

AquaKlean EF 135: Highly alkaline cleaner & etchant.

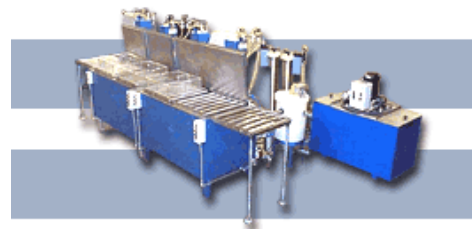
Application Notes: NuGeneration Technologies' AquaKlean EF 135 is a highly alkaline liquid cleaner & etchant with moderate-foaming for use in agitated tank applications. The low-caustic and non-phosphated formula will not sludge or scale-up. AquaKlean EF 135 may be used as an aluminum etchant and cleaner. Provides cleaning on both ferrous and non-ferrous metals while enabling a mild to moderate etch on aluminum alloys. Other acceptable materials include: magnesium, plastics, ceramics and glass.

AquaKlean EF 135 was formulated to provide improved removal of particulates and organics while providing reduced residues, and fast rinsing. **AquaKlean EF 135 provides excellent wetting and rinsing properties and is therefore an excellent choice for pre-plate cleaning.** Removes: inks, polishing and buffing compounds, grease, oils, fingerprints, drawing compounds, and metalworking fluids.

Application Procedure: AquaKlean EF 135 is effective at ambient temperatures. However, it is normally used at 5 to 15% by volume of water at 120 to 190°F for 5 seconds to 5 minutes. The parameters can vary due to the type and extent of soils to be removed and the etch desired on aluminum alloys. Temperatures may be increase slightly for shorter time cycles. For best results tanks should have adequate agitation to ensure uniform cleaning and etching. Agitation ensures that fresh chemical comes into contact with the surface and that oils are removed allowing for uniform etching. Safe on magnesium. Test for discoloration on cuprous alloys.

Typical Usage Parameters:

AquaKlean EF 135	
Description	Highly Alkaline Cleaner/Etchant
Concentration Range – Spray	2 - 5%
Concentration Range – Immersion and ultrasonic tanks	5%-15%
Operating Temps	70F and up Best >120 to 165°F



Physical Properties:

AquaKlean EF 135	
pH, Concentrate	13.5
pH, @ 5% b.v.	12.4
Bulk Density, #/gal	9.3
Flash Point	None
Solubility In Water	Complete
Biodegradable	YES
Chelates	YES (2% EDTA)
Corrosive	YES
Silicates	NO
VOC (Concentrate)	Zero g/L
Ozone Friendly	YES



Availability: Available in 5, 55 and 300 gallon containers. Bulk tank shipments also available.

Shipment: Freight classification is "Corrosive Liquid, NOS, 8, PGIII (Sodium hydroxide mixture) UN1760."

Storage: Keep out of direct sunlight. Keep from freezing. Store between 40-120°F.

Disposal: Dispose of in accordance with local, state, & federal regulations. For assistance with disposal contact NuGeneration Technologies at 888-99-NuGen or email: info@nugentec.com