

Grades of Stainless Steel Used in Tubing, Column Hardware, and Filters - Sales and Marketing

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Overview

Stainless steel is widely used in HPLC tubing, column hardware, and filtration components due to its strength, corrosion resistance, and compatibility with a broad range of mobile phases.

MICROSOLV products employ a specific stainless-steel grade selected for reliability, chemical durability, and performance under high-pressure chromatographic conditions.

Stainless Steel Grade Used in MICROSOLV Products

Material Specification

- All MICROSOLV stainless steel tubing is manufactured using SS316 stainless steel, also known as 316 or 316L grade, depending on geometry and application.
 - The same stainless-steel grade is used in HPLC column hardware, ensuring consistent material properties throughout the fluid path.
 - Filters and sparging stones are also produced using SS316 for chemical compatibility and corrosion resistance.
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Why SS316 Stainless Steel Is Preferred

Performance Advantages

- High corrosion resistance, especially against acids, chlorides, and typical HPLC solvents.
- Excellent mechanical strength, making it suitable for high-pressure applications.
- Low extractables, ensuring clean baselines and minimal chemical interference.
- Compatibility with a wide range of organic solvents, buffers, and additives commonly used in HPLC and LC-MS.

Where It Is Used

- Analytical and preparative HPLC tubing
- Column bodies and end fittings
- Inlet filters and sparging stones
- General fluid-path components requiring robust metal construction

SS316 delivers superior durability, making it the industry standard for high-performance analytical equipment.

Additional Information

A separate MICROSOLV resource explains stainless-steel nomenclature and what SS316 composition means for corrosion resistance and mechanical performance. Click [here](#) to learn more about what this nomenclature means in terms of stainless steel grade.

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