

# Product Specification

## Hydrochloric Acid, 0.500 Normal (N/2)

**Lot Number:** SAMPLE

**Product Number:** 3650

**Manufacture Date:** N/A

**Expiration Date:** N/A

The certified value for this product is confirmed in independent testing by a second qualified chemist.

| Name              | CAS#      | Grade           |
|-------------------|-----------|-----------------|
| Water             | 7732-18-5 | ACS/ASTM/USP/EP |
| Hydrochloric Acid | 7647-01-0 | ACS             |

| Test   | Specification           | Result | NIST SRM# |
|--|-------------------------|--------|-----------|
| Appearance   | Colorless liquid        | N/A    |           |
| Assay (vs. Tris(hydroxymethyl)aminomethane/Methyl Red) | 0.4998-0.5002 N at 20°C | N/A    | 723       |

| Specification  | Reference           |
|--|---------------------|
| Aqueous Hydrochloric Acid Standard Solution (0.5 M)        | ASTM (D 94 B)       |
| Hydrochloric acid, 0.5 N                                   | TAPPI (T 625 cm-85) |
| Hydrochloric acid, 0.5 N                                   | TAPPI (T 632 cm-84) |
| Standard hydrochloric acid, 0.5 N                          | TAPPI (T 621 cm-71) |
| Hydrochloric Acid, Standard Solution (0.5 N)               | ASTM (D 128)        |
| Hydrochloric acid, 0.5 N                                   | TAPPI (T 635 om-93) |
| Hydrochloric acid, 0.5 N                                   | TAPPI (T 610 sp-97) |
| Aqueous Hydrochloric Acid Standard Solution (0.5 M)        | ASTM (D 94 A)       |
| Hydrochloric Acid (1+23)                                   | ASTM (D 4922)       |
| Hydrochloric Acid, Half-Normal (0.5 N) Volumetric Solution | USP (N/A)           |

Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

| Part Number | Size / Package Type | Shelf Life (Unopened Container) |
|-------------|---------------------|---------------------------------|
| 3650-1      | 4 L natural poly    | 24 months                       |
| 3650-16     | 500 mL natural poly | 24 months                       |
| 3650-1CT    | 4 L Cubitainer®     | 24 months                       |
| 3650-2.5    | 10 L Cubitainer®    | 24 months                       |
| 3650-32     | 1 L natural poly    | 24 months                       |
| 3650-4      | 120 mL natural poly | 24 months                       |
| 3650-5      | 20 L Cubitainer®    | 24 months                       |
| 3650-55     | 55 gal poly drum    | 12 months                       |
| 3650-5HP    | 20 L Ropak™         | 24 months                       |

**Recommended Storage:** 15°C - 30°C (59°F - 86°F)

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