

**Characteristics
(Crosslinked product)**

Mechanical Properties	RTV 4082/8 A + 140/8 B
Shore A Hardness <i>(after 24 H)</i>	42 approx
Tensile Strength at Break <i>(MPa)</i>	5
Elongation at Break <i>(%)</i>	400
Tear Strength <i>(KN/m)</i>	20

Flammability Properties	
Self- extinguishibility 3 mm	UL94 V1
Self- extinguishibility 13 mm	UL94 V0
Limit oxygen index % (3mm) NF T 51-071 & NF EN ISO 4589-2 (1999)	29,3
Limit oxygen index % (13 mm) NF T 51-071	38,9
Flame Classification NF F 16-101	I3
Smoke Density (3 mm) NF F 16-101 With Flame Maximum Optical Density (Dm) Darkness by the Smoke (V0F4)	138,7 127,3
Without Flame Maximum Optical Density (Dm) Darkness by the Smoke (V0F4)	107,7 21
Gas Toxicity Conventional Toxicity Index NF X 70-100-2 (2001) NF X 70-100-1 (2001)	8,53
Smoke Index NF F 16-101 Table 4	10
Smoke Rating NF F 16-101 Table 4	F1

RHODORSIL[®] RTV 4082/8 A - RTV 140/8 B

Remarks: Combination of Flame Classification **I3** and Smoke Index **F1** allows **Rhodorsil RTV 4082/8 – 140/8 A&B** as responding to fire behaviour requirement described in the grids 10,11,12 and 13 (authorised) and grids 4, 8 and 9 (under agreement of the end user) for the material used internally or externally in rail machineries A1,A2 and B according to AFNOR NF F 16-101 tables 8 and 9.

For which concerns electrical devices, Rhodorsil RTV 4082/8 – RTV 140/8 A&B responds to what is described by AFNOR NF F 16-102 table 1 requirement 1 & 2

Characteristics (Crosslinked product)

Dielectric Properties	RTV 4082/8 A + 140/8 B
Dielectric Strenght (<i>kV/mm</i>) AFNOR NF C 26226 50Hz	> 14,3
Volume Resistivity (<i>ohm.m</i>) AFNOR NF C26215	$5,5 \cdot 10^{13}$
Surface Resistivity (<i>ohm</i>) AFNOR NF C 26215	$4,3 \cdot 10^{16}$
Tracking Index CEI 60587	1A 3,5

Packaging

Rhodorsil RTV 4082/8 A is delivered in 25 KG plastic pails while RTV 140/8 B is delivered in 2,5 KG metal cans.

Storage and shelf life

When stored in its original unopened packaging, at a temperature of between 5°C and 25°C, the **Rhodorsil RTV4082/8A and Rhodorsil RTV 140/8 B** may be stored for up to 12.months from the date of manufacture clearly marked on the packaging.

Beyond this date, Bluestar Silicones no longer guarantees that the product meets the sales specifications.

Safety

Please consult the Safety Data Sheet of **Rhodorsil RTV4082/8 A and Rhodorsil RTV 140/8 B**

RHODORSIL[®] RTV 4082/8 A - RTV 140/8 B

sit our website www.bluestarsilicones.com

 **EUROPE**

Bluestar Silicones France
21 Avenue Georges
Pompidou
F69486 Lyon Cedex 03
FRANCE
Tel. (33) 4 72 13 19 00
Fax (33) 4 72 13 19 88

 **NORTH AMERICA**

Bluestar Silicones USA
2 Tower Center
Boulevard
Suite 1601
East Brunswick, NJ
08816-1100
United States
Tel. (1) 732 227-2070
Fax. (1) 732 249-7000

 **LATIN AMERICA**

*Bluestar Silicones
Brazil Ltda.*
Av. Maria Coelho
Aguiar, 215
Bloco B - 2o. andar -
Parte 1
CEP 05804-902-Sao
Paulo/SP Brazil
Tel. (55) 11 3741 8860
Fax (55) 11 3741 7718

 **ASIA PACIFIC**

*Bluestar Silicones Hong
Kong
Trading Co. Ltd.*
Unit C, 18/F Manulife
Tower
169 Electric Road
North Point-Hong Kong
Tel. (852) 3106 8200
Fax (852) 2979 0241

Warning to the users

The information contained in this document is given in good faith based on our current knowledge. It is only an indication and is in no way binding, particularly as regards infringement of or prejudice to third party rights through the use of our products. BLUESTAR SILICONES guarantees that its products comply with its sales specifications. This information must on no account be used as a substitute for necessary prior tests which alone can ensure that a product is suitable for given use. Users are responsible for ensuring compliance with local legislation and for obtaining the necessary certifications and authorisations. Users are requested to check that they are in possession of the latest version of this document and BLUESTAR SILICONES is at their disposal to supply any additional information.

RHODORSIL[®] RTV 4082/8 A - RTV 140/8 B