

# CHEMICAL COMPATIBILITY GUIDE

**Legend:** **A**= Very good | **B**= Good | **C**= Poor, not recommended | **D**= Very poor, not recommended | **1**= Good until 22°C (72°F) | **2**= Good until 48°C (120°F)

	PUMP MATERIALS			O-RINGS MATERIALS		
CHEMICAL	PP	PVDF	AISI 316	EPDM	Viton	PTFE
ACETIC ACID	B	C	B	A	B	A
ACETIC ACID 20%	A	A	A	A	B	A
ACETIC ACID 80%	A	C	B	A	B	A
ACETIC ACID, GLACIAL	A1	A1	A	B	D	A
ACETONE	A	D	A	A	D	A
ALCOHOLS: ETHYL	A	A	A	A	A	A
ALCOHOLS: ISOPROPYL	A2	A	B	A	A	A2
ALCOHOLS: METHYL	A2	A	A	A	C	A
ALCOHOLS: PROPYL	A	A2	A	A	A	A
ALUMINIUM SULFATE	A	A	B2	A	A	A
AMINES	B2	-	A	B	D	A2
AMMONIA, LIQUID	A2	A	A2	A	D	A
CHLORINE, ANHYDROUS LIQUID	D	A1	C	B	A	A
COPPER CHLORIDE	A	A	D	A	A	A
COPPER SULFATE > 5%	A	A	B	A	A	A
DETERGENTS	A	A	A1	A	A	A
ETHER	D	B1	A	C	C	A
FERRIC CHLORIDE	A	A	D	A	A	A
FUEL	A1	A	A1	D	A	B
FUEL OILS	A	B	A	D	A	B
GASOLINE (HIGH - AROMATIC)	A	A	A	D	A	A
GLUCOSE	A	A	A	A	A	A
HYDRAULIC OIL (PETRO)	D	A	A	D	A	A
HYDROCHLORIC ACID < 33%	A2	A	D	A2	A	A
HYDROFLUORIC ACID 50%	A	A	D	D	B	A
HYDROFLUORIC ACID 100%	C1	A	B1	D	B	A
HYDROGEN PEROXIDE 10%	A	A	B	A	A	A
HYDROGEN PEROXIDE 30%	B1	A	B	B	A	A
LACQUER THINNERS	D	-	A	D	D	A
MOTOR OIL	A1	B	A2	D	-	A
NAPHTHA	B	A	A	D	A	B
NICKEL CHLORIDE	A	A	C	A1	A	A
OIL: HYDRAULIC OIL (SYNTHETIC)	D	A	A	A	A	A
OLIVE OIL	A	-	A	D	A	A1
PHENOL (CARBOLIC ACID)	B	A1	B	B	A	A

	PUMP MATERIALS			O-RINGS MATERIALS		
CHEMICAL	PP	PVDF	AISI 316	EPDM	Viton	PTFE
PHOSPHORIC ACID < 40%	A	A	C	A	A	A
PHOSPHORIC ACID > 40%	A	A	D	A	A	A
PHOTOGRAPHIC DEVELOPER	A	-	A	B	A	A
ROSINS	A2	-	A1	-	A	A
SALT BRINE	A	A	A2	A	A2	A2
SEA WATER	A	A	C	A2	A	A
SOAP SOLUTIONS	A	A1	A1	A	A	A
SODIUM BICARBONATE	A	A	A1	A2	A	A
SODIUM BISULFITE	A	A	B1	A2	A	A
SODIUM CARBONATE	A	A	A	A2	A	A
SODIUM CHLORIDE	A	A	B	A	A	A
SODIUM HYDROXIDE (10%)	A	C	-	A	C	-
SODIUM HYDROXIDE (40%)	A	C	-	A	C	-
SODIUM HYDROXIDE (50%)	A	C	B1	A	D	A
SODIUM HYPOCHLORITE (100%)	C	A	C	B1	A1	A
SODIUM HYPOCHLORITE 12,5%	C	A	C	A	A	A
SULFURIC ACID (10-75%)	A1	A	D	B2	A2	A
SULFURIC ACID (75-100%)	C1	A	D	B1	A1	A
SULFURIC ACID 100%	D	D	A	D	A	A
TIN SALTS	A	A	D	B	A	A
TOLUENE (TOLUOL)	C1	A1	A	D	C	A
UREA	A	A	B	A	A	A
WATER, ACID, MINE	A	A	B	A	A	A
WATER, DISTILLED	A	A	A	A	A	A

All the information in this chart is only approximate and should only be used for an initial choice of the type of materials best suited for the customers' pumps. The data comes from various highly reliable sources. Despite this, GemmeCotti itself did not carry out the relative tests, and is not responsible for the preciseness of the data. Therefore, GemmeCotti has no responsibility for possible malfunctions or damage of any type caused by the incorrect selection of construction materials and/or of the incorrect choice of pump size if it is not made by GemmeCotti itself after having received all suitable information regarding the application and the characteristics of the pumped liquid.