ENVIRAZONE

CHEMICAL COMPATIBILITY & RESISTANCE CHART

Application: Secondary Containment Selection Guide

Materials: High-Tenacity PVC (650gsm) vs. Advanced TPU (650gsm)

COMPATIBILITY KEY

- **Excellent (A): Material is unaffected. Suitable for long-term storage.**
- **Good (B): Minor effect. Suitable for short-term secondary containment (spill events).**
- **Fair (C): Moderate effect. Risk of swelling or softening. Emergency use only.**
- **Not Recommended (X): Severe degradation. Immediate failure risk.**

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1. OILS, FUELS, AND HYDROCARBONS

The primary difference between materials is their reaction to hydrocarbons. TPU is the definitive solution for fuel-heavy environments.

Chemical Type	Example	PVC Resistance	TPU Resistance
Diesel & Fuel Oil	Red Diesel / Home Heating Oil	Good (B)	Excellent (A)
Lubricating Oils	Engine Oil / Gear Oil	Excellent (A)	Excellent (A)

Petrol / Gasoline	**Unleaded / Super Unleaded**	**Not Recommended (X)**	**Good (B)**
Hydraulic Fluid	**Mineral-based Hydraulic Oil**	**Good (B)**	**Excellent (A)**
Kerosene	**Jet A1 / Paraffin**	**Fair (C)**	**Excellent (A)**
Grease	**Industrial Lithium Grease**	**Excellent (A)**	**Excellent (A)**

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2. ACIDS AND ALKALINE SOLUTIONS

Both materials offer high resistance to aqueous solutions, but PVC often performs slightly better with concentrated acids.

Chemical Type	Example	PVC Resistance	TPU Resistance
Weak Acids	**Acetic Acid (10%) / Citric Acid**	**Excellent (A)**	**Excellent (A)**
Strong Acids	**Hydrochloric Acid (35%)**	**Good (B)**	**Fair (C)**
Sulfuric Acid	**Battery Acid**	**Good (B)**	**Fair (C)**
Alkalines	**Sodium Hydroxide / Caustic Soda**	**Excellent (A)**	**Good (B)**
Detergents	**Industrial Cleaning Solutions**	**Excellent (A)**	**Excellent (A)**

3. SOLVENTS AND ALCOHOLS

Solvents are the most "aggressive" group. TPU provides significantly better resistance to certain solvents that would instantly dissolve PVC.

Chemical Type	Example	PVC Resistance	TPU Resistance
Alcohols	Ethanol / Isopropyl Alcohol (IPA)	Good (B)	Excellent (A)
Ketones	Acetone / MEK	Not Recommended (X)	Not Recommended (X)
Chlorinated Solvents	Methylene Chloride	Not Recommended (X)	Not Recommended (X)
Aromatic Hydrocarbons	Toluene / Xylene	Not Recommended (X)	Fair (C)
Glycols	Antifreeze / Brake Fluid	Excellent (A)	Excellent (A)

SUMMARY GUIDELINES FOR USERS

- **For General Spill Containment: Use Reinforced PVC. It is cost-effective and provides excellent resistance to oils, water, and weak acids.**
- **For Fuel or Hydrocarbon Storage: Use TPU. PVC can become brittle or "sticky" when exposed to fuels long-term; TPU remains inert.**
- **For Aggressive Solvents: Always consult Envirazone technical support. No flexible liner is 100% resistant to all ketones or chlorinated solvents.**

Envirazone Technical Support

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