

# Application Note M8.0

## SiliaBond Metal Scavengers Characteristics

**SiliaBond Metal Scavengers** are made of **SiliaFlash<sup>®</sup> F60** (40-63  $\mu\text{m}$ , 60  $\text{\AA}$ , 500  $\text{m}^2/\text{g}$ ) and endcapped to avoid non-specific binding (undesirable interactions with the free silanols). Therefore, they present the following characteristics:

- **No leaching (chemical stability):** no API contamination by the metal scavenger.

Each **SiliaBond** product manufactured by SiliCycle is submitted to a very rigorous quality control in order to provide customers with default-free products and insure 100% satisfaction. The quality control analysis of the final material includes loading and reactivity determination, loss on drying as well as leachables and extractables analysis (over 99.995%). Certificates of analysis are sent with each **SiliaBond Metal Scavenger** product.

- **High selectivity:** total recovery of the API.
- **Very good metal affinity:** efficient for a wide range of metal catalysts.
- **Solvent compatibility:** can be used in any solvent, aqueous (pH 2 to 12) and organic.
- **Fast kinetic:** even at room temperature.
- **Easily scalable:** from mg up to multi-ton scale.

- **Thermally and mechanically stable:** works well with overhead stirring and can withstand very high temperatures; suitable for use in microwave synthesizers.

- **Ease of use:** no swelling or static charge.
- **Flexible formats:** amenable to use in **SiliaSep** & **SiliaPrep Cartridges**.
- **Cost efficient:** low cost per gram of metal scavenged.
- **Controlled loading:** consistent and accurate loading insure lot-to-lot reproducibility.

As **SiliaBond Metal Scavengers** are being used by many pharmaceutical industries and biotechnologies, SiliCycle has implemented a quality control procedure regarding possible leaching. **SiliaBond** products have been used in typical experimental conditions and under "drastic" conditions, and then analyzed by GC/MS and ICP-OES for leaching quantification. The solution must be free of contaminants for the product to pass the

