ACE ENTERPRISES

ACE-2

WATER-BASED ULTRASONIC CLEANER

Alkaline precision cleaning for ultrasonic tanks: cavitation plus detergency, with zero solvent risk

Non-flammable
Zero VOC
Low foaming

2 – 10%	40 – 70 °C	25 – 80 kHz	>90%
dilution in water, by soil load	optimal temperature for cavitation	frequency range; 5 – 20 minute cycle	biodegradable, completely water soluble

Ultrasonic cavitation needs the right chemistry

Cavitation scrubs blind holes, threads, fine channels and tight crevices that brushing and wiping cannot reach, but it works best with a cleaner matched to the soil. ACE-2 combines alkaline detergency with ultrasonic cavitation to remove organic and inorganic contaminants from precision components, with none of the fire and fume risks of solvent cleaning.

Why a water-based cleaner in your ultrasonic tank?

What matters	Solvent cleaning	ACE-2 water-based
Fire and explosion risk	Flammable solvents need special equipment and precautions	Water-based and non-flammable
VOC and waste	VOC emissions and harder waste handling	Zero VOC; simpler handling and disposal
Mixed soils	Strong on oils and greases, limited on inorganic soils	Removes oils, fats, waxes and coolants, plus scale and oxide films
Metal protection	Depends on the solvent	Corrosion inhibitors protect metal components
Final finish	Fast drying, no water rinse	Deionised-water rinse, then hot-air or vacuum drying for spot-free parts

Match the chemistry to the job. For heavily oily parts that must leave the tank dry with no water rinse, ACE also offers ACE D-5 hydrocarbon ultrasonic cleaning solvent.

Five-step ultrasonic cleaning cycle

1 Dilute	2 Heat	3 Clean	4 Rinse	5 Dry
2 – 10% in water, based on soil load	40 – 70 °C for optimal cavitation	25 – 80 kHz, 5 – 20 minutes based on contamination	Deionised water to prevent spotting	Hot air or vacuum drying as required

What ACE-2 removes

Oils • fats • waxes • coolants • scale • oxide films

Where you can use it

Precision engineering Automotive and aerospace components	**Medical device cleaning** Instruments and devices	**Electronic circuit boards** Boards and assemblies
Watch and jewellery Fine work and delicate items	**Metal finishing and tool maintenance** Tools and finished parts	**Pharmaceutical and laboratory equipment** Lab and process equipment
Optical components and lenses Spot-free precision optics	**3D printed part cleaning** Printed parts and supports	**Industry and laboratories** Ultrasonic tanks of all sizes

ACE ENTERPRISES | 7/3, Swapna, Oswal Park, Pokharan Road No.2, Thane (West) – 400601, Maharashtra
Mobile: 9850956240 / 9021688906 | Email: ukalkar2001@yahoo.com

Material compatibility

Material	Status
Stainless steel	Excellent
Glass and ceramics	Excellent
Aluminium alloys	Compatible
Brass and copper	Compatible
Plastics (PP, ABS, acrylic)	Compatible
Zinc / magnesium die-cast	Not recommended

Soft metals in high alkalinity are also not recommended. Try a small test first on new materials, at your intended temperature and cycle time.

Get the best results from your ultrasonic tank

Ultrasonic frequency	Cavitation	Best suited to
25 kHz	Larger bubbles, most aggressive	Heavy soils and robust parts; avoid on delicate or polished surfaces
40 kHz	Balanced, general purpose	Most precision machined parts and maintenance cleaning
68 – 80 kHz	Smaller bubbles, gentler	Fine detail, delicate parts and electronics-related components

Frequency guidance is general industry practice; confirm the right setting with your equipment supplier.

Good practice	Why it helps
Dilute by soil load	Use 2 – 10% in water; start low and increase only for heavier soils
Heat the bath to 40 – 70 °C	Warm solution cleans faster and gives optimal cavitation
Degas before loading	Run the bath briefly without parts so dissolved air does not weaken cavitation
Use a basket, do not overload	Keeps every surface exposed and keeps parts off the tank floor
Rinse in deionised water	Prevents mineral spotting; then dry with hot air or vacuum
Replace exhausted solution	Change the bath when cleaning slows, so results stay repeatable

Why customers choose ACE-2

Safer for operators No VOC emissions; no fire or explosion risk	**Cleaner parts** Degreases and removes scale and oxides while inhibiting corrosion	**Smooth ultrasonic operation** Low foaming formula suits ultrasonic systems
Easier waste management Simplified handling and disposal compared with solvents	**Cost-effective** Dilutable concentrate for long-term cleaning at 2 – 10% in water	**Responsible chemistry** Biodegradable and completely water soluble

Technical snapshot

Property	Value	Property	Value
Appearance	Clear to pale yellow liquid	Foaming	Low
pH (1% solution)	10.5 – 12.5	Water solubility	Complete
Specific gravity	1.05 – 1.10 g/cm³	Shelf life	12 – 24 months
Packaging	25 L, 50 L, 210 L	Storage	Cool, dry place; away from acids and oxidisers

Put precision cleaning on a safer footing.

Ask for a sample for your ultrasonic tank

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