# ACRYLNITRIL BUTADIENE - NBR

Acrylnitrile and butadiene unsatured copolymers balls, they provide good wear/abrasion, heat and compression resistance. Excellent contact compatibility with plastics. Poor resistance to aging. They allow to get closer tolerances despite of the soft components. The natural color of the balls is black.

## APPLICATION

Pumps and safetyvalves (as sealing element), hydraulic and pneumatic applications.

## TECHNICAL AND COMMERCIAL NAME

Acrylnitril Butadien, Buna-N, Nitrile or NBR

## PHYSICAL / MECHANICAL / THERMAL / ELECTRICAL / MAGNETIC PROPERTIES

| Property | Symbol | Unit | Type | Notes | Values |
|---|---|---|---|---|---|
| Density | δ | [g/cm3] | Physical | Room temp. | 1,20 |
| Young´s modulus | E | [GPa] | Mechanical | - | 3,5 |
| Elongation at break | A | % | Mechanical | Room temp. | max 700 |
| Friction coefficient | μ | - | Mechanical | Room temp. | 0,90 |
| Coefficient of thermal expansion | α | [10-6/ºC] | Thermal | (DT=0-100°C) | 170 |
| Thermal conductivity | λ | [W/(m·K)] | Thermal | Room temp. | 0,25 |
| Electric resistivity | ρ | [Ω*m] | Electric | - | >10^15 |
| magnetic permeability | μ | - | Magnetic | diamagnetic | < ~1 |

## TECHNISCHE EIGENSCHAFTEN

| Property | Type | Unit | Values | Unit | Values |
|---|---|---|---|---|---|
| Härte | Mechanical | [Shore A] | 75-90 | - | - |
| Zugfestigkeit | Mechanical | [MPa] | 15-20 | [$p_{six}10^3$] | 2,15-2,90 |
| Betriebstemperatur | Thermal | [ºC] | -15 / 100 | [ºF] | 5 / 212 |

## QUALITY AND DIAMETER

| Dia mm | Unit | Dia “ | Unit | Precision Grade |
|---|---|---|---|---|
| 1,000 – 200,000 | [mm] | > ~8“ | ["] | III |

## CORRISION RESISTANCE

NBR balls are resistant in contact with hydraulic fluids, lubricant oils, transmission fluids, not polar petroleum products, aliphatic hydrocarbons, mineral greases, most diluted acids, basis and salt solutions at room temperature. They are resisting even into air and water environments. They are not resisting against aromatic and chlorinated hydrocarbons, polar solvents, ozone, ketones, esters, aldehydes.