



ACMA 2Q24 Pulse of the Industry Survey

Release: March 29, 2024

Compiled by Vault Consulting, LLC

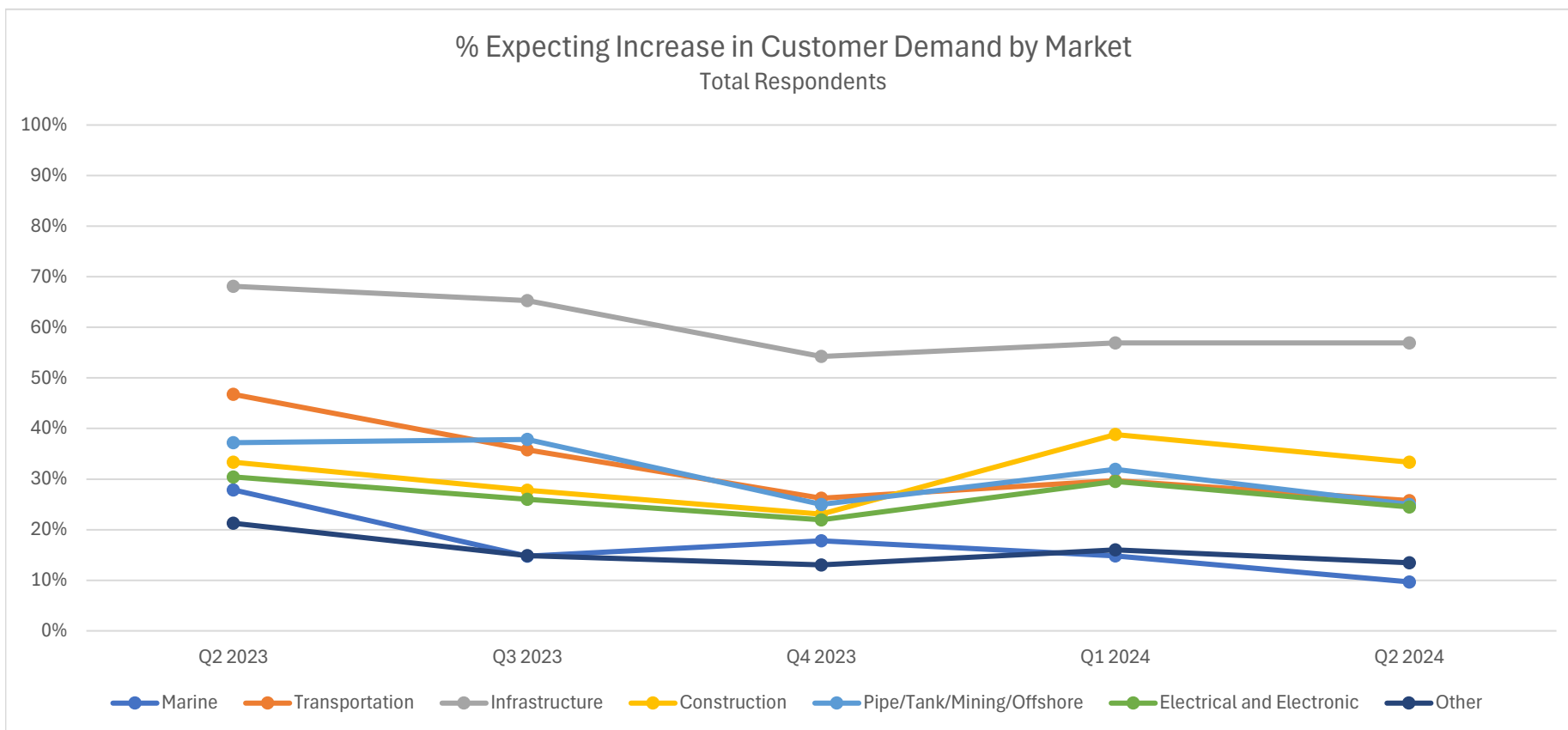


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SUMMARY OF KEY FINDINGS:

This quarter, an Executive Summary has been added showing trends on key measures. Highlights include:

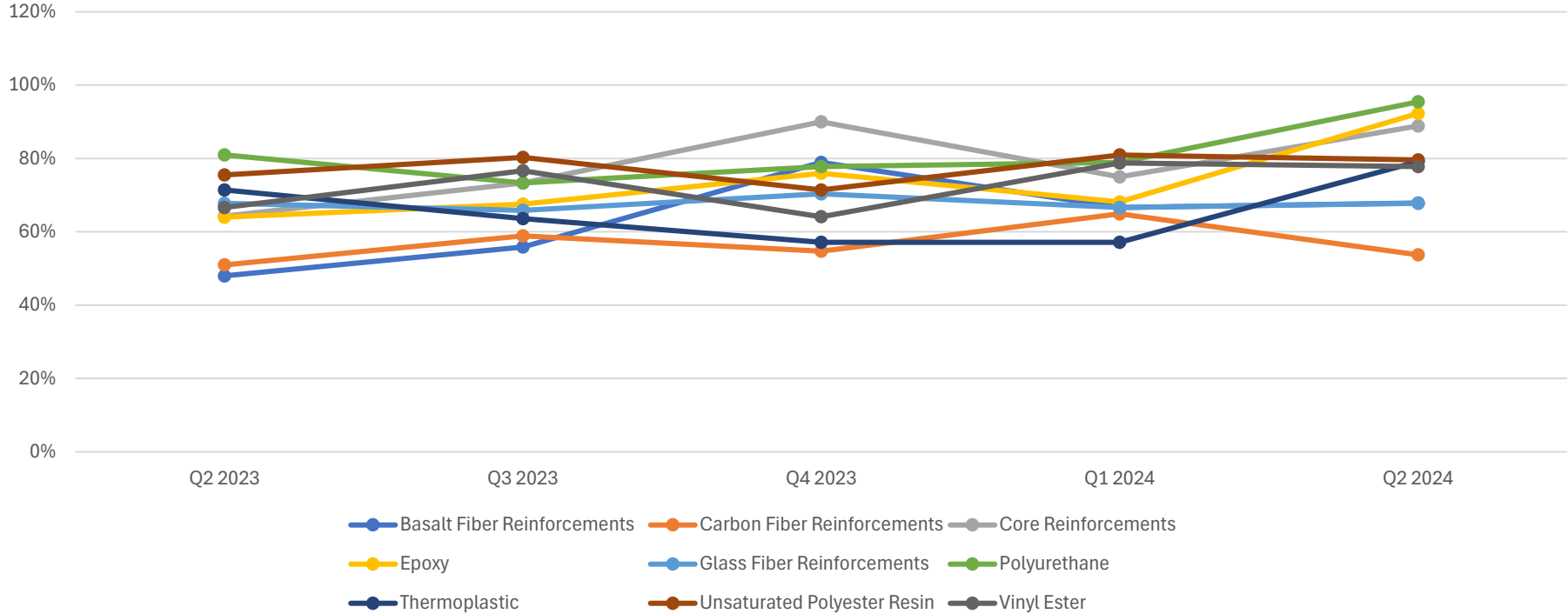
- Expected increases in customer demand quarter over quarter have been fairly stable over the past year, except in 4Q23 when all segments dipped except in the Marine market.
- For the past year, respondents consistently indicate the highest anticipated increases in the Infrastructure market although after the dip in 4Q23 perceived increases have generally leveled off though 2Q24.
- A majority of respondents report that Product Inputs are at the "right amount" for the past year. However, the percent indicating this for Thermoplastics had been declining through the first quarter of 2024 but jumped back up in 2Q.
- A majority have seen inventory levels as "stable" for the past year. While this fluctuated a bit for many product inputs over the year, none have dipped below 50%.
- The importance of Hiring and Training and Supply Chain Disruption has receded a bit among total respondents since 3Q23 while the Regulation of Styrene has increased. Roughly half of respondents indicate Sustainability and Recycling as important, which has been stable over the past year.
- Just under 40% of total respondents indicate current inventory levels for glass fiber reinforcements is high this quarter.
- 6 in 10 respondents do not feel Hydrogen is an important issue at this time.



What is the outlook for customer demand in North America in the current quarter compared to the prior quarter for the following markets? Please only answer for markets for which you have knowledge.

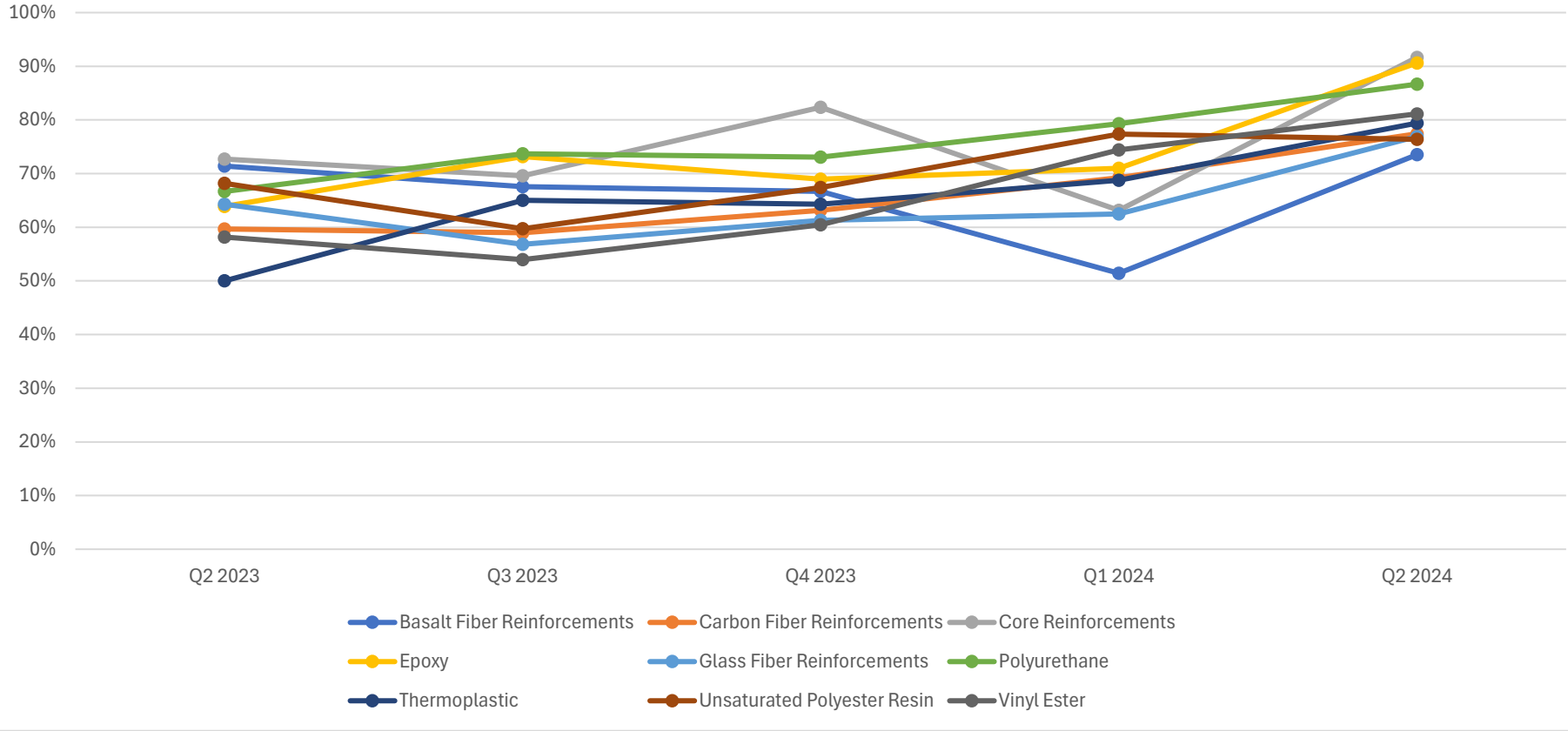
% Reporting Product Inputs are "Right Amount"

Total Respondents



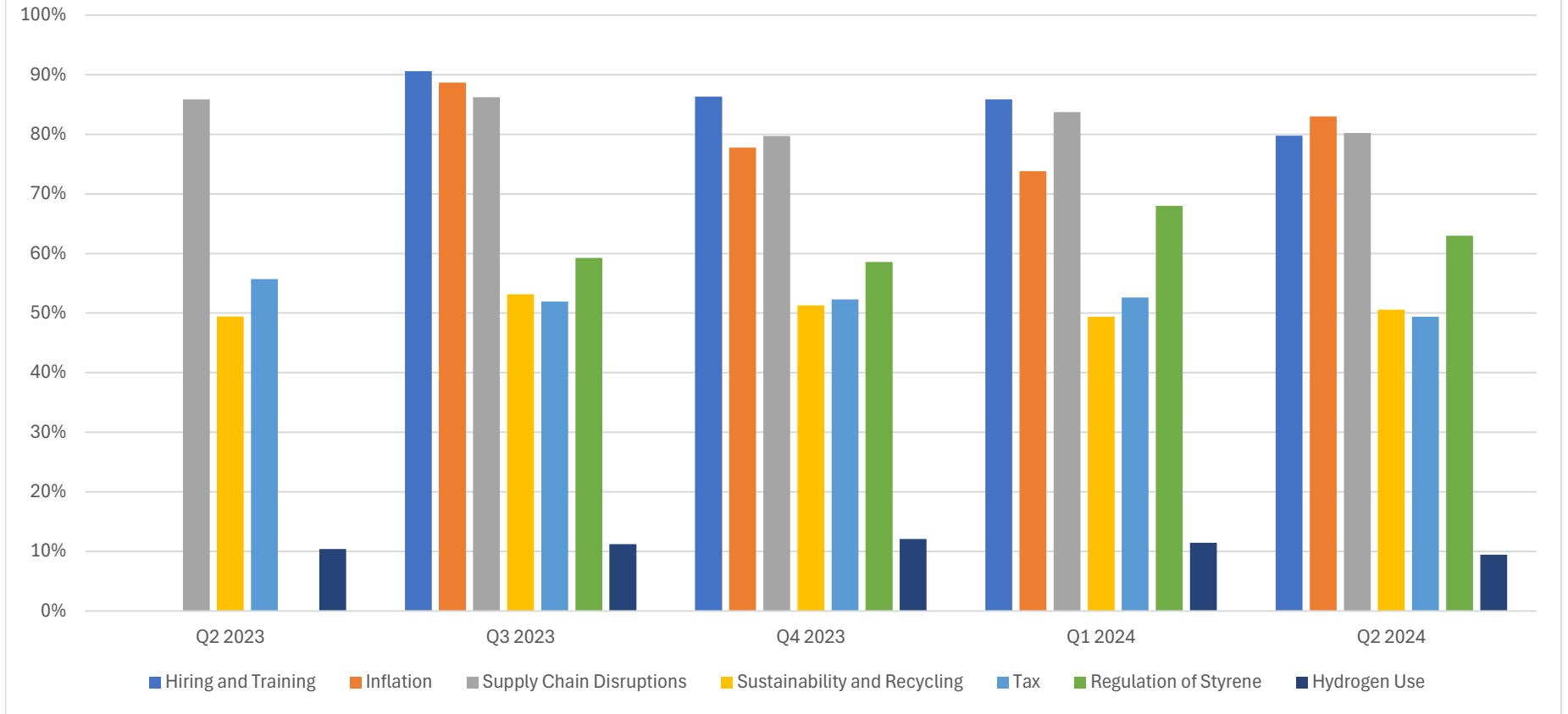
Using a scale of 1 to 5 where "1" means extremely low inventory, "3" means the right amount, and "5" means extremely high inventory, how do you view inventory for the following inputs? Please only answer on products for which you have knowledge.

% Indicating Lead Time for Product Inventory is "Stable"
Total Respondents



What is the current lead time for the following inputs? Please only answer for products for which you have knowledge.

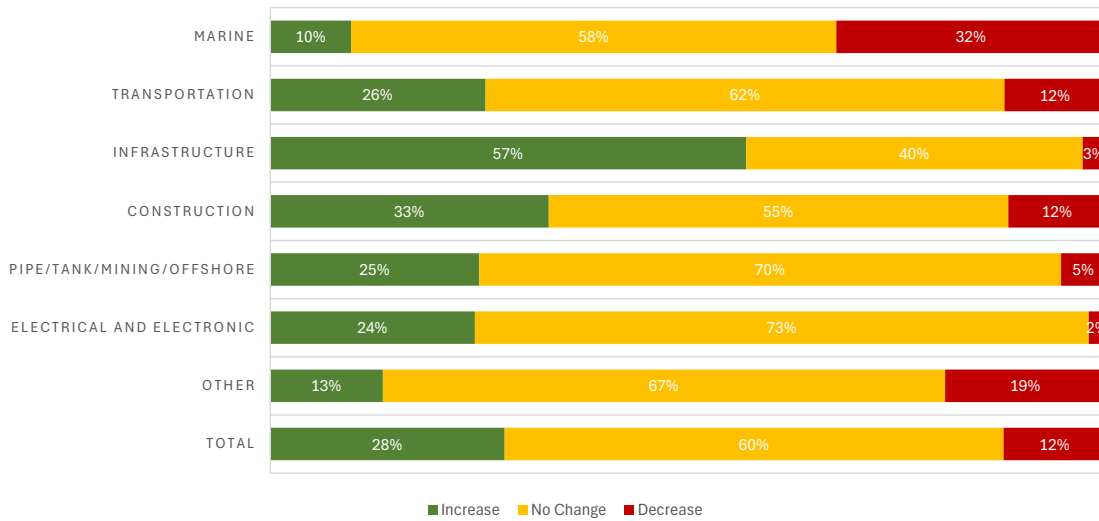
Important Topics in Composites Industry % Rating Extremely/Very Important



Based on what you have read and heard, how important do you consider each of the following issues to your company?

Outlook for Customer Demand in Q2 2024 Compared with Q1 2024

EXPECTED CUSTOMER DEMAND BY MARKET



Overall Market			
Market	Increase	No Change	Decrease
Marine	10%	58%	32%
Transportation	26%	62%	12%
Infrastructure	57%	40%	3%
Construction	33%	55%	12%
Pipe/Tank/Mining/Offshore	25%	70%	5%
Electrical and Electronic	24%	73%	2%
Other	13%	67%	19%
Total	28%	60%	12%

Unique Responses
58
63
68
58
54
47
48
87

Manufacturer			
Market	Increase	No Change	Decrease
Marine	15%	50%	35%
Transportation	24%	62%	14%
Infrastructure	51%	44%	5%
Construction	34%	51%	14%
Pipe/Tank/Mining/Offshore	20%	70%	10%
Electrical and Electronic	15%	81%	4%
Other	8%	69%	23%
Total	26%	59%	15%

Unique Responses
34
37
43
35
30
26
26
55

Supplier / Distributor			
Market	Increase	No Change	Decrease
Marine	0%	71%	29%
Transportation	27%	62%	12%
Infrastructure	64%	36%	0%
Construction	30%	61%	9%
Pipe/Tank/Mining/Offshore	29%	71%	0%
Electrical and Electronic	33%	67%	0%
Other	14%	73%	14%
Total	28%	62%	9%

Unique Responses
24
26
25
23
24
21
22
26

Affiliate			
Market	Increase	No Change	Decrease
Marine	25%	50%	25%
Transportation	33%	67%	0%
Infrastructure	75%	25%	0%
Construction	50%	50%	0%
Pipe/Tank/Mining/Offshore	50%	50%	0%
Electrical and Electronic	50%	50%	0%
Other	50%	25%	25%
Total	48%	43%	10%

Unique Responses
4
3
4
2
2
2
4
6

Small: 1 - 10 Employees			
Market	Increase	No Change	Decrease
Marine	0%	67%	33%
Transportation	33%	67%	0%
Infrastructure	67%	33%	0%
Construction	50%	50%	0%
Pipe/Tank/Mining/Offshore	50%	50%	0%
Electrical and Electronic	50%	50%	0%
Other	33%	33%	33%
Total	43%	48%	10%

Unique Responses
3
3
6
2
2
2
3
7

Medium: 11 - 100 Employees			
Market	Increase	No Change	Decrease
Marine	20%	70%	10%
Transportation	22%	78%	0%
Infrastructure	42%	58%	0%
Construction	46%	54%	0%
Pipe/Tank/Mining/Offshore	20%	80%	0%
Electrical and Electronic	0%	100%	0%
Other	22%	78%	0%
Total	27%	71%	1%

Unique Responses
10
9
12
13
10
7
9
17

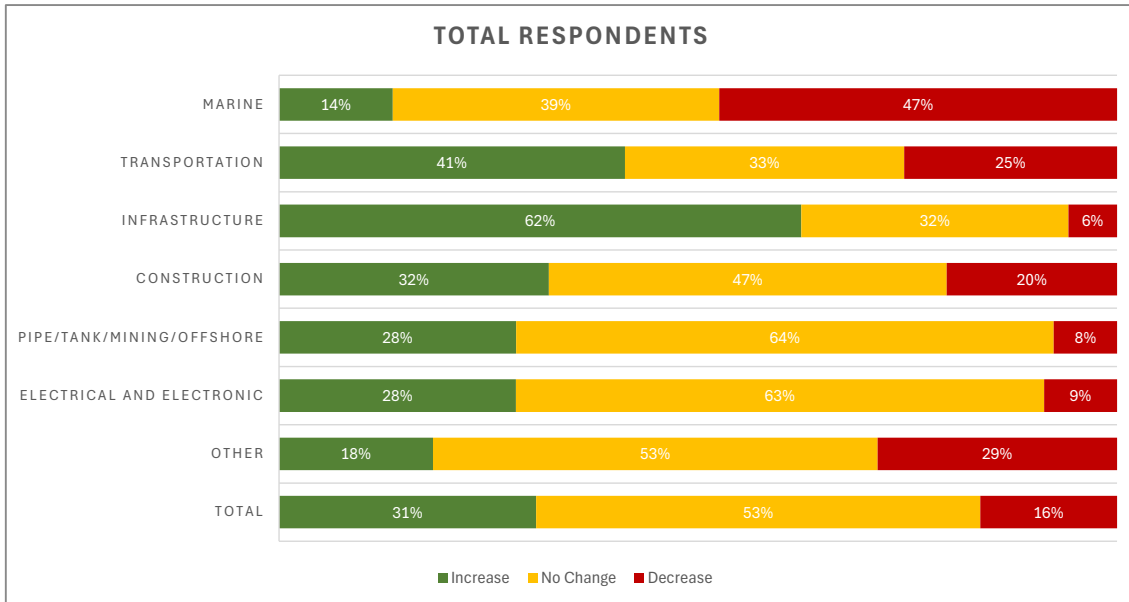
Large: 101+ Employees			
Market	Increase	No Change	Decrease
Marine	8%	55%	37%
Transportation	26%	59%	15%
Infrastructure	59%	37%	4%
Construction	29%	56%	16%
Pipe/Tank/Mining/Offshore	25%	68%	7%
Electrical and Electronic	28%	70%	3%
Other	10%	68%	23%
Total	27%	58%	15%

Unique Responses
49
54
54
45
44
40
40
63

Survey Question: What is the outlook for customer demand in North America in the current quarter compared to the prior quarter for the following markets? Please only answer for markets for which you have knowledge.

*Darker shading represents the higher responses by market segment. Shading does not represent statistical significance.

Customer Demand in North American 2024 vs. 2023



Overall Market			
Market	Increase	No Change	Decrease
Marine	14%	39%	47%
Transportation	41%	33%	25%
Infrastructure	62%	32%	6%
Construction	32%	47%	20%
Pipe/Tank/Mining/Offshore	28%	64%	8%
Electrical and Electronic	28%	63%	9%
Other	18%	53%	29%
Total	31%	53%	16%

Unique Responses
55
60
65
57
51
44
45
86

Manufacturer			
Market	Increase	No Change	Decrease
Marine	19%	42%	39%
Transportation	38%	32%	29%
Infrastructure	55%	38%	8%
Construction	36%	42%	21%
Pipe/Tank/Mining/Offshore	26%	63%	11%
Electrical and Electronic	24%	64%	12%
Other	17%	50%	33%
Total	33%	46%	21%

Unique Responses
31
34
40
33
27
25
24
54

Supplier / Distributor			
Market	Increase	No Change	Decrease
Marine	4%	38%	58%
Transportation	46%	38%	15%
Infrastructure	76%	24%	0%
Construction	29%	50%	21%
Pipe/Tank/Mining/Offshore	33%	63%	4%
Electrical and Electronic	37%	58%	5%
Other	14%	62%	24%
Total	35%	47%	18%

Unique Responses
24
26
25
24
24
19
21
26

Affiliate			
Market	Increase	No Change	Decrease
Marine	25%	25%	50%
Transportation	33%	0%	67%
Infrastructure	50%	25%	25%
Construction	0%	100%	0%
Pipe/Tank/Mining/Offshore	0%	100%	0%
Electrical and Electronic	0%	100%	0%
Other	50%	25%	25%
Total	29%	43%	29%

Unique Responses
4
3
4
2
2
2
4
6

Small: 1 - 10 Employees			
Market	Increase	No Change	Decrease
Marine	0%	33%	67%
Transportation	33%	0%	67%
Infrastructure	67%	17%	17%
Construction	0%	100%	0%
Pipe/Tank/Mining/Offshore	0%	100%	0%
Electrical and Electronic	0%	100%	0%
Other	33%	33%	33%
Total	29%	43%	29%

Unique Responses
3
3
6
2
2
2
3
7

Medium: 11 - 100 Employees			
Market	Increase	No Change	Decrease
Marine	20%	60%	20%
Transportation	44%	56%	0%
Infrastructure	58%	42%	0%
Construction	46%	54%	0%
Pipe/Tank/Mining/Offshore	30%	70%	0%
Electrical and Electronic	0%	86%	14%
Other	33%	67%	0%
Total	36%	60%	4%

Unique Responses
10
9
12
13
10
7
9
17

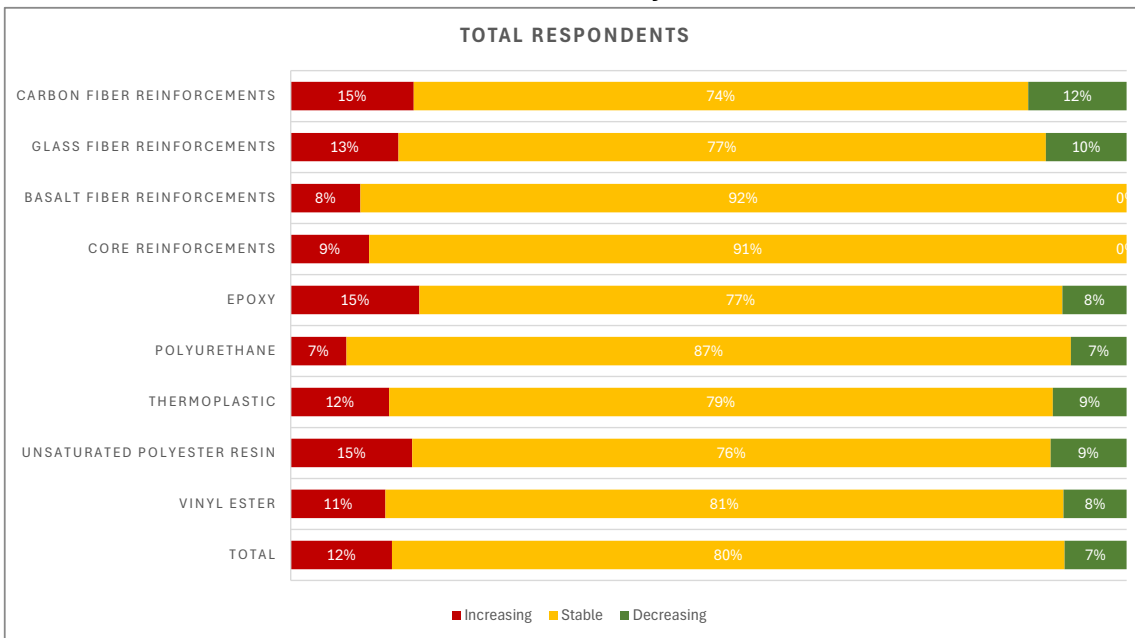
Large: 101+ Employees			
Market	Increase	No Change	Decrease
Marine	13%	35%	52%
Transportation	41%	31%	27%
Infrastructure	63%	31%	6%
Construction	30%	43%	27%
Pipe/Tank/Mining/Offshore	29%	61%	10%
Electrical and Electronic	35%	57%	8%
Other	14%	51%	35%
Total	33%	43%	24%

Unique Responses
46
51
51
44
41
37
37
62

Survey Question: What is the outlook for customer demand in North America in 2024 compared to 2023 in the following markets? Please only answer for markets for which you have knowledge.

*Darker shading represents the higher responses by market segment. Shading does not represent statistical significance.

Current Lead Time by Product



Overall			
Product	Increasing	Stable	Decreasing
Carbon Fiber Reinforcements	15%	74%	12%
Glass Fiber Reinforcements	13%	77%	10%
Basalt Fiber Reinforcements	8%	92%	0%
Core Reinforcements	9%	91%	0%
Epoxy	15%	77%	8%
Polyurethane	7%	87%	7%
Thermoplastic	12%	79%	9%
Unsaturated Polyester Resin	15%	76%	9%
Vinyl Ester	11%	81%	8%
Total	12%	80%	7%

Unique Responses
29
57
21
28
35
27
30
51
49
78

Manufacturer			
Product	Increasing	Stable	Decreasing
Carbon Fiber Reinforcements	6%	83%	11%
Glass Fiber Reinforcements	10%	85%	5%
Basalt Fiber Reinforcements	0%	100%	0%
Core Reinforcements	6%	94%	0%
Epoxy	13%	75%	13%
Polyurethane	5%	84%	11%
Thermoplastic	19%	69%	13%
Unsaturated Polyester Resin	15%	76%	9%
Vinyl Ester	9%	81%	9%
Total	10%	82%	8%

Unique Responses
18
39
10
17
24
19
16
33
32
48

Supplier / Distributor			
Product	Increasing	Stable	Decreasing
Carbon Fiber Reinforcements	18%	73%	9%
Glass Fiber Reinforcements	11%	67%	22%
Basalt Fiber Reinforcements	9%	91%	0%
Core Reinforcements	9%	91%	0%
Epoxy	18%	82%	0%
Polyurethane	0%	100%	0%
Thermoplastic	7%	86%	7%
Unsaturated Polyester Resin	6%	83%	11%
Vinyl Ester	18%	76%	6%
Total	11%	82%	8%

Unique Responses
11
18
11
11
11
8
14
18
17
25

Affiliate			
Product	Increasing	Stable	Decreasing
Carbon Fiber Reinforcements	40%	40%	20%
Glass Fiber Reinforcements	40%	60%	0%
Basalt Fiber Reinforcements	33%	67%	0%
Core Reinforcements	25%	75%	0%
Epoxy	25%	75%	0%
Polyurethane	33%	67%	0%
Thermoplastic	0%	100%	0%
Unsaturated Polyester Resin	50%	50%	0%
Vinyl Ester	0%	100%	0%
Total	28%	69%	3%

Unique Responses
5
5
3
4
4
3
4
4
4
5

Small: 1 - 10 Employees			
Product	Increasing	Stable	Decreasing
Carbon Fiber Reinforcements	25%	50%	25%
Glass Fiber Reinforcements	20%	80%	0%
Basalt Fiber Reinforcements	0%	100%	0%
Core Reinforcements	0%	100%	0%
Epoxy	0%	100%	0%
Polyurethane	0%	100%	0%
Thermoplastic	0%	100%	0%
Unsaturated Polyester Resin	25%	75%	0%
Vinyl Ester	0%	100%	0%
Total	10%	86%	3%

Unique Responses
4
5
2
3
3
2
3
4
3
5

Medium: 11-100 Employees			
Product	Increasing	Stable	Decreasing
Carbon Fiber Reinforcements	17%	83%	0%
Glass Fiber Reinforcements	15%	77%	8%
Basalt Fiber Reinforcements	17%	83%	0%
Core Reinforcements	14%	86%	0%
Epoxy	25%	75%	0%
Polyurethane	25%	75%	0%
Thermoplastic	0%	100%	0%
Unsaturated Polyester Resin	27%	64%	9%
Vinyl Ester	10%	80%	10%
Total	17%	79%	4%

Unique Responses
6
13
6
7
8
4
5
11
10
15

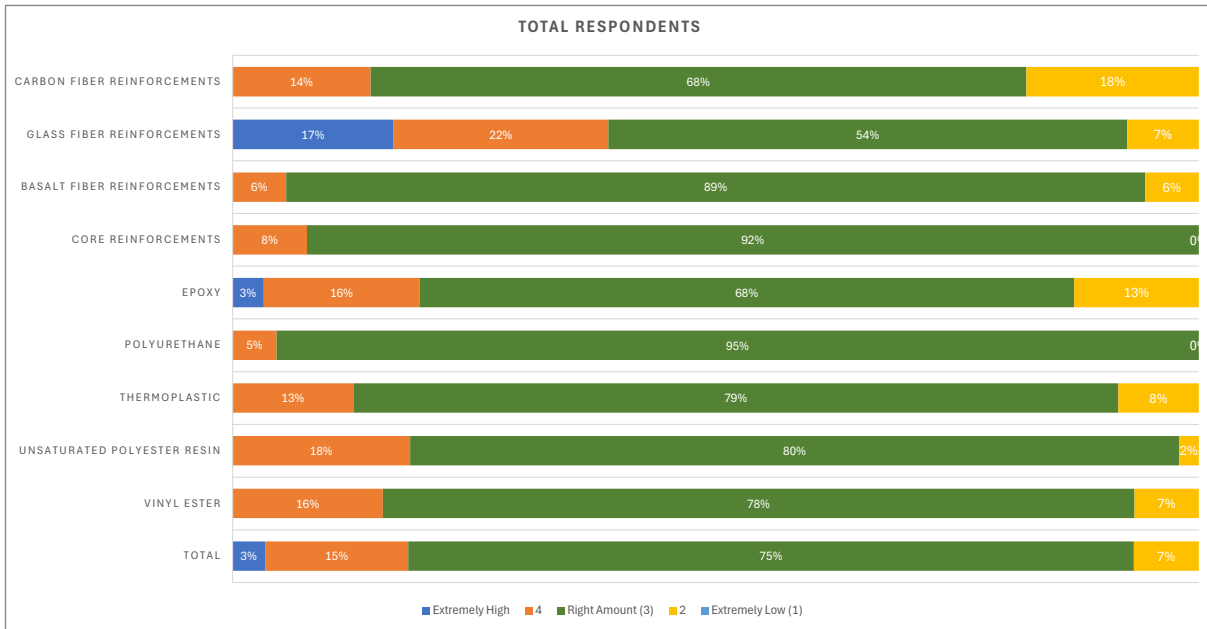
Large: 101+ Employees			
Product	Increasing	Stable	Decreasing
Carbon Fiber Reinforcements	13%	75%	13%
Glass Fiber Reinforcements	11%	77%	11%
Basalt Fiber Reinforcements	6%	94%	0%
Core Reinforcements	9%	91%	0%
Epoxy	14%	75%	11%
Polyurethane	4%	88%	8%
Thermoplastic	15%	73%	12%
Unsaturated Polyester Resin	10%	80%	10%
Vinyl Ester	13%	80%	8%
Total	11%	80%	9%

Unique Responses
24
44
16
22
28
24
26
40
40
58

Survey Question: What is the current lead time for the following inputs? Please only answer for products for which you have knowledge.

*Darker shading represents the higher responses by market segment. Shading does not represent statistical significance.

Current Inventory



Overall					
Product	Extremely High	4	Right Amount (3)	2	Extremely Low (1)
Carbon Fiber Reinforcements	0%	14%	68%	18%	0%
Glass Fiber Reinforcements	17%	22%	54%	7%	0%
Basalt Fiber Reinforcements	0%	6%	89%	6%	0%
Core Reinforcements	0%	8%	92%	0%	0%
Epoxy	3%	16%	68%	13%	0%
Polyurethane	0%	5%	95%	0%	0%
Thermoplastic	0%	13%	79%	8%	0%
Unsaturated Polyester Resin	0%	18%	80%	2%	0%
Vinyl Ester	0%	16%	78%	7%	0%
Total	3%	15%	75%	7%	0%

*Total based on Manufacturer and Supplier / Distributor responses only.

Unique Responses
28
54
18
26
31
22
24
49
45
71

Manufacturer					
Product	Extremely High	4	Right Amount (3)	2	Extremely Low (1)
Carbon Fiber Reinforcements	0%	6%	82%	12%	0%
Glass Fiber Reinforcements	5%	22%	65%	8%	0%
Basalt Fiber Reinforcements	0%	0%	89%	11%	0%
Core Reinforcements	0%	13%	88%	0%	0%
Epoxy	0%	15%	65%	20%	0%
Polyurethane	0%	0%	100%	0%	0%
Thermoplastic	0%	15%	69%	15%	0%
Unsaturated Polyester Resin	0%	16%	84%	0%	0%
Vinyl Ester	0%	14%	82%	4%	0%
Total	1%	14%	78%	7%	0%

Unique Responses
17
37
9
16
20
13
13
31
28
47

Supplier / Distributor					
Product	Extremely High	4	Right Amount (3)	2	Extremely Low (1)
Carbon Fiber Reinforcements	0%	27%	45%	27%	0%
Glass Fiber Reinforcements	41%	24%	29%	6%	0%
Basalt Fiber Reinforcements	0%	11%	89%	0%	0%
Core Reinforcements	0%	0%	100%	0%	0%
Epoxy	9%	18%	73%	0%	0%
Polyurethane	0%	11%	89%	0%	0%
Thermoplastic	0%	9%	91%	0%	0%
Unsaturated Polyester Resin	0%	22%	72%	6%	0%
Vinyl Ester	0%	18%	71%	12%	0%
Total	7%	17%	70%	6%	0%

Unique Responses
11
17
9
10
11
9
11
18
17
24

Affiliate					
Product	Extremely High	4	Right Amount (3)	2	Extremely Low (1)
Carbon Fiber Reinforcements	0%	0%	75%	0%	25%
Glass Fiber Reinforcements	0%	20%	60%	20%	0%
Basalt Fiber Reinforcements	0%	0%	33%	67%	0%
Core Reinforcements	0%	0%	100%	0%	0%
Epoxy	0%	0%	100%	0%	0%
Polyurethane	0%	33%	67%	0%	0%
Thermoplastic	33%	0%	67%	0%	0%
Unsaturated Polyester Resin	0%	0%	75%	25%	0%
Vinyl Ester	0%	0%	75%	25%	0%
Total	3%	6%	73%	15%	3%

Unique Responses
4
5
3
3
4
3
3
4
4
5

Small: 1 - 10 Employees					
Product	Extremely High	4	Right Amount (3)	2	Extremely Low (1)
Carbon Fiber Reinforcements	0%	0%	67%	0%	33%
Glass Fiber Reinforcements	0%	0%	80%	20%	0%
Basalt Fiber Reinforcements	0%	0%	50%	50%	0%
Core Reinforcements	0%	0%	100%	0%	0%
Epoxy	0%	0%	100%	0%	0%
Polyurethane	0%	0%	100%	0%	0%
Thermoplastic	0%	0%	100%	0%	0%
Unsaturated Polyester Resin	0%	0%	75%	25%	0%
Vinyl Ester	0%	0%	67%	33%	0%
Total	0%	0%	81%	15%	4%

Unique Responses
3
5
2
2
3
2
2
4
3
5

Medium: 11 - 100 Employees					
Product	Extremely High	4	Right Amount (3)	2	Extremely Low (1)
Carbon Fiber Reinforcements	0%	0%	100%	0%	0%
Glass Fiber Reinforcements	8%	23%	62%	8%	0%
Basalt Fiber Reinforcements	0%	0%	60%	40%	0%
Core Reinforcements	0%	0%	100%	0%	0%
Epoxy	0%	0%	71%	29%	0%
Polyurethane	0%	20%	80%	0%	0%
Thermoplastic	25%	0%	75%	0%	0%
Unsaturated Polyester Resin	0%	0%	100%	0%	0%
Vinyl Ester	0%	10%	80%	10%	0%
Total	3%	7%	81%	9%	0%

Unique Responses
6
13
5
7
7
5
4
12
10
14

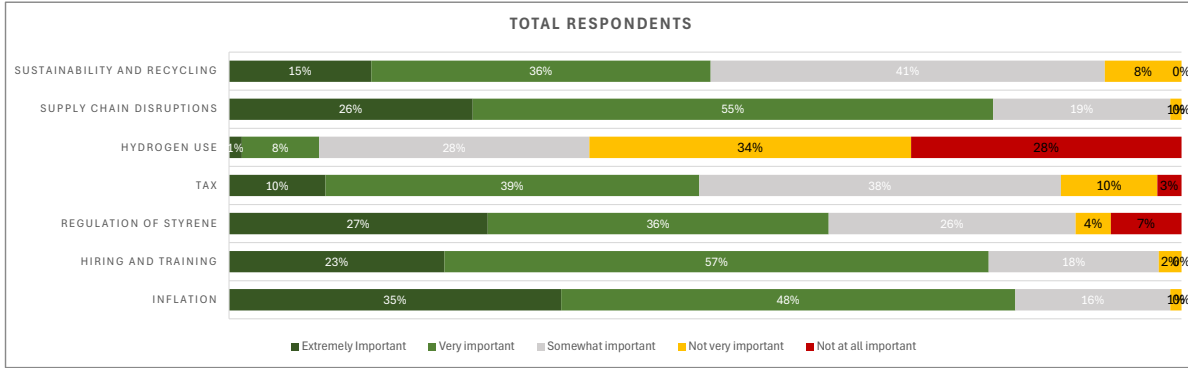
Large: 101+ Employees					
Product	Extremely High	4	Right Amount (3)	2	Extremely Low (1)
Carbon Fiber Reinforcements	0%	17%	61%	22%	0%
Glass Fiber Reinforcements	20%	24%	49%	7%	0%
Basalt Fiber Reinforcements	0%	7%	93%	0%	0%
Core Reinforcements	0%	10%	90%	0%	0%
Epoxy	4%	20%	68%	8%	0%
Polyurethane	0%	6%	94%	0%	0%
Thermoplastic	0%	14%	76%	10%	0%
Unsaturated Polyester Resin	0%	24%	73%	3%	0%
Vinyl Ester	0%	17%	78%	6%	0%
Total	4%	17%	72%	6%	0%

Unique Responses
23
41
14
20
25
18
21
37
36
57

Survey Question: Using a scale of 1 to 5 where “1” means extremely low inventory, “3” means the right amount, and “5” means extremely high inventory, how do you view inventory for the following inputs? Please only answer on products for which you have knowledge.

*Darker shading represents the higher responses by market segment. Shading does not represent statistical significance.

Industry Topics of Interest



Top Two Topics of Interest

Topic	Percent Very or Extremely Important
Inflation	20.40%
Supply Chain Disruptions	19.83%

*Top Two Topics calculated as the highest percentage of very or extremely important topics out of all very or extremely important responses.

Overall

Topic	Extremely Important	Very important	Somewhat important	Not very important	Not at all important
Sustainability and Recycling	15%	36%	41%	8%	0%
Supply Chain Disruptions	26%	55%	19%	1%	0%
Hydrogen Use	1%	8%	28%	34%	28%
Tax	10%	39%	38%	10%	3%
Regulation of Styrene	27%	36%	26%	4%	7%
Hiring and Training	23%	57%	18%	2%	0%
Inflation	35%	48%	16%	1%	0%

Unique Responses
87
86
74
79
81
84
86

Topic	Extremely Important	Very important	Somewhat important	Not very important	Not at all important
Sustainability and Recycling	17%	39%	37%	7%	0%
Supply Chain Disruptions	30%	56%	13%	2%	0%
Hydrogen Use	2%	11%	30%	33%	24%
Tax	10%	39%	43%	8%	0%
Regulation of Styrene	24%	37%	24%	6%	10%
Hiring and Training	26%	57%	15%	2%	0%
Inflation	38%	49%	13%	0%	0%

Unique Responses
54
54
46
49
51
54
53

Supplier / Distributor

Topic	Extremely Important	Very important	Somewhat important	Not very important	Not at all important
Sustainability and Recycling	7%	30%	52%	11%	0%
Supply Chain Disruptions	19%	56%	26%	0%	0%
Hydrogen Use	0%	0%	22%	39%	39%
Tax	8%	42%	33%	13%	4%
Regulation of Styrene	28%	36%	32%	0%	4%
Hiring and Training	16%	52%	28%	4%	0%
Inflation	30%	44%	22%	4%	0%

Unique Responses
27
27
23
24
25
25
27

Affiliate

Topic	Extremely Important	Very important	Somewhat important	Not very important	Not at all important
Sustainability and Recycling	33%	33%	33%	0%	0%
Supply Chain Disruptions	20%	40%	40%	0%	0%
Hydrogen Use	0%	20%	40%	20%	20%
Tax	17%	33%	17%	17%	17%
Regulation of Styrene	60%	20%	20%	0%	0%
Hiring and Training	20%	80%	0%	0%	0%
Inflation	33%	50%	17%	0%	0%

Unique Responses
6
5
5
6
5
5
6

Small: 1 - 10 Employees					
Topic	Extremely Important	Very important	Somewhat important	Not very important	Not at all important
Sustainability and Recycling	29%	43%	29%	0%	0%
Supply Chain Disruptions	17%	50%	33%	0%	0%
Hydrogen Use	0%	17%	17%	50%	17%
Tax	14%	43%	29%	0%	14%
Regulation of Styrene	50%	17%	33%	0%	0%
Hiring and Training	17%	83%	0%	0%	0%
Inflation	29%	57%	14%	0%	0%

Unique Responses
7
6
6
7
6
6
7

Medium: 11 - 100 Employees					
Topic	Extremely Important	Very important	Somewhat important	Not very important	Not at all important
Sustainability and Recycling	13%	25%	56%	6%	0%
Supply Chain Disruptions	13%	75%	13%	0%	0%
Hydrogen Use	0%	8%	25%	33%	33%
Tax	15%	46%	15%	23%	0%
Regulation of Styrene	15%	62%	15%	0%	8%
Hiring and Training	13%	69%	19%	0%	0%
Inflation	27%	67%	7%	0%	0%

Unique Responses
16
16
12
13
13
16
15

Large: 101+ Employees					
Topic	Extremely Important	Very important	Somewhat important	Not very important	Not at all important
Sustainability and Recycling	14%	38%	39%	9%	0%
Supply Chain Disruptions	30%	50%	19%	2%	0%
Hydrogen Use	2%	7%	30%	32%	29%
Tax	8%	37%	44%	8%	2%
Regulation of Styrene	27%	32%	27%	5%	8%
Hiring and Training	26%	52%	19%	3%	0%
Inflation	38%	42%	19%	2%	0%

Unique Responses
64
64
56
59
62
62
64

Survey Question: Based on what you have read and heard, how important do you consider each of the following issues to your company?

*Darker shading represents the higher responses by market segment. Shading does not represent statistical significance.

Other Industry Topics of Interest

Topic	Count
Interest Rate	1
Price	1

Based on what you have read and heard, how important do you consider each of the following issues to your company? - Other (Specify) - Text

BACKGROUND:

Purpose:

The purpose of the survey is to gauge perceptions about how the composites industry is performing over time. Published data from the survey will allow members to assess how their company's markets and inputs are trending relative to the overall composites industry; and enable ACMA to identify hot topics in the composites industry for which the association should be engaged on behalf of its members.

ACMA will also use the survey to gauge the perceived value of association membership and identify any strengths and areas for improvement.

Survey Objectives:

To assess perceptions of end market segments over the next quarter and next 9 months

To determine the size of composites inputs inventory

To identify issues that members perceive to be important in the composites industry

Survey Methodology:

The survey is conducted on a **quarterly** basis among members of ACMA.

The survey takes approximately **5 minutes** to complete and remain in the field for roughly two weeks.

Vault Consulting will distribute the survey each quarter and will be responsible for collecting, aggregating, and reporting results each quarter. Reports will be published roughly two weeks after fieldwork closes.

Sample sizes for the current quarter were as follows:

Total Respondents 88

Manufacturers 55

Supplier/Distributor 27

Affiliates 6

Data collection was conducted between 3/1/2024 to 3/15/2024.

For more information on this survey or how to participate please contact Paige Patterson at ppatterson@acmanet.org