

CERTIFICATE OF VERIFICATION

Intertek does hereby certify that an independent assessment has been conducted on behalf of:

Kazan Soda Elektrik Üretim A. Ş
(Kazan Soda)

and has been assessed and verified by Intertek to:
CarbonClear-CI-02.0

Main Address:

Kazan Soda – part of the WE Soda Group

Mülk Küme Evleri 1. Cadde No:122, Yenikent – Sincan/Ankara, Türkiye

Product Industry/Category:

Mining / Extractive

Product Details:

Sodium Carbonate (Soda Ash)
Sodium Bicarbonate

Acceptance Criteria:

Level of Assurance: Limited Assurance
Based on supplied EPD and LCA (from WE Soda)

Issuing Office Name & Address:

Intertek Health Sciences Inc.
2233 Argentia Road, Suite 201, Mississauga, ON, L5N 2X7 Canada

Certification Number:

Intertek_P2687_KazanSoda_R6513_v2.0

Initial Verification Date:

30th September 2024

Certificate Issued:

30th September 2024

Certificate Valid Until:

15th February 2029



A handwritten signature in black ink, appearing to read 'Wesley Chen'.

Wesley Chen

VP, Sustainability, Quality & Safety,
Assuris

Intertek Health Sciences Inc.
2233 Argentia Road, Suite 201,
Mississauga, ON, L5N 2X7 Canada

CERTIFICATE OF VERIFICATION

System Boundaries:

EPD values based on PCR 2021:03 Basic chemicals (1.1.1). Carbon Clear follows a cradle to gate approach, so delivery of the product and other downstream activities have been scoped out from the final figure. Instead, the boundary is set at the facility gate.

Data Used:

Primary or secondary data usage is explained within the EPD and LCA.

Carbon Intensity Results:

The verified carbon intensity for sodium carbonate (soda ash) and sodium bicarbonate produced at the Kazan Soda facility for the FY 2022 assessment year are summarized in the table below.

Table 1: Kazan Soda FY 2022, Carbon Intensity Results

Boundary Stage	Carbon Intensity (kg CO ₂ e / kg of product)		
	Upstream	Core	Total cradle-to-gate (Upstream + Core)
Sodium Carbonate (Soda Ash)			
1 kg of Sodium Carbonate (Soda Ash) – Bulk (no packaging)	0.049	0.208	0.257
Big bag - packaging only	7.30×10^{-4}	2.68×10^{-5}	7.57×10^{-4}
Small bag - packaging only	4.82×10^{-5}	1.79×10^{-8}	4.82×10^{-5}
Sodium Bicarbonate			
1 kg of Sodium Bicarbonate – Bulk (no packaging)	0.002	0.0442	0.0462
Big bag - packaging only	4.66×10^{-4}	1.72×10^{-5}	4.83×10^{-4}
Small bag - packaging only	1.16×10^{-3}	4.38×10^{-7}	1.16×10^{-3}

Certification Number:

Intertek_P2687_KazanSoda_R6513_v2.0

Initial Verification Date:

30th September 2024

Certificate Issued:

30th September 2024

Certificate Valid Until:

15th February 2029