



## Technical Data Sheet (TDS) – Hydrochloric Acid

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## Report Document

Report Topic					
Technical Data Sheet (TDS) – Hydrochloric Acid					
Purpose of Report					
Awareness and clarification of the specifications and chemical analysis of the Hydrochloric Acid product					
Target Audience					
Organization stakeholders (including colleagues, customers, consumers, etc.)					
Other required details					
Revision number	Writing start date	Date of completion of writing	Prepared by	Approved by	Description
00	2025-1-23	2025-1-23	Amir Hossein Haratian	Amir Rafie	Initial Writing
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## Introduction

In Asia Potash Industry, hydrochloric acid is produced in two different grades. One with a higher sulfate content is referred to as *Yellow Acid*, while the other is called *White Hydrochloric Acid*. This section covers the parameters that should be included in the technical data sheet of these products, along with their values and a comparison with standard limits.

## White Hydrochloric Acid

### Physical and Chemical Properties

Parameter	ISIRI 209 Standard Range	Company Product
<b>Appearance</b>	Colorless, transparent, free from sediment and suspended particles	Colorless, transparent
<b>HCl Concentration (wt%)</b>	Minimum 30%	30-31%
<b>Density at 20°C (g/mL)</b>	Minimum 1.15	1.1536
<b>Sulfate (ppm)</b>	Maximum 100	100-600
<b>Heavy Metals as Lead (ppm)</b>	Maximum 2	Less than 1
<b>Free Chlorine and Bromine as Cl<sub>2</sub> (ppm)</b>	Maximum 20	About 20
<b>Iron (ppm)</b>	Maximum 5	1.32
<b>Sulfite (ppm)</b>	Maximum 50	Less than 50
<b>Arsenic (ppm)</b>	Maximum 1	Less than 0.02
<b>Mercury (ppm)</b>	Maximum 1	Less than 0.008
<b>Copper (ppm)</b>	Maximum 1	Less than 0.02
<b>Lead (ppm)</b>	Maximum 1	Less than 0.2

## Yellow Hydrochloric Acid

### Physical and Chemical Properties

Parameter	ISIRI 209 Standard Range	Company Product
<b>Appearance</b>	Colorless, transparent, free from sediment and suspended particles	Yellow, transparent
<b>HCl Concentration (wt%)</b>	Minimum 30%	33%
<b>Density at 20°C (g/mL)</b>	Minimum 1.15	1.19
<b>Sulfate (ppm)</b>	Maximum 100	15,000-30,000
<b>Heavy Metals as Lead (ppm)</b>	Maximum 2	Less than 1
<b>Free Chlorine and Bromine as Cl<sub>2</sub> (ppm)</b>	Maximum 20	Less than 0.7
<b>Iron (ppm)</b>	Maximum 5	1.32
<b>Sulfite (ppm)</b>	Maximum 50	Less than 50
<b>Arsenic (ppm)</b>	Maximum 1	Less than 0.02
<b>Mercury (ppm)</b>	Maximum 1	Less than 0.008
<b>Copper (ppm)</b>	Maximum 1	Less than 0.02
<b>Lead (ppm)</b>	Maximum 1	Less than 0.2