

## Addisil™ 452 E

### Description

The Addisil 4X2 E series is a two-component heat curable rubber for making elastomers (HCE) with a hardness range between 40 and 80 Shore A for medical applications. This series is based on a platinum cure system, which is particularly suitable for high value extrusion applications where regulatory compliance, transparency, mechanical performance and/or productivity are important. The series is especially suitable for the manufacture of extruded transparent tubing and profiles for use in healthcare applications.

### Key Features and Typical Benefits

- High transparency, no yellowing
- Excellent mechanical properties
- Dry, non-stick surface
- Odourless during processing and in its application
- Fast curing
- Long shelf-life of 6 months for the single component if stored appropriately
- Very long pot life of 2 to 4 weeks for the mixed components

The ingredients used to formulate this product are compositionally compliant with 21 CFR 177.2600, Rubber articles intended for repeated use and the BfR recommendation XV “Silicone”. It is the responsibility of the user to determine that the finished product complies with the provisions of 21 CFR 177.2600 and BfR recommendation XV under their specific manufacturing procedures. See 21 CFR 177.2600 and BfR recommendation for details of extractive limitations and other requirements.

### Typical Physical Properties

Typical properties of compound			Addisil 4X2 E				
			442 E	452 E	462 E	472 E	482 E
Density	DIN 53 479 A	g/cm <sup>3</sup>	1.12	1.13	1.15	1.17	1.19
Typical properties of the vulcanized rubber: Test results on moulded slabs. Vulcanization conditions: 10 mins. @ 175°C Post cured: 4 hrs. @ 200°C in hot air.			Addisil 4X2 E				
			442 E	452 E	462 E	472 E	482 E
Hardness	DIN 53 505	Shore A	40	50	60	70	80
Tensile Strength	DIN 53 504 S2	N/mm <sup>2</sup>	10	10	10	10	8
Elongation at break	DIN 53 504 S2	%	800	800	520	425	350
Tear Strength	ASTM D 624 die B	N/mm	36	36	36	36	24

Registration compliances	Addisil 4X2 E SERIES				
	442 E	452 E	462 E	472 E	482 E
BfR	x	x	x	x	x
FDA	x	x	x	x	x
USP Class VI					
DIN ISO 10993	x	x	x	x	x
Eur. Pharmacopeia 3.1.9					

The typical data is only intended as a guide and should not be used in preparing specifications.

### General Considerations For Use

When the two components are mixed together at a 1:1 mixing ratio, the pot life of compound is approximately 2 to 4 weeks. During storage, the mixing should be wrapped in polythene foil. Cure inhibition: Being a platinum cure mechanism, the

following contaminants can cause cure inhibition:

- Amine derivatives: organic and inorganic basic compounds
- Sulfur products: anti-oxidants from Plastics (thio compounds and sulphides)
- Metal soaps: Mould release agents or anti-acids as Zn or Ca stearate from Polyolefins
- Tin compounds
- Phosphorous products: anti-oxidants from plastics (phosphines and phosphates)

### **Patent Status**

Nothing contained herein shall be construed to imply the nonexistence of any relevant patents or to constitute the permission, inducement or recommendation to practice any invention covered by any patent, without authority from the owner of the patent.

### **Product Safety, Handling and Storage**

Customers should review the latest Safety Data Sheet (SDS) and label for product safety information, safe handling instructions, personal protective equipment if necessary, emergency service contact information, and any special storage conditions required for safety. Momentive Performance Materials (MPM) maintains an around-the-clock emergency service for its products. SDS are available at [www.momentive.com](http://www.momentive.com) or, upon request, from any MPM representative. For product storage and handling procedures to maintain the product quality within our stated specifications, please review Certificates of Analysis, which are available in the Order Center. Use of other materials in conjunction with MPM products (for example, primers) may require additional precautions. Please review and follow the safety information provided by the manufacturer of such other materials.

### **Limitations**

Customers must evaluate Momentive Performance Materials products and make their own determination as to fitness of use in their particular applications.

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