

















### **BRASKEM S.A.**

Corporate Taxpayer ID (CNPJ): 42.150.391/0001-70 Company Registry: 29.300.006.939 **Publicly Held Company** 

### MATERIAL FACT

# **PRODUCTION & SALES REPORT FOURTH QUARTER 2023 AND 2023**

São Paulo, February 19, 2024 - Braskem S.A. ("Braskem" or "Company") reports to its shareholders and the market its **Production & Sales Report for the fourth quarter and fiscal** year of 2023. Note that the information herein is based on preliminary data and that figures were not revised by the Company's independent auditor.

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## 1. OPERATIONAL OVERVIEW 4T23

During 4Q23, most petrochemical spreads in the international market increased compared to the previous quarter, albeit at historically low levels due to the industry's cycle moment. The main positive highlights are: (i) the PE-ethane spread, which increased by 10% in the period due to the reduction in the ethane price on the international market, impacting positively Mexico's and partially Brazil's spreads; and (ii) the increase in US propylene price, which benefited the profitability of producers with flexibility in purchasing propylene.

In relation to the operational performance, the utilization rates of the Company's industrial units and the industry in general remained below the historical average due to the imbalance between global supply and demand. Additionally, the utilization rate in Brazil was impacted by the scheduled maintenance shutdown at the Bahia Petrochemical Complex. On the other hand, the recovery of production levels in Mexico was a positive highlight of the guarter, which an unscheduled shutdown in the previous quarter had impacted.

In this scenario, the sales volumes of the segments were impacted mainly by: (i) the effect of seasonality; (ii) the destocking process in the United States transformation chain; and (iii) the inventory management in the US & Europe and Mexico segments.

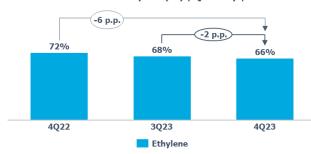
### 2. PERFORMANCE BY SEGMENT

#### 2.1 **BRAZIL/SOUTH AMERICA**

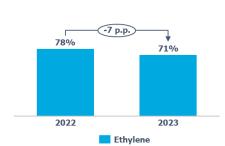
Average utilization rate of petrochemical crackers: reduction in relation to 3Q23 (-2 p.p.) and 4Q22 (-6 p.p.) is explained by: (i) the scheduled maintenance shutdown in the petrochemical complex in Bahia, which lasted around 50 days; (ii) lower feedstock availability at the São Paulo petrochemical complex due scheduled maintenance shutdown of the domestic supplier; and (iii) the production adjustment face to lower global demand.

Compared to 2022, the average utilization rate of petrochemical crackers was lower (-7 p.p.) mainly due to: (i) the production adjustment during the year in the face of global demand lower growth; and (ii) the scheduled maintenance shutdown in Bahia in 4Q23.

Utilization Rate Ethylene (%) | Quarterly | Brazil



Utilization Rate Ethylene (%) | Annual | Brazil





















**Resin sales volume:** in the Brazilian market, resin sales were lower in relation to 3Q23 (-11%), mainly explained by: (i) the prioritization of sales with higher added value; and (ii) the seasonality of the period. In relation to 4Q22, resin sales volume in the Brazilian market decreased (-9%) due to the higher PE sales volume in the last quarter of 2022 due to higher demand in that period.

In the annual comparison, resin sales volume in the Brazilian market was lower (-5%), mainly given the higher supply of products in the international market combined with the prioritization of sales with higher added value.



The resin exports in 4Q23 were higher when compared to 3Q23 (+2%) and 4Q23 (+8%), mainly due to the PE and PP opportunities in South America.

In relation to 2022, resin exports were lower (-3%) due to higher inventories in the global chain, impacting the product demand in the period.





















Main chemicals sales volume 1: in the Brazilian market, main chemicals sales were higher than in 3Q23 (+2%) due to normalization in the production of some customers who conducted their scheduled shutdowns over the last few months. In relation to 4Q22, the reduction (-15%) is mainly explained by: (i) the scheduled shutdowns of customers in 4Q23, especially by paraxylene customers; (ii) lower styrene demand; and (iii) lower gasoline sales volume in the Brazilian market.

In the year 2023, the main chemicals sales in the Brazilian market were inferior to 2022 (-17%) mainly due to: (i) the lower spreads for main chemicals in the international market due to the imbalance between supply and global demand; and (ii) lower gasoline sales volume due lower product availability for sale.

Sales Volume of Main Chemicals (kton) | Quartely | Brazil

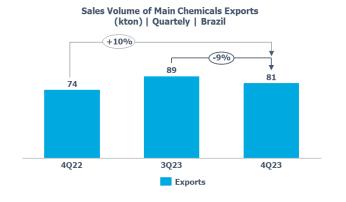
Sales Volume of Main Chemicals (kton) | Annual | Brazil

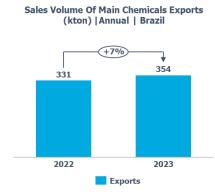




The exports decreased (-9%) compared to 3Q23 due to the lower availability of products for sale caused by the scheduled maintenance shutdown in the petrochemical complex in Bahia. In relation to 4022, the increase (+10%) is explained by higher gasoline sales volume in the international market due to better opportunities in the international fuels market.

In the annual comparison, main chemicals exports were higher (+7%) due to the increase in gasoline, benzene, and toluene sales volume due to better opportunities in the international market.





<sup>&</sup>lt;sup>1</sup> Main chemicals refer to: ethylene, propylene, butadiene, cumene, gasoline, benzene, toluene and paraxylene due to the representation of these products in the segment's net revenue.













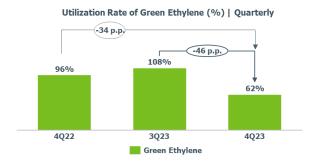


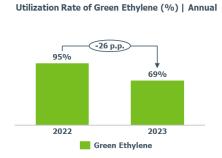




Average utilization rate of green ethylene <sup>2</sup>: decrease in relation to 3Q23 (-46 p.p.) and 4Q22 (-34 p.p.) mainly due to ethanol supply restrictions in December caused by climate conditions in the region.

Compared to 2022, the utilization rate of green ethylene decreased (-26 p.p.) due to the scheduled shutdown and the conclusion of the operations ramp-up process of the expansion project by 30% of the production capacity of the green ethylene unit in Rio Grande do Sul complex.





**Green PE sales volume:** increase compared to 3Q23 (+17%) mainly explained by: (i) the higher availability of product for sale due to the Green PE inventory replenishment process, after completion of the green ethylene production capacity expansion project; and (ii) the increase in demand in the period, related to the seasonality of some customers.

In relation to 4Q22 and the year 2022, the sales volume of Green PE decreased (-10% and -13%), given the lower availability of product for sale due to the scheduled maintenance shutdown and the conclusion of the ramp-up process of the 30% expansion project of the current production capacity of the green ethylene unit in the Rio Grande do Sul complex.





#### 2.2 **UNITED STATES & EUROPE**

**Average utilization rate of PP plants:** remained in line with 3Q23. Increased (+7 p.p.) when compared to 4Q22 mainly explained by: (i) lower utilization rate in 4Q22 due to the adjustments of production volume to inventory levels and demand in the United States converters chain; and (ii) PP

<sup>&</sup>lt;sup>2</sup> Due to the conclusion of the project to expand in 30% green ethylene capacity at the Rio Grande do Sul unit, the calculation of the utilization rate for 4Q22 considers the production capacity of 200 kt/year, and for 3Q23 and 4Q23 considers the production capacity of 260 kt/year.



















inventory build-up during the guarter considering the scheduled maintenance shutdown at Oyster Creek in the United States expected for 1024.

In the annual comparison, the utilization rate remained in line with 2022.



**PP sales volume:** lower when compared to 3Q23 (-6%) due to lower demand in the regions, mainly explained by: (i) the seasonality of the period; and (ii) the destocking process in the converter chain in the United States. In relation to 4Q22, the PP sales volume remained in line.

Compared to 2022, PP sales volume remained in line.



Sales Volume (kton) | Annual | US & Europe +1% 2,110 2,097 2023 2022 PP US and Europe

#### **MEXICO** 2.3

Average utilization rate of PE plants: increased in relation to 3Q23 (+18 p.p.) mainly explained by the production resumption after the unscheduled shutdown in 3Q23. In relation to 4Q22, the increase (+15 p.p.) is explained by the production normalization due to the higher availability of feedstock.

In 4Q23, the average ethane supply by Pemex was around 35 thousand barrels per day, above the minimum volume established in the contract, and the average ethane import through Fast Track was around 18 thousand barrels per day.

In 2023, the utilization rate was higher (+4 p.p.) compared to 2022, explained mainly by higher ethane supply by Pemex during the year, representing an increase of 16% (around 4,5 thousand barrels per day) compared to 2022.





















PE sales volume: decreased compared to 3Q23 (-17%) and remained in line with 4Q22, mainly due to inventory rebuilding and the seasonality of the period.

Compared to 2022, the increase in sales volume (+5%) in 2023 is explained mainly by the higher availability of products for sale due to the higher utilization rate in the period.























# 3. PETROCHEMICAL SPREADS

International References¹ (US\$/ton)	4Q23	3Q23	4Q22	Chg.	Chg.	2023	2022 (E)	Chg.
Brazil	(A)	(B)	(C)	(A)/(B)	(A)/(C)	(D)	(E)	(D)/(E)
Prices								
Brent (US\$/bbl)	84	87	88	-3%	-5%	83	101	-18%
Natural Gas (US\$/MMBtu)	3	3	7	6%	-59%	3	7	-61%
Naphtha	636	638	645	0%	-1%	643	770	-16%
Ethane	169	219	288	-23%	-41%	182	356	-49%
Propane	350	353	414	-1%	-15%	370	576	-36%
Resins (i)	897	886	915	1%	-2%	930	1,201	-23%
PE US	912	890	941	2%	-3%	944	1,284	-26%
PP Asia	917	909	927	1%	-1%	951	1,106	-14%
PVC Asia	782	812	778	-4%	0%	819	1,095	-25%
Main Chemicals (ii)	1,007	995	1,033	1%	-3%	1,041	1,263	-18%
Caustic Soda US	358	356	932	1%	-62%	498	817	-39%
EDC US	252	208	150	21%	68%	246	433	-43%
Spreads								
Resins (i)	293	283	306	3%	-4%	319	443	-28%
PE US (iii)	342	314	348	9%	-2%	366	568	-36%
PP Asia	280	271	282	3%	0%	308	336	-8%
PVC Spread Par (iv)	311	370	703	-16%	-56%	450	838	-46%
Main Chemicals (v)	370	357	388	4%	-5%	398	493	-19%
USA & Europe								
PP US	1,462	1,238	1,595	18%	-8%	1,395	2,201	-37%
PP Europe	1,392	1,339	1,460	4%	-5%	1,416	1,792	-21%
Average Price - US and Europe (vi)	1,443	1,266	1,557	14%	-7%	1,401	2,086	-33%
Propylene Polymer Grade US	1,021	797	713	28%	43%	954	1,121	-15%
Propylene Polymer Grade Europe	1,166	1,109	1,207	5%	-3%	1,176	1,463	-20%
Average Price - Raw Material (vii)	1,062	885	851	20%	25%	1,016	1,216	-16%
PP US Spread	441	441	882	0%	-50%	441	1,080	-59%
PP Europe Spread	226	230	252	-1%	-10%	240	329	-27%
PP US and Europe - Average Spread	381	382	706	0%	-46%	385	870	-56%
	301	302	700	<b>U</b> 70	-10 /0	303	0,0	-30 /0
Mexico	004	000	027	201	201	044	1.240	2404
PE US (1)	904	889	927	2%	-2%	944	1,248	-24%
Ethane US (2)	169	219	288	-23%	-41%	182	356	-49%
Spread (1-2)	736	670	640	10%	15%	762	892	-15%

<sup>&</sup>lt;sup>1</sup>Source: External consulting (Spot Price)

<sup>(</sup>i)PE US (54%), PP Asia (33%) e PVC Asia (13%)

<sup>(</sup>ii) Ethylene (20%), Butadiene (10%), Propylene (10%), Cumene (5%), Benzene (20%), Paraxylene (5%), , Gasoline (25%) and Toluene (5%)

<sup>(</sup>iii) PE US -Naphtha (82%)+ (PE US - 0,5\*Ethane - 0,5\*Propane)(18%)

<sup>(</sup>iv) PVC Asia + (0.685\*Soda US) - (0.48\*Ethylene Europe) - (1.014\*Brent)

<sup>(</sup>v) Main Chemicals - Naphtha

<sup>(</sup>vi) PP USA (72%) and PP Europe (28%)

<sup>(</sup>vii) Propylene USA (72%) and Propylene Europe (28%)



















### FORWARD-LOOKING STATEMENTS

This Material Fact may contain forward-looking statements. These statements are not historical facts but rather are based on the current view and estimates of the Company's management regarding future economic and other circumstances, industry conditions, financial performance, and results, including any potential or projected impact regarding the geological event in Alagoas and related legal procedures on the Company's business, financial condition, and operating results. The words "project," "believe," "estimate," "expect," "plan," "objective," and other similar expressions, when referring to the Company, are used to identify forward-looking statements. Statements related to the possible outcome of legal and administrative proceedings, implementation of operational and financing strategies and investment plans, guidance on future operations, the objective of expanding its efforts to achieve the sustainable macro-objectives disclosed by the Company, as well as factors or trends that affect the financial condition, liquidity or operating results of the Company are examples of forward-looking statements. Such statements reflect the current views of the Company's management and are subject to various risks and uncertainties, many of which are beyond the Company's control. There is no guarantee that the events, trends, or expected results will actually occur. The statements are based on various assumptions and factors, including, but not limited to, general economic and market conditions, industry conditions and operating factors, availability, development, and financial access to new technologies. Any change in these assumptions or factors, including the projected impact from the joint venture and its development of technologies, from the geological event in Alagoas and related legal procedures, and the unprecedented impact on businesses, employees, service providers, shareholders, investors, and other stakeholders of the Company could cause effective results to differ significantly from current expectations. For a comprehensive description of the risks and other factors that could impact any forward-looking statements in this document, especially the factors discussed in the sections, see the reports filed with the Brazilian Securities and Exchange Commission (CVM). This Material Fact does not constitute any offer of securities for sale in Brazil. No securities may be offered or sold in Brazil without being registered or exempted from registration, and any public offer of securities carried out in Brazil must be made through a prospectus, which would be made available by Braskem and contain detailed information on Braskem and its management, as well as its financial statements.