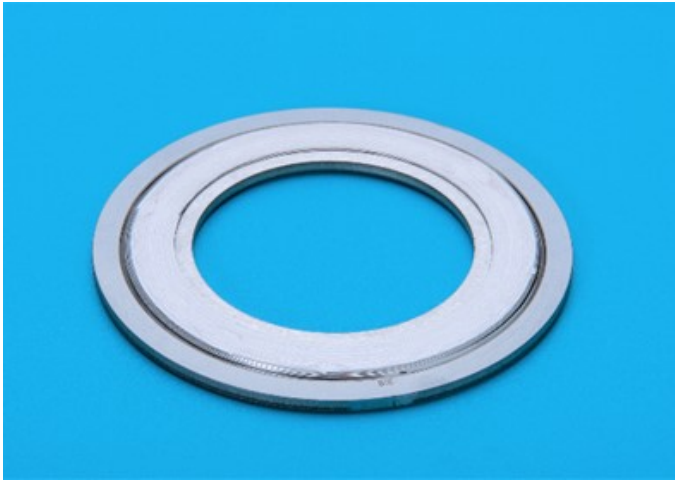




VORTEX™ GASKET-NM

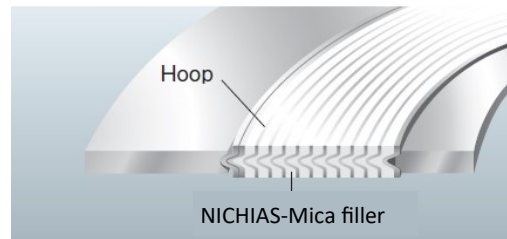
TOMBO™ No. 1838R-NM



VORTEX™ Gasket-NM is a spiral wound gasket using **NM material**. **NM material** is developed by NICHIAS to overcome the chronic problem of vermiculite and graphite.

Vermiculite and graphite are known to have a problem in sealability and weakness in oxidant resistance, respectively. Due to its unique structure, **NM material** solves these issues by extending its sealing life-time and resisting to oxidization.

Exclusively to **NICHIAS**, **VORTEX™ Gasket-NM** is a sealing solution for critical operation - high temperature and high pressure with flammable or toxic water/oil/gas medium for long useful time.



What's special about **VORTEX™ Gasket-NM** ?

- ◇ Serviceable high temperature **up to 1000 °C** higher than customary spiral wound gaskets
- ◇ Outstanding **longer durability** of superb sealing performance at high temperature than others
- ◇ Strong **resistance to oxidizing substance**
- ◇ Successful test result for **API 6FB, Third Edition**

■ Design Criteria

| Gasket coefficient, m [-] | Minimum design seating stress, y [N/mm ²] | Minimum seating stress σ^3 [N/mm ²] | | Allowable seating stress [N/mm ²] |
|---------------------------|---|--|----------------|---|
| | | Water-type or oil-type fluid | Gas-type fluid | |
| 3.00 | 68.9 | 34.3 | 78.4 | 294.2 |

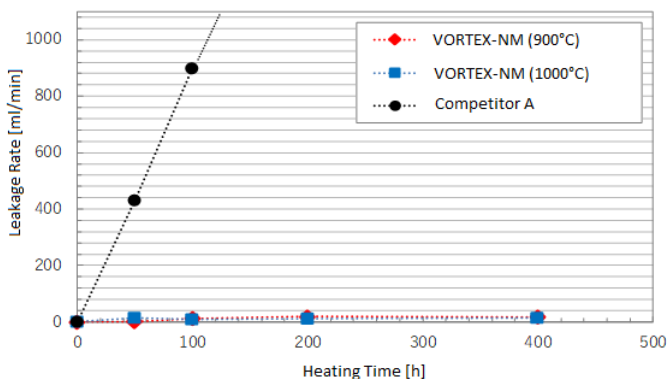
■ Application

- ◇ Suitable for flange coupling, valve bonnet and equipment at high temperature and high pressure.
- ◇ Applicable for water type fluids, oil type fluid, oxidizing acid/salts
- ◇ Recommended for oil refinery, petrochemical and power generations.

■ Service Range

| | | |
|--------------------------|-------------------------------|-----------------------------|
| Water-type Fluid | Maximum Operating Temperature | 1000 °C |
| | Maximum Operating Pressure | Class 2500 (Approx. 43 MPa) |
| Oil-type, Gas-type Fluid | Maximum Operating Temperature | 1000 °C |
| | Maximum Operating Pressure | Class 1500 (Approx. 26 MPa) |

■ Heating Cycle Seal Test



■ Hoop Material

- 312 Stainless Steel (J)
- Alloy 600 (Y)

VORTEX™ Gasket-NM shows stable sealability at high temperature and exhibits excellent sealing performance. It maintains the leakage at near zero level for 400 hours at 1000 °C as shown in the graph.

(tested by NICHIAS Corp.)

For more information, visit www.nichias.eu

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