

Wafergard® Gas Filter Compatibility Guide

The compatibility chart below is intended for use as a guideline. Variations in gas temperature, pressure, concentrations and system conditions can affect filter lifetime compatibility. Compatibility of gas filters is based on temperature less than 60°C and less than 1 ppm moisture.

Name of Gas	Category	Chemical Formula	Nickel	Membrane PTFE/PFA	Stainless	Hastelloy
Ammonia	Hydrogen/Hydrides	NH ₃	●	●	●	●
Argon	Inerts	Ar	●	●	●	●
Arsine	Hydrogen/Hydrides	AsH ₃	⊘	●	●	⊘
Boron 11 Trifluoride	Halogen/Halides	B11F ₃	●	●	●	●
Boron Trichloride	Halogen/Halides	BCl ₃	●	●	●	●
Boron Trifluoride	Halogen/Halides	BF ₃	●	●	●	●
Bromine	Halogen/Halides	Br ₂	●	●	●	●
Carbon Dioxide	Oxygen/Oxides	CO ₂	●	●	●	●
Carbon Monoxide	Oxygen/Oxides	CO	⊘	●	●	●
Carbon Tetrachloride	Hydrocarbons/Halogenated Hydrocarbons	CCl ₄	●	●	●	●
Chlorine	Halogen/Halides	Cl ₂	●	●	●	●
Chlorine Trifluoride	Halogen/Halides	ClF ₃	●	●	●	●
Diborane	Hydrogen/Hydrides	B ₂ H ₆	▲ ²	●	●	●
Dichlorodifluoromethane	Hydrocarbons/Halogenated Hydrocarbons	CCl ₂ F ₂	●	●	●	●
Dichloromethane	Hydrocarbons/Halogenated Hydrocarbons	CH ₂ Cl ₂	●	●	●	●
Dichlorosilane	Halogen/Halides	SiH ₂ Cl ₂	●	●	●	●

● Compatible

▲ Compatible with limitation

⊘ Not compatible

Name of Gas	Category	Chemical Formula	Nickel	Membrane PTFE/PFA	Stainless	Hastelloy
Difluoromethane	Hydrocarbons/Halogenated Hydrocarbons	CH ₂ F ₂	●	●	●	●
Ethane	Hydrocarbons/Halogenated Hydrocarbons	C ₂ H ₆	●	●	●	●
Fluorine	Halogen/Halides	F ₂	●	⊘	●	●
Germane	Hydrogen/Hydrides	GeH ₄	●	●	●	●
Halocarbon 115	Hydrocarbons/Halogenated Hydrocarbons	C ₂ ClF ₅	●	●	●	●
Halocarbon 116 Hexafluoroethane	Hydrocarbons/Halogenated Hydrocarbons	C ₂ F ₆	●	●	●	●
Halocarbon 13	Hydrocarbons/Halogenated Hydrocarbons	CClF ₃	●	●	●	●
Halocarbon 14 Tetrafluoromethane	Hydrocarbons/Halogenated Hydrocarbons	CF ₄	●	●	●	●
Halocarbon 218 Perfluoropropane	Hydrocarbons/Halogenated Hydrocarbons	C ₃ F ₈	●	●	●	●
Halocarbon 23 Trifluoromethane	Hydrocarbons/Halogenated Hydrocarbons	CHF ₃	●	●	●	●
Halocarbon 318 Octafluorocyclobutane	Hydrocarbons/Halogenated Hydrocarbons	C ₄ F ₈	●	●	●	●
Helium	Inerts	He	●	●	●	●
Hexafluoro-2-butyne	Hydrocarbons/Halogenated Hydrocarbons	C ₄ F ₆	●	●	●	●
Hexafluorobutadiene	Hydrocarbons/Halogenated Hydrocarbons	C ₄ F ₆	●	●	●	●
Hydrogen	Hydrogen/Hydrides	H ₂	●	●	●	●
Hydrogen Bromide	Halogen/Halides	HBr	●	●	●	●
Hydrogen Chloride	Halogen/Halides	HCl	●	●	●	●
Hydrogen Fluoride	Halogen/Halides	HF	●	●	●	●
Hydrogen Selenide	Hydrogen/Hydrides	H ₂ Se	⊘	●	●	●
Hydrogen Sulfide	Hydrogen/Hydrides	H ₂ S	●	●	●	●

● Compatible ▲ Compatible with limitation ⊘ Not compatible

Name of Gas	Category	Chemical Formula	Nickel	Membrane PTFE/PFA	Stainless	Hastelloy
Krypton	Inerts	Kr	●	●	●	●
Methane	Hydrocarbons/Halogenated Hydrocarbons	CH ₄	●	●	●	●
Methyl Fluoride	Hydrocarbons/Halogenated Hydrocarbons	CH ₃ F	●	●	●	●
Methylsilane	Hydrogen/Hydrides	SiH ₃ (CH ₃)	●	●	●	●
Neon	Inerts	Ne	●	●	●	●
Nitric Oxide	Oxygen/Oxides	NO	●	●	●	●
Nitrogen	Inerts	N ₂	●	●	●	●
Nitrogen Dioxide	Oxygen/Oxides	NO ₂	●	●	●	●
Nitrogen Trifluoride	Halogen/Halides	NF ₃	●	●	●	●
Nitrous Oxide	Oxygen/Oxides	N ₂ O	●	●	●	●
Octafluorocyclopentene	Hydrocarbons/Halogenated Hydrocarbons	C ₅ F ₈	●	●	●	●
Oxygen	Oxygen/Oxides	O ₂	●	●	●	●
Ozone	Oxygen/Oxides	O ₃	⊘	●	⊘	⊘
Pentaborane	Hydrogen/Hydrides	B ₅ H ₉	●	●	●	●
Phosphine	Hydrogen/Hydrides	PH ₃	▲ ²	●	●	⊘
Phosphorous Trifluoride	Halogen/Halides	PF ₃	●	●	●	●
Silane	Hydrogen/Hydrides	SiH ₄	▲ ¹	●	●	⊘
Silicon Tetrachloride	Halogen/Halides	SiCl ₄	●	●	●	●
Silicon Tetrafluoride	Halogen/Halides	SiF ₄	●	●	●	●
Sulfur Dioxide	Oxygen/Oxides	SO ₂	●	●	●	●
Sulfur Hexafluoride	Halogen/Halides	SF ₆	●	●	●	●
Trichlorofluoromethane	Hydrocarbons/Halogenated Hydrocarbons	CCl ₃ F	●	●	●	●

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Name of Gas	Category	Chemical Formula	Nickel	Membrane PTFE/PFA	Stainless	Hastelloy
Trichloromethane	Hydrocarbons/Halogenated Hydrocarbons	CHCl ₃	●	●	●	●
Trichlorosilane	Halogen/Halides	SiHCl ₃	●	●	●	●
Trichlorotrifluoroethane	Hydrocarbons/Halogenated Hydrocarbons	C ₂ Cl ₃ F ₃	●	●	●	●
Trimethylamine	Hydrocarbons/Halogenated Hydrocarbons	(CH ₃) ₃ N	●	●	●	●
Trimethylsilane	Hydrogen/Hydrides	SiH(CH ₃) ₃	●	●	●	●
Tungsten Hexafluoride	Halogen/Halides	WF ₆	●	●	●	●
Xenon	Inerts	Xe	●	●	●	●

¹Compatible to 150°C.

²Not compatible above room temperature and less than 1000 ppm. Early periodic replacement is recommended. Please consult your Application Specialist or Technical Service for available test data from Entegris' Specialty Gas Research Center for dopant concentrations under 1000 ppm.

● Compatible ▲ Compatible with limitation ⊘ Not compatible

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