

## CHEMICAL COMPATIBILITY GUIDE - DRY CHEMICALS

E = Excellent | G= Good | F = Fair | P = Poor

Ratings are based on ambient temperature, low pressure and 100% concentrations. Exposure conditions that differ from these may affect ratings. Seal material selection is dependent on more than just chemical compatibility. Seal geometries, hardware design and application conditions are also factors in material selection. The compatibility data presented are based on the material's polymer content only. If you need assistance, please contact your local Greene, Tweed representative when selecting the appropriate Greene, Tweed & Co. product for your specific application.

Environment	Chemical Formula	Chemraz											Fluoraz 888	Fluoro	
		513	520	550	570	571	592	655	653	639	E38	661		742	931
Ammonium Fluoride	NH <sub>4</sub> F	E	E	E	E	E	E	E	E	E	E	E	G	G	G
Acetylene	C <sub>2</sub> H <sub>2</sub>	E	E	E	E	E	E	E	E	E	E	E	E	E	E
Ammonia	NH <sub>3</sub>	E	E	E	E	E	E	E	E	E	E	E	G	P	P
Argon	Ar	E	E	E	E	E	E	E	E	E	E	E	E	E	E
Arsenic Chloride	AsCl	E	E	E	E	E	E	E	E	E	E	E	P	P	P
Arsenic Trichloride	AsCl <sub>3</sub>	E	E	E	E	E	E	E	E	E	E	E	P	P	P
Arsine	AsH <sub>3</sub>	E	E	E	E	E	E	E	E	E	E	E	F	F	F
Boron Tribromide	BBr <sub>3</sub>	E	E	E	E	E	E	E	E	E	E	E	E	E	E
Boron Trichloride	BCl <sub>3</sub>	G	G	G	G	G	G	G	G	G	G	G	F	E	E
Boron Trifluoride	BF <sub>3</sub>	G	G	G	G	G	G	G	G	E	G	G	E	E	E
Bromine	Br	E	E	E	E	E	E	E	E	E	E	E	E	E	E
Carbon Dioxide	CO <sub>2</sub>	E	E	E	E	E	E	E	E	E	E	E	G	G	G
Carbon Tetrachloride	CCl <sub>4</sub>	G	G	G	G	G	G	G	G	G	G	G	P	E	E
Carbon Tetrafluoride	CF <sub>4</sub>	G	G	G	G	G	G	G	G	E	G	G	G	E	E
Environment	Chemical Formula	Chemraz											Fluoraz 888	Fluoro	
		513	520	550	570	571	592	655	653	639	E38	661		742	931
Chlorine	Cl <sub>2</sub>	G	G	G	E	E	G	G	G	G	G	G	P	E	E
Chloropenta fluoroethane (F-115)	C <sub>2</sub> F <sub>5</sub> Cl	G	G	G	G	G	G	G	G	E	G	G	P	E	E
Diborane	B <sub>2</sub> H <sub>6</sub>	E	E	E	E	E	E	E	E	E	E	E	G	G	G
Dichloro difluoro methane (F-12)	CCl <sub>2</sub> F <sub>2</sub>	G	G	G	G	G	G	G	G	E	G	G	G	G	G
Dichloro silane	SiH <sub>2</sub> Cl <sub>2</sub>	E	E	E	E	E	E	E	E	E	E	E	G	G	G
Dimethyl amine (DMA)	(CH <sub>3</sub> ) <sub>2</sub> NH	G	G	G	G	G	G	G	G	G	G	G	P	P	P
Disilane	Si <sub>2</sub> H <sub>6</sub>	E	E	E	E	E	E	E	E	E	E	E	G	G	G
Difluoro ethane (F-152A)	CH <sub>3</sub> CHF <sub>2</sub>	G	G	G	G	G	G	G	G	E	G	G	P	P	P

Fluorine	F <sub>2</sub>	G	G	G	G	G	G	G	G	E	G	G	G	G	G
Fluoroform (F-23)	CHF <sub>3</sub>	E	E	E	E	E	E	E	E	E	E	E	P	P	P
Germanium Tetrahydride	GeH <sub>4</sub>	E	E	E	E	E	E	E	E	E	E	E	G	G	G
Helium	He	E	E	E	E	E	E	E	E	E	E	E	E	E	E
Hexachloro disilane	Si <sub>2</sub> Cl <sub>6</sub>	E	E	F	E	E	E	E	E	E	E	E	F	G	G
Hexafluoro ethane (F-116)	C <sub>2</sub> F <sub>6</sub>	G	G	G	G	G	G	G	G	E	G	G	F	G	G
Hydrogen	H <sub>2</sub>	E	E	E	E	E	E	E	E	E	E	E	E	E	E
Hydrogen Bromide	HBr	E	E	E	E	E	E	E	E	E	E	E	E	E	E
<b>Environment</b>	<b>Chemical Formula</b>	<b>Chemraz</b>											<b>Fluoraz 888</b>	<b>Fluoro</b>	
		<b>513</b>	<b>520</b>	<b>550</b>	<b>570</b>	<b>571</b>	<b>592</b>	<b>655</b>	<b>653</b>	<b>639</b>	<b>E38</b>	<b>661</b>		<b>742</b>	<b>931</b>
Hydrogen Chloride	HCl	G	G	E	E	E	G	G	E	G	G	G	G	E	E
Hydrogen Fluoride	HF	E	E	E	E	E	E	E	E	E	E	E	P	P	P
Hydrogen Selenide	H <sub>2</sub> Se	E	E	E	E	E	E	E	E	E	E	E	F	F	F
Hydrogen Sulfide	H <sub>2</sub> S	G	G	E	G	G	G	G	E	G	G	G	G	P	P
Methyl Chloride	CH <sub>3</sub> Cl	E	E	E	E	E	E	E	E	E	E	E	P	E	E
Monomethyl-amine	CH <sub>5</sub> N	G	G	G	G	G	G	G	G	G	G	G	P	F	F
Nitrogen	N <sub>2</sub>	E	E	E	E	E	E	E	E	E	E	E	E	E	E
Nitrogen Trifluoride	NF <sub>3</sub>	E	E	G	G	G	E	E	G	E	E	E	G	G	G
Nitrous Oxide	N <sub>2</sub> O	E	E	E	E	E	E	E	E	E	E	E	E	E	E
Oxygen	O <sub>2</sub>	E	E	P	E	E	E	E	P	E	E	E	P	P	P
Ozone	O <sub>3</sub>	E	E	G	E	E	E	E	G	E	E	E	E	E	E
Perfluoro-propane	C <sub>3</sub> F <sub>8</sub>	G	G	G	G	G	G	G	G	E	G	G	P	P	P
Phosphine	PH <sub>3</sub>	E	E	E	E	E	E	E	E	E	E	E	F	F	F
Phosphorous Trifluoride	PF <sub>3</sub>	E	E	E	E	E	E	E	E	E	E	E	G	E	E
<b>Environment</b>	<b>Chemical Formula</b>	<b>Chemraz</b>											<b>Fluoraz 888</b>	<b>Fluoro</b>	
		<b>513</b>	<b>520</b>	<b>550</b>	<b>570</b>	<b>571</b>	<b>592</b>	<b>655</b>	<b>653</b>	<b>639</b>	<b>E38</b>	<b>661</b>		<b>742</b>	<b>931</b>
Potassium Hydroxide	KOH	P	P	E	G	G	F	F	E	F	F	F	G	P	P
Silane	SiH <sub>4</sub>	E	E	E	E	E	E	E	E	E	E	E	G	G	G
Silicon Tetrachloride	SiCl <sub>4</sub>	G	G	G	G	G	G	G	G	G	G	G	P	G	G
Silicon Tetrafluoride	SiF <sub>4</sub>	G	G	G	G	G	G	G	G	E	G	G	G	P	P
Silicon Trifluoride	SiF <sub>3</sub>	G	G	G	G	G	G	G	G	E	G	G	G	P	P
Sodium	NaOH	P	P	E	G	G	F	F	E	F	F	F	E	G	G

Hydroxide																
Sulfur Hexafluoride	SF <sub>6</sub>	G	G	G	G	G	G	G	G	E	G	G	G	F	F	
Tetraethyl-orthosilicate (TEOS)	(C <sub>2</sub> H <sub>5</sub> ) <sub>4</sub> SiO <sub>4</sub>	E	E	E	E	E	E	E	E	E	E	E	G	E	E	
Tetrafluoro-methane (F-14)	CF <sub>4</sub>	E	E	G	G	G	E	E	G	E	E	E	P	E	E	
Trichloro-ethane	C <sub>2</sub> H <sub>3</sub> Cl <sub>3</sub>	E	E	E	E	E	E	E	E	E	E	E	F	E	E	
Trichloro-silane	SiHCl <sub>3</sub>	E	E	G	G	G	E	E	E	G	G	G	F	G	G	
Trifluoro-methane	CHF <sub>3</sub>	E	E	E	E	E	E	E	E	E	E	E	G	G	G	
Trimethyl-amine	(CH <sub>3</sub> ) <sub>3</sub> N	G	G	G	G	G	G	G	G	G	G	G	P	P	P	
Trisilane	Si <sub>3</sub> H <sub>6</sub>	E	E	E	E	E	E	E	E	E	E	E	G	G	G	
Tungsten Hexafluoride	WF <sub>6</sub>	E	E	G	E	E	E	E	G	E	E	E	G	F	F	

Statements and recommendations are based on our experience and knowledge of typical applications of this product and shall not constitute a guarantee of performance nor a modification or alteration of our standard warranty which shall be applicable to such products.

Prior to actual use it is recommended that compatibility tests be run to determine suitability in a specific application. This is critical where failure could result in injury or damage. A regular program of inspection and replacement should be implemented. Greene, Tweed technical personnel are available to help with a recommendation.