



TECHNICAL SPECIFICATIONS: BRAZILIAN SUGAR EXPORT PORTFOLIO

Below are the consolidated technical specifications for the three primary sugar categories exported by **Marduque Comex Ltda**. These standards are aligned with international **ICUMSA** protocols and **SGS** inspection requirements.

1. REFINED WHITE CANE SUGAR – ICUMSA 45 (GRADE "A")

The highest quality sugar available, refined for maximum purity and brightness.

- **Polarization:** 99.80% Degrees Min.
- **Ash Content (Sulfated):** 0.04% Max.
- **Moisture:** 0.04% Max.
- **Solubility:** 100% Dry and free-flowing.
- **Granulometry:** Standard fine.
- **Color:** Sparkling White (Max. 45 RBU units, ICUMSA Method No. 4-1978).
- **Radiation:** Normal (Certified free from Cesium or Iodine).
- **Sediment:** None.
- **Smell:** Typical and specific to sugar.
- **Magnetic Particles:** 4 mg/kg Max.
- **Sulfur Dioxide:** 10 mg/kg Max.

2. WHITE CRYSTAL SUGAR – ICUMSA 150

A high-quality crystal sugar suitable for direct human consumption and industrial applications.

- **Polarization:** 99.70 Degrees Min.
- **Ash Content:** 0.08% Max.
- **Moisture:** 0.08% Max.
- **Color:** White Crystal (Maximum 150 ICUMSA units).
- **Radiation:** Within international safety limits.
- **Sediment:** None.
- **Smell:** Free from unusual or abnormal odors.
- **Structure:** White crystalline.

3. RAW BROWN CANE SUGAR – VHP (ICUMSA 600-1200)

Very High Polarization (VHP) raw sugar, primarily utilized as a feedstock for refineries.

- **Polarization at 20°C:** 99.0% Min.
- **Ash Content (Sulfated):** 0.15% Maximum by weight.
- **Moisture:** 0.15% Maximum by weight.
- **Solubility:** 95% Dry and free-flowing.
- **Granulometry:** 0.6 mm regular square shape.
- **Color:** Brown (Typical ICUMSA 600 to 1200 range).
- **Radiation:** Within international safety limits.
- **Sulfur Dioxide:** 15 mg/kg Max.
- **Smell:** Free from unusual or abnormal odors.