

## FlexiSolv™ DBE® Esters Compatibility

FlexiSolv™ DBE® esters are compatible with many materials. Immersion tests of a variety of plastics and elastomers were conducted to guide the user with engineering material selections. The results for plastics and elastomers are listed below. Because compatibility may be altered by product formulation, materials selected for critical components should be checked at use conditions.

### Plastics

Many plastics including polyethylene, polypropylene, fluorocarbon resins, nylon, and acetal resin were essentially unaffected and are suitable for DBE® esters service. Polystyrene, ABS, acrylic, and polyvinyl chloride were highly swollen, dissolved, or disintegrated and are not recommended.

### DBE® esters Compatibility with Plastics

Plastic Type	Brand Name	Immersion in DBE® esters 7 Days at 50 ± 1°C, % Change			
		Weight	Volume	Length	Rating*
ABS	Kralastic®		Disintegrated		NR
Acetal	Delrin® 500	+1.8	+1.6	+5.8	OK
Acrylic	Lucite®L		Dissolved		NR
Cellulosic	Ethocel®		Almost dissolved		NR
Epoxy	—	+1.4	+8.9	+0.8	OK
Fluorocarbon	Teflon® FEP 100	+0.1	-2.4	-0.2	OK
Fluorocarbon	Teflon® PFA 340	0	+2.5	+0.2	OK
Fluorocarbon	Teflon® TFE	+0.1	+3.2	+0.7	OK
Ionomer	Surlyn® 8550	+1.6	+2.3	+0.8	OK
Nylon 6,6	Zytel® 101	-0.4	0	-0.3	OK
Polybutyleneterephthalate	Valox® 420-SE0	+0.4	+3.5	+1.1	OK
Polycarbonate	Tuffak®	+31	+54	+6	NR
Polyetherimide	Ultem® 2312	+2.5	+1.9	+0.7	OK
Polyethylene	Alathon® 7050	+0.4	-2.5	+1.0	OK
Polyphenylene Oxide	Noryl® EN265	+7.5	+10.1	+1.2	TEST
Polyphenylene Sulfide	Ryton® 171	+0.1	+0.7	+0.3	OK
Polypropylene	—	+0.6	-0.8	-0.5	OK
Polystyrene	Styron® 475		Dissolved		NR
Polysulfone	—		Soft, tacky, swollen		NR
Polyvinyl Chloride	—	+147	+41	+30	NR

\*Rating: OK = Satisfactory for use

NR = Not recommended for use

TEST = Should be tested in the system before use

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## Elastomers

The elastomers recommended for use in long-term contact, such as gaskets and seals, are silicone, ethylene/propylene rubber, and butyl rubber. Polyurethane and Viton® fluoroelastomers are not recommended.

### DBE® esters Compatibility with Elastomers

Elastomer Type	Brand Name	Immersion in DBE® esters 7 Days at 50 ± 1°C, % Change			Rating*
		Weight	Volume	Length	
Acrylonitrile/Butadiene	Buna N	-7.6	-7.1	-4.2	TEST
Chlorosulfonated Polyethylene	Hypalon® 40	+23	+25	+8.9	NR
Ethylene/Propylene	—	+1.8	—	0	OK
Ethylene/Propylene Terpolymer	Nordel®	-19.7	-19.3	-6.8	TEST
Fluoroelastomer	Viton® A	+91	+162	+28	NR
Fluoroelastomer	Viton® B	+48	+77	+18	NR
Fluorosilicone	—	+10.5	—	+2.9	TEST
Isobutylene/Isoprene	Butyl Rubber	-0.1	+7.0	+0.2	OK
Natural Rubber	—	+6.1	+0.9	+0.9	OK
Polychloroprene	Neoprene W	-3.8	-5.6	-1.1	TEST
Polysulfide	Thiokol® FA	+50	+75	+20	NR
Polyurethane	Adiprene® L	+261	+281	+57	NR
Silicone	—	+2.3	—	0	OK
Styrene/Butadiene	Buna S	+0.5	+2.8	-0.2	OK

\*Rating: OK = Satisfactory for use  
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TEST = Should be tested in the system before use

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## For Samples and Information:

INVISTA Specialty Materials • (800) 231-0998 • Web address: [www.FlexiSolv.com](http://www.FlexiSolv.com)

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