



**Krytox™**  
Performance Lubricants

## Compatibility with Gases

### Product Information

#### Compatibility of Krytox™ Lubricants with Different Gases

Name	Formula	R#	Non-Reactive
Acetylene	C <sub>2</sub> H <sub>2</sub>		N
Ammonia	NH <sub>3</sub>		N
Argon	Ar		N
Arsine	AsH <sub>3</sub>		N
Boron trichloride	BCl <sub>3</sub>		U
Boron trifluoride	BF <sub>3</sub>		U
Bromochlorodifluoromethane	CBrClF <sub>2</sub>	R12B1	D
Bromotrifluoroethylene	C <sub>2</sub> BrF <sub>3</sub>	R123B1	N
Bromotrifluoromethane	CBrF <sub>3</sub>	R13B1	D
Butadiene(1,2)	C <sub>4</sub> H <sub>6</sub>		N
Butadiene(1,3)	C <sub>4</sub> H <sub>6</sub>		N
Butane	C <sub>4</sub> H <sub>10</sub>		N
Butene	C <sub>4</sub> H <sub>8</sub>		N
Butene cis	C <sub>4</sub> H <sub>8</sub>		N
Butene trans	C <sub>4</sub> H <sub>8</sub>		N
Carbon dioxide	CO <sub>2</sub>		N <sup>1</sup>
Carbon monoxide	CO		N
Carbon tetrafluoride/Tetrafluoromethane	CF <sub>4</sub>	R14	D
Carbonyl sulphide	COS		N
Chlorine	Cl <sub>2</sub>		N
Chlorodifluoromethane	CHClF <sub>2</sub>	R22	D
Chloromethane	CH <sub>3</sub> Cl	R40	D
Chloropentafluoroethane	C <sub>2</sub> ClF <sub>5</sub>	R115	D
Chlorotetrafluoroethane	C <sub>2</sub> HClF <sub>4</sub>	R124	D
Chlorotrifluoroethane	C <sub>2</sub> H <sub>2</sub> ClF <sub>3</sub>	R133a	D
Chlorotrifluoroethylene	C <sub>2</sub> ClF <sub>3</sub>	R1113	D

N: Non-reactive N<sup>1</sup>: Soluble in supercritical CO<sub>2</sub> N<sup>2</sup>: No reaction at 200 °C (392 °F) D: Dissolved U: Uncertain

**Compatibility of Krytox™ Lubricants with Different Gases (continued)**

Name	Formula	R#	Non-Reactive
Chlorotrifluoromethane	CClF <sub>3</sub>	R13	D
Cyclopropane	C <sub>3</sub> H <sub>6</sub>		N
Deuterium	D <sub>2</sub>		N
Diborane	B <sub>2</sub> H <sub>6</sub>		N
Dibromodifluoromethane	CBr <sub>2</sub> F <sub>2</sub>	R12B2	N
Dibromotetrafluoroethane	C <sub>2</sub> Br <sub>2</sub> F <sub>4</sub>	R114B2	N
Dichlorodifluoromethane	CCl <sub>2</sub> F <sub>2</sub>	R12	D
Dichlorofluoromethane	CHCl <sub>2</sub> F	R21	D
Dichlorosilane	SiH <sub>2</sub> Cl <sub>2</sub>		N
Dichlorotetrafluoroethane	C <sub>2</sub> Cl <sub>2</sub> F <sub>4</sub>	R114B2	D
Dicyanogen	C <sub>2</sub> N <sub>2</sub>		N
Difluoro(1,1)-1-chloroethane	C <sub>2</sub> H <sub>3</sub> ClF <sub>2</sub>	R142b	D
Difluoroethane(1,1)	C <sub>2</sub> H <sub>4</sub> F <sub>2</sub>	R152a	D
Difluoroethylene(1,1)	C <sub>2</sub> H <sub>2</sub> F <sub>2</sub>	R132a	N
Dimethylamine	C <sub>2</sub> H <sub>7</sub> N		N
Dimethylether	C <sub>2</sub> H <sub>6</sub> O		N
Disilane	Si <sub>2</sub> H <sub>6</sub>		N
Ethane	C <sub>2</sub> H <sub>6</sub>		N
Ethyl chloride	C <sub>2</sub> H <sub>5</sub> Cl	R160	N
Ethylamine	C <sub>2</sub> H <sub>7</sub> N		N
Ethylene	C <sub>2</sub> H <sub>4</sub>		N
Ethylene oxide	C <sub>2</sub> H <sub>4</sub> O		N
Fluorine	F <sub>2</sub>		N <sup>2</sup>
Fluoroethane	C <sub>2</sub> H <sub>5</sub> F	R161	N
Fluoromethane	CH <sub>3</sub> F	R41	N
Fluoroform/Trifluoromethane	CHF <sub>3</sub>	R23	D
Germane	GeH <sub>4</sub>		N
Helium	He		N
Hexafluoroethane	C <sub>2</sub> F <sub>6</sub>	R116	N
Hexafluoropropene	C <sub>3</sub> F <sub>6</sub>		N
Hydrogen	H <sub>2</sub>		N
Hydrogen bromide	HBr		N
Hydrogen chloride	HCl		N
Hydrogen cyanide	HCN		N
Hydrogen fluoride	HF		N
Hydrogen iodide	HI		N
Hydrogen sulfide	H <sub>2</sub> S		N
Isobutane	C <sub>4</sub> H <sub>10</sub>		N
Isobutylene	C <sub>4</sub> H <sub>8</sub>		N
Krypton	Kr		N
Methane	CH <sub>4</sub>		N

N: Non-reactive N<sup>1</sup>: Soluble in supercritical CO<sub>2</sub> N<sup>2</sup>: No reaction at 200 °C (392 °F) D: Dissolved U: Uncertain

**Compatibility of Krytox™ Lubricants with Different Gases (continued)**

Name	Formula	R#	Non-Reactive
Methylacetylene	C <sub>3</sub> H <sub>4</sub>		N
Methylamine	CH <sub>5</sub> N		N
Methylbromide	CH <sub>3</sub> Br		N
Methylmercaptan	CH <sub>4</sub> S		N
Methylsilane	CH <sub>6</sub> Si		N
Neon	Ne		N
Nitric oxide	NO		N
Nitrogen	N <sub>2</sub>		N
Nitrogen dioxide	NO <sub>2</sub> /N <sub>2</sub> O <sub>4</sub>		N
Nitrous oxide	N <sub>2</sub> O		N
Nitrogen trifluoride	NF <sub>3</sub>		N
Octafluorobutene	C <sub>4</sub> F <sub>6</sub>		N
Octafluorocyclobutane	C <sub>4</sub> F <sub>8</sub>		N
Octafluoropropane	C <sub>3</sub> F <sub>8</sub>		N
Oxygen	O <sub>2</sub>		N
Phosgene	COCl <sub>2</sub>		N
Phosphine	PH <sub>3</sub>		N
Propadiene	C <sub>3</sub> H <sub>4</sub>		N
Propane	C <sub>3</sub> H <sub>8</sub>		N
Propylene	C <sub>3</sub> H <sub>6</sub>		N
Propylene oxide	C <sub>3</sub> H <sub>6</sub> O		N
Silane	SiH <sub>4</sub>		N
Silicon tetrachloride	SiCl <sub>4</sub>		N
Silicon tetrafluoride	SiF <sub>4</sub>		N
Sulfur dioxide	SO <sub>2</sub>		N
Sulfur hexafluoride	SF <sub>6</sub>		N
Sulfur tetrafluoride	SF <sub>4</sub>		N
Tetrafluoroethylene	C <sub>2</sub> F <sub>4</sub>	R114	N
Trichlorosilane	SiHCl <sub>3</sub>		N
Trichlorotrifluoroethane	C <sub>2</sub> Cl <sub>3</sub> F <sub>3</sub>	R113	D
Trifluoroethane(1,1,1)	C <sub>2</sub> H <sub>3</sub> F <sub>3</sub>	R143a	D
Trimethylamine	C <sub>3</sub> H <sub>9</sub> N		N
Tungsten hexafluoride	WF <sub>6</sub>		N
Vinyl bromide	C <sub>2</sub> H <sub>3</sub> Br	R140B1	N
Vinyl chloride	C <sub>2</sub> H <sub>3</sub> ClF <sub>2</sub>	R140	N
Vinyl fluoride	C <sub>2</sub> H <sub>3</sub> F	R141	N
Xenon	Xe		N

N: Non-reactive N1: Soluble in supercritical CO<sub>2</sub> N2: No reaction at 200 °C (392 °F) D: Dissolved U: Uncertain

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