

# BLUESIL™ LSR 8300 A/B A2

## LIQUID SILICONE RUBBER

Technical Data Sheet n° 090031–Feb/2022

### Description

**BLUESIL™ LSR 8300 A/B A2** is a two-component liquid silicone rubber designed for producing various parts with good transparent and mechanical properties through injection process after A/B mix with ratio of 1/1.

### Examples of applications

- Automotive applications: spark plug boots, gaskets, seals
- Respiratory mask
- Cushioning applications
- Balloons
- Others

### Key benefits

- High transparence
- Excellent mechanical properties
- Good process ability
- Good rebound resilience

### Typical properties

Grade	Appearance A/B	A/B viscosity (25 °C, 10/sec), Pa.s	Density (g/cm <sup>3</sup> )	Hardness (Shore A)	Tensile strength (MPa)	Elongation at break (%)	100% Modulus (MPa)	Tear strength (N/mm)	Compression Set (%)	Rebound (%)
Test standard		ISO 3219	ISO 2781	ASTM D 2240	ASTM D 412 Die C	ASTM D 412 Die C	ASTM D 412 Die C	ASTM D 624 Die B	ASTM D 395 B (177°C*22h, 25%)	ASTM D 7121
LSR 8320	Transparent/Transparent	240/230	1.10	20	8.6	990	0.30	26	-	38
LSR 8320 H	Transparent/Transparent	359/308	1.10	19	9.5	1181	0.28	27	-	42
LSR 8325	Transparent/Transparent	240/240	1.10	24	9.8	899	0.43	18	-	43
LSR 8330	Transparent/Transparent	290/270	1.10	32	9.5	823	0.58	24	-	53
LSR 8335	Transparent/Transparent	250/240	1.11	35	8.7	593	0.78	28	-	51
LSR 8340 H	Transparent/Transparent	322/288	1.12	41	10.3	801	1.01	33	28	55
LSR 8350	Transparent/Transparent	260/238	1.11	51	9.3	672	1.97	41	28	58
LSR 8350 R	Transparent/Transparent	260/240	1.11	50	9.4	694	1.87	40	28	57
LSR 8360	Transparent/Transparent	271/258	1.12	61	10.0	589	2.49	46	38	63
LSR 8370	Transparent/Transparent	340/341	1.13	69	9.7	483	3.90	48	35	62
LSR 8380	Transparent/Transparent	369/383	1.14	74	10.1	495	4.20	46	27	62

ASTM slabs 160mm\*160mm\*2mm at 177°C cured for 5 minutes with hot mold. These data are approx.

# BLUESIL™ LSR 8300 A/B A2

Standard of tensile strength, elongation at break and 100% Modulus of LSR 8320, LSR 8320 H and LSR 8325 is ISO 37 Type 2.

Standard of tear strength of LSR 8320, LSR 8320 H and LSR 8325 is ASTM D 624 Die A.

**Please note:** *The typical properties are not intended for use in preparing specifications. Please contact our local Sales Department for assistance in writing specifications.*

**Instruction of use** Cure is dependent upon molding temperature and part size. Parts A and B components of **BLUESIL™ LSR 8300 A/B A2** are designed to be mixed in equal parts using standard liquid injection molding processing equipment and techniques. Airless mixing, metering and dispensing equipment are recommended for production operations. Accurate measuring and complete mixing are essential factors in obtaining consistent results.

**Cleaning** Special care must be taken to assure clean moulds and a clean work area with no organic rubbers used on the same processing equipment. Traces of foreign materials can poison the catalyst and inhibit the cure. All metering and mixing equipment should be thoroughly cleaned. Polymer systems, which contain traces of amines, sulfur, nitrogen oxide, organotin compounds and carbon monoxide can interfere with the cure of this product and should be avoided.

**Packaging** **BLUESIL™ LSR 8300 A/B A2** is available in 20 kg pails or 200 kg drums.

**Storage and shelf life** **BLUESIL™ LSR 8300 A/B A2** when stored in the original, unopened container at room temperature 24°C (77°F), can be stored for 12 months from the date of manufacturing. Beyond this date, Elkem Silicones no longer guarantees that the product meets the sales specifications.

**Safety** Please consult the Safety Data Sheet of **BLUESIL™ LSR 8300 A/B A2**.

Visit our website: [www.silicones.elkem.com](http://www.silicones.elkem.com)

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# BLUESIL MF 160 USP

<b>Description</b>	<b>BLUESIL MF 160 USP</b> is a silicone Master batch, heat curing after addition of a vulcanisation agent (chosen according to the processing method).
<b>Examples of applications</b>	Extrusion, moulding and injection of translucent or coloured articles with a very good compromise of properties and notably high tensile strength.
<b>Key benefits</b>	<ul style="list-style-type: none"> <li>• Outstanding processing aptitude</li> <li>• Very slight refreshing after prolonged storage</li> <li>• No or very little post-curing</li> <li>• Very good compromise of mechanical properties and notably outstanding tensile strength</li> <li>• Good dielectric properties</li> <li>• Good heat stability up to 200°C</li> <li>• Major potential for blending with "Mix and Fix" range master batches</li> <li>• Easy to obtain bright colours using Bluestar Colour Base for HCR</li> </ul>

- Typical properties**
- **Type** (according to AFNOR T 40002)..... MVQ
  - **Specific gravity** at 25 °C.....1.15
  - **Natural colour** ..... transparent
  - After addition of 1.25% dichloro-2,4 benzoyl peroxide (at 50%) and vulcanisation for 8 min at 115°C (1)
  - After addition of 0.6% dimethyl-2,5 bis (tertiobutyl peroxy) -2,5 hexane at 75% and vulcanisation for 10 min at 170°C (2)

## 1. Mechanical properties

Before / post curing	(1)
Shore A hardness, approx.	56
Tensile strength, MPa approx.	11
Elongation at break, %, approx.	545
Secant modulus at 100 % elongation, MPa, approx.	1.4
Tear strength, kN/m, approx.	24
Compression set (22 h/177°C/25 %), %, approx	66
Rebound resilience, %, approx.	50
Linear shrinkage, %, approx	1.9

After post curing 4 hours at 200°C	(1)	(2)
Shore A hardness, approx.	62	60
Tensile strength, MPa approx.	11.5	12.2
Elongation at break, %, approx	440	580
Secant modulus at 100 % elongation, MPa, approx.	1.9	1.5
Tear strength, kN/m, ASTM D 624 A, approx	22	24

# BLUESIL MF 160 USP

<b>Tear strength</b> , kN/m, delft, approx.	11	13
<b>Tear strength</b> , kN/m, DIN 53507, approx.	6	11
<b>Compression set</b> (22 h/177°C/25 %), %, approx	44	34
<b>Rebound resilience</b> , %, approx.	55	49
<b>Linear shrinkage</b> , %, approx	2.8	4.3

## 2. Heat stability

(on specimens post cured for 4 hours at 200°C)

After ageing for 10 days at 200°C	(1)	(2)
<b>Shore A hardness</b> , approx.	68	3
<b>Tensile strength</b> , MPa approx.	7.3	7
<b>Elongation at break</b> , %, approx.	240	210

After ageing for 3 days at 225°C	(1)	(2)
<b>Shore A hardness</b> , approx.	69	75
<b>Tensile strength</b> , MPa approx.	6	5.5
<b>Elongation at break</b> , %, approx.	185	135

## 3. Dielectric properties

	(1)	(2)
<b>Dielectric strength</b> (2 mm thickness), kV/mm, approx.	24	/
<b>Dielectric constant at 1 MHz</b> , approx.	2.9	/
<b>Dissipation factor at 1 MHz</b> , approx.	$1.2 \cdot 10^{-3}$	/
<b>Transversal resistivity</b> , Ohm.cm, approx.	$3.7 \cdot 10^{16}$	/
<b>Strike-over voltage</b> , kV, approx.	48	/

# BLUESIL MF 160 USP

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Please note: The typical properties are not intended for use in preparing specifications. Please contact our local Sales Department for assistance in writing specifications.

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<b>Instruction of use</b>	Please consult your local ELKEM SILICONES sales office.
<b>Regulation</b>	Please consult your local ELKEM SILICONES sales office.
<b>Limitations</b>	Please consult your local ELKEM SILICONES sales office.
<b>Packaging</b>	<ul style="list-style-type: none"><li>• BLUESIL MF 160 USP is available in<ul style="list-style-type: none"><li>○ Carton of 500 KG (1102.5 LB)</li></ul></li></ul>
<b>Storage and shelf life</b>	When stored in its original packaging: BLUESIL MF 160 USP may be stored at temperatures between -5°C / 23°F and 40°C / 104°F for up to 18 months from its date of manufacturing. Comply with the storage instructions and expiration date marked on the packaging. Beyond this date, Elkem Silicones no longer guarantees that the product meets the sales specifications.
<b>Safety</b>	Please consult the Safety Data Sheet of: BLUESIL MF 160 USP

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# BLUESIL MF 175 USP

<b>Description</b>	<b>BLUESIL MF 175 USP</b> is a silicone Master batch, heat curing after addition of a vulcanization agent (chosen according to the processing method).
<b>Examples of applications</b>	Extrusion, compression and injection moulding of translucent or colored articles requiring a good compromise of mechanical properties and a high tensile strength in particular.
<b>Key benefits</b>	<ul style="list-style-type: none"> <li>· Outstanding processing aptitude.</li> <li>· Outstanding transparency</li> <li>· Very slight replastification after prolonged storage.</li> <li>· Very good compromise of mechanical properties and outstanding tensile strength in particular.</li> <li>· Good dielectric properties.</li> <li>· Good heat stability up to 200°C.</li> <li>· Major potential for blending with "Mix and Fix" range master batches.</li> <li>· Easy to obtain bright colours using Bluestar Colour Base for HCR.</li> </ul>

<b>Typical properties</b>	<ul style="list-style-type: none"> <li>• <b>Type</b> (according to AFNOR T 40002)..... MVQ</li> <li>• <b>Specific gravity</b> at 25 °C .....1.19</li> <li>• <b>Natural colour</b> ..... transparent</li> </ul> <p>· After addition of 1.25% dichloro-2,4 benzoyl peroxide (at 50%) and vulcanization for 8 min at 115°C (1)</p> <p>· After addition of 0.6% dimethyl-2,5 bis (tertiobutyl peroxy) -2,5 hexane at 75% and vulcanization for 10 min at 170°C (2)</p>
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## 1. Mechanical properties

1.1 - Values measured on 2 mm thickness ASTM slab

Before / post curing	(1)	(2)
Shore A hardness, approx.	67	62
Tensile strength, MPa approx.	12	11
Elongation at break, %, approx.	475	600
Secant modulus at 100 % elongation, MPa, approx.	2.3	1.3
Tear strength, kN/m, approx.	25	28
Compression set (22 h/177°C/25 %), %, approx	70	68
Rebound resilience, %, approx.	43	38
Linear shrinkage, %, approx	2.3	4.2

	(1)	(2)
Shore A hardness, approx.	75	73
Tensile strength, MPa approx.	12	11.5

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<b>Elongation at break, %</b> , approx	370	430
<b>Secant modulus at 100 % elongation</b> , MPa, approx.	3.2	2.4
<b>Tear strength</b> , kN/m, ASTM D 624 A, approx	23	24
<b>Compression set</b> (22 h/177°C/25 %), %, approx	43	46
<b>Rebound resilience</b> , %, approx.	50	47
<b>Linear shrinkage</b> , %, approx	3	4.4

## 1. 2 - Values measured on 2 mm thickness extruded strips

<b>After post curing 4 hours at 200°C</b>	(1)	
<b>Shore A hardness</b> , approx.	71	
<b>Tensile strength</b> , MPa approx.	11.9	
<b>Elongation at break</b> , %, approx	360	
<b>Secant modulus at 100 % elongation</b> , MPa, approx.	2.7	
<b>Tear strength</b> , kN/m, ASTM D 624 A, approx	20	

## 2. Heat stability without thermal additive

Values measured on 2 mm thickness ASTM slab post cured 4 hours at 200°C

<b>After aging for 10 days at 200°C</b>	(1)	(2)
<b>Shore A hardness</b> , approx.	83	84
<b>Tensile strength</b> , MPa approx.	8.8	8.5
<b>Elongation at break</b> , %, approx	175	140
<b>Secant modulus at 100 % elongation</b> , MPa, approx.	5.6	7.0
<b>Tear strength</b> , kN/m, ASTM D 624 A, approx	16	13

## 3. Heat stability with addition of 0,4 p of additive ADD 744

# BLUESIL MF 175 USP

Values measured on 2 mm thickness ASTM slab post cured 4 hours at 200°C

<b>Heat stability with addition of 0,4 p of ADD 744 After ageing for 3 days at 250°C</b>	(1)	(2)
Shore A hardness, approx.	78	80
Tensile strength, MPa approx.	6.8	5.6
Elongation at break, %, approx	210	180
Secant modulus at 100 % elongation, MPa, approx.	4.1	4
Tear strength, kN/m, ASTM D 624 A, approx	16	15

<b>Heat stability with addition of 0,4 p of ADD 744 After ageing for 7 days at 250°C</b>	(1)	(2)
Shore A hardness, approx.	83	8083
Tensile strength, MPa approx.	6.8	6.1
Elongation at break, %, approx	145	160
Secant modulus at 100 % elongation, MPa, approx.	5.3	5.3
Tear strength, kN/m, ASTM D 624 A, approx	16	16

#### 4. Electrical properties

Values measured on ASTM slab post cured 4 hours at 200°C

<b>Values measured on 1 mm thickness approx.</b>	(1)	(2)
Dielectric strength, kV/mm approx.	25.8	/
Breakdown voltage, kV (1.34 mm thickness), approx.	34.5	/
<b>Values measured on 2 mm thickness approx.</b>	(1)	(2)
Dielectric strength (2 mm thickness), kV/mm, approx.	19.5	/
Dielectric constant at 1 MHz, approx.	45.5	/

# BLUESIL MF 175 USP

<b>Dissipation factor at 1 MHz, approx.</b>	2.8	/
<b>Transversal resistivity, Ohm.cm, approx.</b>	$1 \cdot 10^{-3}$	/
<b>Strike-over voltage, kV, approx.</b>	$7.6 \cdot 10^{16}$	/

Please note: The typical properties are not intended for use in preparing specifications. Please contact our local Sales Department for assistance in writing specifications.

<b>Instruction of use</b>	Postcured parts can be used for Food contact applications, please contact us for more information about the suitable regulations and limitations.
<b>Regulation</b>	Please consult your local ELKEM SILICONES sales office.
<b>Limitations</b>	Please consult your local ELKEM SILICONES sales office.
<b>Packaging</b>	<ul style="list-style-type: none"> <li>• BLUESIL MF 175 USP is available in                             <ul style="list-style-type: none"> <li>○ Carton of 500 KG (1102.5 LB)</li> </ul> </li> </ul>
<b>Storage and shelf life</b>	When stored in its original packaging: BLUESIL MF 175 USP may be stored at temperatures between -5°C / 23°F and 40°C / 104°F for up to 18 months from its date of manufacturing. Comply with the storage instructions and expiration date marked on the packaging. Beyond this date, Elkem Silicones no longer guarantees that the product meets the sales specifications.
<b>Safety</b>	Please consult the Safety Data Sheet of: BLUESIL MF 175 USP

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# BLUESIL MF 240 U

<b>Description</b>	<b>BLUESIL MF 240 U</b> is a silicone master-batch, which is hot curing after addition of a cross-linking agent (chosen according to the transformation method).
<b>Examples of applications</b>	<ul style="list-style-type: none"> <li>Producing articles with good compression set.</li> <li>Producing articles exposed to oils (with or without insert).</li> <li>Use in blends with MASTER BATCHES of greater hardness (coating of cylinders, etc.).</li> </ul>
<b>Key benefits</b>	<ul style="list-style-type: none"> <li>No replastifying.</li> <li>No post-curing.</li> <li>Low shrinkage.</li> <li>Low compression set.</li> <li>Good heat resistance, up to 200°C.</li> <li>Low swelling in paraffin or slightly aromatic oils.</li> <li>Bright colours easily obtained.</li> </ul>
<b>Typical properties</b>	<ul style="list-style-type: none"> <li><b>Type</b> (in accordance with AFNOR T 40 002)..... MVQ</li> <li><b>Density</b> at 25 °C, approx.....1.09</li> <li><b>Natural colour</b>..... colourless, transparent</li> </ul>

## Properties after working:

After addition of 0.9 % of 2-4 dichloro benzoyl peroxide (at 50 %) curing for 8 minutes at 115 °C (1).

After addition of 0.6 % of 2,5 dimethyl 2,5 bis (tertiobutylperoxy) hexane at 75 %, curing for 10 minutes at 170 °C (2).

### 1. Mechanical properties

**(1)**
**(2)**

Before / post curing	(1)	(2)
Shore A hardness, approx.	44	42
Tensile strength, MPa approx.	7	7.60
Elongation at break, %, approx.	380	475
Secant modulus at 100 % elongation, MPa, approx.	1.29	0.98
Tear strength, kN/m, approx.	12	12
Compression set (22 h/177°C/25 %), %, approx	17	8
Rebound resilience, %, approx.	68	64
Linear shrinkage, %, approx	2.15	3.80

### 2. Heat stability

2. 1 Properties after ageing for 7 days at 177°C

After ageing for 7 days at 177°C	(1)	(2)
Shore A hardness, approx.	45	43
Tensile strength, MPa approx.	6.8	6.8

# BLUESIL MF 240 U

<b>Elongation at break, %</b> , approx.	365	410
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## 2. 2 Properties after ageing over 3 days at 200 °C

<b>After ageing for 3 days at 200°C</b>	<b>(1)</b>	<b>(2)</b>
<b>Shore A hardness</b> , approx.	44	44
<b>Tensile strength</b> , MPa approx.	7.1	6.5
<b>Elongation at break, %</b> , approx.	370	380

## 2. 3 Properties after ageing over 10 days at 200 °C

<b>After ageing for 10 days at 200°C</b>	<b>(1)</b>	<b>(2)</b>
<b>Shore A hardness</b> , approx.	42	44
<b>Tensile strength</b> , MPa approx.	6.9	6.1
<b>Elongation at break, %</b> , approx.	360	315

## 3. Oil resistance

### 3.1 Variation of properties after immersion for 70 hours at 150 °C in ASTM 1 oil

<b>After immersion for 70 hours at 150 °C in ASTM 1 oil</b>	<b>(1)</b>	<b>(2)</b>
<b>Shore A hardness</b> , approx.	-8	-10
<b>Tensile strength</b> , MPa approx.	-2	-23
<b>Elongation at break, %</b> , approx.	+10	-12
<b>Volume, %</b>	+4	+40

### 3.2. Variation of properties after immersion for 70 hours at 150 °C in ASTM 2 oil

<b>After immersion for 70 hours at 150 °C in ASTM 2 oil</b>	<b>(1)</b>	<b>(2)</b>
<b>Shore A hardness</b> , approx.	-15	-15
<b>Tensile strength</b> , MPa approx.	-11	-30
<b>Elongation at break, %</b> , approx.	+20	-6
<b>Volume, %</b>	+8	+9

Please note: The typical properties are not intended for use in preparing specifications. Please contact our local Sales Department for assistance in writing specifications.

#### Instruction of use

Please consult your local ELKEM SILICONES sales office.

# BLUESIL MF 240 U

<b>Regulation</b>	Please consult your local ELKEM SILICONES sales office.
<b>Limitations</b>	Please consult your local ELKEM SILICONES sales office.
<b>Packaging</b>	<ul style="list-style-type: none"><li>• BLUESIL MF 240 U is available in<ul style="list-style-type: none"><li>○ Carton of 25 KG (55.13 LB)</li><li>○ Tote bin of 500 KG (1102.5 LB)</li></ul></li></ul>
<b>Storage and shelf life</b>	When stored in its original packaging: BLUESIL MF 240 U may be stored at temperatures between -5°C / 23°F and 40°C / 104°F for up to 18 months from its date of manufacturing. Comply with the storage instructions and expiration date marked on the packaging. Beyond this date, Elkem Silicones no longer guarantees that the product meets the sales specifications.
<b>Safety</b>	Please consult the Safety Data Sheet of: BLUESIL MF 240 U

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# BLUESIL MF 280 U

<b>Description</b>	Silicone master-batch compound, vulcanising on heating after addition of a vulcanizing agent (chosen according to the transformation process).
<b>Examples of applications</b>	<b>BLUESIL MF 280 U</b> is recommended for moulding, injection and extrusion of articles with good mechanical properties (notably in low compression sets). The use in blending with BLUESIL MF 240 U for products exposed to oils (with or without an insert) and for roller mill coatings.
<b>Key benefits</b>	<ul style="list-style-type: none"> <li>• Excellent green strength</li> <li>• Slight refreshing after prolonged storage</li> <li>• No post curing</li> <li>• Low shrinkage</li> <li>• Low compression set</li> <li>• Good heat stability, up to 225°C</li> <li>• Good oil resistance (slight swelling)</li> <li>• Wide possibilities of blending with the "Mix &amp; Fix" masterbatch range</li> </ul>

<b>Typical properties</b>	<ul style="list-style-type: none"> <li>• <b>Type</b> (in accordance with AFNOR T 40 002)..... MVQ</li> <li>• <b>Density</b> at 25 °C, approx..... 1.36</li> <li>• <b>Natural colour</b>..... Beige</li> </ul>
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## Properties after working:

After addition of 1.25% of 2,4-dichlorobenzoyl peroxide (50%) and vulcanisation for 8 min. at 115°C (1).

After addition of 0.6% of 2,5-dimethyl bis-(tertiobutyl peroxy) 2,5-hexane (75%) and vulcanisation for 10 min. at 170°C (2)

### 1. Mechanical properties

1.1 With no post curing

(1)

(2)

Before / post curing	(1)	(2)
Shore A hardness, approx.	77	78
Tensile strength, MPa approx.	7.4	7.5
Elongation at break, %, approx.	210	215
Secant modulus at 100 % elongation, MPa, approx.	4.7	4.8
Tear strength, kN/m, approx.	19	19
Compression set (22 h/177°C/25 %), %, approx	40	15
Rebound resilience, %, approx.	54	49
Linear shrinkage, %, approx	1.9	3.6

### 1.2 After post curing for 4 hours at 200°C

Before / post curing	(1)	(2)
Shore A hardness, approx.	79	81
Tensile strength, MPa approx.	7.3	7.6

# BLUESIL MF 280 U

<b>Elongation at break, %</b> , approx.	165	170
<b>Secant modulus at 100 % elongation, MPa</b> , approx.	5.2	5.3
<b>Tear strength, kN/m</b> , approx.	16	17
<b>Compression set (22 h/177°C/25 %)</b> , %, approx	31	10
<b>Rebound resilience, %</b> , approx.	52	48
<b>Linear shrinkage, %</b> , approx	2.6	4.3

## 2. Heat stability

### 2.1 Properties after 7 days at 177°C

After ageing for 7 days at 177°C	(1)	(2)
<b>Shore A hardness</b> , approx.	79	80
<b>Tensile strength, MPa</b> approx.	7.2	7
<b>Elongation at break, %</b> , approx.	185	175
<b>Tear strength, kN/m</b> , approx.	16	19

### 2.2 Properties after 3 days at 200°C

After ageing for 3 days at 200°C	(1)	(2)
<b>Shore A hardness</b> , approx.	78	79
<b>Tensile strength, MPa</b> approx.	6.4	6.9
<b>Elongation at break, %</b> , approx.	155	170
<b>Tear strength, kN/m</b> , approx.	16	17

### 2.3 Properties after 7 days at 200°C

After aging for 7 days at 200°C	(1)	(2)
<b>Shore A hardness</b> , approx.	79	80
<b>Tensile strength, MPa</b> approx.	6.7	6.2
<b>Elongation at break, %</b> , approx	185	140
<b>Tear strength, kN/m</b> , approx	14	18

# BLUESIL MF 280 U

## 2.4 Properties after 10 days at 200°C

After aging for 10 days at 200°C	(1)	(2)
Shore A hardness, approx.	77	81
Tensile strength, MPa approx.	6.4	6.3
Elongation at break, %, approx	155	170
Tear strength, kN/m, approx	15	17

## 2.5 Properties after 3 days at 225°C

After aging for 3 days at 225°C	(1)	(2)
Shore A hardness, approx.	77	79
Tensile strength, MPa approx.	6	5.5
Elongation at break, %, approx	160	140
Tear strength, kN/m, approx	14	16

## 3. Hot oil resistance

After the addition of 0.6% 2.5 bis-dimethyl (tertiobutylperoxy) - 2.5hexane (75%) and vulcanization at 170°C:

- Properties after immersion for 70 hours at 150°C (3)
- Properties after immersion for 7 days at 150°C (4)

### 3.1 In ASTM 1 oil

In ASTM 1 oil	(3)	(4)
Shore A hardness, approx.	79	78
Tensile strength, MPa approx.	7.7	7.1
Elongation at break, %, approx	180	190
Volume, %	3	3

### 3.2 In IRM 902 oil

In IRM 902 oil	(3)	(4)
Shore A hardness, approx.	74	74
Tensile strength, MPa approx.	7.6	7.3

# BLUESIL MF 280 U

<b>Elongation at break, %</b> , approx	185	205
<b>Volume, %</b>	8	9

### 3.3 In IRM 903 oil

In IRM 903 oil	(3)	(4)
<b>Shore A hardness</b> , approx.	60	53
<b>Tensile strength</b> , MPa approx.	6.8	6.1
<b>Elongation at break, %</b> , approx	205	180
<b>Volume, %</b>	33	34

### 3.4 In 15W40 Motor oil

In 15W40 Motor oil	(3)	(4)
<b>Shore A hardness</b> , approx.	70	67
<b>Tensile strength</b> , MPa approx.	6.5	6.3
<b>Elongation at break, %</b> , approx	210	215
<b>Volume, %</b>	14	14

Please note: The typical properties are not intended for use in preparing specifications. Please contact our local Sales Department for assistance in writing specifications.

<b>Instruction of use</b>	Please consult your local ELKEM SILICONES sales office.
<b>Regulation</b>	Please consult your local ELKEM SILICONES sales office.
<b>Limitations</b>	Please consult your local ELKEM SILICONES sales office.
<b>Packaging</b>	<ul style="list-style-type: none"> <li>• BLUESIL MF 280 U is available in                             <ul style="list-style-type: none"> <li>○ Tote bin of 500 KG (1102.5 LB)</li> </ul> </li> </ul>
<b>Storage and shelf life</b>	When stored in its original packaging: BLUESIL MF 280 U may be stored at a temperature below 40°C / 104°F for up to 18 months from its date of manufacturing. Comply with the storage instructions and expiration date marked on the packaging. Beyond this date, Elkem Silicones no longer guarantees that the product meets the sales specifications.
<b>Safety</b>	Please consult the Safety Data Sheet of: BLUESIL MF 280 U

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# BLUESIL MF 280 U

the suitability of product for the uses and applications contemplated by users and others shall be the sole responsibility of users. 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 ELKEM SILICONES is at their disposal to supply any additional information.

Title	BLUESIL HCR 1920 U A0
Linked Products	<a href="#">BLUESIL HCR 1920 U A0</a>
Description	BLUESIL™ HCR 1920 U A0 is a silicone master-batch, vulcanizing under heat after addition of a vulcanizing agent that could be chosen according to actual processing requirement.
Examples of Applications	Molding articles with good mechanical properties and appearance.
Key benefits	<ul style="list-style-type: none"> <li>• Good mechanical properties</li> <li>• Excellent appearance</li> <li>• Easy to process; no sticky to rolls; easy to demold</li> <li>• Good stability up to 200°C</li> <li>• Slight replastification after prolonged storage</li> <li>• No post-cure or slight post-cure</li> <li>• Wide range of reloading or blending</li> </ul>
Instruction of Use Public	
Instruction of Use Connected	
Limitations	
Safety	Please consult the Safety Data Sheet of this product.
Shelf Life (DLU)	For information about Storage and Shelf Life for this product, please download the Technical Data Sheet.

## Technical characteristics

Grade	Test method	HCR 1920 U
Appearance	-	Translucent
Density (g/cm <sup>3</sup> )	ISO 2781	1.07
Hardness (Shore A)	ASTM D 2240	20
Tensile strength (MPa)	ISO 37 Type 1	6.3
Elongation at break (%)	ISO 37 Type 1	976
100% Modulus (MPa)	ISO 37 Type 1	0.29
Tear strength (N/mm)	ASTM D 624 Die C	12

Slabs 160mm\*160mm\*2mm at 175 °C cured for 5 mins after addition of 1.0% 2,5-dimethyl-2,5-di(tert-butylperoxy)hexane (at 45%). These data are approx.

Silbione No

TechServContacts  Guoping Chen

Show Packaging Yes

Show Storage and Shelf-life Yes

Standards

Approval Status Approved

Content Type: e-TDS\_EN\_CT

Version: 14.0

Created at 2/3/2023 7:04 AM by  System Account

Last modified at 4/25/2023 2:45 PM by  Zhibin Li

Close



Title	BLUESIL HCR 1980 U A0
Linked Products	<a href="#">BLUESIL HCR 1980 U A0</a>
Description	BLUESIL™ HCR 1980 U A0 is a silicone master-batch, vulcanizing under heat after addition of a vulcanizing agent that could be chosen according to actual processing requirement.
Examples of Applications	Molding articles with good mechanical properties and appearance.
Key benefits	<ul style="list-style-type: none"><li>• Good mechanical properties</li><li>• Excellent appearance</li><li>• Easy to process; no sticky to rolls; easy to demold</li><li>• Good stability up to 200°C</li><li>• Slight replastification after prolonged storage</li><li>• No post-cure or slight post-cure</li><li>• Wide range of reloading or blending</li></ul>
Instruction of Use Public	
Instruction of Use Connected	
Limitations	
Safety	Please consult the Safety Data Sheet of this product.
Shelf Life (DLU)	For information about Storage and Shelf Life for this product, please download the Technical Data Sheet.

Technical characteristics

Grade	Test method	HCR 1980 U
Appearance	-	Translucent
Density (g/cm <sup>3</sup> )	ISO 2781	1.23
Hardness (Shore A)	ASTM D 2240	81
Tensile strength (MPa)	ISO 37 Type 1	8.7
Elongation at break (%)	ISO 37 Type 1	232
100% Modulus (MPa)	ISO 37 Type 1	4.18
Tear strength (N/mm)	ASTM D 624 Die C	17

Slabs 160mm\*160mm\*2mm at 175 °C cured for 5 mins after addition of 1.0% 2,5-dimethyl-2,5-di(tert-butylperoxy)hexane (at 45%). These data are approx.

Silbione No

TechServContacts  Guoping Chen

Show Packaging Yes

Show Storage and Shelf-life Yes

Standards

Approval Status Approved

Content Type: e-TDS\_EN\_CT

Version: 6.0

Created at 2/23/2023 9:50 AM by  System Account

Last modified at 4/25/2023 2:55 PM by  Zhibin Li

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# BLUESIL HCR 1940 USP A2

<b>Description</b>	BLUESIL™ HCR 1940 USP A2 is a silicone master-batch, vulcanizing under heat after addition of a vulcanizing agent that could be chosen according to actual processing requirement.																															
<b>Examples of applications</b>	Molding articles with good mechanical properties and appearance.																															
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<b>Limitations</b>	Please consult your local ELKEM SILICONES sales office.																															
<b>Packaging</b>	Please consult your local ELKEM SILICONES sales office.																															
<b>Storage and shelf life</b>	When stored in its original packaging: BLUESIL HCR 1940 USP A2 may be stored at a temperature below 40°C / 104°F for up to 12 months from its date of manufacturing. Comply with the storage instructions and expiration date marked on the packaging. Beyond this date, Elkem Silicones no longer guarantees that the product meets the sales specifications.																															
<b>Safety</b>	Please consult the Safety Data Sheet of: BLUESIL HCR 1940 USP A2																															

# BLUESIL HCR 1940 USP A2

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# BLUESIL HCR 1970 USP A2

<b>Description</b>	BLUESIL™ HCR 1970 USP A2 is a silicone master-batch, vulcanizing under heat after addition of a vulcanizing agent that could be chosen according to actual processing requirement.																															
<b>Examples of applications</b>	Molding articles with good mechanical properties and appearance.																															
<b>Key benefits</b>	<ul style="list-style-type: none"> <li>• Good mechanical properties</li> <li>• Excellent appearance</li> <li>• Easy to process; no sticky to rolls; easy to demold</li> <li>• Good stability up to 200°C</li> <li>• Slight replastification after prolonged storage</li> <li>• No post-cure or slight post-cure</li> <li>• Wide range of reloading or blending</li> </ul>																															
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<b>Limitations</b>	Please consult your local ELKEM SILICONES sales office.																															
<b>Packaging</b>	Please consult your local ELKEM SILICONES sales office.																															
<b>Storage and shelf life</b>	When stored in its original packaging: BLUESIL HCR 1970 USP A2 may be stored at a temperature below 40°C / 104°F for up to 12 months from its date of manufacturing. Comply with the storage instructions and expiration date marked on the packaging. Beyond this date, Elkem Silicones no longer guarantees that the product meets the sales specifications.																															
<b>Safety</b>	Please consult the Safety Data Sheet of: BLUESIL HCR 1970 USP A2																															

# BLUESIL HCR 1970 USP A2

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<b>Description</b>	Bluesil HCR 9140 M is a silicone master-batch, vulcanizing under heat after addition of a vulcanizing agent.
<b>Examples of applications</b>	Molding, injection and extrusion parts
<b>Key benefits</b>	<ul style="list-style-type: none"> <li>• Good extrudability</li> <li>• High transparency</li> <li>• Good mechanical properties</li> <li>• Good stability up to 200°C</li> <li>• Bright colors can be easily obtained using Elkem Silicones SC color bases</li> </ul>

## Typical properties

### Vulcanization condition:

After addition of **(1)** 1.0% of 2,5-dimethyl-2,5-di(tert-butylperoxy)hexane (at 45%), and vulcanization for 10 minutes at 170°C; **(2)** 1.25% of 2,4-dichlorobenzoyl peroxid (50%) and vulcanization for 8 minutes at 115°C

### Properties without Post Cure

Properties	(1)	(2)
Hardness, Shore A	39	40
Tensile strength, MPa	9.5	9
Elongation at break, %	850	720
Modulus at 100% elongation	0.75	0.7
Tear strength, kN/m	20	20
Rebound resilience, %	43	45

### Properties after post-cure for 4 hours at 200° C

Properties	(1)	(2)
Hardness, Shore A	41	42
Tensile strength, MPa	10.5	10
Elongation at break, %	750	680
Modulus at 100% elongation	0.85	0.8
Tear strength, kN/m	23	21
Rebound resilience, %	44	46

**Please note:** The data in this TDS are typical properties, are not intended for use in preparing specifications for any particular application of HCR 9150 M. Please contact our Technical Service Department for more detailed data.

Please note: The typical properties are not intended for use in preparing specifications. Please contact our local Sales Department for assistance in writing specifications.

<b>Instruction of use</b>	Please consult your local ELKEM SILICONES sales office.
<b>Regulation</b>	Please consult your local ELKEM SILICONES sales office.

# BLUESIL HCR 9140 M A2

Technical Data Sheet n° 5663-V5 – 2020/05/27

<b>Limitations</b>	Please consult your local ELKEM SILICONES sales office.
<b>Packaging</b>	<ul style="list-style-type: none"><li>• BLUESIL HCR 9140 M A2 is available in<ul style="list-style-type: none"><li>○ Carton of 20 KG (44.1 LB)</li></ul></li></ul>
<b>Storage and shelf life</b>	When stored in its original packaging: BLUESIL HCR 9140 M A2 may be stored for up to months from its date of manufacturing. Comply with the storage instructions and expiration date marked on the packaging. Beyond this date, Elkem Silicones no longer guarantees that the product meets the sales specifications.
<b>Safety</b>	Please consult the Safety Data Sheet of: BLUESIL HCR 9140 M A2

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# BLUESIL HCR 9150 M

<b>Description</b>	Bluesil HCR 9150 M is a silicone master-batch, vulcanizing under heat after addition of a vulcanizing agent that could be chosen according to actual processing requirement.																									
<b>Examples of applications</b>	Molded parts and extrusion parts with good comprehensive properties.																									
<b>Key benefits</b>	<ul style="list-style-type: none"> <li>• Excellent processing characteristics; non sticky to rolls and easy to demold</li> <li>• Good mechanical properties</li> <li>• Good stability up to 200°C</li> <li>• Bright colors easily obtained using Bluestar Silicones SC color bases</li> </ul>																									
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<b>Regulation</b>	Please consult your local ELKEM SILICONES sales office.																									
<b>Limitations</b>	Please consult your local ELKEM SILICONES sales office.																									
<b>Packaging</b>	<ul style="list-style-type: none"> <li>• BLUESIL HCR 9150 M A2 is available in                             <ul style="list-style-type: none"> <li>○ Carton of 20 KG (44.1 LB)</li> <li>○ Carton of 500 KG (1102.5 LB)</li> <li>○ Case of 500 KG (1102.5 LB)</li> </ul> </li> </ul>																									
<b>Storage and shelf life</b>	When stored in its original packaging: BLUESIL HCR 9150 M A2 may be stored at a temperature below 40°C / 104°F for up to 12 months from its date of manufacturing. Comply with the storage instructions and expiration date marked on the packaging. Beyond this date, Elkem Silicones no longer guarantees that the product meets the sales specifications.																									
<b>Safety</b>	Please consult the Safety Data Sheet of: BLUESIL HCR 9150 M A2																									

# BLUESIL HCR 9150 M

**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. ELKEM 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. Determination of the suitability of product for the uses and applications contemplated by users and others shall be the sole responsibility of users. 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 ELKEM SILICONES is at their disposal to supply any additional information.

# BLUESIL HCR 9170 M A2

<b>Description</b>	BLUESIL™ HCR 9170 M A2 is a silicone master-batch, vulcanizing under heat after addition of a vulcanizing agent that could be chosen according to actual processing requirement.																									
<b>Examples of applications</b>	Molding and extrusion articles with good comprehensive properties.																									
<b>Key benefits</b>	<ul style="list-style-type: none"> <li>• Easy to process; no sticky to rolls; easy to demold and extrude</li> <li>• Good appearance, high transparence and good anti-yellowing</li> <li>• Good mechanical properties</li> <li>• Bright colors easily obtained with color bases</li> <li>• Wide range of reloading or blending</li> </ul>																									
<b>Typical properties</b>	<table border="1"> <thead> <tr> <th>Grade</th> <th>Test method</th> <th>HCR 9170 M</th> </tr> </thead> <tbody> <tr> <td>Appearance</td> <td>-</td> <td>Transparent</td> </tr> <tr> <td>Density (g/cm<sup>3</sup>)</td> <td>ISO 2781</td> <td>1.20</td> </tr> <tr> <td>Hardness (Shore A)</td> <td>ASTM D 2240</td> <td>72</td> </tr> <tr> <td>Tensile strength (MPa)</td> <td>ISO 37 Type 2</td> <td>11.1</td> </tr> <tr> <td>Elongation at break (%)</td> <td>ISO 37 Type 2</td> <td>490</td> </tr> <tr> <td>100% Modulus (MPa)</td> <td>ISO 37 Type 2</td> <td>2.59</td> </tr> <tr> <td>Tear strength (N/mm)</td> <td>ASTM D 624 Die B</td> <td>30</td> </tr> </tbody> </table> <p>Slabs 160mm*160mm*2mm at 170°C cured for 10 mins after addition of 1.0% 2,5-dimethyl-2,5-di(tert-butylperoxy) hexane (at 45%), and post cured at 200 °C for 4hours. These data are approx. Please note: The typical properties are not intended for use in preparing specifications. Please contact our local Sales Department for assistance in writing specifications.</p>	Grade	Test method	HCR 9170 M	Appearance	-	Transparent	Density (g/cm <sup>3</sup> )	ISO 2781	1.20	Hardness (Shore A)	ASTM D 2240	72	Tensile strength (MPa)	ISO 37 Type 2	11.1	Elongation at break (%)	ISO 37 Type 2	490	100% Modulus (MPa)	ISO 37 Type 2	2.59	Tear strength (N/mm)	ASTM D 624 Die B	30	
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Warning to the users

# BLUESIL HCR 9170 M A2

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