

CoreKleen HX

Two-part rust, scale & red-dirt remover · near-neutral · safe on aluminium and zinc

KT-CC-CRKHX

DILUTION A 20% + B 1–2% Part A + Part B	TEMPERATURE 50–60 °C typically 60 °C	CYCLE TIME 60–90 min range 30–120 min	PH CONCENTRATE 6.0–6.5 near neutral
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DESCRIPTION

CoreKleen HX removes rust, scale, red dirt and grime from industrial components in ultrasonic and immersion tanks. Part A provides the chelating phosphonate chemistry that lifts oxide layers at a near-neutral pH of 6.0–6.5, and Part B is the surfactant additive dosed alongside it. The near-neutral working solution is markedly gentler than conventional acid pickling — for the operator and for the equipment — and is safe on ferrous, non-ferrous and aluminium alloys. It also passivates, leaving short-term corrosion protection, which makes it useful immediately before painting.



KEY BENEFITS & industries

- Removes rust, scale, red dirt and grime in one immersion process
- Near-neutral pH — gentler on operators and equipment than acid pickling
- Chelating action targets the oxide layer, not the base metal
- Safe on aluminium alloys and on zinc — removes white rust
- Passivates as it cleans — short-term protection before painting
- Water-based and fully soluble — no solvent vapours
- Formulated for ultrasonic cavitation
- Titration-controlled for consistent bath strength

Mining & heavy plant

Engine reconditioning

Transport & rail

General manufacturing

Tank & system cleaning

TYPICAL CHARACTERISTICS from SDS §9

CoreKleen HX-A (KT-CC-CRK-HX-A)	Clear to yellow liquid · sweet odour · SG 1.1–1.2 · pH 6.0–6.5 · boiling point > 100 °C · soluble in water
CoreKleen HX-B (KT-CC-CRK-HX-B)	Clear colourless liquid · mild odour · SG 0.95–1.00 · pH 8–10 · boiling point > 100 °C · completely soluble
Active chemistry	Part A — hydroxyethylidene diphosphonic acid 5–15% · Part B — dipropylene glycol methyl ether 30–60%
Typical values only — consult the specification sheet. Sourced from the Kleentek SDS (KT-CC-CRK-HX-A and KT-CC-CRK-HX-B, both v1.0, issued 01 Jul 2026).	

USE RECOMMENDATIONS

System	Ultrasonic and immersion tanks · tank and closed-system circulation
Dilution	A 20% + B 1–2% v/v , dosed into the same bath
Temperature	50–60 °C , typically 60 °C
Cleaning duration	30–120 min; typically 60–90 min. Ultrasonic: 1 h light rust, 2 h heavy rust
Other applications	Passivating unrusted steel, brush or spray — 10–30% · tank circulation, unrusted — 3–6% up to 72 h ambient · tank circulation, rusted — 5–25% · spot rust, brush or spray — neat
Rinse	Rinse thoroughly with RO / DI water

A stronger mix and a higher temperature both speed the reaction. Bath capacity: at a 25% make-up roughly 15 g/L of iron can be dissolved before the bath is spent.

MATERIAL COMPATIBILITY	Ferrous — carbon steel · cast iron · stainless steel
	Non-ferrous — aluminium alloys · zinc (removes white rust) · nickel & alloys · titanium · chrome plating
	Plastics & composites — HDPE · polypropylene · EPDM · Viton
	Other — glass · ceramics
	Not suitable Magnesium. Acrylic, polycarbonate and ABS — the glycol ether in Part B crazes them. PVC and nitrile seals are softened by it; use EPDM or Viton. Copper and brass are chelated on prolonged contact — time-limit and test. Always confirm compatibility by testing with your specific contaminants under your specific cleaning conditions.

SOILS REMOVED	Rust · scale · red dirt · grime · white rust on zinc surfaces
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BATH MAINTENANCE	Monitor bath strength by titration and top up to the working concentration rather than letting it drift. Replace the bath once roughly 15 g/L of dissolved iron is reached at a 25% make-up.
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CONCENTRATION VERIFICATION titration	STANDARD Sample 190 µL Part A → 100 mL Then 1 mL → 100 mL Factor × 100 Result drops = A	BLANK Sample Tap water Method As standard Result drops = B	BATH SAMPLE Sample 200 µL → 1000 mL Factor × 5000 Result drops = C
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Take 40 mL of the prepared solution into the organophosphonate test bottle, add two crushed P1/4 tablets, then add reagent P5 one drop at a time until the colour goes bright green → grey → permanent purple; count the drops. **Concentration (g/L) = $100 \times (C - B) \div (A - B)$** . Operating range for a 30% v/v make-up: 320–375 g/L.

AVAILABILITY & quality	10 L KT-CC-CRK-HX-A-10	20 L KT-CC-CRK-HX-A-20	200 L KT-CC-CRK-HX-A-200	1,000 L KT-CC-CRK-HX-A-1000
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Part B is supplied separately in 10 L (KT-CC-CRK-HX-B-10) and 20 L (KT-CC-CRK-HX-B-20). Minimum order quantity 10 L. Manufactured under Kleentek's ISO 9001:2015 certified quality management system — a Certificate of Analysis for the supplied batch is available on request.

TRANSPORT	Not classified as Dangerous Goods for transport. Neither part is classified.
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SAFETY & HANDLING	Part A is classified hazardous — GHS Danger: causes serious eye damage (Category 1, H318). Part B is not classified as hazardous. Wear protective gloves and eye/face protection when handling the concentrates. Refer to the Safety Data Sheets (KT-CC-CRK-HX-A and KT-CC-CRK-HX-B); the SDS takes precedence over this document in all matters of safety.
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