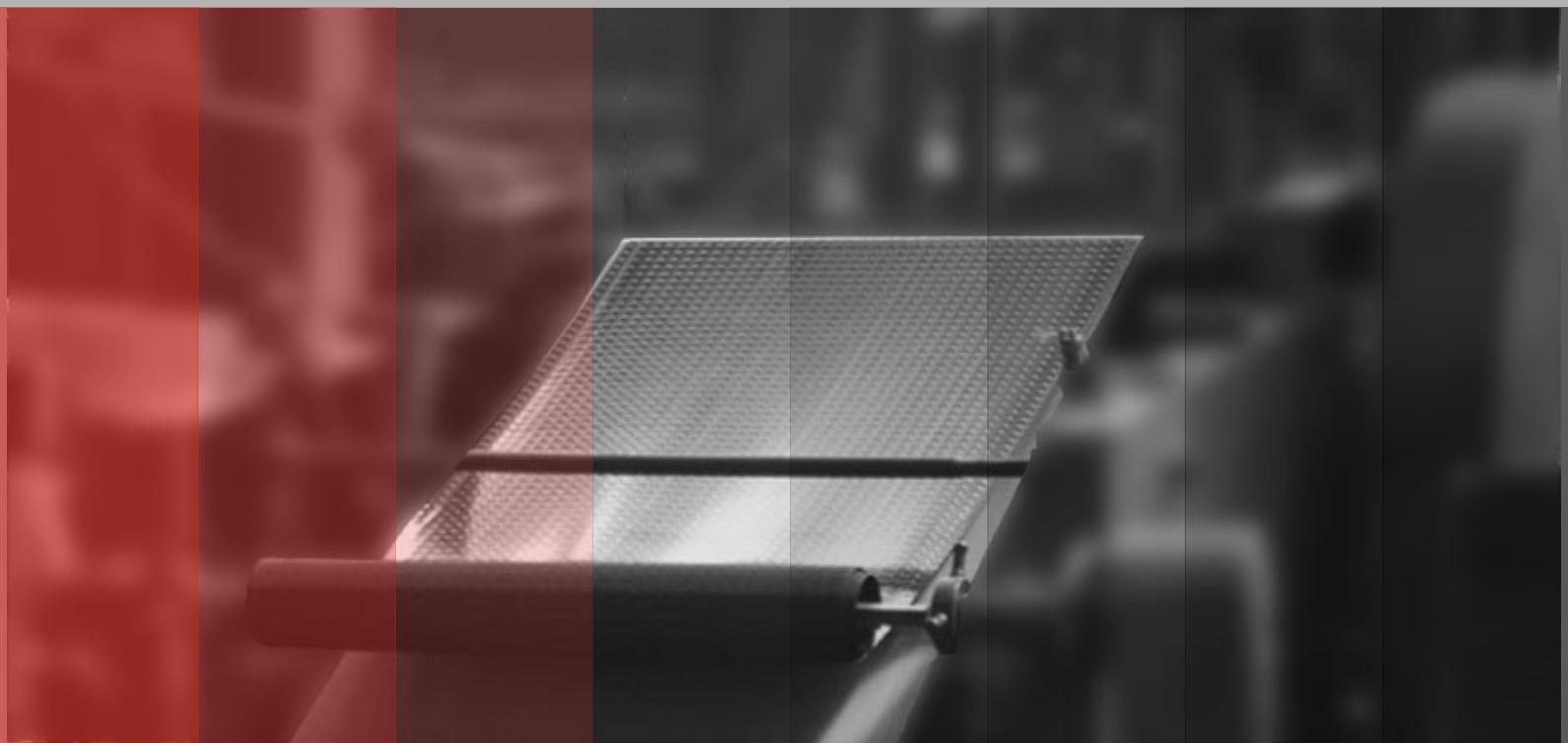


**VULKAN GUME D.O.O. NIŠ**



*rubber flooring and technical sheets*

en

[www.vulkan.rs](http://www.vulkan.rs)



## Mission

Development, production and market supplying with high quality rubber products within the maximally short terms of delivery and by competitive price. Our goal is long term partnership, that is why we consider the best interest of both sides the basis of successful cooperation.

## Quality

We produce only high quality rubber products. All production processes are strictly controlled, beginning with the input control of materials all the way to the final product. Our production is made in accordance with requirements of European standards. System of Quality Management of company "VULKAN GUME LLC" is certified by international standards **ISO 9001:2008, ISO 14001:2004**, as well as **TECKO №UA.MQ.148**.

## Reputation

In 75 years of factory's existence we have won the trust of many customers from Europe, the Middle East and Russia, as well as the countries of the Balkan region, where our regular buyers are majority of public and private companies: power plants, mines, factories and industrial plants.

## Development

Our product line is constantly updated with new types of products, created at the request of customers. Our laboratory, in collaboration with technicians, regularly develops new recipes and masters the production of new products in order to satisfy the needs of our customers.

## Logistics

Geographical location of the factory in the heart of Europe with a developed transport network gives us the advantage in the organization of logistics in terms of goods delivery and supplying of materials. This gives us an opportunity to significantly optimize transportation costs and reduce period of delivery.

# RUBBER FLOORING AND TECHNICAL SHEETS



"VULKAN GUME" Rubber Industry is situated in the heart of Serbia, in the city of Nis. Founded in 1937, our company, the oldest rubber industry in the Balkans, has a long tradition of successful business. The favorable geographical and logistic position of the factory is only one of its advantages.

From the day of the foundation up to the present moment, we stick to the principles which distinguish us from our competitors. Those principles primarily concern the quality, individual approach to the client and maximally short terms of delivery.

The range of our products is applicable in the fields of mining, metallurgy and construction:

- rubber conveyor belts
- pressure and pressure-suction hoses
- hoses for special purposes
- **TECHNICAL SHEETS**
- **RUBBER FLOORING SHEETS**
- **ELECTRO INSULATING MATS AND BOOTS**
- rubber technical goods

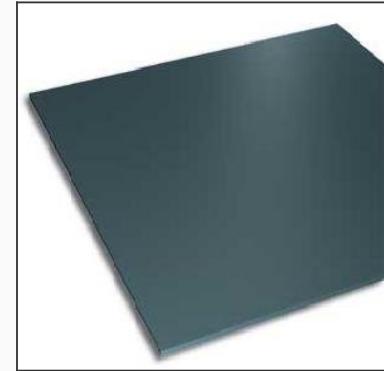
### **Rubber flooring**

Rubber floorings "VULKAN GUME LLC" is being made on the basis of natural and synthetic caoutchouc with the addition of mineral fillers and safe colors. Rubber floorings do not contain toxic substances like chlorine, bromine, iodine, cadmium, asbestos and heavy metals. Improved performance characteristics such as durability, wear resistance, good sound insulation, anti-slip properties, stability in contact with smoldering cigarette butts and easy cleaning allows application of rubber flooring "VULKAN GUME LLC" in all types of industrial, public and residential buildings:

- offices, schools, hospitals, residential buildings
- malls, supermarkets, catering companies
- exhibition areas, train stations, airports
- warehouses and industrial premises
- public transportation
- fitness-centers

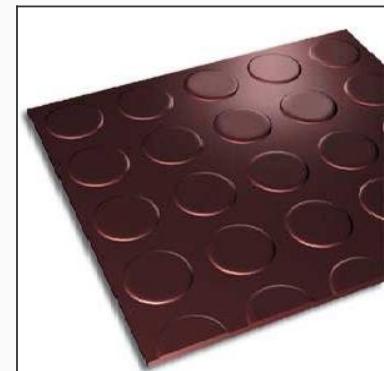
**Flooring sheet SMOOTH**

|   |  |                   | in accordance with standard | thickness (mm) | width (mm) | length (mm) | rubber |
|---|--|-------------------|-----------------------------|----------------|------------|-------------|--------|
| hardness                                      | 78 ± 5   | °Sh               | DIN 53505                   |                |            |             |        |
| specific gravity                              | 1.55   | g/cm <sup>3</sup> | DIN 53479                   |                |            |             |        |
| temperature range                             | -20 do +70   | °C                |                             |                |            |             |        |
| resistance to abrasion (5N)                   | max 160  | mm <sup>3</sup>   | DIN 53516                   |                |            |             |        |
| dimensions change under the influence of heat | < 0.6  | mm                | DIN 51962                   |                |            |             |        |
| resistance to further tearing                 | < 20   | N/mm              |                             |                |            |             |        |
| burning characteristic                        | class B2   |                   | DIN 4102-1                  |                |            |             |        |
| chemical agents resistance                    | no color change  |                   | DIN 51958                   |                |            |             |        |
| testing of flammability by cigarette          | extinguishing cigarette butt - no change                         |                   |                             |                |            |             |        |
| testing of light resistance                   | no color change  |                   | DIN 53389                   |                |            |             |        |
| color   | black<br>red<br>green<br>grey<br>blue<br>dark blue<br>on request |                   |                             |                |            |             |        |
| appearance                                    | the upper side smooth, the back side with textile pattern        |                   |                             |                |            |             |        |



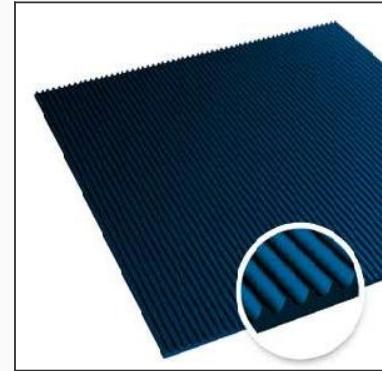
**Flooring sheet BOLLO**

|   |   |                   | in accordance with standard | thickness (mm) | width (mm) | length (mm) | rubber |
|---|---|-------------------|-----------------------------|----------------|------------|-------------|--------|
| hardness                                      | 78 ± 5  | °Sh               | DIN 53505                   |                |            |             |        |
| specific gravity                              | 1.55  | g/cm <sup>3</sup> | DIN 53479                   |                |            |             |        |
| temperature range                             | -20 do +70  | °C                |                             |                |            |             |        |
| resistance to abrasion (5N)                   | max 160   | mm <sup>3</sup>   | DIN 53516                   |                |            |             |        |
| dimensions change under the influence of heat | < 0.6   | mm                | DIN 51962                   |                |            |             |        |
| resistance to further tearing                 | < 20  | N/mm              |                             |                |            |             |        |
| burning characteristic                        | class B2  |                   | DIN 4102-1                  |                |            |             |        |
| chemical agents resistance                    | no color change   |                   | DIN 51958                   |                |            |             |        |
| testing of flammability by cigarette          | extinguishing cigarette butt - no change                                  |                   |                             |                |            |             |        |
| testing of light resistance                   | no color change   |                   | DIN 53389                   |                |            |             |        |
| color   | black<br>red<br>green<br>brown<br>grey<br>blue<br>dark blue<br>on request |                   |                             |                |            |             |        |
| appearance                                    | the upper side smooth, the back side with textile pattern                 |                   |                             |                |            |             |        |



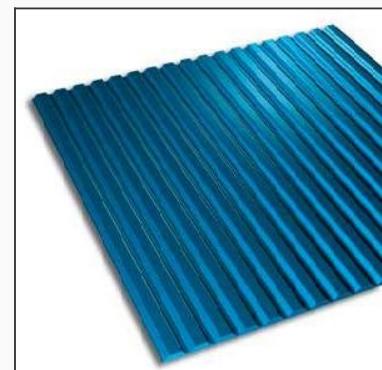
**Flooring sheet 1000 RIGHE**

|   |  |       | in accordance with standard | thickness (mm) | width (mm) | length (mm) | rubber |
|---|--|-------|-----------------------------|----------------|------------|-------------|--------|
| hardness                                      | 78 ± 5   | °Sh   | DIN 53505                   |                |            |             |        |
| specific gravity                              | 1.55   | g/cm³ | DIN 53479                   |                |            |             |        |
| temperature range                             | -20 do +70   | °C    |                             |                |            |             |        |
| resistance to abrasion (5N)                   | max 160  | mm³   | DIN 53516                   |                |            |             |        |
| dimensions change under the influence of heat | < 0.6  | mm    | DIN 51962                   |                |            |             |        |
| resistance to further tearing                 | < 20   | N/mm  |                             |                |            |             |        |
| burning characteristic                        | class B2   |       | DIN 4102-1                  |                |            |             |        |
| chemical agents resistance                    | no color change  |       | DIN 51958                   |                |            |             |        |
| testing of flammability by cigarette          | extinguishing cigarette butt - no change                         |       |                             |                |            |             |        |
| testing of light resistance                   | no color change  |       | DIN 53389                   |                |            |             |        |
| color   | black<br>red<br>green<br>grey<br>blue<br>dark blue<br>on request |       |                             |                |            |             |        |
| appearance                                    | the upper side smooth, the back side with textile pattern        |       |                             |                |            |             |        |



**Flooring sheet 100 RIGHE**

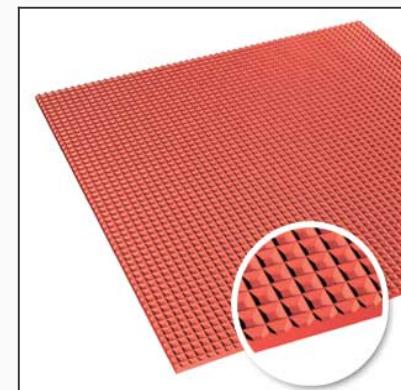
|   |   |       | in accordance with standard | thickness (mm) | width (mm) | length (mm) | rubber |
|---|---|-------|-----------------------------|----------------|------------|-------------|--------|
| hardness                                      | 78 ± 5  | °Sh   | DIN 53505                   |                |            |             |        |
| specific gravity                              | 1.55  | g/cm³ | DIN 53479                   |                |            |             |        |
| temperature range                             | -20 do +70  | °C    |                             |                |            |             |        |
| resistance to abrasion (5N)                   | max 160   | mm³   | DIN 53516                   |                |            |             |        |
| dimensions change under the influence of heat | < 0.6   | mm    | DIN 51962                   |                |            |             |        |
| resistance to further tearing                 | < 20  | N/mm  |                             |                |            |             |        |
| burning characteristic                        | class B2  |       | DIN 4102-1                  |                |            |             |        |
| chemical agents resistance                    | no color change   |       | DIN 51958                   |                |            |             |        |
| testing of flammability by cigarette          | extinguishing cigarette butt - no change                                  |       |                             |                |            |             |        |
| testing of light resistance                   | no color change   |       | DIN 53389                   |                |            |             |        |
| color   | black<br>red<br>green<br>brown<br>grey<br>blue<br>dark blue<br>on request |       |                             |                |            |             |        |
| appearance                                    |   |       |                             |                |            |             |        |



## Flooring sheet PYRAMID

|  | in accordance with standard | thickness (mm) | width (mm) | length (mm) | rubber |
|--|-----------------------------|----------------|------------|-------------|--------|
|--|-----------------------------|----------------|------------|-------------|--------|

|   |  |       |            |  |  |
|---|--|-------|------------|--|--|
| hardness                                      | 78 ± 5                                   | °Sh   | DIN 53505  |  |  |
| specific gravity                              | 1.55                                     | g/cm³ | DIN 53479  |  |  |
| temperature range                             | -20 do +70                               | °C    |            |  |  |
| resistance to abrasion (5N)                   | max 160                                  | mm³   | DIN 53516  |  |  |
| dimensions change under the influence of heat | < 0.6                                    | mm    | DIN 51962  |  |  |
| resistance to further tearing                 | < 20                                     | N/mm  |            |  |  |
| burning characteristic                        | class B2                                 |       | DIN 4102-1 |  |  |
| chemical agents resistance                    | no color change                          |       | DIN 51958  |  |  |
| testing of flammability by cigarette          | extinguishing cigarette butt - no change |       |            |  |  |
| testing of light resistance                   | no color change                          |       | DIN 53389  |  |  |
| color   | black                                    |       |            |  |  |
|   | red                                      |       |            |  |  |
|   | green                                    |       |            |  |  |
|   | grey                                     |       |            |  |  |
|   | blue                                     |       |            |  |  |
|   | dark blue                                |       |            |  |  |
|   | on request                               |       |            |  |  |
| appearance                                    |  |       |            |  |  |



## Flooring sheet SPORTING

|  | in accordance with standard | thickness (mm) | width (mm) | length (mm) | rubber |
|--|-----------------------------|----------------|------------|-------------|--------|
|--|-----------------------------|----------------|------------|-------------|--------|

|   |  |       |            |  |  |
|---|--|-------|------------|--|--|
| hardness                                      | 78 ± 5                                   | °Sh   | DIN 53505  |  |  |
| specific gravity                              | 1.55                                     | g/cm³ | DIN 53479  |  |  |
| temperature range                             | -20 do +70                               | °C    |            |  |  |
| resistance to abrasion (5N)                   | max 160                                  | mm³   | DIN 53516  |  |  |
| dimensions change under the influence of heat | < 0.6                                    | mm    | DIN 51962  |  |  |
| resistance to further tearing                 | < 20                                     | N/mm  |            |  |  |
| burning characteristic                        | class B2                                 |       | DIN 4102-1 |  |  |
| chemical agents resistance                    | no color change                          |       | DIN 51958  |  |  |
| testing of flammability by cigarette          | extinguishing cigarette butt - no change |       |            |  |  |
| testing of light resistance                   | no color change                          |       | DIN 53389  |  |  |
| color   | red                                      |       |            |  |  |
|   | green                                    |       |            |  |  |
|   | on request                               |       |            |  |  |
| appearance                                    |  |       |            |  |  |

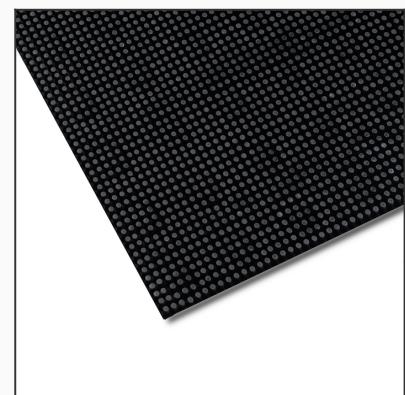


### Anti-dirt and anti-slip rubber flooring Punto

It is used as protection from water and dirt in the entryways of residential and public areas with high traffic, as well as for safe and comfortable movement at the pools, ski centers, skating rinks and other places with slippery surfaces.

#### Flooring sheet PUNTO

|   | in accordance with standard |                   | thickness (mm) | width (mm) | length (mm) | rubber |
|---|-----------------------------|-------------------|----------------|------------|-------------|--------|
| <b>hardness</b>                             | 50 ± 5                      | °Sh               | DIN 53505      |            | 1000        | 10000  |
| <b>weight</b>                               | 8.6                         | kg/m <sup>2</sup> | DIN 53479      |            |             |        |
| <b>temperature range</b>                    | -20 do +70                  | °C                |                |            |             |        |
| <b>resistance to abrasion (5N)</b>          | min 300                     | mm <sup>3</sup>   | DIN 53516      |            |             |        |
| <b>tensile strength</b>                     | 7                           | MPa               |                |            |             |        |
| <b>resistance to further tearing</b>        |                             | N/mm              |                |            |             |        |
| <b>burning characteristic</b>               |                             |                   | DIN 4102-1     |            |             |        |
| <b>chemical agents resistance</b>           |                             |                   | DIN 51958      |            |             |        |
| <b>testing of flammability by cigarette</b> |                             |                   |                |            |             |        |
| <b>testing of light resistance</b>          |                             |                   | DIN 53389      |            |             |        |
| <b>color</b>                                | black                       |                   |                |            |             |        |
|   | grey                        |                   |                |            |             |        |
| <b>appearance</b>                           |                             |                   |                |            |             |        |



### Specialized electro insulating boots

Specialized dielectric footwear is designed for the safe work on electrical installations and other places of high risk of electric shock. It is being used at an operating voltage up to 3000 V in the temperature range from -30 to +50. Frequency of testing of electric conductivity properties of dielectric footwear is once a year.

**Size:** 45, 47

**Height:** 25cm

**Color:** ocher

**Standard SRPS:** Z.B1.303

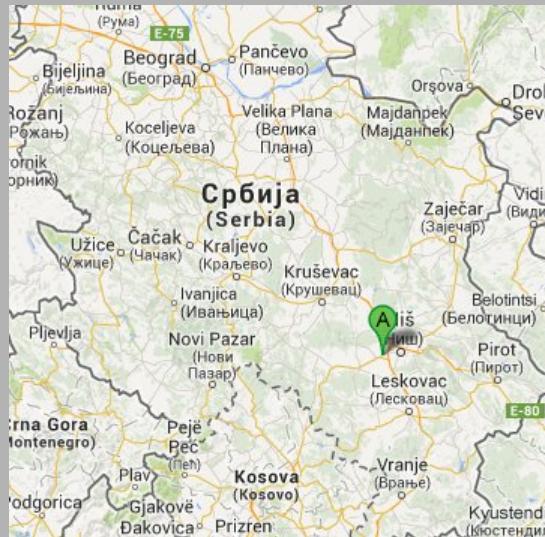


|   | STANDARD QUALITY<br>TECHNICAL SHEETS |                   |                   |                   | TECHNICAL SHEETS FOR SPECIAL PURPOSE |                |           |                       |                            |             |                            |                            |                              |                            |                             |                             |  |
|---|--------------------------------------|-------------------|-------------------|-------------------|--------------------------------------|----------------|-----------|-----------------------|----------------------------|-------------|----------------------------|----------------------------|------------------------------|----------------------------|-----------------------------|-----------------------------|--|
|   | R.T.S.                               | R.T.S.            | R.T.S.            | R.T.S.            | abrasion<br>resistant<br>R.T.S.      | High quality   |           | Oil resistant<br>R.S. | Oil resistant R.S.         |             | Oil resistant R.S.         |                            | Electro insulating<br>carpet |                            |                             |                             |  |
| thickness<br>(mm)   | 1-6                                  | 6-20              | 10-50             | 1-6               | 1-25                                 | 1-6            | 6-20      | 1-6                   | 6-20                       | 1-6         | 6-20                       | 1-6                        | 6-20                         | 4-6                        | 3-4                         |                             |  |
| width (mm)  | 1200                                 | 1200              | 1000              | 1200              | 1000/1200                            | 1200           | 1000/1200 | 1200                  | 1000/1200                  | 1200        | 1000/1200                  | 1200                       | 1000/1200                    | 1000/1200                  | 1000/1200                   |                             |  |
| length (mm)   | 10000                                | 10000             | 1000              | 10000             | 10000                                | 10000          |           | 1000                  | 10000                      |             | 10000                      |                            | 10000                        |                            | 10000                       |                             |  |
| rubber  | SBR /<br>NR                          | SBR /<br>NR       | SBR /<br>NR       | SBR /<br>NR       | SBR / NR                             | NR             | NR        | 20%<br>NBR            | 20% NBR                    | 100%<br>NBR | 100% NBR                   | 100%<br>NBR                | 100% NBR                     | NR / SBR                   | NR / SBR                    |                             |  |
| hardness<br>( $\circ$ Sh)   | 75 ± 5                               | 70 ± 5            | 70 ± 5            | 60 ± 5            | 63 ± 5                               | 40 ± 5         | 50 ± 5    | 70 ± 5                | 70 ± 5                     | 50          | 50                         | 50                         | 50                           | 50                         | 65                          |                             |  |
| specific<br>gravity<br>( $g/cm^3$ )                               | 1.5                                  | 1.5               | 1.5               | 1.5               | 1.15                                 | 1              | 1.5       | 1.4                   | 1.4                        | 1.2 ± 0.05  | 1.2 ± 0.05                 | 1.2 ± 0.05                 | 1.2 ± 0.05                   | 1.45 ± 0.05                | 1.45 ± 0.05                 |                             |  |
| tensile<br>strength<br>(MPa)                                      | min 4                                | min 4.5           | min 4.5           | min 4.5           | min 15                               | min 18         |           | min 6                 | min 8                      |             | min 8                      | min 8                      | min 8                        | min 8                      | min 5                       | min 5                       |  |
| elongation<br>(%)   | min 200                              | min 200           | min 200           | min 200           | min 400                              | min 800        |           | min 200               | min 300                    |             | min 500                    | min 500                    | min 500                      | min 500                    | min 200                     | min 200                     |  |
| temperature<br>range (°C)   | -20 do<br>+70                        | -20 do<br>+70     | -20 do<br>+70     | -20 do<br>+70     | -30 do<br>+80                        | -30 do +70     |           | -20 do +80            | -20 do +100                |             | -30 do +100                | -30 do +100                | -30 do +100                  | -30 do +100                | -30 do +80                  | -30 do +80                  |  |
| resistance<br>to abrasion<br>(5N) (mm <sup>3</sup> )              | max 250                              | max 250           | max 250           | max 250           | max 100                              | max 150        |           | max 200               | max 200                    |             | max 160                    | max 160                    | max 160                      | max 160                    | -                           | -                           |  |
| ozone<br>resistance   | non<br>resistant                     | non<br>resistant  | non<br>resistant  | non<br>resistant  | non<br>resistant                     | non resistant  |           | non resistant         | non resistant              |             | non resistant              | non resistant              | non resistant                | non resistant              | non resistant               | non resistant               |  |
| weather<br>resistance   | well<br>resistant                    | well<br>resistant | well<br>resistant | well<br>resistant | excellent<br>resistant               | well resistant |           | well resistant        | well resistant             |             | non resistant              | non resistant              | non resistant                | non resistant              | -                           | -                           |  |
| oil<br>resistance   | non<br>resistant                     | non<br>resistant  | non<br>resistant  | non<br>resistant  | non<br>resistant                     | non resistant  |           | non resistant         | well resistant             |             | well resistant             | well resistant             | well resistant               | well resistant             | excellent<br>resistant      | excellent<br>resistant      |  |
| benzine<br>resistance   | non<br>resistant                     | non<br>resistant  | non<br>resistant  | non<br>resistant  | non<br>resistant                     | non resistant  |           | non resistant         | conditionally<br>resistant |             | conditionally<br>resistant | conditionally<br>resistant | conditionally<br>resistant   | conditionally<br>resistant | conditionally<br>resistant  | conditionally<br>resistant  |  |
| acid<br>resistance  | non<br>resistant                     | non<br>resistant  | non<br>resistant  | non<br>resistant  | non<br>resistant                     | non resistant  |           | non resistant         | conditionally<br>resistant |             | conditionally<br>resistant | conditionally<br>resistant | conditionally<br>resistant   | conditionally<br>resistant | conditionally<br>resistant  | conditionally<br>resistant  |  |
| strong<br>bases<br>resistance                                     | non<br>resistant                     | non<br>resistant  | non<br>resistant  | non<br>resistant  | non<br>resistant                     | non resistant  |           | non resistant         | conditionally<br>resistant |             | conditionally<br>resistant | conditionally<br>resistant | conditionally<br>resistant   | conditionally<br>resistant | conditionally<br>resistant  | conditionally<br>resistant  |  |
| solid rubber<br>(mm)  | 1-6                                  | 6-25              | 10-50             | 6-25              | -                                    | -              |           | -                     | -                          |             | -                          | -                          | -                            | -                          | -                           | -                           |  |
| with 1 ply<br>(mm)  | 2-6                                  | 6-25              | -                 | -                 | -                                    | -              |           | -                     | -                          |             | -                          | -                          | -                            | -                          | type 3000 - breakdown vol - | type 1000 - breakdown vol - |  |
| with 2 plies<br>(mm)  | 3-5                                  | 6-25              | -                 | -                 | -                                    | -              |           | -                     | -                          |             | -                          | -                          | -                            | -                          |                             |                             |  |
| with 3 plies<br>(mm)  | 5-6                                  | 6-25              | -                 | -                 | -                                    | -              |           | -                     | -                          |             | -                          | -                          | -                            | -                          | Standard:                   |                             |  |
| with 4 plies<br>(mm)  | 6                                    | 6-25              | -                 | -                 | -                                    | -              |           | -                     | -                          |             | -                          | -                          | -                            | -                          | SRPS Z.B1.304               |                             |  |
| Permanent deformation by compression for 25% <b>SRPS G.S2.130</b> |                                      |                   |                   |                   |                                      |                |           |                       |                            |             |                            |                            |                              |                            |                             |                             |  |
| conditions  | 22h na 70°C                          |                   |                   |                   | -                                    | -              |           | 22h na 70°C           | -                          |             | 72h na 70°C                | -                          |                              | 72h na 70°C                | -                           |                             |  |
| CS  | 50%                                  |                   |                   |                   | -                                    | -              |           | 30%                   | -                          |             | 50%                        | -                          |                              | 50%                        | -                           |                             |  |
| testing of rubber resistance against fluids <b>SRPS G.S2.129</b>  |                                      |                   |                   |                   |                                      |                |           |                       |                            |             |                            |                            |                              |                            |                             |                             |  |
| medium  | -                                    | -                 | -                 | -                 | -                                    | -              |           | ASTM N°2              | -                          |             | ASTM N°2                   | -                          |                              | ASTM N°2                   | -                           |                             |  |
| conditions  | -                                    | -                 | -                 | -                 | -                                    | -              |           | 22h na 70°C           | -                          |             | 72h na 70°C                | -                          |                              | 72h na 70°C                | -                           |                             |  |
| volume<br>change  | -                                    | -                 | -                 | -                 | -                                    | -              |           | ±2%                   | -                          |             | ±2%                        | -                          |                              | ±2%                        | -                           |                             |  |

| thickness     | tolerance |
|---------------|-----------|
| 0.75          | ±0.12mm   |
| 1             | ±0.20mm   |
| 1.5           | ±0.25mm   |
| 2             | ±0.30mm   |
| 3             | ±0.40mm   |
| 4.5           | ±0.55mm   |
| 6             | ±0.75mm   |
| 10            | ±1.00mm   |
| >12.50        | ±10%      |
| width         | ±2%       |
| length        | ±2%       |
| hardness      | ±5°Sh     |
| spec. gravity | ±5%       |



# VULKAN GUME D.O.O. NIŠ



GPS: N43.313485, E21.791616

Toplicki partizanski odred bb, 18000 Nis, Serbia - [info@vulkan.rs](mailto:info@vulkan.rs)  
**[www.vulkan.rs](http://www.vulkan.rs)**

## Sales Department

phone: +381 66 833 70 05

phone: +381 66 833 70 14

phone: +381 66 833 70 41

phone: +381 66 833 70 44

e-mail: [s.stankovic@vulkan.rs](mailto:s.stankovic@vulkan.rs)

e-mail: [m.zejak@vulkan.rs](mailto:m.zejak@vulkan.rs)

e-mail: [s.kitanovic@vulkan.rs](mailto:s.kitanovic@vulkan.rs)

e-mail: [k.mjakusko@vulkan.rs](mailto:k.mjakusko@vulkan.rs)

