

# AMBERCLEAN L12

## AQUEOUS METAL CLEANER

AZ 1

### Description

Amberclean L12 is a multipurpose, biodegradable cleaner, which does not contain volatile organic compounds (VOC) or ozone depleting substances (ODS). Amberclean L12's unique water-based formulation is founded on new cleaning technology and, as such, possesses a degree of environmental and personal safety that exceeds typical cleaners for similar applications. Amberclean L12's powerful surface active agents cut through and remove combinations of grease, oil, dirt, waxes, cutting fluids, tube bending lubricants and other organic contaminants from soiled metal surfaces. Innovative Organics' proven corrosion inhibition technology protects metal surfaces during cleaning processes without the use of silicates. Amberclean L12 is well suited for immersion or hand wipe applications and may be used with ultrasonic tanks, recirculating pumps or other similar equipment.

### Features and Benefits

- Non toxic, non flammable and biodegradable
- Does not contain Glycol Ethers or any other hazardous solvents (no VOC)
- Does not contain chlorine, sulfur, phenols, nitrites, diethanolamine, silicone or silicates
- Designed to prevent corrosion on ferrous and non-ferrous substrates, including aluminum
- Will not remove alodine
- Poses no health, safety or environmental risks
- Cleans grease, oil and dirt combinations effectively
- Will not leave films or residues
- Will not upset waste treatment facilities
- May be ultra filtered for extended tank life
- Unique water based formulation rinses easily and is low foaming

### Typical Physical Properties

Appearance	Clear, Amber Liquid
Specific Gravity @20°C	1.01
LBS / Gallon	8.42
pH (as is)	8.40
Volatile Organic Compounds (g/kg)	0
Flash Point	None
Theoretical Oxygen Demand (TOD)	0.50

**INNOVATIVE**  
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**Recommended Process Parameters**

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Concentration:	5 - 25%
Temperature:	Ambient - 140°F
Water:	Soft or deionized

A deionized water rinse is recommended following processing with Amberclean L12. In applications replacing solvent or vapor degreasing, Amberclean L21, a non silicated aqueous cleaner, should follow the rinse step in lieu of traditional alkaline cleaners.

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Amberclean L12 is approved by Boeing Commercial Airplane Group under specification, BAC 5763. The following test criteria should be considered as a guideline for the use of Amberclean L12 in degreasing applications:

**Weight Change / Ferrous & Non-Ferrous**

Metals including Magnesium	PASS
Intergranular Attack	PASS
Sandwich Corrosion (2024 T3)	PASS
Sulfur Content	PASS
Hydrogen Embrittlement	—
<i>Unplated 4340</i>	PASS
<i>Plated</i>	PASS
Titanium Stress Corrosion	PASS
Anodized Aluminum Surfaces	PASS
Conversion Coated Aluminum	PASS

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**Availability**

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Bulk, 55 gallon drums, 5 gallon pails

Product: **AmberClean L12**
**KEY**

E = Excellent - no effect
G = Good - minor effect
F = Fair - moderate effect
S = Severe effect - not recommended

Classification	Material	Compatibility
<b>Plastics:</b>	Low density polyethylene (LDPE)	E
	High density polyethylene (HDPE)	E
	Ultra-high MW polyethylene (UHMPE)	E
	Polypropylene (PP)	E
	Polymethyl pentene (PMP)	E
	Acetal (Delrin)	G
	Nylon	G
	Teflon (TFE)	E
	Polyvinylidene fluoride (PVDF)	E
	Polycarbonate (PC)	F*
	Polyvinyl chloride (PVC)	E
	Chlorinated polyvinyl chloride (CPVC)	E
	Polysulfone (PSF)	E
	Polystyrene (PS)	G
	Vinylester	G
	Epoxy	G
<b>Elastomers:</b>	Viton	E
	EPDM	E
	Neoprene	G
	Silicone	G
	Natural rubber	F
	Buna N (nitrile)	G
<b>Metals:</b>	Aluminum (& alloys)	E
	Clad aluminum	E
	Stainless Steel(s)	E
	Titanium	E
	Brass	G
	Bronze	G
	Copper	G
	Cast iron	F
	Carbon steel	G
	Nickel alloys	E

\*Testing showed minor effect at ambient temperature and severe effect at elevated temp.

This data has been extrapolated and compiled from various compatibility tables and is not practical test data. Compatibility testing should be performed on materials with G and F ratings prior to their incorporation in processes utilizing AmberClean L12.