Volta™
Belting Technology

Chemical-Resistance Guide

2021

Statement of Expectations

The data tabulated in the following pages summarize the effects of a broad variety of Chemicals on Volta products. Most of the data are based on the information given by the raw material manufacturers and suppliers and some on laboratory tests performed on an immersed specimen at room temp unless otherwise specified. The data does not take into account all variables that can be encountered in actual use.

We emphasize that the data contained herein should be used as a guideline only. We recommend testing chemical resistance under your operating conditions using the actual media in contact with the belt.

Generally chemical resistance depends on the chemical properties, period of exposure, temperature and concentration.
According to a general rule, chemical resistance may be improved when reducing:

- Temperature.
- Exposure time between cleaning.
- Concentration.

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Reagents	Code	Reagents	Code
Acetic Acid (glacial)	1.1	Cyclohexane	6.1
Acetic Acid (20%)	1.1	Cyclohexanol	5
Acetic Acid (3%)	1.1	Dibuthyl Phthalate	9
Acetone	8	Diesel Fuel	11
Aluminum Chloride (25%)	3	Diethyl Ether	12
Aluminum Sulfate (25%)	3	Diethyl Sebacate	9
Ammonium Chloride	3	Dimethyl Acetamide	12
Ammonium Hydroxide (3%)	2	Dimethyl Formamide	12
Ammonium Nitrate (25%)	3	Dimethyl Sulphexide	12
Ammonium Sulfate (25%)	3	Dioctyl Phthalate	9
Amyl Acetate	9	Epichlorohydrin	7.3
Amylalcohol	5	Ethanol	5
Aniline	12	Ethyl Acetate	9
Anti-Freeze (Glysantine)	12	Ethyl Chloride	7.1
ASTM - Oil 1 (>100°C)	10.1	Ethylene Dichloride	7.1
ASTM - Oil 2 (>100°C)	10.1	Ethylene Glycol	5
ASTM - Oil 3 (>100°C)	10.1	Fish Oil	10.3
ASTM Reference Fuel A	11	Formaldehyde (40%)	8
ASTM Reference Fuel B	11	Formic Acid (20%)	1.1
ASTM Reference Fuel C	11	Freon (116 , 12, 113, 114)	7.1
ASTM Reference Fuel D	11	Glycerin	5
Benzene	6.2	Hexane	6.1
Benzyl Alcohol	5	Hexanol	5
Boric Acid (3%)	1.2	Hydrazine	12
Brake Fluid	12	Hydrochloric Acid (20%)	1.2
Bromine (anhydrous Liquid)	4	Hydrochloric Acid (3%)	1.2
Butane	6.1	Hydrochloric Acid (37%)	1.2
Butyl Acetate	9	Hydrofluoric acid (48%)	1.2
Calcium Chloride (25%)	3	Hydrogen Peroxide (30%)	4
Calcium Hydroxide (dilute)	2.1	Hydrogen Sulfide	1.2
Carbon Tetrachloride	7.1	iso Butanol	5
Castor Oil	10.3	Iso Octane	6.1
Chlorine gas	4	Iso-Propanol	5
Chlorobenzene	7.2	Javelle water (0.5%)	4
Chloroform	7.1	JP-4 Jet Fuel	11
Citric Acid (3%)	1.1	Kerosene	11
Coconut Oil	10.3	Lactic Acid (3%)	1.1
Corn Oil	10.3	Lubricating Oil	10.2
Cottonseed Oil	10.3	Methanol	5
Cyclo hexanone	8	Methyl ethyl ketone	8

Reagents	Code
Methylene Chloride	7.1
Mineral Oil	10.2
Nitric Acid (20%)	1.2
Nitric Acid (3%)	1.2
Nitrobenzen	12
N-Methyl Pyrrolidone	12
Nut Oil	10.3
Oleic acid	1.1
Oleum (20%)	1.1
Olive Oil	10.3
Ozone	4
Palmitic acid	1.1
Peanut Oil	10.3
Pentane	6.1
Perchloroethylene	7.1
Petrolether	12
Phenol	5
Phenolic Solution (3%)	1.1
Phosphoric Acid (3%)	1.2
Potassium Hydroxide (dilute)	2.1
Pyridine	12
Sea Water	0
Silicone Fluid	12
Sodium Bisulfate (3%)	1.2
Sodium Chloride (25%)	3
Sodium Citrate	3
Sodium dichromate (20%)	4

Reagents	Code
Sodium Hydroxide (Caustic Soda) (3%)	2.1
Sodium Hydroxide (Caustic Soda) (46%)	2.1
Sodium Hypoclorite (3%) (Javelle water)	4
Sodium Nitrate (25%)	3
Sodium Nitrate (3%)	3
Sodium Propionate	3
Sodium Sulfite (3%)	3
Steam (100°C)	0
Styrene	12
Sulfuric Acid (20%)	1.2
Sulfuric Acid (3%)	1.2
Sulfuric Acid (Battery Acid)	1.2
Sunflower oil	10.3
Super Gasoline Leaded	11
Super Gasoline Unleaded	11
Tanic Acid (10%)	1.1
Tap Water	0
Test Fluid A	11
Test Fluid B	11
Test Fluid C	11
Tetrachloroethylene	7.1
Tetrahydrofurane	12
Toluene	6.2
Trichloroethane	7.1
Triethanolamine Solution (3%)	2.2
Urea Solution (3%)	2.2
Xylene	6.2

Chemical-Resistance chart of Volta Belts

Rating key: G-Good resistance, F-Fair, P-Poor resistance

Reagents Type	L & M Family	H Family	LT/DR
0. Water			
Tap Water	G	G	G
Sea Water	G	G	G
Steam (100°C)	P	F	F
1.Acids			
1.1 Organic Acids			
Formic Acid (20%)	P	F	P
Acetic Acid (glacial)	P	F-G	G
Acetic Acid (20%)	P	G	P
Acetic Acid (3%)	P-F	G	G
Lactic Acid (3%)	P-F	G	G
Citric Acid (3%)	F	G	G
Tanic Acid (10%)	G	G	G
Palmitic acid	P-F	G	G
Oleic acid	P-F	G	G
Phenolic Solution (3%)	F-G	F-G	F-G
1.2 Inorganic Acids			
Hydrochloric Acid (37%)	P	P	P
Hydrochloric Acid (20%)	P	F	F
Hydrochloric Acid (3%)	P	F	G
Nitric Acid (20%)	P	P	P
Nitric Acid (3%)	P	F	P
Sulfuric Acid (Battery Acid)	P	P	P
Sulfuric Acid (20%)	P	F	P
Sulfuric Acid (3%)	P	G	G
Oleum (20%)	P	P	P
Hydrogen Sulfide	--	G	--
Sodium Bisulfate (3%)	F-G	G	G
Phosphoric Acid (3%)	F	G	G
Boric Acid (3%)	F-G	G	G
Hydrofluoric acid (48%)	P	P	P

Reagents Type	L & M Family	H Family	LT/DR
2. Basic Solution			
2.1 Alkaline			
Sodium Hydroxide (Caustic Soda) (46%)	P-F	F	F
Sodium Hydroxide (Caustic Soda) (3%)	F	G	G
Calcium Hydroxide (dilute)	G	G	G
Potassium Hydroxide (dilute)	F	G	G
2.2 Other			
Ammonium Hydroxide (3%)	P-F	F	G
Urea Solution (3%)	F-G	--	G
Triethanolamine Solution (3%)	F-G	--	G
3. Salt Solution			
Aluminum Chloride (25%)	G	G	G
Aluminum Sulfate (25%)	G	G	G
Ammonium Nitrate (25%)	G	--	G
Ammonium Sulfate (25%)	G	F	G
Ammonium Chloride	G	G	G
Calcium Chloride (25%)	F-G	G	G
Sodium Chloride (25%)	F-G	G	--
Sodium Nitrate (25%)	F-G	--	--
Sodium Nitrate (3%)	G	--	G
Sodium Sulfite (3%)	G	--	G
Sodium Citrate	P-F	F	--
Sodium Propionate	P-F	F	--
4. Oxidizing			
Hydrogen Peroxide (30%)	F	P	F
Ozone	F	F	F
Sodium Hypoclorite (3%) (Javelle water)	P-F	G	F
Javelle water (0.5%)	F	G	G
Chlorine gas	P	P	P
Bromine (anhydrous Liquid)	P	P	F
Sodium dichromate (20%)	--	F	--

Reagents Type	L & M Family	H Family	LT/DR
5. Alcohols			
Methanol	P-F	G	F
Ethanol	F	G	G
Iso-Propanol	F	G	G
Iso Butanol	F	G	F
Amylalcohol	F	G	G
Hexanol	F	G	G
Cyclohexanol	F	G	F
Benzyl Alcohol	P	--	P
Ethylene Glycol	G	G	G
Glycerin	G	G	G
Phenol	--	P	P
6. Hydrocarbon			
6.1 Aliphatic			
Butane	G	G	G
Pentane	G	G	G
Hexane	G	G	G
Cyclohexane	G	G	G
Iso Octane	G	G	G
6.2 Aromatic			
Toluene	F	F	F
Benzene	F	F	F
Xylene	F	F	F
7. Halogenated Hydrocarbon			
7.1 Aliphatic Halogenated Hydrocarbon			
Methylene Chloride	P	P	P
Ethyl Chloride	P	P	P
Ethylene Dichloride	P	P	P
Chloroform	P	P	P
Carbon Tetrachloride	P	F	F
Tetrachloroethylene	F	P	F
Trichloroethane	F	P	F
Perchloroethylene	--	P	--
Freon (11^{6}, 12, 113, 114)	--	G	--

Reagents Type	L & M Family	H Family	LT/DR
7.2 Aromatic Halogenated Hydrocarbon			
Chlorobenzene	P-F	P	P
7.3 Other Halogenated Hydrocarbon			
Epichlorohydrin	--	P	P
8. Aldehides & Ketones			
Methyl ethyl ketone	P	F	P
Acetone	P-F	F	P-F
Formaldehyde (40%)	--	F	F
Cyclo hexanone	P	--	P
9. Aliphatic Esters			
Ethyl Acetate	P-F	F	F
Butyl Acetate	P-F	F	P-F
Amyl Acetate	P-F	F	P-F
Dibuthyl Phthalate	G	G	--
Diethyl Sebacate	G	G	--
Dioctyl Phthalate	G	G	G
10. Oils			
10.1 ASTM Oils			
ASTM - Oil 1 (>100°C)	G	G	G
ASTM - Oil 2 (>100°C)	G	G	G
ASTM - Oil 3 (>100°C)	G	G	G
10.2 Others			
Mineral Oil	G	G	G
Lubricating Oil	G	G	G
10.3 Edible Oils			
Cottonseed Oil	G	G	F
Castor Oil	F	F	G
Olive Oil	G	G	G
Corn Oil	G	G	G
Coconut Oil	G	G	G
Fish Oil	G	G	G
Peanut Oil	G	G	G
Nut Oil	G	G	G
Palm Oil	G	G	G
Soya Oil	G	G	G
Sunflower oil	G	G	G

Reagents Type	L & M Family	H Family	LT/DR
11. <u>Fuels</u>			
Test Fluid A	G	--	F
Test Fluid B	F	--	F
Test Fluid C	P-F	--	F
Diesel Fuel	G	F	G
ASTM Reference Fuel A	G	G	G
ASTM Reference Fuel B	F	G	F
ASTM Reference Fuel C	F	G	F
ASTM Reference Fuel D	F	G	F
Super Gasoline Leaded	G	F	--
Super Gasoline Unleaded	G	F	--
Kerosene	G	G	G
JP-4 Jet Fuel	G	G	--
12. <u>Other Solvents</u>			
Anti-Freeze (Glysantine)	F-G	P	G
Silicone Fluid	G	G	G
Brake Fluid	P	P	P
Aniline	P	P	F
Tetrahydrofurane	P	F	P
Dimethyl Formamide	P	G	P
Dimethyl Acetamide	P	--	P
Pyridine	P	P	P
N-Methyl Pyrrolidone	P	--	P
Dimethyl Sulphexide	P	--	P
Nitrobenzen	--	P	--
Diethyl Ether	F	F	F
Petrolether	G	G	G
Hydrazine	P	P	P
Styrene	--	P	P