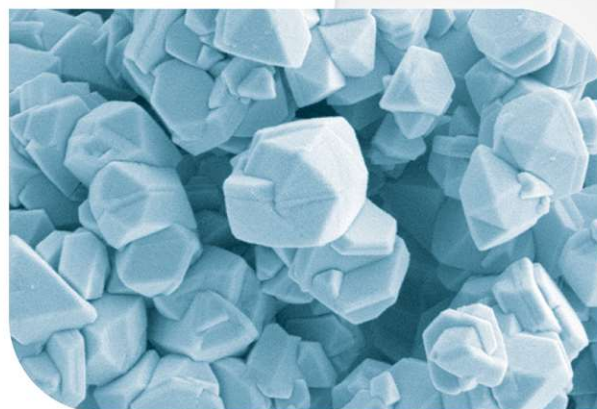




2023 Jefferies Industrials Conference

September 6, 2023

YOUR CATALYST FOR POSITIVE CHANGE™

Legal Discussion

Continuing Operations

Financial results are presented on a continuing operations basis, which excludes the Performance Materials business and Performance Chemicals business unless otherwise indicated.

Forward-Looking Statements

Some of the information contained in this presentation, constitutes “forward-looking statements.” Forward-looking statements can be identified by words such as “anticipates,” “intends,” “plans,” “seeks,” “believes,” “estimates,” “expects,” “projects” and similar references to future periods. Forward-looking statements are based on our current expectations and assumptions regarding our business, the economy and other future conditions. Because forward-looking statements relate to the future, they are subject to inherent uncertainties, risks and changes in circumstances that are difficult to predict. Examples of forward looking statements include, but are not limited to, our future results of operations, financial condition, liquidity, prospects, growth, strategies, capital allocation programs (including our share repurchase program), product and service offerings, expected end use demand trends and financial 2023 outlook. Our actual results may differ materially from those contemplated by the forward-looking statements. We caution you, therefore, against relying on any of these forward-looking statements. They are neither statements of historical fact nor guarantees or assurances of future performance. Important factors that could cause actual results to differ materially from those in the forward-looking statements include, but are not limited to, regional, national or global political, economic, business, competitive, market and regulatory conditions, including tariffs and trade disputes, currency exchange rates, effects of inflation, and other factors, including those described in the sections titled “Risk Factors” and “Management’s Discussion & Analysis of Financial Condition and Results of Operations” in our filings with the SEC, which are available on the SEC’s website at www.sec.gov. Any forward-looking statement made by us in this presentation, the conference call during which this presentation is reviewed and any discussions that follow speaks only as of the date on which it is made. Factors or events that could cause our actual results to differ may emerge from time to time, and it is not possible for us to predict all of them. We undertake no obligation to update any forward-looking statement, whether as a result of new information, future developments or otherwise, except as may be required by applicable law.

Non-GAAP Financial Measures

This presentation includes certain non-GAAP financial measures, including adjusted EBITDA, adjusted EBITDA margin, adjusted free cash flow, net debt leverage ratio, adjusted diluted earnings per share and cash conversion, which are provided to assist in an understanding of our business and its performance. These non-GAAP financial measures should be considered only as supplemental to, and not as superior to, financial measures prepared in accordance with GAAP. Non-GAAP financial measures should be read only in conjunction with consolidated financials prepared in accordance with GAAP. Reconciliations of non-GAAP measures to the relevant GAAP measures are provided in the appendix of this presentation. In reliance upon the unreasonable efforts exemption provided under Item 10(e)(1)(i)(B) of Regulation S-K, the Company is not able to provide a reconciliation of the Company’s non-GAAP financial guidance to the corresponding GAAP measures without unreasonable effort because of the inherent difficulty in forecasting and quantifying certain amounts necessary for such a reconciliation such as certain non-cash, nonrecurring or other items that are included in net income and EBITDA as well as the related tax impacts of these items and asset dispositions / acquisitions and changes in foreign currency exchange rates that are included in cash flow, due to the uncertainty and variability of the nature and amount of these future charges and costs. Because this information is uncertain, the Company is unable to address the probable significance of the unavailable information, which could be material to future results.

Legal Discussion

Supply Share and Industry Information

Certain statistical information used in this presentation is based on independent industry publications, reports by research firms or other published independent sources. Some statistical information is also based on our good faith estimates which are derived from management's knowledge of our industry and such independent sources referred to above. Certain supply share statistics, ranking and industry information included in this presentation, including the size of certain markets and our estimated supply share position and the supply share positions of our competitors, are based on management estimates. These estimates have been derived from our management's knowledge and experience in the industry and end uses into which we sell our products, as well as information obtained from surveys, reports by research firms, our customers, distributors, suppliers trade and business organizations and other contacts in the industries into which we sell our products. We believe these data to be accurate as of the date of this presentation. However, this information may prove to be inaccurate because this information cannot always be verified with complete certainty due to the limitations on the availability and reliability of raw data, the voluntary nature of the data gathering process and other limitations and uncertainties. Unless otherwise noted, all of our supply share position and industry information presented in this presentation herein is an approximation based on management's knowledge and is based on our, or, in the case supply share position information excludes volume attributable to manufacturers who produce primarily for their own consumption. In addition, references to various end uses into which we sell our products are based on how we define the end uses for our products.

Zeolyst Joint Venture

Zeolyst International and Zeolyst C.V. (our 50% owned joint ventures that we refer to collectively as the "Zeolyst Joint Venture"), are accounted for as an equity method investment in accordance with GAAP. The presentation of the Zeolyst Joint Venture's sales in this presentation represents 50% of the sales of the Zeolyst Joint Venture. We do not record sales by the Zeolyst Joint Venture as revenue and such sales are not consolidated within our results of operations. However, our adjusted EBITDA reflects our share of the earnings of the Zeolyst Joint Venture that have been recorded as equity in net income from affiliated companies in our consolidated statements of income for such periods and includes Zeolyst Joint Venture adjustments on a proportionate basis based on our 50% ownership interest. Accordingly, our adjusted EBITDA margins are calculated including 50% of the sales of the Zeolyst Joint Venture for the relevant periods in the denominator.

Ecovyst Business Profile & Value Proposition

An Industry-leading Provider of Specialty Catalysts and Services into Key End Uses



- Favorable organic growth trends driven by end use demand and growing need for sustainable products and services
- Significant revenue visibility arising from customer collaborations, qualified and specified products, and long-term contracts
- Unit margin stability in inflationary environment provided by price leverage and contractual cost pass-through mechanisms
- Attractive segment Adjusted EBITDA margins in the 30% range
- Strong Cash Conversion¹ ratio - ~73% TTM 6/30/2023
- Focus on leverage reduction – 3.2x at 6/30/2023
- Approximately \$240 million remaining under \$450 million/4-year share repurchase authorization -

1. See Appendix for reconciliation of non-GAAP measures.

Key Highlights

Q2 2023 Key Highlights

\$229 Mln

Sales
Q2 2023¹

\$79 Mln

Adj. EBITDA
Q2 2023²

>80%

Number of innovation
projects linked to
Sustainability

3.2X

Net Debt Leverage
Ratio^{2,5}

73%

Cash
Conversion^{2,3,4}

\$99 Mln

Liquidity⁶



1. Sales includes proportionate 50% share of sales from the Zeolyst Joint Venture, although such sales are not consolidated with our results of operations.

2. Adjusted EBITDA includes proportionate 50% share of sales from the Zeolyst Joint Venture

3. See Appendix for Reconciliations of non-GAAP measures

4. For TTM period ended 6/30/2023. Cash Conversion = (Adjusted EBITDA-Capex)/Adjusted EBITDA

5. Cash Conversion is calculated on a TTM basis

6. Net Debt Leverage Ratio = (Total debt – Cash and cash equivalents) / Adjusted EBITDA

7. Liquidity = \$29 million of Cash and Cash equivalents + Availability on revolving ABL facility of \$70 million

Ecovyst Reporting Segments

ECOSERVICES

\$651 Million TTM Sales

\$215 Million TTM Adjusted EBITDA¹

Regeneration Services

- **Regeneration services for refinery alkylation**
- Chemical spent acid regeneration

Virgin Sulfuric Acid

- Oleum (nylon production)
- High strength for **mining minerals and metals production**
- Electrolyte grades (for water treatment, semiconductors, lead acid batteries)

Treatment Services

- Hazardous and non-hazardous waste
- **Beneficial reuse of energy in waste**



- Ex-situ activation of catalysts for:
- Hydro-processing
- **Renewable fuel production**

Applications

Expected Growth Drivers

- Favorable alkylate demand for high octane fuels
- High industry utilization
- Electrification and growing needs for industrial applications (mining, nylon)
- Debottlenecking providing for further growth opportunities
- Growing demand for ex-situ activation in both traditional and renewable fuels

Catalyst Technologies

\$244 Million TTM Sales

\$78 Million TTM Adjusted EBITDA²

Silica Catalysts (100% Ownership)

- HDPE and LLDPE production
- Polyethylene anti-blocking agents (films)
- **Renewable materials**
- Metal recovery

ZEOLYST INTERNATIONAL (50% Ownership)³

- Hydrocracking of traditional fuels
- **Production of renewable fuels**
- Emission control technologies
- **Processes for plastic recycling**

Applications

Expected Growth Drivers

- Strengthening & light weighting of materials
- Recycling of materials
- Growing demand for renewable fuels
- Increasing regulation driving reduction in emissions



1. Excludes unallocated corporate expenses of \$28.8.0 million. See appendix reconciliation of non-GAAP measures included in Appendix.

2. Silica catalyst Sales of \$115.4 million and Sales attributable to 50% ownership in Zeolyst JV of \$125.7 million.

3. Represents 50% of ownership with Shell Catalysts & Technologies

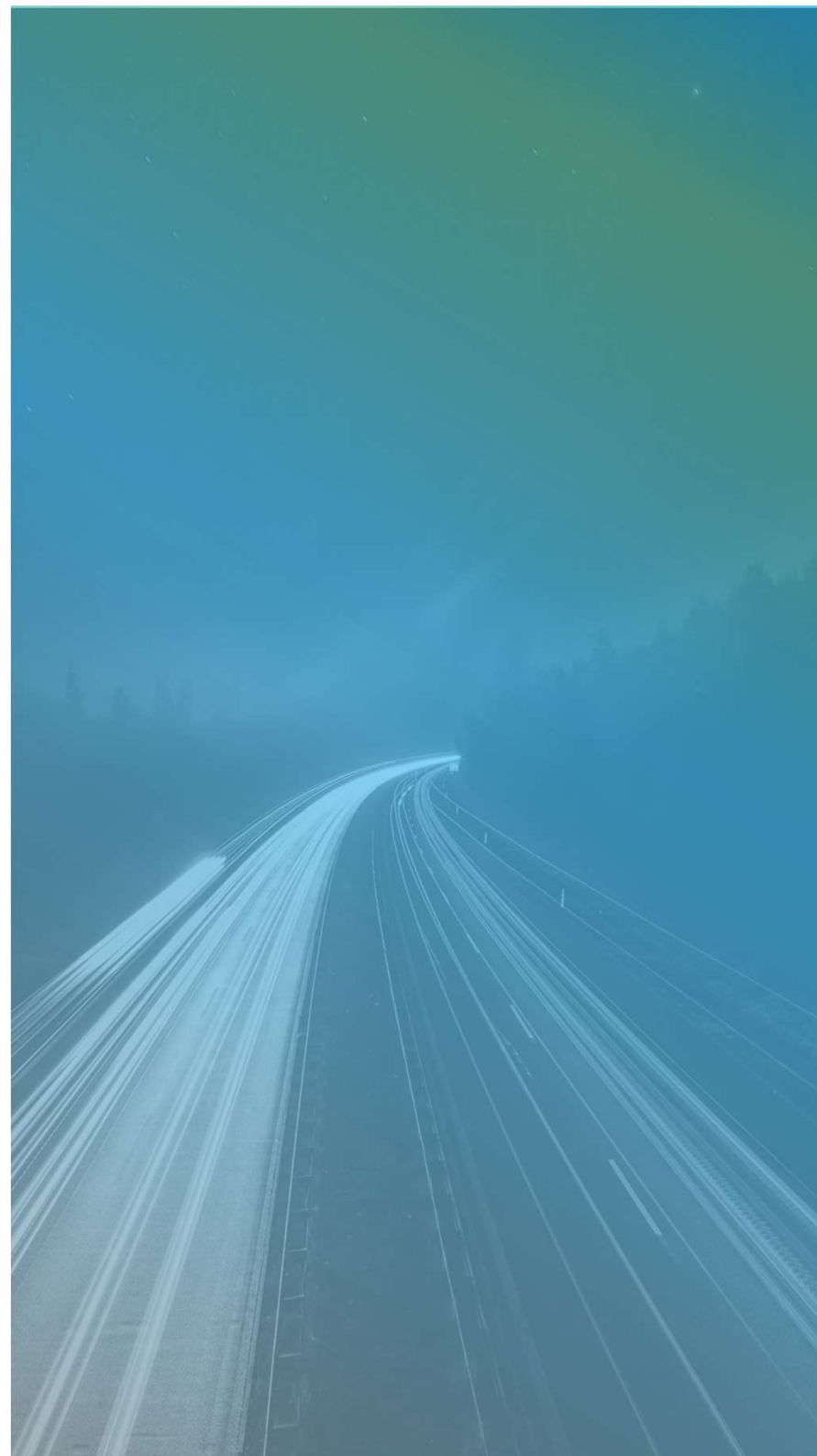
Expanding our Focus on Sustainability

Continued focus on **sustainable products and processes**

- Over 80% of innovation projects linked to sustainability
- Announced that Zeolyst International and Valoregen, a leading innovator of recycling technologies, are collaborating for the development of advanced plastic recycling technologies
- Published 2022 Sustainability Report



Second Quarter 2023 Financial Performance



Financial Performance - Q2 2023

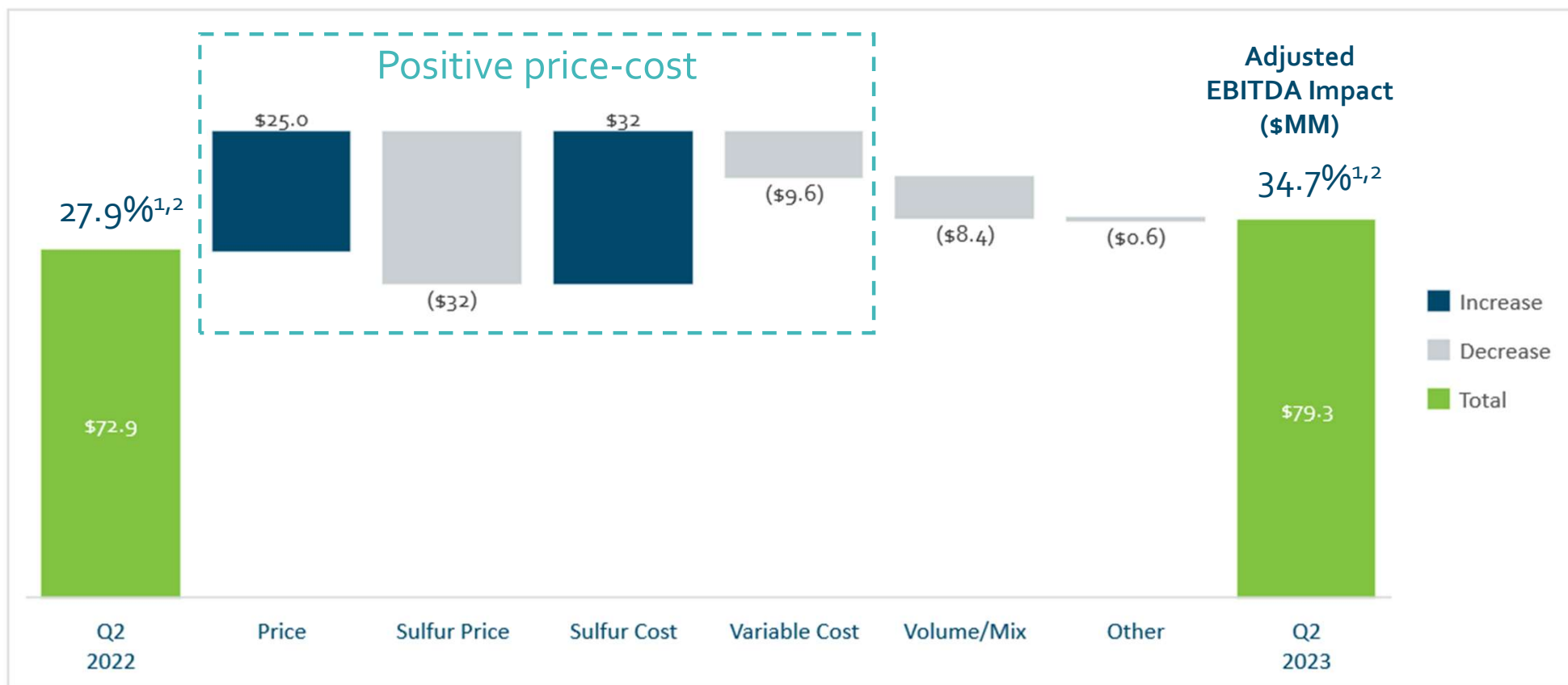
Second Quarter Financial Results

(\$ in millions)	Second Quarter 2023	Second Quarter 2022	\$ Change	% Change
Ecovyst Sales	184.1	225.2	(41.1)	(18.3)
Zeolyst JV Sales	44.7	35.9	8.8	24.5
Adjusted EBITDA ¹	79.3	72.9	6.4	8.8
Adjusted EBITDA Margin ^{1,2} (%)	34.7	27.9		680 bps

(\$ in millions)	\$ Change	% Change
Sales Change Factors ³	(41.1)	(18.3)
Volume	(33.8)	(15.0)
Price (ex sulfur pass-through)	24.7	10.9
Price impact of sulfur pass-through	(32.0)	(14.2)

Adjusted EBITDA Bridge - Q2 2023

Continued strong pricing to cover higher variable costs with contractual cost pass-through provisions and announced price increases



Ecoservices - Q2 2023 Financial Performance

(\$ in millions)	Second Quarter 2023	Second Quarter 2022	\$ Change	% Change
Ecoservices Sales	158.1	193.0	(34.9)	(18.1)
Adjusted EBITDA ¹	60.1	60.0	0.1	0.2
Adjusted EBITDA Margin ¹ (%)	38.0	31.1		690 bps

Ecoservices Highlights

- Second quarter sales reflect lower pass-through of sulfur costs of approximately \$32 million and lower sales volume for virgin sulfuric acid, partially offset by higher pricing for regeneration services.
- Adjusted EBITDA flat vs. Q2'22 with higher pricing for regeneration services, offsetting lower virgin sulfuric acid sales volume and higher unplanned repair and maintenance costs
- Adjusted EBITDA margin of 38.0%, up 690 basis points, primarily reflecting the effect of lower sulfur cost pass-through on sales, along with higher pricing for regeneration services, partially offset by lower volume and higher unplanned repair and maintenance costs

Catalyst Technologies - Q2 2023 Financial Performance

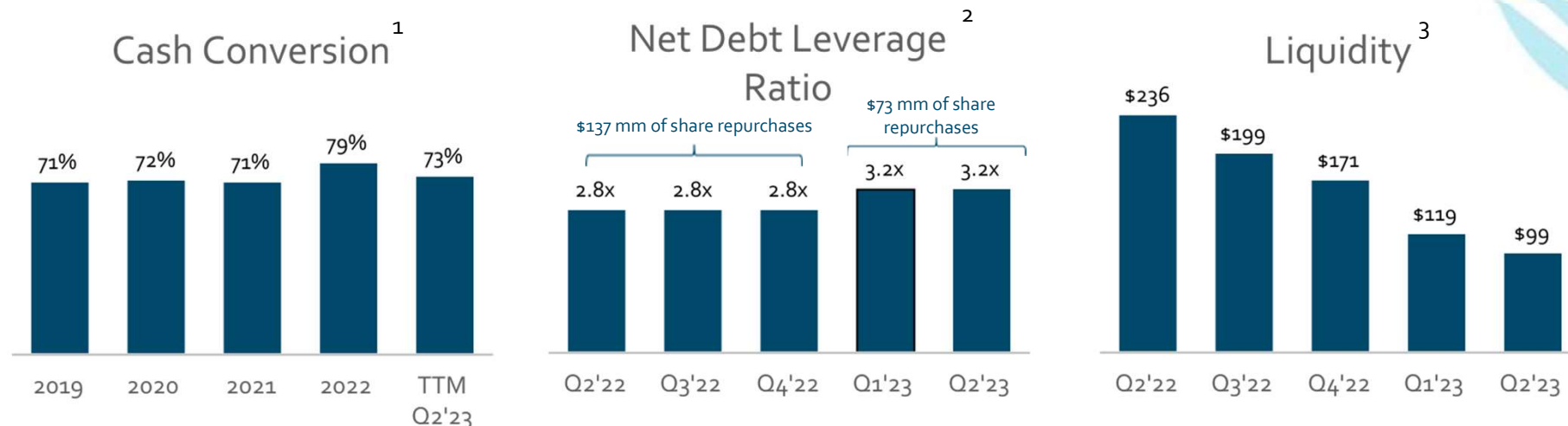
(\$ in millions)	Second Quarter 2023	Second Quarter 2022	\$ Change	% Change
Silica Catalysts Sales	26.0	32.2	(6.2)	(19.3)
Zeolyst JV Sales	44.7	35.9	8.8	24.5
Adjusted EBITDA ¹	25.4	21.4	4.0	18.7
Adjusted EBITDA Margin ^{1,2} (%)	35.9	31.4		450 bps

Catalyst Technologies Highlights

- Decrease in Silica Catalysts sales reflects lower sales of polyethylene catalysts and the timing of niche custom catalyst sales, partially offset by higher average selling prices.
- Zeolyst JV sales increased 25% on higher demand for catalysts used in the production of renewable fuels, emission control and hydrocracking catalysts.
- Adjusted EBITDA and associated margin increased, reflecting higher pricing, favorable product mix and lower production costs.

Cash, Leverage & Liquidity

Strong Cash Conversion Provides for Capital Allocation Flexibility and Improving Leverage Profile



Cash Generation

- Continued strong cash flow from operations
- Historically modest capital spending

Share repurchase authorization

- Originally \$450 million/4 years
- Returned capital to shareholders via \$137 million of share repurchases in 2022, \$30 million in Q1'23 and \$43 million in Q2'23
- Approximately \$240 million remaining under authorization

Leverage Ratio and Debt Profile

- Robust cash generation capability has provided for historic reduction in leverage, limited by recent share repurchases
- No significant debt maturities until 2028
- No maintenance covenants on leverage
- Interest rate caps limit rate exposure

Liquidity

- At 6/30/2023, Liquidity of \$99 million was comprised of cash and cash equivalents of \$29 million and availability under the Revolving ABL facility of \$70 million

1. Cash Conversion = (Adjusted EBITDA-Capex)/Adjusted EBITDA. See Appendix for Reconciliations of non-GAAP measures

2. Net Debt Leverage Ratio = (Total debt – Cash and cash equivalents) / Adjusted EBITDA. See Appendix for Reconciliations of non-GAAP measures

3. Liquidity = Cash and cash equivalents + Availability on revolving ABL facility

APPENDIX

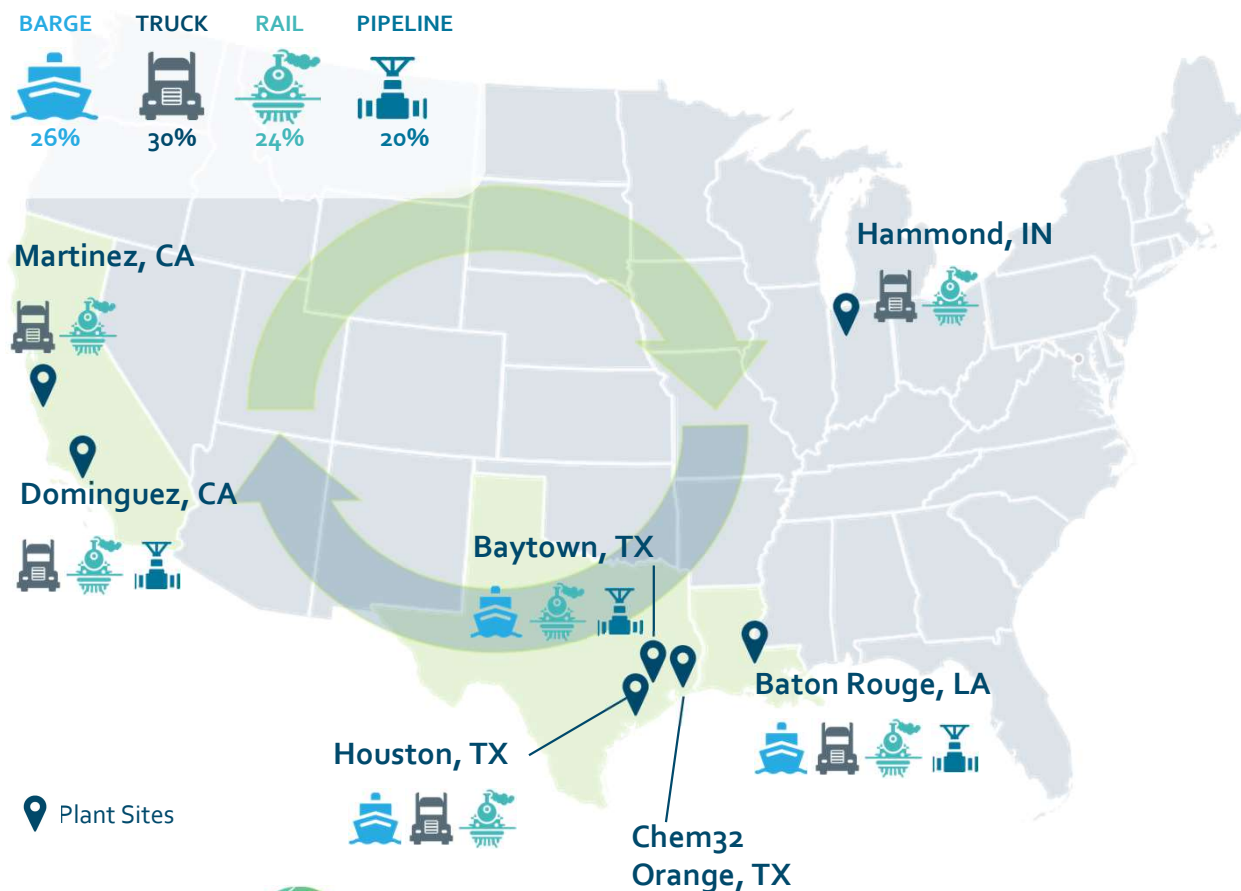
Annual Segment Sales, Adjusted EBITDA and Margins

(\$ in millions, except %)	Trailing Twelve Months Ended	Year Ended December 31,			
	June 30, 2023	2022	2021	2020	2019
Sales:					
Ecoservices	651.4	702.5	500.5	401.9	447.1
Silica Catalysts	108.9	117.7	110.7	94.0	85.7
Total sales	760.3	820.2	611.2	495.9	532.8
Zeolyst Joint Venture sales	134.5	132.6	131.3	128.6	170.3
Adjusted EBITDA¹:					
Ecoservices	215.4	227.8	177.7	157.2	175.6
Catalyst Technologies	78.0	78.0	88.0	74.5	107.8
Unallocated corporate expenses	(26.6)	(29.0)	(38.1)	(39.1)	(43.3)
Total Adjusted EBITDA	266.8	276.8	227.6	192.6	240.1
Adjusted EBITDA Margin¹:					
Ecoservices	33.1%	32.4%	35.5%	39.1%	39.3%
Catalyst Technologies	32.0%	31.2%	36.4%	33.5%	42.1%
Total Adjusted EBITDA Margin^{1,2}	29.8%	29.0%	30.7%	30.8%	34.1%

Ecoservices: North American Leader in Sulfuric Acid Recycling and Related Services with Key Competitive Position in Gulf Coast and California

ANTICIPATED FUTURE GROWTH FACTORS

- Existing customer re-contracting, and favorable alkylate fundamentals expected to drive growth for regeneration services
- Rising virgin acid consumption for electrification and green infrastructure enabling materials mining
- Increasing demand for sustainable waste solutions from industrials benefitting Treatment Services
- Accelerating off site Catalyst Activation demand from renewable fuels producers and traditional refineries



UNRIVALED SUPPLY INFRASTRUCTURE

- Managing end to end supply chain & customer inventories
- Production redundancy in key refining locations enables the highest degree of reliability

FAVORABLE CUSTOMER POSITIONS

- Long-term contracts with cost pass-through
- Typically, 100% of supply for customer sites
- Take-or-pay and capacity reservation fees

Catalyst Technologies: Global Leader in Tailored Catalyst Solutions

ANTICIPATED FUTURE GROWTH FACTORS

- Preferred technology and increasing product offerings for strengthening & light weighting of materials projected to drive growth in polyethylene catalysts
- Growing demand for renewable fuels
- Increasing regulation driving reduction in vehicle emissions
- New product launches supporting the ongoing product development and collaboration with customers, including plastic recycling



FLEXIBLE MANUFACTURING NETWORK

- Improved manufacturing network efficiencies
- Continued debottlenecking production capacity for sold out product lines

FAVORABLE CUSTOMER POSITIONS

- Believe growing faster than market with existing polyethylene customers
- Strong growth in custom catalysts; diversified across multiple chemical processes
- Collaborating on multiple product development projects for new offerings in renewable fuels and materials and recycling of polymers

Quarterly Segment Sales, Adjusted EBITDA and Margins

(\$ in millions, except %)	Three Months Ended		Six Months Ended	Three Months Ended		Six Months Ended
	March 31, 2023	June 30, 2023	June 30, 2023	March 31, 2022	June 30, 2022	June 30, 2022
Sales:						
Ecoservices	137.8	158.1	295.8	154.0	193.0	347.0
Silica Catalysts	23.1	26.0	49.2	25.7	32.2	57.9
Total sales	160.9	184.1	345.0	179.7	225.2	404.9
Zeolyst Joint Venture sales	22.1	44.7	66.8	29.0	35.9	64.9
Adjusted EBITDA:¹						
Ecoservices	36.8	60.1	96.9	49.3	60.0	109.3
Catalyst Technologies	13.0	25.4	38.4	17.0	21.4	38.4
Unallocated corporate expenses	(6.9)	(6.2)	(13.1)	(7.1)	(8.5)	(15.6)
Total Adjusted EBITDA	42.9	79.3	122.2	59.2	72.9	132.1
Adjusted EBITDA Margin¹:						
Ecoservices	26.7%	38.0%	32.8%	32.0%	31.1%	31.5%
Catalyst Technologies	28.8%	35.9%	33.1%	31.1%	31.4%	31.3%
Total Adjusted EBITDA Margin^{1,2}	23.4%	34.7%	29.7%	28.4%	27.9%	28.1%

1. See Appendix for Reconciliations of non-GAAP measures

2. Totals include corporate costs

* Rounding discrepancies may arise when rounding results from dollars (in thousands) to dollars (in millions)

Sales and Adjusted EBITDA Major Change Factors

Sales

Sales (in \$ millions and %)	Three Months Ended June 30, 2023						Six Months Ended June 30, 2023					
	Ecovyst		Ecoservices		Silica Catalysts		Ecovyst		Ecoservices		Silica Catalysts	
Sales:	\$	%	\$	%	\$	%	\$	%	\$	%	\$	%
Volume	(33.8)	(15.0)	(24.5)	(12.7)	(9.3)	(28.9)	(63.8)	(15.8)	(51.0)	(14.7)	(12.8)	(22.1)
Price/Mix	(7.3)	(3.3)	(10.4)	(5.4)	3.1	9.6	4.7	1.2	(0.2)	(0.1)	4.9	8.5
Currency	—	—	—	—	—	—	(0.8)	(0.2)	—	—	(0.8)	(1.4)
Sales Change	(41.1)	(18.3)	(34.9)	(18.1)	(6.2)	(19.3)	(59.9)	(14.8)	(51.2)	(14.8)	(8.7)	(15.0)

Adjusted EBITDA

Adj. EBITDA (in \$ millions and %)	Three Months Ended June 30, 2023						Six Months Ended June 30, 2023					
	Ecovyst		Ecoservices		Catalyst Technologies		Ecovyst		Ecoservices		Catalyst Technologies	
Adj EBITDA:	\$	%	\$	%	\$	%	\$	%	\$	%	\$	%
Volume/Mix	(8.4)	(11.6)	(9.5)	(15.8)	1.1	5.1	(27.7)	(21.0)	(21.6)	(19.8)	(6.1)	(15.9)
Price	(7.0)	(9.6)	(10.4)	(17.3)	3.4	15.9	5.5	4.2	(0.2)	(0.2)	5.7	14.8
Variable Cost	22.3	30.7	22.4	37.3	(0.1)	(0.5)	17.9	13.6	18.8	17.2	(0.9)	(2.3)
Currency	—	—	—	—	—	—	(0.2)	(0.2)	—	—	(0.2)	(0.5)
Other	(0.5)	(0.7)	(2.4)	(4.0)	(0.4)	(1.8)	(5.4)	(4.1)	(9.4)	(8.5)	1.5	3.9
Adj EBITDA Change	6.4	8.8	0.1	0.2	4.0	18.7	(9.9)	(7.5)	(12.4)	(11.3)	—	—

Reconciliation of Net Income to Adjusted EBITDA

(\$ in millions, except %)	Three Months Ended	LTM	Year Ended			
	June 30, 2023	June 30, 2023	December 31, 2022	December 31, 2021	December 31, 2020	December 31, 2019
Reconciliation of net income to Adjusted EBITDA						
Net income	26.1	67.4	69.8	1.8	54.3	31.1
Provision (benefit) for income taxes	8.8	21.6	24.9	12.1	(52.1)	12.3
Interest expense, net	9.2	38.9	37.2	37.0	50.4	66.9
Depreciation and amortization	21.0	81.2	79.2	79.7	76.9	74.8
EBITDA	65.1	209.1	211.1	130.6	129.5	185.1
Joint venture depreciation, amortization and interest ^(a)	3.2	14.7	16.0	15.6	14.7	14.7
Amortization of investment in affiliate step-up ^(b)	1.6	6.4	6.4	6.5	6.6	7.5
Debt extinguishment costs	—	—	—	26.9	25.0	3.4
Net loss on asset disposals ^(c)	1.1	5.2	3.6	5.7	4.7	4.6
Foreign currency exchange (gain) loss ^(d)	(0.4)	(0.9)	1.4	4.7	(5.3)	1.2
LIFO expense (benefit) ^(e)	1.1	1.9	(0.2)	(1.9)	(5.3)	6.5
Transaction and other related costs ^(f)	1.2	4.5	7.0	2.0	1.1	0.2
Equity-based compensation	5.0	17.0	20.6	31.8	17.2	13.3
Restructuring, integration and business optimization expenses ^(g)	1.1	8.6	11.6	3.0	2.0	2.6
Other ^(h)	0.3	0.3	(0.7)	2.7	2.4	1.0
Adjusted EBITDA¹	79.3	266.8	276.8	227.6	192.6	240.1

1. For additional information with respect to each adjustment, see appendix "Descriptions for reconciliations of Non-GAAP financial measures"

* Rounding discrepancies may arise when rounding results from dollars (in thousands) to dollars (in millions)

Reconciliation of Net (Loss) Income to Adjusted EBITDA

(\$ in millions, except %)	Three Months Ended		LTM	Three Months Ended			Twelve Months Ended	
	March 31, 2023	June 30, 2023	June 30, 2023	March 31, 2022	June 30, 2022	September 30, 2022	December 31, 2022	December 31, 2022
Reconciliation of net (loss) income to Adjusted EBITDA								
Net (loss) income	(1.5)	26.1	67.4	7.9	19.2	21.3	21.5	69.8
Provision for income taxes	0.9	8.8	21.6	5.7	7.3	9.0	2.9	24.9
Interest expense, net	9.9	9.2	38.9	8.5	8.9	9.5	10.3	37.2
Depreciation and amortization	20.2	21.0	81.2	19.5	19.7	19.6	20.4	79.2
EBITDA	29.5	65.1	209.1	41.6	55.1	59.4	55.1	211.1
Joint venture depreciation, amortization and interest ^(a)	3.6	3.2	14.7	4.1	4.0	3.9	4.0	16.0
Amortization of investment in affiliate step-up ^(b)	1.6	1.6	6.4	1.6	1.6	1.6	1.6	6.4
Net loss on asset disposals ^(c)	1.2	1.1	5.2	0.1	0.6	0.5	2.4	3.6
Foreign currency exchange (gain) loss ^(d)	(0.7)	(0.4)	(0.9)	0.6	0.5	1.0	(0.8)	1.4
LIFO expense (benefit) ^(e)	1.4	1.1	1.9	0.2	0.2	(0.4)	(0.2)	(0.2)
Transaction and other related costs ^(f)	1.4	1.2	4.5	4.3	0.8	1.8	0.1	7.0
Equity-based compensation	4.1	5.0	17.0	7.3	5.4	4.7	3.2	20.6
Restructuring, integration and business optimization expenses ^(g)	1.0	1.1	8.6	0.4	5.3	1.3	5.2	11.6
Other ^(h)	(0.2)	0.3	0.3	(1.0)	(0.6)	1.6	(1.4)	(0.7)
Adjusted EBITDA¹	42.9	79.3	266.8	59.2	72.9	75.4	69.2	276.8
EBITDA Adjustments by Line Item								
EBITDA	29.5	65.1	209.1	41.6	55.1	59.4	55.1	211.1
Cost of goods sold	0.6	0.3	(1.2)	(0.6)	(0.6)	(1.2)	(0.9)	(3.3)
Selling, general and administrative expenses	4.1	5.0	17.0	7.5	5.4	4.7	3.2	20.8
Other operating expense, net	4.1	3.7	20.0	4.9	7.0	5.0	7.2	24.1
Equity in net (income) from affiliated companies	1.6	1.6	6.4	1.6	1.6	1.6	1.6	6.4
Other (income) expense, net ²	(0.6)	0.4	0.8	0.1	0.4	2.0	(1.0)	1.7
Joint venture depreciation, amortization and interest ^(a)	3.6	3.2	14.7	4.1	4.0	3.9	4.0	16.0
Adjusted EBITDA	42.9	79.3	266.8	59.2	72.9	75.4	69.2	276.8

Descriptions for reconciliation of Non-GAAP financial measures



- a. We use Adjusted EBITDA as a performance measure to evaluate our financial results. Because our Catalyst Technologies segment includes our 50% interest in the Zeolyst Joint Venture, we include an adjustment for our 50% proportionate share of depreciation, amortization and interest expense of the Zeolyst Joint Venture.
- b. Represents the amortization of the fair value adjustments associated with the equity affiliate investment in the Zeolyst Joint Venture as a result of the combination of the businesses of PQ Holdings Inc. and Eco Services Operations LLC in May 2016. We determined the fair value of the equity affiliate investment and the fair value step-up was then attributed to the underlying assets of the Zeolyst Joint Venture. Amortization is primarily related to the fair value adjustments associated with fixed assets and intangible assets, including customer relationships and technical know-how.
- c. When asset disposals occur, we remove the impact of net gain/loss of the disposed asset because such impact primarily reflects the non-cash write-off of long-lived assets no longer in use.
- d. Reflects the exclusion of the foreign currency transaction gains and losses in the statements of income related to the non-permanent intercompany debt denominated in local currency translated to U.S. dollars.
- e. Represents non-cash adjustments to the Company's LIFO reserves for certain inventories in the U.S. that are valued using the LIFO method, effectively reflecting the results as if these inventories were valued using the FIFO method, which we believe provides a means of comparison to other companies that may not use the same basis of accounting for inventories.
- f. Relates to certain transaction costs, including debt financing, due diligence and other costs related to transactions that are completed, pending or abandoned, that we believe are not representative of our ongoing business operations.
- g. Includes the impact of restructuring, integration and business optimization expenses, which are incremental costs that are not representative of our ongoing business operations.
- h. Other consists of adjustments for items that are not core to our ongoing business operations. These adjustments include environmental remediation and other legal costs, expenses for capital and franchise taxes, and defined benefit pension and postretirement plan (benefits) costs, for which our obligations are under plans that are frozen. Also included in this amount are adjustments to eliminate the benefit realized in cost of goods sold of the allocation of a portion of the contract manufacturing payments under the five-year agreement with the buyer of the Performance Chemicals business to the financing obligation under the failed sale-leaseback. Included in this line-item are rounding discrepancies that may arise from rounding from dollars (in thousands) to dollars (in millions).

Adjusted Free Cash Flow

(\$ in millions)	Full Year 2022 ¹	Six months ended June 30, 2023
Cash flow from Operations before interest and tax	247.5	70.5
Less: Cash paid for taxes	25.6	10.0
Less: Cash paid for interest ²	35.4	19.4
Cash Flow from Operations	186.6	41.1
Less: Purchases of property, plant and equipment ³	58.9	39.2
Free Cash Flow	127.7	1.9
Plus: Cash paid for costs related to segment disposals	18.1	—
Adjusted Free Cash Flow	145.8	1.9

1. Includes proportionate shares of cash generation from discontinued operations for the period presented.

2. Shown net of capitalized interest and includes the cash received or paid on interest rate cap agreements

3. Excludes the Company's proportionate 50% share of capital expenditures from the Zeolyst Joint Venture

* Rounding discrepancies may arise when rounding results from dollars (in thousands) to dollars (in millions)

Cash Conversion, Liquidity, Leverage

Cash Conversion

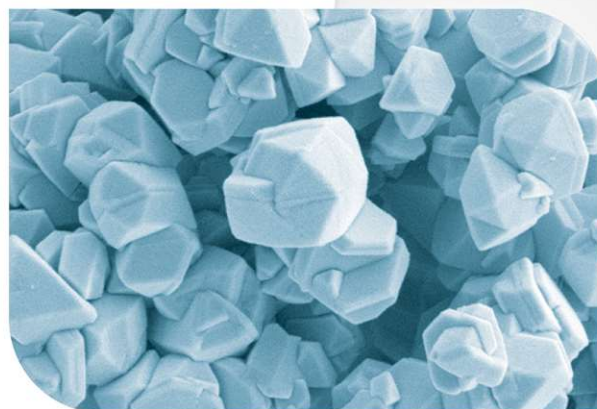
(\$ in millions, except %)	2019	2020	2021	2022	TTM Q2 2023
Adjusted EBITDA	240.1	192.6	227.6	276.8	266.8
Less: Capex ¹	70.3	54.5	66.4	59.5	72.3
Cash Conversion	169.9	138.1	161.2	217.5	194.5
Cash Conversion %²	71%	72%	71%	79%	73%

Liquidity

(\$ in millions, except %)	Q2 2022	Q3 2022	Q4 2022	Q1 2023	Q2 2023
Cash and cash equivalents	151.2	121.4	110.9	61.6	29.2
Availability on revolving ABL facility	84.8	77.6	59.7	57.3	70.0
Liquidity³	236.0	199.0	170.6	118.9	99.2

Leverage Ratio

(\$ in millions, except %)	Q2 2022	Q3 2022	Q4 2022	Q1 2023	Q2 2023
Total debt	891.0	888.8	886.4	884.3	882.0
Less: Cash and cash equivalents	151.2	121.4	110.9	61.6	29.2
Net debt	739.8	767.4	775.5	822.7	852.8
Net income	39.5	56.2	69.8	59.9	67.4
Adjusted EBITDA	264.7	270.7	276.8	260.5	266.8
Net Debt to Net Income Ratio	18.7x	13.7x	11.1x	13.7x	12.7x
Net Debt Leverage Ratio	2.8x	2.8x	2.8x	3.2x	3.2x



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