

# STYRENE - BUTADIENE RUBBER - HIPREN® EM

Property		Test Method	Unit	1500T	1502T	1723
Physical - chemical	Mooney viscosity ML <sub>1+4/100C</sub>	ASTM D 1646	MU	51	51	49
	Volatile matter	ASTM D 5668	% weight	0.5	0.5	0.5
	Ash	ASTM D 5667	% weight	0.40	0.40	0.40
	Bound styrene	ASTM D 5775	% weight	23.5	23.5	23.5
	Soap	ASTM D 5774	% weight	0.5	0.50	0.50
	Organic acid	ASTM D 5774	% weight	6.0	6.0	4.5
	ETA extract	ASTM D 5774	% weight	-	-	32.0
	Stabilizer	Internal	% weight	0.34	0.3	0.34
Vulcanisation	M <sub>L</sub>	ASTM D 5289	dNm	1.9-2.9	2.0-3.0	2.4
	M <sub>H</sub>	ASTM D 5289	dNm	18.5-22.5	19.0-23.0	16.5
	t <sub>s1</sub>	ASTM D 5289	min	3.2-5.2	2.5-4.5	3.5
	t <sub>50%</sub>	ASTM D 5289	min	9.0-13.0	7.5-11.5	6.8
	t <sub>90%</sub>	ASTM D 5289	min	16.5-21.5	14.5-19.5	13.0
Compound	Tensile strength at break	ASTM D 412	MPa	min 22	min 22	min 19.0
	Elongation at break	ASTM D 412	%	min 400	min 300	min 350
	Modulus 300%	ASTM D 412	MPa	9.5-14.5	12.5-17.5	13.7
	Rebound resilience	ASTM D 7121	%	min 40	min 40	min 30
	Hardness	ASTM D 2240	°ShA	61-69	64-72	64

## APPLICATION

1500T	Appropriate for rubber compounds used in the production of car tyres and inner tubes, footwear, cables, conveyor belts, and various technical rubber articles
1502T	Appropriate for rubber compounds used in the production of floor coverings, bicycle tyres, children toys, hosepipes, cables, footwear and various technical rubber articles having light colour shades
1723	Appropriate for rubber compounds used in the production of car tyres and inner tubes, conveyor belts, shoes and various technical rubber articles

The values given in this review are typical and are provided for guidance purposes only.

### TYPICAL VULCANISATION PROPERTIES:

Standard test recipe: ASTM D 3185  
 Mixing procedure: ASTM D 3182  
 Carbon black: IRB 9 (types 1500T, 1502T); IRB 7 (type 1723)  
 Curemeter test: Rheometer MDR 2000  
 Conditions: Temperature 160°C, Arc 0.5°

### CHARACTERISTICS OF COMPOUND:

Conditions:  
 Vulcanisation temperature 145°C  
 Vulcanisation time 35 min  
 Test specimen S1



HIPREN EM 1500T and 1502T has Health Certificate issued by by National Laboratory of Health, Environment and Food, Maribor, Slovenia.

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## STYRENE-BUTADIENE RUBBER - HIPREN® EM

It is produced in the HIP-Petrohemija under the licence from Bunawerke Hülls (Germany) and engineering made by Lurgi (Germany).

### PACKAGING AND STORAGE

Rubber HIPREN EM is in the form of a bale, net mass 30.00 ± 0.50 kg, wrapped in a transparent polyethylene film with a print (indicates the manufacturer and type of rubber). The bales of rubber are stacked into wooden box-pallets (external dimensions 1000 x 1200 x 1250 mm) which are lined inside with a cardboard and a polyethylene sack. After stacking the bales in the pallet, the bales are closed by are closed by folding and gluing the sack. One box-pallet contains 30 bales of rubber, total net mass in the pallet of about 900 kg. The packaged material are protected from contamination and moisture.

Packaging of rubber bales can also be in metal pallets. Bales of rubber are stacked in metal box-pallets, which are lined inside with a polyethylene sack. After stacking the bales in the pallet, the bales are closed by folding and gluing the sack. One metal box-pallet contains 33 or 40 bales of rubber, with a total net weight of 990 to 1200 kg. The packaged material are protected from contamination and moisture. Packaged and marked material is stored in a closed and dry place at a temperature of up to 30°C, so that it is completely protected from the direct influence of solar radiation and heat source.

The storage time is two years under the specified conditions. The manufacturer shall not be held responsible for any damage resulting from inappropriate storage of the product.

### PACKAGING FILM

Property	Method	Unit	Standard value	Tolerance values
Thickness	ISO 4593	µm	50	40-60
Vicat softening point	ASTM D 1525	°C	91.5	89-94

### REACH

HIP-Petrohemija with applying the existing standards ISO 9001, ISO 14001, ISO 45001 and ISO 50001, follows completely the highest standards by which there are regulated environmental protection, human health and safety protection and herewith it expresses its intention to meet all the requirements which are prescribed by REACH regulation.

Registration of all the substances of potential export interest has been made with European Agency for Chemicals in Helsinki, in accordance with the prescribed deadlines, therefore in this way it enables further undisturbed placement and sale of HIP-Petrohemija's products without any limits at EU Market. As the only representative for HIP-Petrohemija in EU, pursuant to Article 8 of REACH regulation, there has been designated **Business Development & Intelligence srl (BD&I srl), Bruxelles, Belgium**

