

**High Density Polyethylene
Chemical Resistance & Physical Properties**

Acids - dilute	✓✓✓	Excellent resistance, no attack.
Acids - concentrated	✓✓✓	Excellent resistance, no attack.
Alcohols	✓✓✓	Excellent resistance, no attack.
Aldehydes	✓✓	Good resistance, minor attack.
Bases	✓✓✓	Excellent resistance, no attack.
Esters	✓✓	Good resistance, minor attack.
Hydrocarbons Aliphatic	✓✓	Good resistance, minor attack.
Hydrocarbons Aromatics	✓✓	Good resistance, minor attack.
Hydrocarbons Halogenated	✓	Limited resistance, moderate attack, suitable for short term use only.
Ketones	✓✓	Good resistance, minor attack.
Oils, Minerals	✓✓	Good resistance, minor attack.
Oil, Vegetable	✓✓	Good resistance, minor attack.
Oxidizing Agents	✓	Limited resistance, moderate attack, suitable for short term use only.
Max Temp. °C	120	
Min Temp. °C	-100	
Autoclavable	NO	
Microwavability	NO	
Gas Sterilization	YES	
Dry Heat Sterilization	NO	
Gamma Irradiation Sterilization	YES	
Chemical Disinfectant Sterilization	YES	
Transparency	Opaque	
Flexibility	Rigid	
Gas Permeability N ₂	3	
Gas Permeability CO ₂	45	
Gas Permeability O ₂	10	
Water Absorption %	< 0.01	
Resistivity Ohm CM ²	> 10 ¹⁵	
Non-Cytotoxicity	YES	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.
Specific Gravity	0.95	