



# SulfaTrap™

*Taking Sulfur Out of the Equation*



## SulfaTrap Products

	Natural Gas						LPG			Gas Treatment				Liquid Feeds			Renewables			
	Pipeline Quality Gas Ultra Purification	Bulk Processing	High Moisture Gas	High COS Gas	LNG	Metal Removal	HD5, HD10	High COS LPG	Metal Removal	Olefins	Bulk Gas (H <sub>2</sub> , CO <sub>2</sub> ) Ultra Purification	Refinery off-gas	Synthesis gas / reformat	Metal Removal	Natural Gas Liquids	Chemical Feeds (ammonia, diethylether)	Gasoline & Diesel Upgrade	Bio-Ethanol	Bio-Diesel	Biogas
SulfaTrap™-R2B	●		●		●					●		●			●	●		●		●
SulfaTrap™-R2G	●		●		●					●		●			●	●		●		●
SulfaTrap™-R4	●		●		●		●									●				
SulfaTrap™-R5A	●	●			●					●		●			●	●		●		
SulfaTrap™-R5C			●									●								
SulfaTrap™-R5E		●		●	●		●	●												
SulfaTrap™-R5P								●												
SulfaTrap™-R6	●	●			●		●													
SulfaTrap™-R7J		●	●	●	●															●
SulfaTrap™-R7H		●	●	●	●															●
SulfaTrap™-R7Q		●	●	●	●															●
SulfaTrap™-R8HB	●				●		●				●								●	●
SulfaTrap™-R8C	●			●	●		●	●			●								●	●
SulfaTrap™-D1																	●	●	●	
SulfaTrap™-D4																	●	●	●	
SulfaTrap™-WG													●							
SulfaTrap™-HRG													●							
SulfaTrap™-MT1						●			●					●			●			
SulfaTrap™-MT2						●			●					●			●			
SulfaTrap™-X1	●	●			●		●													
SulfaTrap™-X5		●	●	●	●		●	●												

- **SulfaTrap™-R2** products are universal adsorbents used in the ultra-purification of a range of hydrocarbons and chemical feedstocks. They can remove a wide range of sulfur compounds (sulfides, mercaptans and thiophenes) reducing the total sulfur concentration of the gas to single digit ppbv concentrations. These sorbents perform well in presence of high moisture (up to 10,000 ppmv H<sub>2</sub>O) and heavy hydrocarbons, making them highly suitable purifiers for complex feedstocks (e.g., ethylene, propylene) and off-gases (e.g., refinery off-gases, fuel gas, natural gas tainted with LPG during peak-shaving).
- **SulfaTrap™-R2B** sorbent offers a regenerable solution for extended product life. In bulk processing (e.g., large LNG plants), SulfaTrap™-R2B purifiers located downstream of amine scrubbers can remove the mercaptans and complex sulfides to meet the most stringent purity requirements. Regenerable operation ensures cost-effective gas processing. The SulfaTrap™-R2B sorbent is also used in treatment of natural gas liquids and other light hydrocarbon condensates.
- **SulfaTrap™-R6** series adsorbents are recommended for ultra-purification. These are designed for purifying low moisture (e.g., pipeline quality) natural gas. The SulfaTrap™-R6 is moisture tolerant up to 1,000 ppmv H<sub>2</sub>O (~6 times higher than pipeline specification of 154 ppmv – 7 lb/MMSCF). It is particularly effective in removing dimethyl sulfide and methyl ethyl sulfide, which has proven to be extremely difficult in removing from the gas using common adsorbents.
- **SulfaTrap™-R5** series sorbents are specifically designed for removing carbonyl sulfide (COS). These are used in ultra-purification of natural gas, biogas and LPG. SulfaTrap™-R5C is designed to handle high moisture gas, while SulfaTrap™-R5P is recommended for LPG desulfurization. SulfaTrap™-R5C is also shown to be highly effective in ultra-purification of CO<sub>2</sub>.
- **SulfaTrap™-R7** sorbents are high capacity and low-cost bulk sulfur removal sorbents. These sorbents are particularly effective for hydrogen sulfide and low molecular weight mercaptan removal (e.g., methyl mercaptan, ethyl mercaptan). They could achieve 30-35% wt. sulfur capacity (kg sulfur removed per kg sorbent). **SulfaTrap™-R7J** sorbent is effective all the way from completely dry gas to saturated conditions. **SulfaTrap™-R7H** is the lower cost option and maintains its performance in moist gas (500 ppmv H<sub>2</sub>O to saturation) making it ideal for biogas purification. **SulfaTrap™-R7Q** is our low cost scavenger that operates in high moisture gas (5,000 ppm H<sub>2</sub>O to fully saturated)
- **SulfaTrap™-R8HB** sorbent is used deep purification of natural gas or biogas. Its large pore size makes it ideal in removing large sulfur molecules, such as disulfides (e.g., diethyl disulfide), large mercaptans (e.g., tert-butyl mercaptan) and thiophenes. A modified version of it is also effective for removal of siloxanes from biogas and other process streams.
- **SulfaTrap™-D1 and SulfaTrap™-D4** sorbents are designed to treat liquid hydrocarbons, including natural gas liquids, bio-ethanol, gasoline and diesel fuel. It can be operated in a regenerable manner (regeneration is carried out by mild thermal swing). It could be used as a stand-alone sulfur removal system or can be integrated to traditional hydro-desulfurization systems (HDS), polishing off any unconverted sulfur from streams feeding into the gasoline pool.
- **SulfaTrap™-WG and SulfaTrap™-HRG** remove H<sub>2</sub>S and COS at elevated temperatures (250°C to 800°C, respectively). These are primarily designed to treat synthesis gas or reformat gas, reducing sulfur level to single digit ppbv concentrations.
- **SulfaTrap™-M** series products removes heavy metals (e.g., mercury, arsenic and selenium) from a range of process streams. **SulfaTrap™-M1** achieves mercury capacity up to 20% wt. (kg mercury removed per kg of sorbent), while **SulfaTrap™-M2** removes mercury along with other volatile metals such as arsenic from natural gas and other hydrocarbon streams.
- **SulfaTrap™-X1 and SulfaTrap™-X5** are next-generation sorbents with ultra high capacity. These are ideal for applications with space limitations or requiring extended operation between service.

Most products available as 1/16" or 1/8" extrudates and any custom pellet size.



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