PRODUCT TECHNICAL DATA SHEET · SUGAR

ICUMSA 45 Sugar

Refined White Cane Sugar · ICUMSA 45

ORIGIN
Brazil

REFERENCE	REVISION	DATE	HS CODE
PGC-FT-AZU45-BR	01	Nov 8, 2026	1701.99





01 GENERAL IDENTIFICATION

Product	Refined white cane sugar, ICUMSA color max. 45 IU
Name at origin	Açúcar refinado granulado · Group I, Cristal Branco class (IN MAPA No. 47/2018)
Raw material	Sugarcane (*Saccharum* spp., commercial hybrids)
Cane variety	RB varieties from the RIDESA program · specific variety and varietal traceability PENDING
Country of origin	Brazil · producing region and mill PENDING
Intended use	Direct consumption and food industry (beverages, confectionery, bakery, dairy)
Sales department	Polo Group Company · the exporter is the origin mill, named in the contract

02 TECHNICAL DESCRIPTION

Refined granulated sugar obtained by dissolving crystal or raw cane sugar, purifying the syrup, evaporation, crystallization, centrifugation, drying, cooling and screening, as defined by IN MAPA No. 47/2018. White, bright, dry, free-flowing crystals with a characteristic sweet taste and no off-odors.

The ICUMSA 45 value indicates the color in solution (max. 45 IU at 420 nm), stricter than the Brazilian legal limit for refined granulated sugar and the Codex Standard limit for white sugar (both 60 IU).

CONTRACT defines the product offered · CATALOG Polo Group 2026 catalog condition · STANDARD legal or regulatory limit · REFERENCE indicative value, not guaranteed · PENDING to be confirmed with the mill

03 ANALYTICAL SPECIFICATIONS

Table 1 · Physicochemical parameters

PARAMETER	VALUE	UNIT	METHOD	STATUS
Color in solution (420 nm)	**≤ 45**	ICUMSA IU	ICUMSA GS2-10 · ABNT NBR 9724	CONTRACT
Polarization	**≥ 99.80**	°Z	ICUMSA GS2-1 · ABNT NBR 8869	STANDARD IN MAPA 47/2018
Moisture (loss on drying)	**≤ 0.05**	% m/m	ICUMSA GS2-15 · ABNT NBR 8870	STANDARD IN MAPA 47/2018
Conductivity ash	**≤ 0.04**	% m/m	ICUMSA GS2-17 · ABNT NBR 9755	STANDARD IN MAPA 47/2018
Invert sugar (reducing sugars)	**≤ 0.04**	% m/m	ICUMSA GS2-5 / GS2-6	STANDARD Codex CXS 212
Black specks	**≤ 5**	No. / 100 g	ABNT NBR 16803	STANDARD IN MAPA 47/2018
Magnetic particles	**≤ 5**	mg/kg	ABNT NBR 16802	STANDARD IN MAPA 47/2018
Sulfur dioxide (SO_2)	**≤ 15**	mg/kg	ICUMSA GS2-33 / GS2-35	STANDARD Codex CXS 212
Insoluble matter	**—**	mg/kg	ICUMSA GS2-19	PENDING
Grain size (mean size and CV)	**—**	mm · %	ICUMSA GS2-37	PENDING
Appearance, odor and taste	**Conforming**	—	Sensory evaluation	REFERENCE

Values marked "Standard" are the legal maximum or minimum limits; the actual value of each lot must be stated on the certificate of analysis. Market offers for Brazilian ICUMSA 45 sugar usually state moisture ≤ 0.04% and SO_2 ≤ 10 mg/kg REFERENCE, not guaranteed.

Regulatory comparison for reference

PARAMETER	IN MAPA 47/2018 · REFINED GRANULATED	CODEX CXS 212 · WHITE SUGAR	DIR. 2001/111/EC · WHITE SUGAR
Polarization, min.	99.80 °Z	99.7 °Z	99.7 °Z
Moisture, max.	0.05%	0.1%	0.06%
Color, max.	60 IU	60 IU	Color type ≤ 9 points
Conductivity ash, max.	0.04%	0.04%	Not set for white sugar
Invert sugar, max.	Not set	0.04%	0.04%

Guaranteed value vs. reference. Only the values stated in the specification signed by the mill and in the lot's certificate of analysis, issued by the mill's laboratory and verifiable by SGS or another independent body at origin, are guaranteed. All other data in this sheet are regulatory requirements or reference values.

04 FOOD SAFETY AND CONTAMINANTS

PARAMETER	LIMIT	REGULATORY REFERENCE	STATUS
Lead (Pb)	**≤ 0.10 mg/kg**	ANVISA IN No. 160/2022 · "Açúcares" (sugars)	STANDARD
Total arsenic (As)	**≤ 0.10 mg/kg**	ANVISA IN No. 160/2022 · "Açúcares" (sugars)	STANDARD
Copper (Cu)	**—**	No limit for sugar in IN 160/2022	PENDING
Pesticide residues	**MRL**	Codex MRLs · Reg. (EC) 396/2005 if the destination is the EU	STANDARD
Yeasts and molds	**≤ 10 CFU/g**	Data sheet of a Brazilian refined sugar manufacturer	REFERENCE
***Salmonella* spp.**	**Absent/25 g**	Data sheet of a Brazilian refined sugar manufacturer	REFERENCE
Coliforms at 45 °C	**≤ 5 MPN/g**	Data sheet of a Brazilian refined sugar manufacturer	REFERENCE
Radioactivity	**—**	Certificate only if required by the destination country	PENDING

Allergens. Cane sucrose is not among the allergens listed in Annex II of Regulation (EU) No 1169/2011. Sulfites must be declared if they exceed 10 mg/kg expressed as SO_2; lot value PENDING.

GMO. Brazil has authorized the cultivation of genetically modified sugarcane since 2017. RB varieties come from RIDESA's plant breeding; the mill's declaration that the product is not genetically modified is PENDING.

05 CERTIFICATIONS

CERTIFICATION	SCOPE	STATUS
FSSC 22000 / ISO 22000	Food safety management system of the mill or refinery	PENDING
HACCP	Hazard analysis and critical control points plan	PENDING
Bonsucro	Sustainable production of sugarcane and sugar	PENDING
Halal · Kosher	Depending on the destination market	PENDING
Facility registration	Registration of the exporting mill with MAPA (Brazil)	PENDING

No certification is considered confirmed until a current copy of the certificate issued in the mill's name is received. A distinction is made between certification of the facility and the quality certificate of each lot.

06 PACKAGING

Packaging	Polypropylene (PP) bags of 50 kg · big bags of 1,000 kg
Material requirements	New, clean, food grade, protecting against contamination and moisture
Inner bag (PE liner)	PENDING
Bag marking	Product, net weight, lot, production date and "Product of Brazil" · neutral or branded design PENDING

07 COMMERCIAL AND LOGISTICS TERMS

Table 2 · Commercial and logistics

ITEM	CONDITION	STATUS
Presentation	Refined white sugar ICUMSA 45 (grade A)	CATALOG
Packaging	PP bags 50 kg · big bags 1,000 kg	CATALOG
Palletizing	Pallet type, bags per pallet or floor-loaded without pallets	PENDING
Container	20' Dry	CATALOG
Capacity	±26–27 t per 20' container (≈ 520–540 bags of 50 kg) · big bag load PENDING	CATALOG
Incoterms® 2020	FOB · CFR · CIF depending on destination	CATALOG
Port of loading	Named in the contract · Santos (SP) and Paranaguá (PR) are the main sugar export ports	PENDING
Price and availability	On request · weekly quote at origin market prices	CATALOG
Documents	Commercial invoice · packing list · bill of lading (B/L) · certificate of origin · certificate of analysis of the lot · quality and weight inspection certificate (SGS or equivalent) · fumigation certificate and health certificates depending on the destination country	BY DESTINATION

The number of bags per container is calculated from the load stated in the catalog (26,000–27,000 kg ÷ 50 kg).

08 STORAGE AND SHELF LIFE

- Clean, dry, ventilated warehouse, free of chemicals and strong odors.
- Protected from direct sunlight and weather; bags on pallets, away from walls and floor.
- Avoid sudden changes in temperature and humidity, which cause caking.
- Reference conditions: ≤ 45 °C and relative humidity ≤ 70% REFERENCE
- Reference shelf life: 12 months under those conditions, according to the data sheet of a Brazilian refined sugar manufacturer REFERENCE
- Shelf life guaranteed by the mill PENDING

09 ADDITIONAL INFORMATION

Origin. In Brazil's Center-South region, the main producing area, the harvest runs from April to November; in the North-Northeast, from September to March. RB varieties, developed by RIDESA (a network of 10 federal universities), covered 56% of the country's sugarcane area according to data published in June 2026 REFERENCE.

References. IN MAPA No. 47/2018 (Brazil) · ANVISA IN No. 160/2022 · Codex CXS 212-1999, Standard for Sugars · Directive 2001/111/EC · Regulations (EU) No 1169/2011 and (EC) No 396/2005 · ICUMSA (GS2) and ABNT NBR methods.

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