

LED Chemical Compatibility List

POTENTIAL CHEMICAL COMPATIBILITY ISSUES WITH LED AND ELECTRONIC COMPONENTS

Certain chemical contaminants that may exist in end user locations (especially industrial applications) are known to degrade LEDs and other electronic components. This degradation may result in damaging effects to these components, ranging from performance impact up to failure. The occurrence, severity, and timing of any potential contaminant impact is dependent on many factors, including concentrations of the contaminants, ventilation, and temperature at the end-user location.

The potential for contaminant impact should be considered when selecting a lighting fixture for any application where contaminants may be present. Acuity Brands offers many Industrial Lighting solutions, ranging from non-sealed light duty units to fully IP-Rated luminaires. If you have specific concerns about the impact of contaminants, it is best to engage your factory representative to discuss the desired lighting solution. Your authorized factory representative can help you choose the best solution for your application:

NOTE:

It is important to have this discussion before wide-scale implementation of any lighting solution. Failure due to the effect of contaminants is not covered under our standard terms of warranty.

The following table identifies the most common chemical contaminants that may impact and degrade LEDs and other electronic components. This list is intended solely to provide guidance and is not a complete list of all contaminants that may have an adverse effect.

Potential Chemical Compatibility Issues with LED and Electronic Components list
Acetic Acid (acid)
Acrylic Rubber
Acetone
Acrylonitrile butadiene styrene (ABS)
Ammonia (alkaline)
Benzene (solvent)
Butadiene rubber
Butyl rubber
Chlorinated polyethylene
Chlorobutyl
Chlorosulphonated rubber
Cyanoacrylate (adhesive)
Dichloromethane (solvent)
Epichlorhydrin
Gasoline (solvent)
Halogenated hydrocarbons (containing F, Cl, Br elements)/ Misc
Hydrocarbon oil
Hydrochloric acid (acid)
Methyl ethyl ketone (MEK) (solvent)
Methyl isobutyl ketone (MIBK) (solvent)
Mineral spirits (solvent)
Nitric acid (acid)
Petroleum (oil/lubricant)
Potassium hydroxide (alkaline)
Silicone oil (oil/lubricant)
Sodium hydroxide (alkaline)
Sulfuric acid (acid)
Tetrachloromethane (solvent)
Tetradecylamine
Toluene (solvent)
Trimethylhexamethylene diamine
Xylene (solvent)