Chemical Resistance and Physical Properties

✓✓✓ Excellent resistance, no attack.

✓✓ Good resistance, minor attack.

✓ Limited resistance, moderate attack, suitable for short term use only.

✖ Poor resistance, not recommended.

— No information available.

Dynalab Corp
Supplying Science and Education

Transparency

C Clear | TL Translucent | O Opaque

Flexibility

EX Excellent | R Rigid

	LDPE	HDPE	PP	PPCO	PS	ACRYLIC	PTFE	PMP	PVC	PC	PFA
Acids - dilute	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓
Acids - concentrated	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓	✖	✓✓✓	✓✓✓	✓✓✓	✖	✓✓✓
Alcohols	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✖	✓✓✓	✓✓✓	✓✓✓	✓✓	✓✓✓
Aldehydes	✓✓	✓✓	✓✓	✓✓	✖	✓✓	✓✓✓	✓✓	✖	✓	✓✓✓
Bases	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓	✓✓✓	✓✓✓	✓✓✓	✖	✓✓✓
Esters	✓✓✓	✓✓	✓✓	✓✓✓	✖	✖	✓✓✓	✓✓	✖	✖	✓✓✓
Hydrocarbons Aliphatic	✓	✓✓	✓✓	✓✓	✖	✓✓	✓✓✓	✓	✓✓✓	✖	✓✓✓
Hydrocarbons Aromatics	✓	✓✓	✓	✓	✖	✖	✓✓✓	✓	✖	✖	✓✓✓
Hydrocarbons Halogenated	✖	✓	✓	✓	✖	✖	✓✓✓	✖	✖	✖	✓✓✓
Ketones	✓✓	✓✓	✓✓	✓✓	✖	✖	✓✓✓	✓	✖	✖	✓✓✓
Oils, Minerals	✓	✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓
Oil, Vegetable	✓✓	✓✓	✓✓	✓✓	✓✓	✖	✓✓✓	✓✓	✓✓	✓✓	✓✓✓
Oxidizing Agents	✓	✓	✓	✓	✖	✖	✓✓✓	✓	✓✓	✖	✓✓✓
Max Temp. °C	80	120	135	121	70	90	300	145	70	130	270
Min Temp.°C	-50	-100	0	-40	0	-60	-200	0	-25	-135	-260
Autoclavable	NO	NO	YES	YES	NO	NO	YES	YES	NO	YES	YES
Microwavability	YES	NO	YES	YES**	NO	NO	YES	YES	YES	YES**	YES
Gas Sterilization	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Dry Heat Sterilization	NO	NO	NO	NO	NO	NO	YES	YES	NO	NO	YES
Gamma Irradiation Sterilization	YES	YES	NO	NO	YES	YES	NO	YES	NO	YES	YES
Chemical Disinfectant Sterilization	YES	YES	YES	YES	NO	NO	YES	YES	YES	YES	YES
Transparency	TL	TL	TL	TL	C	C	O	C	C	C	TL
Flexibility	EX	R	R	R	R	R	R	R	R	R	R
Gas Permeability N_2	20	3	4.4	4.2	3	-	-	65	0.4	3	-
Gas Permeability CO_2	280	45	92	65	75	-	-	-	10.2	85	-
Gas Permeability O_2	60	10	28	24	15	-	-	270	1.2	20	-
Water Absorption %	<0.01	<0.01	<0.02	<0.02	0.05	0.3	0.3	<0.01	0.06	0.35	<0.03
Resistivity Ohm CM^2	$>10^{15}$	$>10^{15}$	$>10^{16}$	$>10^{16}$	$>10^{16}$	$>10^{14}$	$>10^{18}$	$>10^{16}$	$<10^{16}$	$2x10^{16}$	10^{18}
Non-Cytotoxicity*	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Specific Gravity	0.92	0.95	0.90	0.90	1.05	1.18	2.2	0.83	1.34	1.20	2.16

* "YES" is based on the material being determined to be non-cytotoxic based on USP and ASTM biocompatibility testing standards using an MEM elution technique on a W138 human diploid lung cell line.

** Material will absorb heat.