

# NEVSiI™ HTHR Series

## High Heat and High Temperature Resistant Silicone Rubber Compound

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The **NEVSiI HTHR Series** is a technology platform specifically designed to be heat and temperature resistant silicone rubber compounds with Shore A hardness ranging from 30 to 80 durometer. The series has been specifically designed to meet a variety of high heat/high temperature applications in the range of  $\geq 300^{\circ}\text{C}$ .

For in the New Energy Vehicle market segment and other automotive applications where high temperature and high voltage environments are present. The **NEVSiI HTHR Series** possesses flame-retardant properties and maintains high heat resistance, insulation and self-extinguishing properties, which can reduce the risk of ignition and suppress the generation of harmful gas. This is in addition to the self-lubricating functionality which lowers assembly force and provides ease of use in application and assembly.

### KEY FEATURES

- Good mechanical properties
- Excellent heat resistance
- Low compression set
- Excellent processability
- Easily blendable

### APPLICATIONS

- Heat resistant molded components
- High temperature rubber parts
- Gaskets and seals
- Connectors

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### PROPERTY DATA

Testing Items	Unit	Standard	Typical Data					
			NEVSi HTHR30	NEVSi HTHR40	NEVSi HTHR50	NEVSi HTHR60	NEVSi HTHR70	NEVSi HTHR80
<b>Basic Properties</b>								
Compound Color			Red					
Polymer Classification			VMQ					
<b>Physical Strength</b>								
<i>(0.80 pphr of 45% 2,5-Dimethyl-2,5-di(tertbutylperoxy)hexane masterbatch; Press cure 10 minutes @ 170°C; Post cure 4 hours @ 200°C)</i>								
Specific Gravity	g/cm <sup>3</sup>	JIS K 6249 / DIN 53 479 A	1.12	1.13	1.16	1.18	1.22	1.2
Shore A Hardness	Durometer	JIS K 6253 / DIN 53 505	30	40	50	60	70	80
Tensile Strength	MPa	JIS K 6251	8.5	8.5	9.0	9.5	9.5	8.8
		DIN 53 505 S2	9.5	9.5	9.5	10	9.5	9.0
Elongation @ Break	%	JIS K 6251	850	560	440	390	330	280
		DIN 53 505 S2	900	600	470	410	340	290
Tear Strength	N/mm	ASTM D 624-B	15	15	17	18	18	16
Compression Set*	%	ISO 815	20	12	10	10	11	13
<b>Heat Resistant Performance</b>								
<i>(Heat aging 72hrs @ 250°C after post cure)</i>								
Shore A Hardness	Durometer	JIS K 6257	32	42	53	63	74	85
Tensile Strength	MPa		5.5	5.5	5.6	5.8	5.8	5.5
Elongation @ Break	%		460	370	290	255	210	175
Tear Strength	N/mm		13	12	15	17	17.5	13

\*22 hours @ 175°C

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Heat Resistant Performance								
<i>(Heat aging 72hrs @ 316°C after post cure)</i>								
Shore A Hardness	Durometer	JIS K 6257	44	57	68	79	86	95
Tensile Strength	MPa		4.5	4.5	4.5	4.5	4.0	4.0
Elongation @ Break	%		300	260	185	166	75	55
Tear Strength	N/mm		10	7.5	8.5	8	9.5	12
Heat Resistant Performance								
<i>(Heat aging 72hrs @ 350°C after post cure)</i>								
Shore A Hardness	Durometer	JIS K 6257	53	64	75	86	89	-
Tensile Strength	MPa		3.8	4.0	4.2	4.0	3.8	-
Elongation @ Break	%		160	130	96	80	40	-

*Typical property data values should not be used as specifications. Assistance and specifications are available by contacting Momentive Performance Materials Commercial Office.*

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### HANDLING AND SAFETY

- Wear eye protection and protective gloves when handling this product.
- Cure only where appropriate ventilation systems exist.

### STORAGE

- Store in a cool and dry place out of direct sunlight.
- Keep out of the reach of children.

### PACKAGE

20kg carton

NEVSi HTHR XO  
Created Aug-2022

### FOR INDUSTRIAL USE ONLY

It is the responsibility of the user to determine the suitability of any Momentive Silicones product for any intended application. NEVER USE ANY Momentive SILICONES PRODUCT FOR IMPLANTATION OR INJECTION INTO THE HUMAN BODY. Specifications are available by contacting Momentive Performance Materials. Typical property data values should not be used as specifications. In as much as Momentive Performance Materials, Inc. has no control over the use to which others may put the material, it does not guarantee that the same results as those described herein will be obtained. Each user of the material should make his own tests to determine the suitability of the material for his own particular use. Statements concerning possible or suggested uses of the materials described herein are not to be construed as constituting a license under any Momentive Performance Materials patent covering use or as recommendations for use of such materials in the infringement of any patent. Material Safety Data Sheets are available upon request from Momentive Performance Materials. The contents of this catalog are subject to change without notice. No part of this data may be reproduced without the prior approval of Momentive Performance Materials.

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