



Guardian-NR is a hollow NiMo cylinder with mild activity designed for use as top bed grading in a variety of hydroprocessing unit applications. In addition to excellent physical integrity, Guardian-NR provides high void space for particulate trapping. These rings, along with Guardian-NT trilobes, are typically loaded above the main bed catalyst and aid in providing even flow distribution.

Eurecat's 3 mm, 5 mm and 9 mm Guardian Rings deliver a very cost effective and environmentally friendly way to maximize overall catalyst life since they are manufactured utilizing carefully selected high quality regenerated catalyst as a portion of their formulation.

Guardian-NR Nickel/Molybdenum Rings Typical Properties

| | | | | |
|---------------------|--------------------|-----|------|-----|
| Nominal Diameter | mm | 3 | 5 | 9 |
| | in | 1/8 | 3/16 | 3/8 |
| Sock Load Density | kg/m ³ | 620 | 590 | 560 |
| | lb/ft ³ | 39 | 37 | 35 |
| Void Fraction | % | 50 | 50 | 50 |
| Side Crush Strength | kg/mm | 1.4 | 1.6 | 2.0 |
| | lb/mm | 3.0 | 3.5 | 4.5 |
| Bulk Crush Strength | Mpa | 1.0 | 1.0 | 1.0 |
| | lb/in ² | 145 | 145 | 145 |

| | | |
|---------------------------------|----|-------|
| Standard Drum Packaging | kg | 125 |
| | lb | 275 |
| Standard Supersack Packaging | kg | 726 |
| | lb | 1,600 |

