

CORNING

The future flows through
Corning® Advanced-Flow™ reactors

Corning® Advanced-Flow™ G1 SiC Reactor

Continuous flow reactor with high chemical resistance

The Corning G1 SiC reactor is compatible with a wide variety of chemicals – including hydrofluoric acids – and high pH at elevated temperatures. It also offers the enhanced heat and mass transfer capabilities of an Advanced-Flow™ reactor. Reactors can be customized by integrating G1 glass fluidic modules in the G1 SiC reactor.

Benefits

- Compatible with a wide variety of chemicals from low pH (including hydrofluoric acid) to high pH even at elevated temperatures (up to 200°C)
- G1 glass fluidic modules can be integrated in the G1 SiC reactor to combine the transparency of glass (photo chemistry, visual check of a chemical reaction), and the corrosion resistance of SiC (for caustic quenching)

Features

- Flow range: 30 to 200 ml/min
- Modular internal volume (10 ml per fluidic module)
- Metal-free reaction paths
- High flexibility
- Scalability with Advanced-Flow™ G4 SiC production reactor
- Improved heat transfer option is available

Reactor Elements

The G1 SiC reactor comprises sintered ceramic fluidic modules, aluminum heat exchanger, PFA piping and perfluoro-elastomer gaskets.

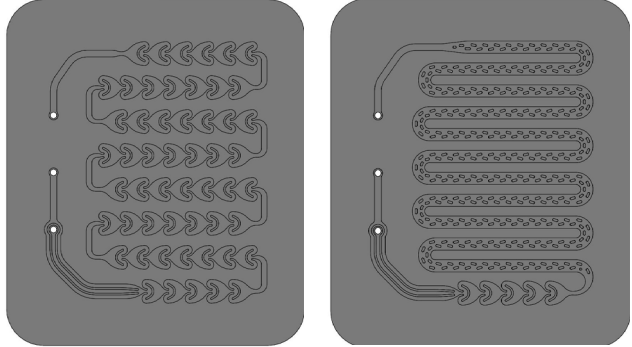
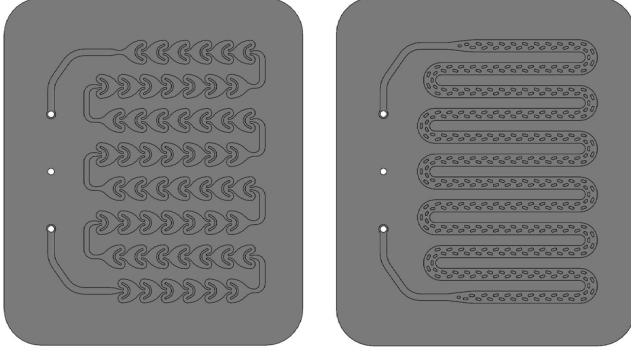


Boundary Conditions

Operating Conditions	Process Path	Heat Exchange Path
Temperature (°C)	-60 to 200	-60 to 200
Pressure (barg)	0 to 18	0 to 6

Fluidic Module Design Options

Fluidic modules have various functionalities and can be used as building blocks for your reactor, allowing customized reactors to be assembled.

Mixing Designs	Residence Time Designs
One injection zone to contact two reactants and residence time	Residence time or pre-heating/cooling
	

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