

Twin HCR WT

MODIFIED ACID WATER TREATMENT CHEMICAL

TWIN HCR WT

Twin HCR WT is part of the proprietary, eco-friendly Modified Acid product portfolio that minimizes the hazardous exposure levels, corrosion rates and negative HSE properties of strong acids while maintaining the positive aspects of solubilizing ability with a controlled reaction rate. Twin HCR WT is a strong modified acid that can be enhanced through the addition of conventional chemistry and can safely be used in place of conventional acids.

APPLICATIONS

Water Treatment and Industrial Descaling:

- Effective descalant and scale prevention for a majority of applications on a broad range of scale
- Controls inorganic scale over a large concentration range including calcium and calcium sulfates
- Controls polymerization and precipitation of silica
- Decreases precipitation of aluminum, iron, and heavy metal salts
- Controlled buffering for precise pH adjustment

TYPICAL PHYSICAL PROPERTIES

Appearance	Clear or Amber Liquid
Specific Gravity	1.15
Freezing Point	-49°F (-45°C)
Boiling Point	> 212°F (100°C)
pH	< 1.0
Salinity	~ 48%
Solubility in Water	Complete
Thermal Stability	428°F (220°C)
Shelf Life	> 1 year

FEATURES & BENEFITS

- Effective anti-scalant & descalant for majority of water applications
- Effective for broad range of scale
- More methodical and comprehensive reaction rate (spend nature) than strong acids
- Higher spent pH than strong acids, reducing volumes required to neutralize
- Minimal reprecipitation of scale at high pH levels
- Non-corrosive to skin tissue
- Ultra-low long term corrosion effects
- Compatible with typical elastomers
- Ultra-high thermal stability, packages to 428°F (220°C)
- Readily Biodegradable (OECD 306)
- NSF Approved for water treatment applications



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OUTSTANDING HS&E PROFILE

- Non-corrosive to skin
- Low fuming
- Low oral toxicity
- Biodegradable
- Non-regulated for ground transport (USA)

TOTAL SOLUBILITY

Blend (HCR:water)	Scale	Total Solubility kg/m ³ (lb/gal)
Concentrate	CaCO ₃	220 (1.84)
1:1	CaCO ₃	130 (1.08)
Concentrate	FeS	130 (1.08)
1:1	FeS	70 (0.58)

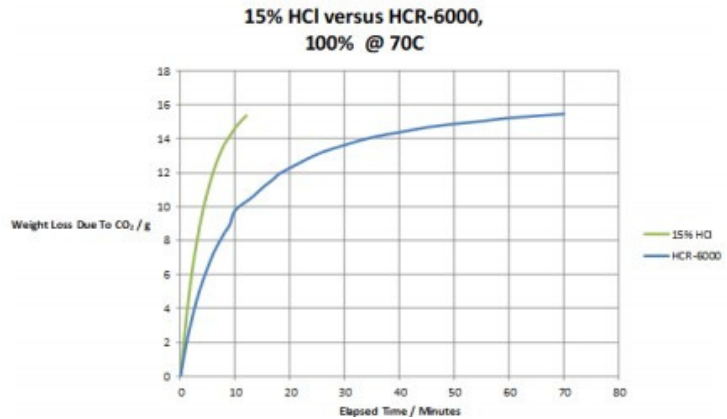


Figure 1. Twin HCR WT has a more methodical and comprehensive reaction rate than 15% HCl, which improves penetration of scale to aid in removal.

ADJUSTING pH USING VARIOUS ACIDS

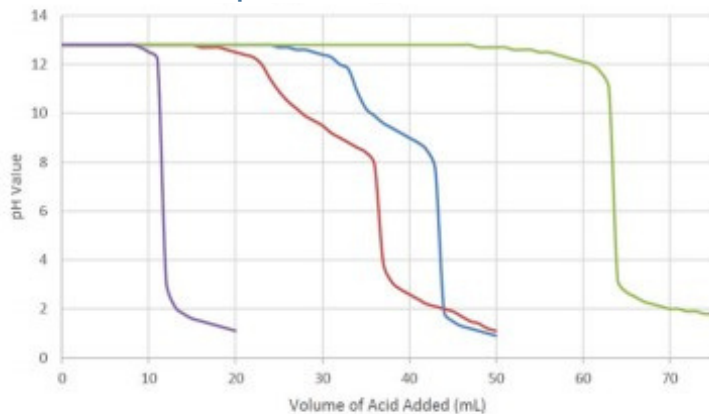


Figure 2. Volumes of Twin HCR WT compared to sulfuric acid for pH adjustment of a 2.5% NaOH solution.

SAFETY, STORAGE & HANDLING

- Stored in sealed drums or IBC totes
- Shelf life of >1 year; confirm corrosion if product sits for >60 days
- HDPE, brass or stainless-steel fittings and valves should be used
- Consult SDS for additional information and PPE requirements

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