

### Tolerances for molded parts - rubber

acc. to ISO 3302-1

| nominal dimension<br>(mm) | tolerance class M1               |                                | tolerance class M2               |                                | tolerance class M3               |                                | tolerance class M4               |                                |
|---------------------------|----------------------------------|--------------------------------|----------------------------------|--------------------------------|----------------------------------|--------------------------------|----------------------------------|--------------------------------|
|                           | mold-<br>dependant<br>dimensions | dimensions<br>with<br>overflow | mold-<br>dependant<br>dimensions | dimensions<br>with<br>overflow | mold-<br>dependant<br>dimensions | dimensions<br>with<br>overflow | mold-<br>dependant<br>dimensions | dimensions<br>with<br>overflow |
|                           | tolerances - in mm:              |                                | tolerances - in mm :             |                                | tolerances - in mm :             |                                | tolerances - in mm :             |                                |
| 0 - 6,3                   | ± 0,10                           | ± 0,10                         | ± 0,15                           | ± 0,25                         | ± 0,25                           | ± 0,40                         | ± 0,50                           | ± 0,50                         |
| > 6,3 - 10                | ± 0,10                           | ± 0,15                         | ± 0,20                           | ± 0,30                         | ± 0,30                           | ± 0,50                         | ± 0,70                           | ± 0,70                         |
| > 10 - 16                 | ± 0,15                           | ± 0,20                         | ± 0,20                           | ± 0,40                         | ± 0,40                           | ± 0,60                         | ± 0,80                           | ± 0,80                         |
| > 16 - 25                 | ± 0,20                           | ± 0,20                         | ± 0,25                           | ± 0,50                         | ± 0,50                           | ± 0,80                         | ± 1,00                           | ± 1,00                         |
| > 25 - 40                 | ± 0,20                           | ± 0,25                         | ± 0,35                           | ± 0,60                         | ± 0,60                           | ± 1,00                         | ± 1,30                           | ± 1,30                         |
| > 40 - 63                 | ± 0,25                           | ± 0,35                         | ± 0,40                           | ± 0,80                         | ± 0,80                           | ± 1,30                         | ± 1,60                           | ± 1,60                         |
| > 63 - 100                | ± 0,35                           | ± 0,40                         | ± 0,50                           | ± 1,00                         | ± 1,00                           | ± 1,60                         | ± 2,00                           | ± 2,00                         |
| > 100 - 160               | ± 0,40                           | ± 0,50                         | ± 0,70                           | ± 1,30                         | ± 1,30                           | ± 2,00                         | ± 2,50                           | ± 2,50                         |
|                           | tolerances - in %:               |                                | tolerances - in % :              |                                | tolerances - in % :              |                                | tolerances - in % :              |                                |
| > 160                     | ± 0,30                           | ± 0,40                         | ± 0,50                           | ± 0,70                         | ± 0,80                           | ± 1,30                         | ± 1,50                           | ± 1,50                         |

### Tolerances for profiles and hoses (without reinforcement) - rubber

acc. to ISO 3302-1

| nominal dimension<br>(mm) | tolerance class E1  | tolerance class E2   | tolerance class E3   |
|---------------------------|---------------------|----------------------|----------------------|
|                           | tolerances - in mm: | tolerances - in mm : | tolerances - in mm : |
| 0 - 1,5                   | ± 0,15              | ± 0,25               | ± 0,40               |
| > 1,5 - 2,5               | ± 0,20              | ± 0,35               | ± 0,50               |
| > 2,5 - 4,0               | ± 0,25              | ± 0,40               | ± 0,70               |
| > 4,0 - 6,3               | ± 0,35              | ± 0,50               | ± 0,80               |
| > 6,3 - 10,0              | ± 0,40              | ± 0,70               | ± 1,00               |
| > 10,0 - 16,0             | ± 0,50              | ± 0,80               | ± 1,30               |
| > 16,0 - 25,0             | ± 0,70              | ± 1,00               | ± 1,60               |
| > 25,0 - 40,0             | ± 0,80              | ± 1,30               | ± 2,00               |
| > 40,0 - 63,0             | by agreement        | ± 1,60               | ± 2,50               |
| > 63,0 - 100,0            | by agreement        | ± 2,00               | ± 3,20               |

### Tolerances for sheets, cut-to-size parts, die-cut parts

acc. to DIN 7715 part 5

| nominal dimension<br>(mm) | tolerance class P1 | tolerance clas P1  | tolerance class P3 |
|---------------------------|--------------------|--------------------|--------------------|
|                           | tolerances - in mm | tolerances - in mm | tolerances - in mm |
| 0 - 1,6                   | ± 0,20             | ± 0,20             | ± 0,40             |
| > 1,6 - 4                 | ± 0,20             | ± 0,30             | ± 0,40             |
| > 4 - 6,3                 | ± 0,20             | ± 0,40             | ± 0,50             |
| > 6,3 - 10                | ± 0,30             | ± 0,50             | ± 0,60             |
| > 10 - 25                 | ± 0,30             | ± 0,60             | ± 0,80             |
| > 25 - 40                 | ± 0,40             | ± 0,80             | ± 1,00             |
| > 40 - 63                 | ± 0,50             | ± 1,00             | ± 1,50             |
| > 63 - 100                | ± 0,60             | ± 1,20             | ± 2,00             |
| > 100 - 160               | ± 0,80             | ± 1,40             | ± 2,50             |
| > 160 - 250               | ± 1,00             | ± 1,60             | ± 3,00             |
| > 250 - 400               | ± 1,60             | ± 2,50             | ± 5,00             |
|                           | tolerances - in %: | tolerances - in %: | tolerances - in %: |
| > 400                     | ± 0,50             | ± 0,80             | ± 1,50             |

## Tolerances for cord rings and extruded vulcanized rings

acc. to ISO 3302-1

| nominal dimension<br>(mm) | tolerances as to cord thickness | tolerances as to length and inner-Ø |  |
|---------------------------|---------------------------------|-------------------------------------|--|
|                           | tolerance class E2              | +/- 0,8%                            |  |
|                           | tolerances – in mm              |                                     |  |
| 0 - 1,5                   | ± 0,25                          |                                     |  |
| > 1,5 - 2,5               | ± 0,35                          |                                     |  |
| > 2,5 - 4,0               | ± 0,40                          |                                     |  |
| > 4,0 - 6,3               | ± 0,50                          |                                     |  |
| > 6,3 - 10,0              | ± 0,70                          |                                     |  |
| > 10,0 - 16,0             | ± 0,80                          |                                     |  |
| > 16,0 - 25,0             | ± 1,00                          |                                     |  |
| > 25,0 - 40,0             | ± 1,30                          |                                     |  |
| > 40,0 - 63,0             | ± 1,60                          |                                     |  |
| > 63,0 - 100,0            | ± 2,00                          |                                     |  |

## Tolerances for sponge rubber

acc. to ISO 3302-1

| nominal dimension<br>(mm) | tolerance class E1 | tolerance class E2 | tolerance class E3 |
|---------------------------|--------------------|--------------------|--------------------|
|                           | tolerances – in mm | tolerances – in mm | tolerances – in mm |
| 0 - 1,5                   | ± 0,15             | ± 0,25             | ± 0,40             |
| > 1,5 - 2,5               | ± 0,20             | ± 0,35             | ± 0,50             |
| > 2,5 - 4,0               | ± 0,25             | ± 0,40             | ± 0,70             |
| > 4,0 - 6,3               | ± 0,35             | ± 0,50             | ± 0,80             |
| > 6,3 - 10,0              | ± 0,40             | ± 0,70             | ± 1,00             |
| > 10,0 - 16,0             | ± 0,50             | ± 0,80             | ± 1,30             |
| > 16,0 - 25,0             | ± 0,70             | ± 1,00             | ± 1,60             |
| > 25,0 - 40,0             | ± 0,80             | ± 1,30             | ± 2,00             |
| > 40,0 - 63,0             | by agreement       | ± 1,60             | ± 2,50             |
| > 63,0 - 100,0            | by agreement       | ± 2,00             | ± 3,20             |

## Tolerances for cut-to-length extrusions

acc. to ISO 3302-1

| nominal dimension<br>(mm) | tolerance class L1 | tolerance class L2 | tolerance class L3 |
|---------------------------|--------------------|--------------------|--------------------|
|                           | tolerances – in mm | tolerances – in mm | tolerances – in mm |
| 0 - 40                    | ± 0,70             | ± 1,00             | ± 1,60             |
| > 40 - 63                 | ± 0,80             | ± 1,30             | ± 2,00             |
| > 63 - 100                | ± 1,00             | ± 1,60             | ± 2,50             |
| > 100 - 160               | ± 1,30             | ± 2,00             | ± 3,20             |
| > 160 - 250               | ± 1,60             | ± 2,50             | ± 4,00             |
| > 250 - 400               | ± 2,00             | ± 3,20             | ± 5,00             |
| > 400 - 630               | ± 2,50             | ± 4,00             | ± 6,30             |
| > 630 - 1000              | ± 3,20             | ± 5,00             | ± 10,00            |
| > 1000 - 1600             | ± 4,00             | ± 6,30             | ± 12,50            |
| > 1600 - 2500             | ± 5,00             | ± 10,00            | ± 16,00            |
| > 2500 - 4000             | ± 6,30             | ± 12,50            | ± 20,00            |
|                           | tolerances – in mm | tolerances – in mm | tolerances – in mm |
| > 4000                    | ± 0,16             | ± 0,32             | ± 0,50             |

All tech data presented without guarantee - no liability for correctness, actuality and completeness

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