

# Calcite & Limescale Remover - Acidic

HCl 33% w/w · Limescale & Uric Scale Removal

## KEY BENEFITS

— <b>HCl 33% w/w</b>	industrial-strength hydrochloric acid in a precision gel delivery system — the concentration used in professional descaling operations, accessible at institutional procurement scale.
— <b>pH 1.5–2.0</b>	aggressive calcium carbonate and uric scale dissolution at a single 30 ml application — effective where weekly maintenance has failed to prevent chronic build-up.
— <b>Thick gel formulation</b>	clings to under-rim and vertical bowl surfaces rather than draining immediately — contact time is where descaling happens, and the gel ensures that contact time.
— <b>Dye-free and transparent</b>	no staining risk on grout, porcelain, or ceramic surrounds — visual application control that housekeeping supervisors can verify without specialist equipment.
— <b>Designed for high-use washrooms</b>	healthcare, industrial, and educational toilet blocks where daily user volume makes standard maintenance cleaners insufficient.
— <b>Application</b>	Squeeze approximately 30 ml under the toilet rim and across the bowl surface using the squeeze bottle applicator. Ensure product reaches under-rim deposits and waterline staining.

## AT A GLANCE

<b>pH</b>	1.5–2.0 (strongly acidic)
<b>Dose per bowl</b>	30 ml
<b>Fragrance</b>	Dye-free, no added fragrance
<b>Pack size</b>	5 Litres
<b>Shelf life</b>	24 months from date of manufacture, unopened
<b>Safe on</b>	Ceramic toilet bowls, porcelain, vitreous china, urinals
<b>Rinse after use</b>	Flush thoroughly — mandatory

## HOW TO USE

- 1 Application**

Squeeze approximately 30 ml under the toilet rim and across the bowl surface using the squeeze bottle applicator. Ensure product reaches under-rim deposits and waterline staining.
- 2 Contact time**

Allow 10–15 minutes for standard limescale and waterline staining. Allow up to 20 minutes for heavy or long-standing scale deposits.
- 3 Agitation**

Spread product using a toilet brush during contact time if required for under-rim coverage. Light scrubbing accelerates dissolution on heavy deposits.
- 4 Rinse**

Flush thoroughly after contact time. The dissolution products are water-soluble — a complete flush removes all residue.
- 5 Frequency**

Weekly application in standard-use washrooms prevents scale accumulation from becoming chronic. Increase to twice-weekly for very high-use facilities.

## WHY IT WORKS

What is the chemistry of acid descaling, and why does HCl outperform other acid cleaners for institutional washrooms? Limescale in toilet bowls is primarily calcium carbonate (CaCO<sub>3</sub>), deposited from hard water as it evaporates. Uric scale — the yellow-brown staining characteristic of high-use male urinals and toilet bowls — is a complex of uric acid, calcium, and protein compounds. Both are alkaline or neutral in pH. The only effective removal mechanism is acid dissolution: introducing a strong acid that reacts with these deposits to form soluble products. Hydrochloric acid reacts with calcium carbonate in a straightforward neutralisation reaction:  $\text{CaCO}_3 + 2\text{HCl} \rightarrow \text{CaCl}_2 + \text{H}_2\text{O} + \text{CO}_2$ . The products — calcium chloride, water, and carbon dioxide — are all soluble or gaseous, meaning the deposit is completely dissolved rather than redistributed. At 33% w/w concentration and pH 1.5–2.0, this reaction proceeds rapidly even on dense, long-standing scale accumulations. HCl is preferred over organic acids (citric, phosphoric) for institutional descaling applications for two reasons: reaction rate and cost. At equivalent pH, HCl achieves faster and more complete calcium carbonate dissolution than organic acids because it is a strong acid that fully dissociates in solution, delivering the maximum available hydrogen ion concentration for the dissolution reaction. For high-use institutional washrooms where turnaround time between cleaning sessions is constrained, this reaction speed is operationally significant.

## DID YOU KNOW

Fact The transparency is a deliberate design decision. Most toilet cleaners use blue or green dyes for visual appeal. We removed them entirely. Dye-free means you can see exactly where product has been applied, there is zero staining risk on grout or porcelain, and flushing is faster with less water. Every detail on a product label is a choice.

## WHAT YOU GET FROM ONE PACK

### 30 ml per bowl.

One 5-litre pack. 166 complete descaling sessions. At 30 ml per bowl application, a single 5L pack delivers 166 full toilet bowl descaling treatments. For a healthcare facility or educational campus with 20 toilet bowls on a weekly descaling protocol, one pack covers more than 8 weeks of scheduled washroom maintenance. For high-use industrial washroom blocks running twice-weekly treatment, the same pack provides 4 weeks of coverage. The commercial case for acid descaling versus increasing neutral cleaner frequency: one weekly 30 ml acid application prevents the chronic build-up that requires expensive periodic deep-clean interventions. Prevention cost versus remediation cost, at institutional volume, is not close.

## FULL PRODUCT SPECIFICATIONS

<b>Active ingredient</b>	Hydrochloric Acid (HCl) 33% w/w
<b>Active class</b>	Strong inorganic acid — descaling and disinfecting
<b>pH</b>	1.5–2.0 (strongly acidic)
<b>Specific gravity</b>	1.15–1.18 at 25°C
<b>Formulation type</b>	Thick gel — viscosity-modified for vertical surface adhesion
<b>Appearance</b>	Clear to slightly viscous transparent gel
<b>Fragrance</b>	Dye-free, no added fragrance
<b>Dose per bowl</b>	30 ml
<b>Contact time</b>	10–20 minutes depending on scale severity
<b>Safe on</b>	Ceramic toilet bowls, porcelain, vitreous china, urinals
<b>Avoid on</b>	Marble, granite, natural stone, stainless steel, acid-sensitive surfaces
<b>Rinse after use</b>	Flush thoroughly — mandatory
<b>PPE</b>	Gloves and eye protection mandatory. Never mix with bleach.
<b>Shelf life</b>	24 months from date of manufacture, unopened
<b>Pack size</b>	5 Litres
<b>MSDS / TDS</b>	QR code on label · Available on request

## CAUTION & STORAGE

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### Handle with care.

For professional and institutional use. DANGER — strong acid. Contains Hydrochloric Acid 33% w/w. Never mix with bleach, ammonia, or alkaline cleaners — mixing with hypochlorite produces toxic chlorine gas. Causes severe eye and skin burns on contact with concentrate. Wear chemical-resistant gloves and eye protection at all times during application. Ensure adequate ventilation in enclosed washrooms. Keep out of reach of children. Store in original sealed container below 30°C, away from metals, alkaline materials, and heat sources. Do not store in metal containers — HCl corrodes ferrous metals. Keep container tightly sealed when not in use — HCl is volatile and fumes can damage surrounding materials. Shelf life 24 months from manufacture date, unopened. In case of spillage, neutralise with sodium bicarbonate solution and flush with water.

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- 3 Agitation**  
 Spread product using a toilet brush during contact time if required for under-rim coverage. Light scrubbing accelerates dissolution on heavy deposits.
- 4 Rinse**  
 Flush thoroughly after contact time. The dissolution products are water-soluble — a complete flush removes all residue.
- 5 Frequency**  
 Weekly application in standard-use washrooms prevents scale accumulation from becoming chronic. Increase to twice-weekly for very high-use facilities.

### BEFORE YOU START — PPE REQUIRED

- ✓ Chemical-resistant gloves (nitrile)
- ✓ Safety goggles / eye protection
- ✓ Protective apron

### QUICK REFERENCE

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<b>Safe on</b>	Ceramic toilet bowls, porcelain, vitreous china, urinals

**HAZARD ! HIGH**

### DO

- ✓ For professional and institutional use.
- ✓ Causes severe eye and skin burns on contact with concentrate.
- ✓ Wear chemical-resistant gloves and eye protection at all times during application.
- ✓ Ensure adequate ventilation in enclosed washrooms.

### DON'T

- ✗ Never mix with bleach, ammonia, or alkaline cleaners — mixing with hypochlorite produces toxic chlorine gas.
- ✗ Keep out of reach of children.
- ✗ Do not store in metal containers — HCl corrodes ferrous metals.

Emergency / questions: care@allesclinx.com · allesclinx.com · National Poison Control (India): 1800-116-117