



# MATHESON

## Nanochem® GuardBed™

Manufactured for Nippon Sanso Matheson by 

## Products For Natural Gas

Natural gas contains a wide variety of sulfur compounds and not just H<sub>2</sub>S. Sulfur degrades performance and poisons the catalysts used in fuel processing. In addition to the naturally occurring sulfur, organic sulfur compounds such as mercaptans are also added as an odorant. Sulfur speciation in the gas can change from pipeline to pipeline, locale to locale and season to season. Other compositional changes in heavy hydrocarbons and moisture further complicate the problem.

**Nanochem® GuardBed™** sorbents remove all naturally occurring sulfur compounds (e.g., H<sub>2</sub>S, COS) and organo-sulfur odorants, including sulfides (e.g. dimethyl sulfide, DMS and di- and tri-sulfides, Mercaptans (e.g., tert butyl mercaptan, TBM, and thiophenes, (e.g., tetrahydro-thiophene, THT). Our sorbents reduce the sulfur concentration to ppbv levels to ensure maximum protection.

We will work closely with you to engineer the best solution for your application. Protect your process and catalysts with the **Nanochem® GuardBed™** family of sulfur sorbents!



### FEATURES

- **Ambient temperature** operation
- **High capacity** and removal efficiency for all sulfur species
  - Reducing sulfur concentration to less than 5 ppbv
- **Tolerant** to heavy hydrocarbons and moisture (Nanochem® GuardBed™-R2 operates in up to 8000 ppmv water)
- **Easy disposal** - No flammability, toxicity or pyrophorocity
- **Regenerable** or expendable operation

Product	Application
<b>Nanochem® GuardBed™-R2</b>	Moisture-tolerant desulfurization
<b>Nanochem® GuardBed™-R5</b>	COS removal
<b>Nanochem® GuardBed™-R6</b>	General desulfurization (pipeline NG)
<b>Nanochem® GuardBed™-R8</b>	General desulfurization

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