

# KER<sup>®</sup> 1500

## Styrene-Butadiene Rubber - SBR

### Material Data Sheet

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Edition: 4

Approved by: Zdeněk Herber, Product manager

Previous editions of this document have lost their validity.

### CHARACTERISTICS

KER<sup>®</sup> 1500 is a standard grade of styrene-butadiene rubber. It is produced by a technology of cold emulsion copolymerization based on soaps of rosin and fatty acids and contains 23.5% of chemically bonded styrene. It is coagulated by a system of acid and synthetic coagulant, does not contain extender oil and is stabilized by staining antioxidant.

### GENERAL REQUIREMENTS

Bales of synthetic rubber KER<sup>®</sup> 1500 should be close to dimensions 720x360x180 mm. Presence of any mechanical impurities is not permitted.

### TECHNICAL PARAMETERS

#### RUBBER TECHNICAL PARAMETERS

| Parameters                               | Units | Values    | Test methods |
|--|-------|-----------|--------------|
| Mooney viscosity ML 1+4 (100°C) – massed | °ML   | 45 ÷ 55   | ASTM D1646   |
| Volatile matters                         | % wt. | max. 0,7  | ASTM D5668   |
| Total ash                                | % wt. | max. 0,4  | ASTM D5667   |
| Organic acids                            | % wt. | 5,0 ÷ 7,5 | ASTM D5774   |
| Soaps                                    | % wt. | max. 0,4  | ASTM D5774   |
| Bonded styrene                           | % wt. | 22 ÷ 25   | ASTM D5775   |

#### VULCANIZATE TECHNICAL PARAMETERS

| Parameters                | Units | Values    | Test methods |
|---------------------------|-------|-----------|--------------|
| Tensile strength          | MPa   | min. 24,5 | ASTM D412    |
| Elongation at break       | %     | min. 320  | ASTM D412    |
| Stress at 300% elongation | MPa   | min. 17,0 | ASTM D412    |

#### STANDARD RUBBER COMPOUND COMPOSITION

Acc. to ASTM D3185, formulation 1A. Carbon black IRB 7. Prepared using laboratory two-roll mill. Vulcanization conditions: temperature 145°C, time 50 minutes.

Guaranteed values of relevant technical parameters of the product are each time agreed upon in the sales contract.

To each shipping lot/delivery a quality certificate including data on properties of the product determined during release control is issued. Scope of the testing which is covered by the quality certificate is each time agreed upon in the sales contract.

### PACKAGING

KER<sup>®</sup> is baled to form of rubber blocks weighing 33 kg (± 0.5 kg).

Each bale is wrapped in PE film, which is an integral part of the product and on which labelling of a specific colour relating to the respective rubber grade is present.

The blocks are laid into returnable metal boxes. Net weight of each complete box is about 1200 kg. Alternatively it is possible supply product in wooden boxes, net weight of each complete box is about 1000 kg.

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RUBBERS

In case of wooden 1 000 kg boxes storage of the product in two (2) or more layers (stacking) is not permitted.

Each pallet bears a self-adhesive label on which manufacturer's name, product name and grade, production lot number, net and gross weight, production date and labelling required by relevant regulations (if needed) are given.

#### TRANSPORTATION

KER® is typically transported in covered road trucks, in covered railway carriages and in standard shipping containers.

KER® 1500 is not a dangerous material to transport.

#### STORAGE

Product should be stored in sheltered conditions away from direct sunlight, at least 2 meters away from radiant heating elements and the temperature should not exceed 30°C. The guaranteed shelf life for KER® under the above-mentioned conditions is twelve (12) months from the date of production.

#### APPLICATION

KER® 1500 is appropriate for rubber compounds used in the production of car tires and inner tubes, conveyor belts, footwear, cables, hosepipes and various technical rubber articles.

The product is not approved for production of rubber articles coming into contact with food or drinking water.

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*This document is of an informative character. The information given herein is based on the present state of our knowledge and experience. It makes neither product properties nor qualitative parameters guarantee and cannot be used as a basis of any claims. The information provided cannot be used for any mixtures with any other substances. Product should be transported, stored and used in accordance with valid regulations and good occupational hygiene practice.*

*Making use of the information as well as product application is beyond the producer control and determination of the safe conditions of use is the sole responsibility of a customer.*

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The logo for Synthos RUBBERS features the word "synthos" in a blue, lowercase, sans-serif font, with the letter "o" in green. Below it, the word "RUBBERS" is written in a blue, uppercase, sans-serif font with horizontal lines through the letters.