

BLUESTAR
SILICONES

Delivering
your
potential.

Bluesil★

Adhesives silicones solutions

for electronic devices & electrical engineering

www.bluestarsilicones.com



Silicones solutions for on board electronics

Silicones materials ensure that electrical and sensitive electronic components work in a safe and reliable way. They are used in automotive, aerospace, consumer electronics, solar, lighting with a wide variety of functions: protection against environment, bonding and sealing. Bluestar Silicones propose a range of specific products for conformal coating, potting, encapsulating, sealing, bonding and thermal conduction.



Presenting silicones solutions Bluesil™ ESA RTV-2 and gels for potting & encapsulation applications

Bluesil™ ESA GELS (1:1 ratio)

	ESA 6024 A&B ESA 6020 A&B	ESA 6016 A&B	ESA 6110 A&B ESA 6110 QC A&B	ESA 6120 QC A&B	ESA 6000 HT A&B
Main characteristics	<ul style="list-style-type: none">• self-adhesive (tacky)• high damping• low extractibles	<ul style="list-style-type: none">• inherent tack• high damping• low extractibles	<ul style="list-style-type: none">• optically clear• shock absorption• self-adhesive (tacky)	<ul style="list-style-type: none">• very low viscosity• thermal resistancy	<ul style="list-style-type: none">• High thermal resistancy
Color	light blue transparent	Colorless to light straw	optical clear	transparent	transparent
Penetration (1/10mm)	300	190	250	270	50
Viscosity (mPa.s)	1300	460	1200	200	1200
Pot-life @RT	90 min	> 6 hours	50 min 5 min	22 min	50 min
Curing conditions	24h @ 23°C or 90 min @ 80°C	24h @ 23°C or 60 min @ 70°C	3h @ 23°C 30 min @ 23°C	30 min @ 120°C	90 min @ 80°C
Shelf life (months)	24	12	12	12	expected 12
Max continuous temperature (°C) 1000 hours	150	150	150	180	200

Our full spectrum
of adhesives
solutions



Presenting silicones solutions Bluesil™ ESA RTV-2 and gels for potting applications

Bluesil™ ESA RTV-2

	ESA 7242 A&B (1:1) ESA 7242 QC A&B (1:1)	ESA 7250 A&B (10:1)	ESA 7255 50 A&B (10:1)	ESA 7246 A&B (10:1)	ESA 7252 A&B (1:1) ESA 7252 QC A&B (1:1)	ESA 7262 A&B (1:1)
Main characteristics	<ul style="list-style-type: none">UL 94 VOgood flowability	<ul style="list-style-type: none">optically clearUL 94 HB	<ul style="list-style-type: none">optically clearadhesion on plastics & metal	<ul style="list-style-type: none">optically clearlow temperature curing	<ul style="list-style-type: none">fire resistancethermal conductive & thermal resiscancy	<ul style="list-style-type: none">fire resistancethermal conductive
Color	dark grey black	optical clear	transparent	clear	black	black
Shore A hardness	51 53	52	30	38	48	48
Viscosity (mPa.s)	2 500 3 500	4 000	2 000	3 500	6 000	2 400
Pot-life @RT	58 min 8 min	4h	8h	80 min	90 min < 5 min	2h
Curing conditions	5 min @ 150°C 1h @ 23°C	1h @ 150°C	1h @ 150°C	24h @ 23°C or 45 min @ 45°C	5 min @150°C 10 min @23°C	20h @ 23°C
Shelf life (months)	12	24	12	12	20	6
Thermal conductivity @ 25°C (W/m.K)	0.43	0.16	0.16	0.16	0.42	0.6
Max service temperature (°C)	250	200	200	200	250	200

Bluestar Silicones offers a broad range of silicones rubbers and gels within the range of CAF® RTV-1 and Bluesil™ ESA RTV-2, which are recommended in electronic applications to ensure mechanical and environmental protection.

Their acceptance is due to several factors including their excellent dielectric properties, mechanical strength, damping properties, moisture resistance, excellent adhesion properties, flame resistance or optical clarity.



Presenting silicones solutions Bluesil™ ESA for LED encapsulation

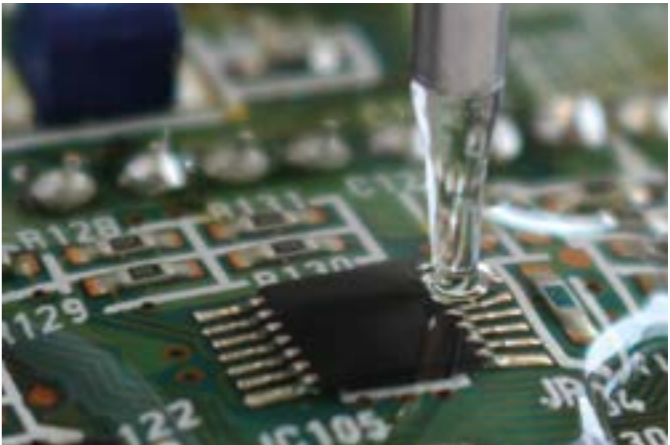
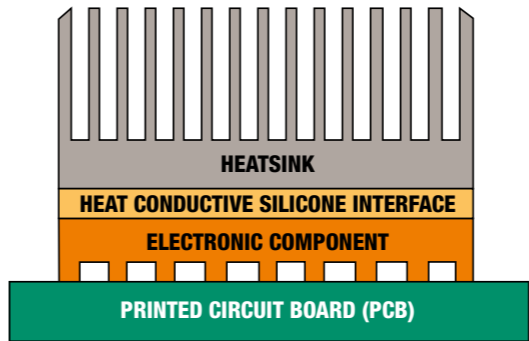
Bluesil™ ESA for LED encapsulation

	ESA 7255 63 A&B (1:1)	ESA 7255 70 A&B (1:1)	ESA 7255 72 A&B (1:1)
Main characteristics	<ul style="list-style-type: none">adhesion on PPA & silverhigh strength	<ul style="list-style-type: none">adhesion on plasticshigh strength	<ul style="list-style-type: none">adhesion on metal & plastics
Color	optical clear	optical clear	optical clear
Shore A hardness	63	70	72
Viscosity (mPa.s)	5 000	5 500	6 000
Pot-life @RT	72h	72h	72h
Curing conditions	24h @ 23°C	24h @ 23°C	24h @ 23°C
Shelf life (months)	6	6	6
Refractive index	1.41	1.41	1.41
Transmittance (2mm, 450nm)%	>90	>90	>90



Electronic components are generating more and more heat. Miniaturization is increasing the need for extracting this heat outside of the electronic devices.

Bluestar Silicones offers also a range of Bluesil™ ESA RTV-2 elastomers and Bluesil™ Pastes providing high heat conductivity with high heat stability.



Presenting silicones solutions Bluesil™ ESA & CAF
for sealing & bonding

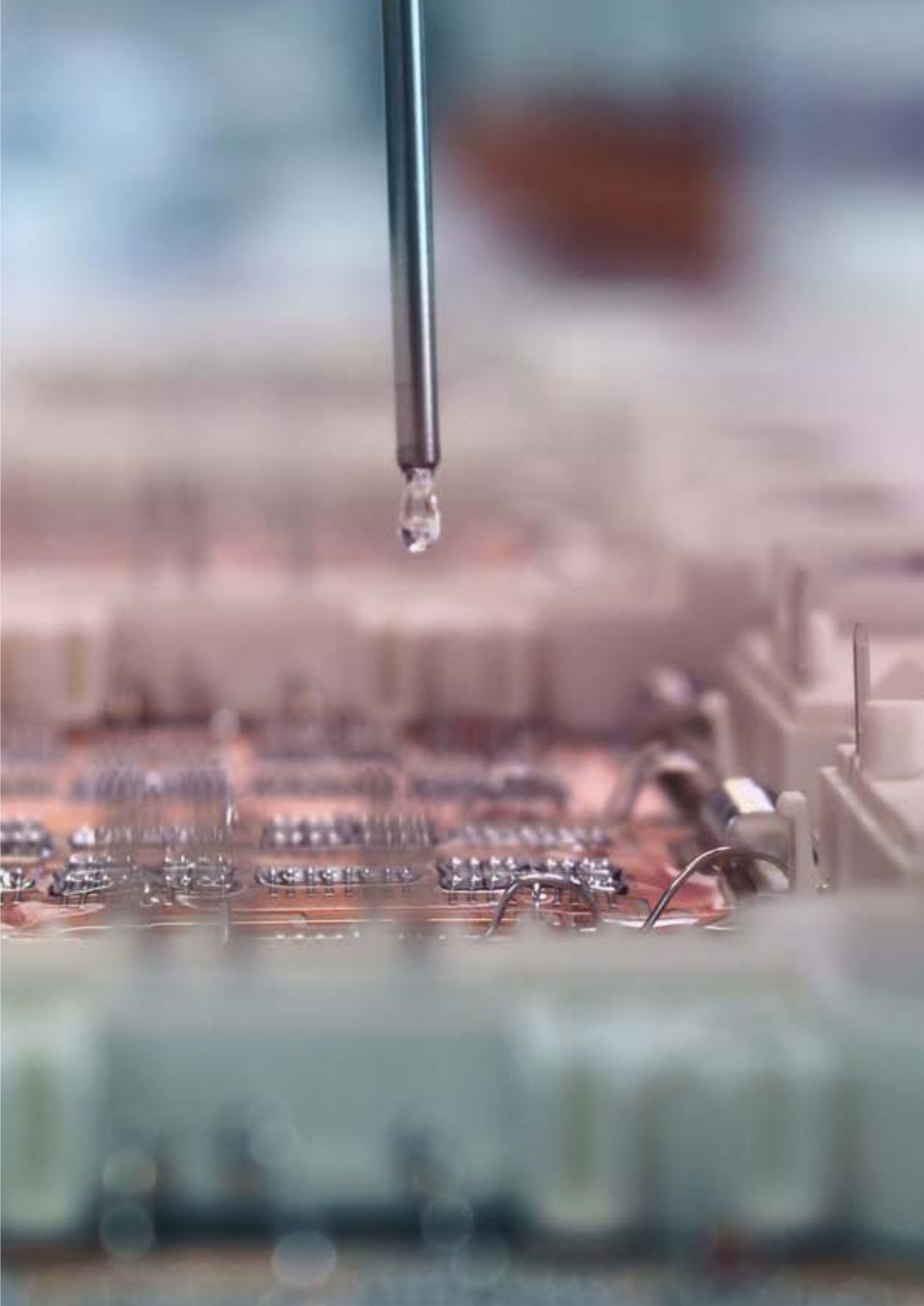
Silicones materials are widely used in electronic applications for bonding components and sealing against environmental contaminants as they can maintain their physical and electrical properties over a wide range of temperature, moisture and other harsh environments.

Bluestar Silicones offers a range of silicones adhesives with CAF® RTV-1 and Bluesil™ ESA RTV-2 which provide self-adhesion to many metals, ceramic, glass and plastics. These solutions are excellent candidates for assembly applications on or near to sensitive electrical and electronic components as they do not release any corrosive by products.



Bluesil™ ESA & CAF for Sealing & Bonding

	ESA 8352 A&B (10:1)	ESA 7244 A&B (1:1)	CAF 530 (1C)	CAF 2 Fluid (1C)
Main characteristics	<ul style="list-style-type: none">• 2K self adhesive plastics & metals• RT curing	<ul style="list-style-type: none">• adhesion on plastics & metal• silk screening	<ul style="list-style-type: none">• neutral alkoxy curing,• thixotropic• primerless	<ul style="list-style-type: none">• neutral flowable product• self-adhesive
Color	dark grey	blue	black, white	translucent
Shore A hardness	50	50	34	48
Viscosity (mPa.s)	@10 s-1 90 000 / 90 000	60 000	paste	30 000
2C: Pot-life @ RT 1C: skin formation time	10 min	>16h	15 min	12 min
Curing conditions	3h @RT	10 min @150°C	8h for 2 mm RT	16h for 2 mm RT
Shelf life (months)	under development 6	12	12	10
Thermal conductivity @25°C (W/m.K)	-	0.4	0.3	0.2
Max service temperature (°C)	220	200	185	250



Bluestar Silicones★

Bluestar Silicones★ is one of the world's leading fully integrated silicones manufacturers with applications and research laboratories, production sites and sales offices located around the globe.

We focus on developing state-of-the-art application expertise to help our customers challenge their boundaries. At Bluestar Silicones★, we're more than just high quality silicones products. We are dedicated people located around the globe committed to your success. From technical support to customized formulations and regulatory support, Bluestar Silicones★ has the people in place when and where you need them.

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