

# Wellfield Protection - Floor Sealant Guidance

Concrete floor sealant protects your floor and extends its life while also preventing the migration of chemicals spills on the floor into the groundwater. Sealants are only required for some types of operations. If required the sealant should be applied to all areas at and adjacent (10 foot radius) to any equipment or chemical/waste storage areas. The specific products selected must be capable of maintaining impermeability after prolonged exposure to chemicals used at your facility. Floors should be resealed when the sealant begins to appear worn.

Consult an engineer to determine the appropriate coating for your facility. They will consider:

- Surface preparation requirements
- Surface texture requirements
- Food industry requirements (if applicable)
- Exposure to impact
- Exposure to wear from vehicles or other sources
- Chemical resistance (specifications of chemical resistant are typically available from coating manufacturers. Select a coating that will hold up to the chemicals in use at your facility.)
- Aesthetic requirements
- Cost (more money upfront insures greater durability and long-term savings)

Application by a manufacturer-approved contractor is recommended because they can provide a warranty on the sealant performance and can apply according to manufacturer's specifications and direction. Some coatings may only be applied by manufacturer licensed contractors.

## Recommended Sealant Types

The following chart is intended as basic guidance. A coating professional should be contacted to select an appropriate coating for your specific application. In addition, use only a coating contractor that provides a written warranty on the coating recommended.

Sealants designed to resist exposure to chemicals (primarily volatile organic compounds [VOCs]) are designated as "Novalac" coatings. Many types of coatings can utilize novalac chemistry including epoxies, PUA resins, and polyamines.

**Table 1. Generic Guidance for the Use of Coatings for Chemical Storage**

Coating Type	Chemical Resistance			Abrasion Resistance	Impact Durability	Notes/Other
	VOCs	Acids	Bases			
Aliphatic Urethane & Acrylic Coatings	Low	Okay	Okay	Low	Low	Usually poor choice
Epoxies	Good	Good	Good	Prone to chipping, Must be reapplied periodically	Low	Good choice in some situations, will not hold up well in shop conditions
Concrete Penetrating Sealers (silane, silicate, and siliconates)	Highly Resistant	Low	Highly Resistant	Excellent	Good	Will show stains, not 100% impermeable, increases durability of concrete
Poly Urea	Good	Good	Good	Medium	Good	Costly, used for containment areas
Troweled-in Hardening Products	Good	Good	Good	Good	Good	Costly
Polyamine Epoxy or Novolac Vinyl Ester	Good	Good	Good	Good	Good	Used for chemical vessels and containment areas
Elastomeric Polyurethane	Good	Good	Good	Low	Good	Used for containment areas