



Electronic Chemicals, Inc.

# Application Bulletin: GenSolve™ 310

## High Performance Cleaning Agent

**DESCRIPTION:** GenSolve™ 310 is a low odor, high performance cleaning agent designed to replace ozone depleting/ toxic materials. It is developed to operate at high temperatures to remove tenacious hydrocarbons.

**APPLICATION:** GenSolve™ 310 has been demonstrated to work well in removing adhesives such as hot melts or ethylene vinyl acetate (EVA), and other hydrocarbons, from hard surfaces and microscopic hard-to-reach areas. GenSolve™ 310 is designed for use in the manufacture of electronics and other products that are subject to stringent quality criteria. Heavy greases, silicones, baked or partially polymerized oils, and many other hydrocarbons can easily be removed using a simple immersion or wipe system. Most importantly, heat may be used to increase its physical and chemical properties.

**CHEMISTRY:** The GenSolve™ 310 formulation involves a solvent package composed of materials having different hydrophobic/philic and organic solvency properties. These materials perform synergistically together enabling superior properties beyond that exhibited individually. By combining these characteristics, foreign materials may be penetrated, emulsified, suspended, and surrounded by soluble block co-polymers to prevent re-deposition and enable easy rinsing. GenSolve™ 310 has an unusually low viscosity, which allows penetration and wetting of surfaces by contact angle reduction to adhered particulates. Low foaming characteristics allow greater efficiency for capillary action to microscopic dimensions during a variety of agitation conditions.

**USAGE:** GenSolve™ 310 is intended for use as an immersion-based cleaning system. A variety of agitation forms may be used. These include ultrasonic, N<sub>2</sub> bubbling, spray-wash, or combinations thereof. Wipe cleaning may also be used. GenSolve™ 310 performance is affected by dilution. Depending upon the diluent, the activity will be inversely proportional with dilution. GenSolve™ 310 is not compatible with water. Heat may be used to enhance the cleaning power.

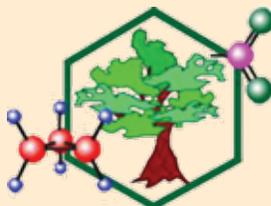
**COMPATIBILITY:** GenSolve™ 310 is completely metal-friendly. This system is non-ionic, and non-reactive towards even the most reactive metal. However, GenSolve™ 310 may attack many types of polymers and plastics. Due to the effective solvency of this agent, it is not recommended to be used with many elastomers and rubbers. Testing is necessary to demonstrate full compatibility.

When specifying the use of plastics in your machine or parts, trays and carriers, we recommend the use of the following: *Polypropylene and Poly Olefins, Polyethylene (low and high density), Teflon, and Butyl Rubber.*

**AVAILABILITY:** GenSolve™ 310 is available in cases of 4x1 gallon bottles as well as 55 gallon drums and totes.



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GENSOLVE 310

### GenSolve™ 310 : A Green Chemistry Customer Testimonial

“We have been looking to find a replacement chemistry to remove an adhesive layer that is used during our backside processing. In the past, we had been using a hazardous solvent that had questionable health issues. We needed to go to a green chemistry that would perform well. KMG had the answer with GenSolve™ 310.

With GenSolve™ 310 we use a heated bath and removed the adhesive in a shorter time frame than the prior chemistry. Because GenSolve™ 310 is a green solution, we no longer need special permits and our costs have been reduced due to fewer tank changes.”

### NFPA/HMIS Rating Comparison:

GenSolve™ 310 can be used to replace chlorinated hydrocarbon solvents.

	Trichloroethylene (TCE)	GenSolve™ 310
Health =	4*	1
Flammability=	1	2
Reactivity =	2	0
Contact =	2	1
	* Suspected Carcinogen.	No known hazard concerns.

**TOXICITY:** GenSolve™ 310 contains olefin alcohols and other solvents not included in EPA’s SARA 313 list. GenSolve™ 310 is readily biodegradable, does not bioaccumulate, and is essentially non-toxic to aquatic life. GenSolve™ 310 has low inherent toxicity, slow dermal penetration, and very low overall hazard concern. However, as with any chemical, we recommend the use of gloves and eye goggles when handling GenSolve™ 310.

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