

# TECHNICAL DATA SHEET

## QH EVERBLOCK™ 1803

ACTIVOL® 1803



QH EVERBLOCK™ 1803 is the most efficient member of a line of hydrochloric acid pickling bath additives for continuous hydrochloric picklers, including deep bath conventional, and shallow bath dynamic systems.

### Applications

It provides all the requirements of a good pickling inhibitor, such as descaling ability, high percentage of efficiency protection, excellent rinsability, reduced acid consumption, reduced gage and metal loss, durability, reduced hydrogen embrittlement, fume reduction and provides uniformly bright pickled surfaces.

### Recommendation for Use

Pickle baths that contain QH EVERBLOCK™ 1803 do not retard the descaling rate of oxides on steel surfaces. Elimination of carry-over to subsequent operations is thus accomplished. A reduction of hydrogen embrittlement is achieved by the reduced amount of hydrogen evolution at the solution/ steel interface.

### Health, Safety and Handling

Please consult the Safety Data Sheet (SDS) for information on storage, safe handling and disposal. The conditions or methods of handling, storage, use and disposal of the product are beyond our reasonable control - we assume no liability for any ineffectiveness of the product or any injury or damage, arising out of or in connection with these conditions.

### The Benefits

- Protects base metal to improve yield and minimize waste
- Provides a high degree of inhibition against the attack of hydrochloric acid on the steel substrate
- Every batch made is certified to provide a minimum of 95% protection to 1010 low carbon base steel
- The wetting properties enable a uniformly pickled surface to be obtained which is free of smut or ingrained scale and exhibits a shiny surface
- Edge corrosion is minimal

### Properties

PROPERTY	TYPICAL VALUE	UNIT
Appearance	Brown liquid	
Odor	Pleasant	
Specific gravity at 25°C	1.101	
Density	9.7	
Flash point	None (water system)	
pH	6.0	
Freezing point	0   -17.8	°F   °C
Solubility	Completely soluble in water and acid systems	
Stability	Unlimited under normal plant storage conditions	



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## Performance

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QH EVERBLOCK™ 1803 is stable in pickle solutions for extended time periods at elevated temperatures without losing its inhibiting action. This feature has been demonstrated in tests conducted in the following manner:

- Steel was pickled in a bath of 10% HCl and 10% Iron at 90°C for thirty minutes
- 96% efficiency for a 0.25% QH EVERBLOCK™ 1803 bath was obtained. At this point the baths were raised to boiling and refluxed for 65 hours
- A repeat pickle test on the same QH EVERBLOCK™ 1803 bath yielded 94% efficiency.

No degradation of inhibitor in the form of insoluble residue as a result of high temperature or electrolyte concentration was observed. As a result of the properties mentioned above, more efficient acid consumption, a longer bath life and greater protection of the base metal will be realized through use of QH EVERBLOCK™ 1803.

## Dosage

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QH EVERBLOCK™ 1803 should be used at 0.25% by volume based on the volume of 20° Bé (31.45%) hydrochloric acid in the pickle bath.

Example:

1. For 100 gallons of 20° Bé HCl (31.455), add 0.25 gallons of QH EVERBLOCK™ 1803.
2. For 100 liters of 20° Bé HCl (31.455), add 0.25 liters of QH EVERBLOCK™ 1803.
3. For 1 meter<sup>3</sup> of 20° Bé HCl (31.455), add 2.5 liters of QH EVERBLOCK™ 1803.

The typical usage rate of QH EVERBLOCK™ 1803 in a production process 28 liters/1000 tons of steel pickled. (Based upon acid usage of 3 gallons of 20° Baumé HCl/ton)

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