



# Halltronic R 629

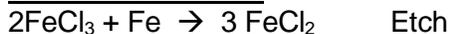
## Features & Benefits

High purity	Consistent performance; No side reactions
High concentration	Smaller storage footprint
Liquid	Ready to use; Less material handling

## Operating Conditions

Sodium Chlorate Usage Data for Ferric Chloride Solutions

### Chemical Reactions



Therefore: 1 mole of iron etched requires  $\frac{1}{2}$  mole of  $\text{NaClO}_3$  and 3 moles of HCl for regeneration

1 mole of Fe = 55.847 grams

1 mole of  $\text{NaClO}_3$  = 106.44 grams

1 mole HCl = 36.46 grams

1 pound of Iron = 454 grams = 8.13 moles and requires 4.06 moles (= 432.1 grams = 0.95 lb)  $\text{NaClO}_3$  and 24.39 moles (= 889.3 grams = 1.96lb) HCl for regeneration.

Halltronic R 629 solution contains 629 grams/L  $\text{NaClO}_3$  or 5.25 lb/Gal

Industrial grade HCl (Muriatic Acid) is 30% HCl and contains 344.7 g/1 HCl or 2.87 lb/Gal.

Therefore: 1 pound of iron etched requires -

0.18 gallons of Halltronic R 629

and

0.68 gallons of Muriatic acid (30% HCl) for regeneration



The numbers given above are for an ideal reaction with 100% efficiency. Actual usage will probably be 10% to 20% higher depending on temperature, type of alloy, etc.

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## Our People. Your Problem Solvers.

For more information on this process,  
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