



ACMA 3Q23 Pulse of the Industry Survey

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Compiled by Vault Consulting, LLC

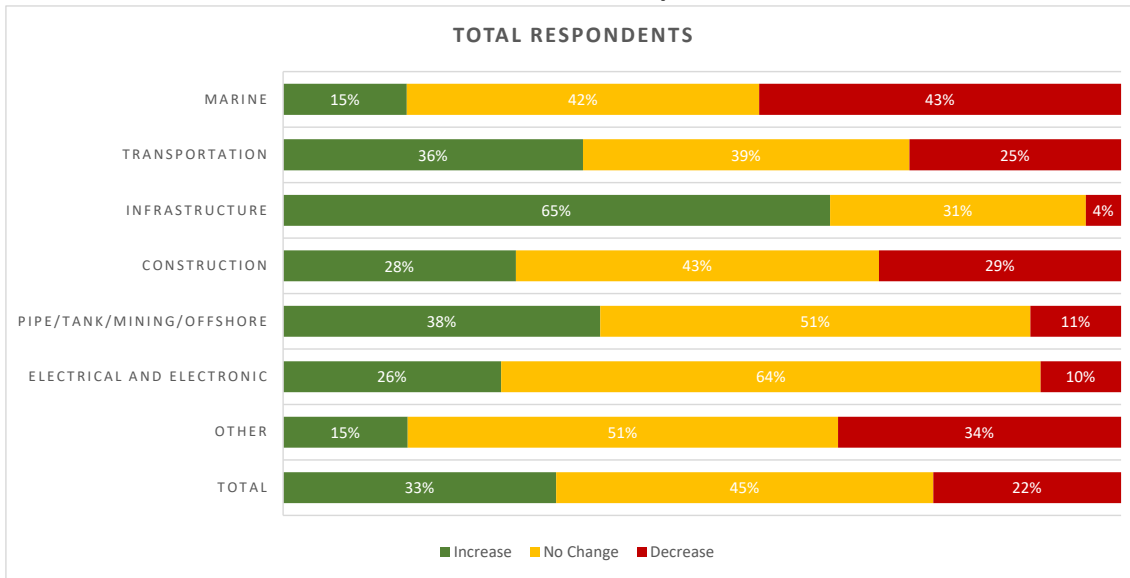


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SUMMARY OF KEY FINDINGS:

- Among total respondents, 65% report customer demand for the Infrastructure market has increased in 3Q23 vs. 2Q23. This is consistent among manufacturers and suppliers/distributors.
- Interestingly, in the Marine market, 55% of manufacturers report no change and 27% a decrease in customer demand vs. 25% of suppliers/distributors saying no change and 67% reporting a decrease this quarter vs. last quarter.
- Year over year a majority, 64%, of total respondents report customer demand for the Infrastructure market is increasing, while 52% indicate a decrease for the Marine market.
- The majority of total respondents report current product lead time is stable across all inputs, and that inventory for these product inputs are at the right amount.
- Hiring and training (90%) of workforce along with inflation (88%) top the list as extremely/very important topics of interest on the minds of total respondents.
 - 86% of total respondents also report supply chain disruptions continue to be extremely/very important.
 - Another 60% of total respondents believe regulation of styrene is an extremely/important issue.`

Customer Demand in Q3 2023 Compared with Q2 2023



Survey Question: What is the outlook for customer demand in North America in Q3 2023 compared to Q2 2023 for the following markets? Please only answer for markets for which you have knowledge.

Overall Market			
Market	Increase	No Change	Decrease
Marine	15%	42%	43%
Transportation	36%	39%	25%
Infrastructure	65%	31%	4%
Construction	28%	43%	29%
Pipe/Tank/Mining/Offshore	38%	51%	11%
Electrical and Electronic	26%	64%	10%
Other	15%	51%	34%
Total	33%	45%	22%

Company Count	
Marine	85
Transportation	91
Infrastructure	91
Construction	87
Pipe/Tank/Mining/Offshore	71
Electrical and Electronic	70
Other	71
Total	116

Manufacturer			
Market	Increase	No Change	Decrease
Marine	18%	55%	27%
Transportation	38%	42%	20%
Infrastructure	62%	31%	7%
Construction	35%	48%	17%
Pipe/Tank/Mining/Offshore	33%	46%	21%
Electrical and Electronic	33%	57%	10%
Other	21%	52%	26%
Total	35%	47%	18%

Company Count	
Marine	49
Transportation	55
Infrastructure	55
Construction	52
Pipe/Tank/Mining/Offshore	39
Electrical and Electronic	42
Other	42
Total	73

Supplier / Distributor			
Market	Increase	No Change	Decrease
Marine	8%	25%	67%
Transportation	28%	36%	36%
Infrastructure	67%	33%	0%
Construction	17%	34%	49%
Pipe/Tank/Mining/Offshore	44%	56%	0%
Electrical and Electronic	11%	79%	11%
Other	3%	52%	45%
Total	26%	44%	30%

Company Count	
Marine	36
Transportation	36
Infrastructure	36
Construction	35
Pipe/Tank/Mining/Offshore	32
Electrical and Electronic	28
Other	29
Total	38

Affiliate			
Market	Increase	No Change	Decrease
Marine	33%	33%	33%
Transportation	75%	25%	0%
Infrastructure	100%	0%	0%
Construction	33%	67%	0%
Pipe/Tank/Mining/Offshore	33%	67%	0%
Electrical and Electronic	67%	33%	0%
Other	33%	33%	33%
Total	57%	35%	9%

Company Count
3
4
4
3
3
3
3
5

Small: 1 - 10 Employees			
Market	Increase	No Change	Decrease
Marine	20%	60%	20%
Transportation	50%	33%	17%
Infrastructure	86%	14%	0%
Construction	20%	80%	0%
Pipe/Tank/Mining/Offshore	0%	100%	0%
Electrical and Electronic	40%	60%	0%
Other	25%	50%	25%
Total	38%	54%	8%

Company Count
5
6
7
5
5
5
4
8

Medium: 11 - 100 Employees			
Market	Increase	No Change	Decrease
Marine	36%	43%	21%
Transportation	57%	21%	21%
Infrastructure	69%	25%	6%
Construction	56%	31%	13%
Pipe/Tank/Mining/Offshore	38%	54%	8%
Electrical and Electronic	25%	67%	8%
Other	25%	58%	17%
Total	45%	41%	13%

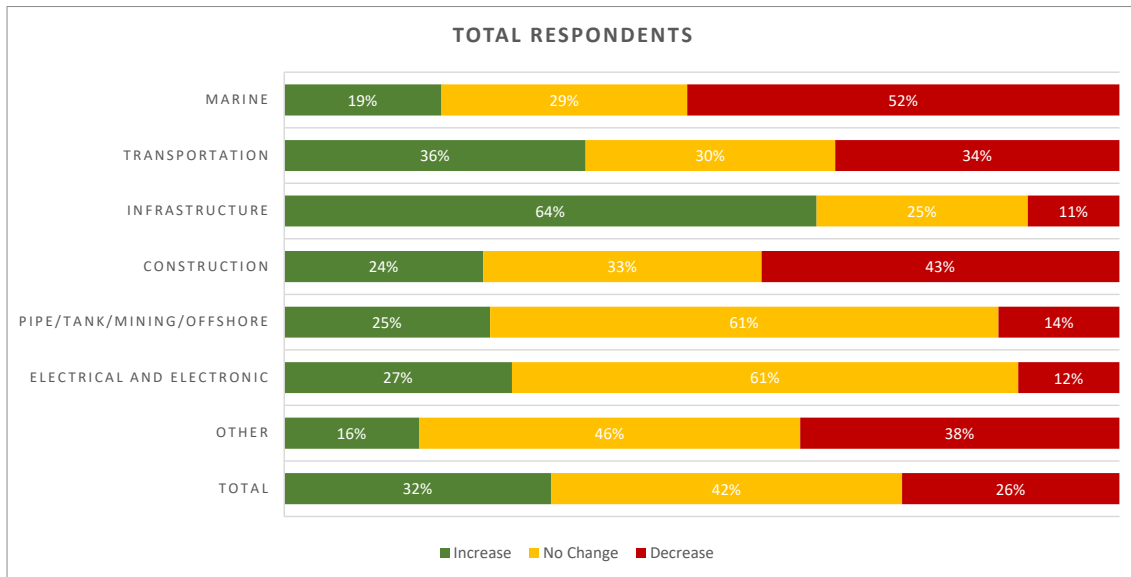
Company Count
14
14
16
16
13
12
12
22

Large: 101+ Employees			
Market	Increase	No Change	Decrease
Marine	10%	41%	49%
Transportation	31%	43%	27%
Infrastructure	63%	33%	4%
Construction	22%	43%	35%
Pipe/Tank/Mining/Offshore	41%	46%	13%
Electrical and Electronic	25%	64%	11%
Other	12%	50%	38%
Total	29%	45%	25%

Company Count
69
75
72
69
56
56
58
86

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

Customer Demand in North American 2023 vs. 2022



Survey Question: What is the outlook for customer demand in North America in 2023 compared to 2022 in the following markets? Please only answer for markets for which you have knowledge.

Overall Market			
Market	Increase	No Change	Decrease
Marine	19%	29%	52%
Transportation	36%	30%	34%
Infrastructure	64%	25%	11%
Construction	24%	33%	43%
Pipe/Tank/Mining/Offshore	25%	61%	14%
Electrical and Electronic	27%	61%	12%
Other	16%	46%	38%
Total	32%	42%	26%

Company Count	
	82
	93
	87
	81
	66
	63
	65
Total	116

Manufacturer			
Market	Increase	No Change	Decrease
Marine	21%	38%	40%
Transportation	39%	30%	32%
Infrastructure	60%	26%	13%
Construction	28%	40%	32%
Pipe/Tank/Mining/Offshore	22%	53%	25%
Electrical and Electronic	34%	50%	16%
Other	21%	44%	36%
Total	33%	39%	28%

Company Count	
	47
	57
	53
	47
	36
	38
	39
Total	73

Supplier / Distributor			
Market	Increase	No Change	Decrease
Marine	14%	17%	69%
Transportation	28%	31%	42%
Infrastructure	65%	26%	9%
Construction	18%	24%	59%
Pipe/Tank/Mining/Offshore	27%	70%	3%
Electrical and Electronic	12%	80%	8%
Other	8%	50%	42%
Total	25%	40%	35%

Company Count	
	35
	36
	34
	34
	30
	25
	26
Total	38

Affiliate			
Market	Increase	No Change	Decrease
Marine	33%	33%	33%
Transportation	75%	25%	0%
Infrastructure	100%	0%	0%
Construction	33%	33%	33%
Pipe/Tank/Mining/Offshore	33%	67%	0%
Electrical and Electronic	67%	33%	0%
Other	33%	33%	33%
Total	57%	30%	13%

Company Count
3
4
4
3
3
3
5

Small: 1 - 10 Employees			
Market	Increase	No Change	Decrease
Marine	40%	40%	20%
Transportation	67%	17%	17%
Infrastructure	71%	29%	0%
Construction	20%	60%	20%
Pipe/Tank/Mining/Offshore	0%	100%	0%
Electrical and Electronic	40%	60%	0%
Other	25%	50%	25%
Total	41%	49%	11%

Company Count
5
6
7
5
5
5
4
8

Medium: 11 - 100 Employees			
Market	Increase	No Change	Decrease
Marine	46%	31%	23%
Transportation	50%	25%	25%
Infrastructure	67%	20%	13%
Construction	46%	38%	15%
Pipe/Tank/Mining/Offshore	20%	60%	20%
Electrical and Electronic	30%	60%	10%
Other	30%	50%	20%
Total	44%	38%	18%

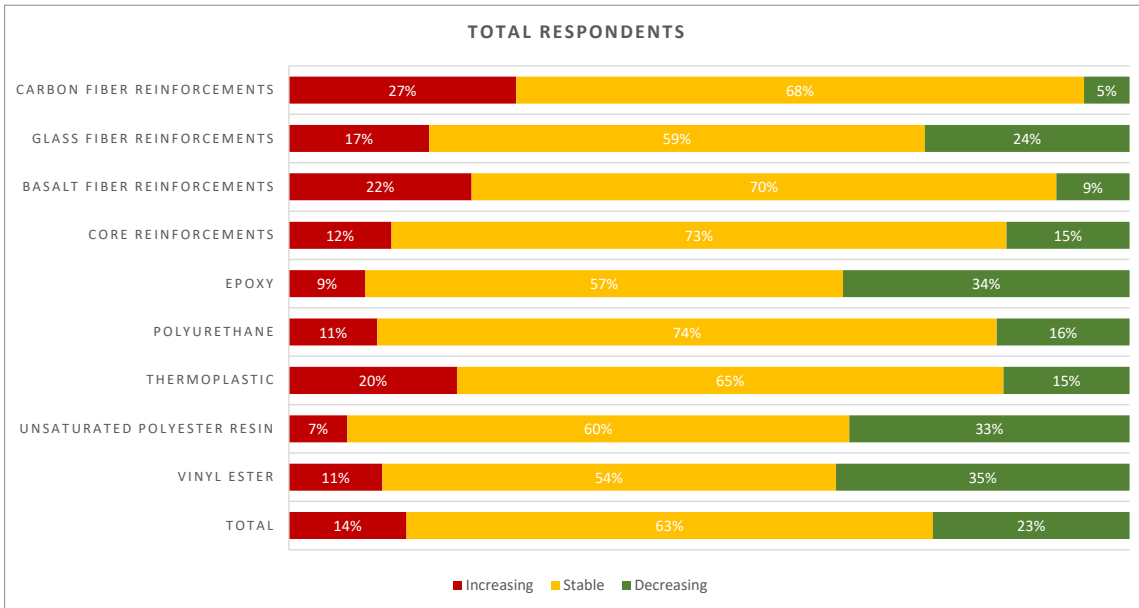
Company Count
13
16
15
13
10
10
10
22

Large: 101+ Employees			
Market	Increase	No Change	Decrease
Marine	12%	28%	60%
Transportation	31%	32%	37%
Infrastructure	62%	26%	12%
Construction	20%	30%	50%
Pipe/Tank/Mining/Offshore	28%	57%	15%
Electrical and Electronic	25%	61%	14%
Other	13%	44%	43%
Total	28%	38%	34%

Company Count
67
75
69
66
54
51
54
86

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

Current Product Lead Time



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

Overall			
Product	Increasing	Stable	Decreasing
Carbon Fiber Reinforcements	27%	68%	5%
Glass Fiber Reinforcements	17%	59%	24%
Basalt Fiber Reinforcements	22%	70%	9%
Core Reinforcements	12%	73%	15%
Epoxy	9%	57%	34%
Polyurethane	11%	74%	16%
Thermoplastic	20%	65%	15%
Unsaturated Polyester Resin	7%	60%	33%
Vinyl Ester	11%	54%	35%
Total	14%	63%	23%

Company Count
35
76
21
39
42
36
38
70
61
99

Manufacturer			
Product	Increasing	Stable	Decreasing
Carbon Fiber Reinforcements	29%	71%	0%
Glass Fiber Reinforcements	16%	63%	21%
Basalt Fiber Reinforcements	27%	64%	9%
Core Reinforcements	19%	71%	10%
Epoxy	13%	65%	22%
Polyurethane	8%	83%	8%
Thermoplastic	22%	65%	13%
Unsaturated Polyester Resin	10%	71%	19%
Vinyl Ester	15%	65%	21%
Total	16%	68%	16%

Company Count
21
56
11
21
23
24
23
42
34
65

Supplier / Distributor			
Product	Increasing	Stable	Decreasing
Carbon Fiber Reinforcements	21%	64%	14%
Glass Fiber Reinforcements	15%	50%	35%
Basalt Fiber Reinforcements	10%	80%	10%
Core Reinforcements	0%	78%	22%
Epoxy	0%	47%	53%
Polyurethane	8%	58%	33%
Thermoplastic	13%	67%	20%
Unsaturated Polyester Resin	0%	43%	57%
Vinyl Ester	4%	41%	56%
Total	7%	55%	38%

Company Count
14
20
10
18
19
12
15
28
27
32

Affiliate			
Product	Increasing	Stable	Decreasing
Carbon Fiber Reinforcements	50%	50%	0%
Glass Fiber Reinforcements	50%	50%	0%
Basalt Fiber Reinforcements	50%	50%	0%
Core Reinforcements	50%	50%	0%
Epoxy	50%	50%	0%
Polyurethane	50%	50%	0%
Thermoplastic	50%	50%	0%
Unsaturated Polyester Resin	50%	50%	0%
Vinyl Ester	50%	50%	0%
Total	50%	50%	0%

Company Count
2
2
2
2
2
2
2
2
2
2
2

Small: 1 - 10 Employees			
Product	Increasing	Stable	Decreasing
Carbon Fiber Reinforcements	33%	67%	0%
Glass Fiber Reinforcements	25%	75%	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	0%	100%	0%
Vinyl Ester	0%	100%	0%
Total	9%	91%	0%

Company Count
3
4
2
2
2
2
3
3
2
4

Medium: 11-100 Employees			
Product	Increasing	Stable	Decreasing
Carbon Fiber Reinforcements	60%	40%	0%
Glass Fiber Reinforcements	8%	62%	31%
Basalt Fiber Reinforcements	0%	75%	25%
Core Reinforcements	10%	80%	10%
Epoxy	0%	67%	33%
Polyurethane	14%	57%	29%
Thermoplastic	25%	63%	13%
Unsaturated Polyester Resin	8%	58%	33%
Vinyl Ester	11%	56%	33%
Total	14%	62%	24%

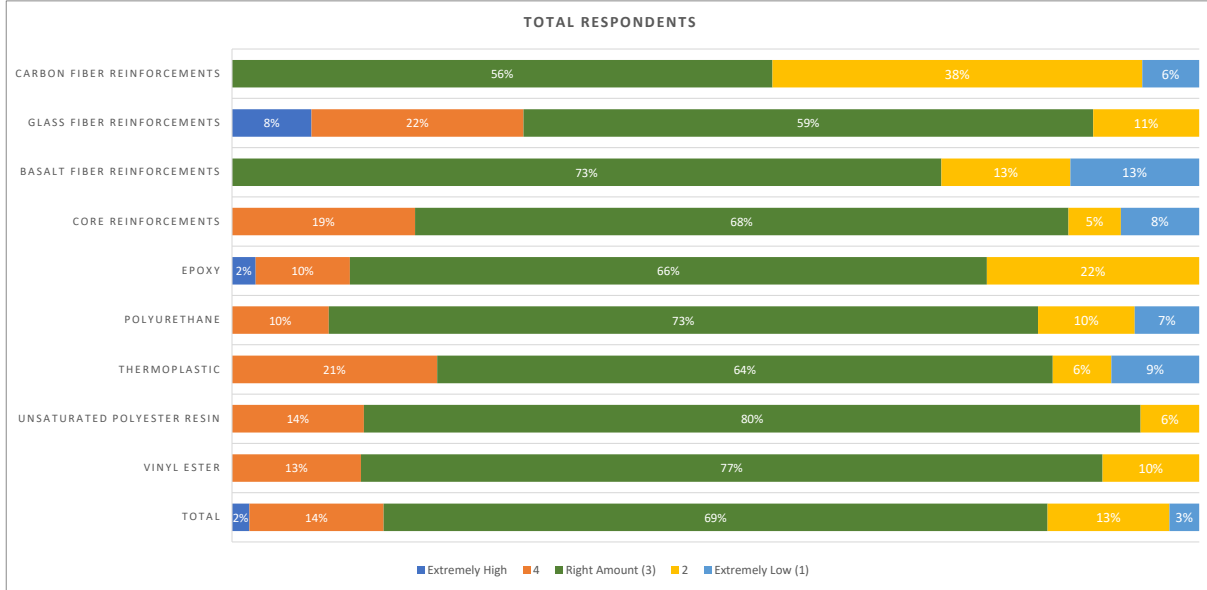
Company Count
5
13
4
10
6
7
8
12
9
17

Large: 101+ Employees			
Product	Increasing	Stable	Decreasing
Carbon Fiber Reinforcements	21%	72%	7%
Glass Fiber Reinforcements	18%	57%	25%
Basalt Fiber Reinforcements	29%	65%	6%
Core Reinforcements	14%	69%	17%
Epoxy	11%	53%	36%
Polyurethane	10%	76%	14%
Thermoplastic	21%	62%	17%
Unsaturated Polyester Resin	7%	58%	35%
Vinyl Ester	12%	52%	37%
Total	14%	61%	25%

Company Count
29
61
17
29
36
29
29
57
52
78

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

Current Inventory



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.

Overall

Product	Extremely High	4	Right Amount (3)	2	Extremely Low (1)
Carbon Fiber Reinforcements	0%	0%	56%	38%	6%
Glass Fiber Reinforcements	8%	22%	59%	11%	0%
Basalt Fiber Reinforcements	0%	0%	73%	13%	13%
Core Reinforcements	0%	19%	68%	5%	8%
Epoxy	2%	10%	66%	22%	0%
Polyurethane	0%	10%	73%	10%	7%
Thermoplastic	0%	21%	64%	6%	9%
Unsaturated Polyester Resin	0%	14%	80%	6%	0%
Vinyl Ester	0%	13%	77%	10%	0%
Total	2%	14%	69%	13%	3%

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

Company Count
34
73
15
37
41
30
33
66
60
92

Manufacturer

Product	Extremely High	4	Right Amount (3)	2	Extremely Low (1)
Carbon Fiber Reinforcements	0%	0%	62%	33%	5%
Glass Fiber Reinforcements	2%	20%	64%	15%	0%
Basalt Fiber Reinforcements	0%	0%	80%	10%	10%
Core Reinforcements	0%	10%	71%	5%	14%
Epoxy	0%	8%	67%	25%	0%
Polyurethane	0%	5%	85%	5%	5%
Thermoplastic	0%	29%	52%	10%	10%
Unsaturated Polyester Resin	0%	10%	80%	10%	0%
Vinyl Ester	0%	9%	77%	14%	0%
Total	0%	12%	70%	14%	3%

Company Count
21
55
10
21
24
20
21
40
35
63

Supplier / Distributor

Product	Extremely High	4	Right Amount (3)	2	Extremely Low (1)
Carbon Fiber Reinforcements	0%	0%	46%	46%	8%
Glass Fiber Reinforcements	28%	28%	44%	0%	0%
Basalt Fiber Reinforcements	0%	0%	60%	20%	20%
Core Reinforcements	0%	31%	63%	6%	0%
Epoxy	6%	12%	65%	18%	0%
Polyurethane	0%	20%	50%	20%	10%
Thermoplastic	0%	8%	83%	0%	8%
Unsaturated Polyester Resin	0%	19%	81%	0%	0%
Vinyl Ester	0%	20%	76%	4%	0%
Total	4%	18%	65%	10%	3%

Company Count
13
18
5
16
17
10
12
26
25
29

Affiliate					
Product	Extremely High	4	Right Amount (3)	2	Extremely Low (1)
Carbon Fiber Reinforcements	0%	0%	100%	0%	0%
Glass Fiber Reinforcements	0%	0%	67%	33%	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%	50%	50%	0%
Unsaturated Polyester Resin	0%	0%	100%	0%	0%
Vinyl Ester	0%	0%	100%	0%	0%
Total	0%	0%	86%	14%	0%

Company Count
3
3
2
2
3
2
2
2
2
3

Small: 1 - 10 Employees					
Product	Extremely High	4	Right Amount (3)	2	Extremely Low (1)
Carbon Fiber Reinforcements	0%	0%	100%	0%	0%
Glass Fiber Reinforcements	0%	0%	75%	25%	0%
Basalt Fiber Reinforcements	0%	0%	100%	0%	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%	50%	50%	0%
Vinyl Ester	0%	0%	100%	0%	0%
Total	0%	0%	88%	12%	0%

Company Count
3
4
1
1
2
1
1
2
2
1
4

Medium: 11 - 100 Employees					
Product	Extremely High	4	Right Amount (3)	2	Extremely Low (1)
Carbon Fiber Reinforcements	0%	0%	60%	40%	0%
Glass Fiber Reinforcements	0%	15%	77%	8%	0%
Basalt Fiber Reinforcements	0%	0%	67%	0%	33%
Core Reinforcements	0%	10%	70%	0%	20%
Epoxy	0%	0%	67%	33%	0%
Polyurethane	0%	25%	75%	0%	0%
Thermoplastic	0%	0%	71%	14%	14%
Unsaturated Polyester Resin	0%	8%	83%	8%	0%
Vinyl Ester	0%	10%	60%	30%	0%
Total	0%	9%	71%	14%	6%

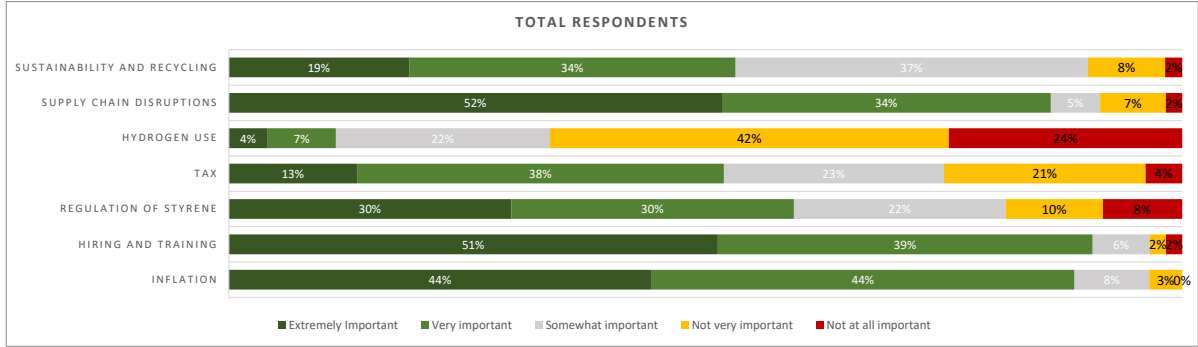
Company Count
5
13
3
10
6
4
7
12
10
16

Large: 101+ Employees					
Product	Extremely High	4	Right Amount (3)	2	Extremely Low (1)
Carbon Fiber Reinforcements	0%	0%	55%	38%	7%
Glass Fiber Reinforcements	10%	24%	54%	12%	0%
Basalt Fiber Reinforcements	0%	0%	69%	23%	8%
Core Reinforcements	0%	21%	68%	7%	4%
Epoxy	3%	11%	67%	19%	0%
Polyurethane	0%	7%	74%	11%	7%
Thermoplastic	0%	27%	58%	8%	8%
Unsaturated Polyester Resin	0%	15%	81%	4%	0%
Vinyl Ester	0%	14%	80%	6%	0%
Total	2%	15%	68%	12%	2%

Company Count
29
59
13
28
36
27
26
54
51
75

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

Industry Topics of Interest



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

Top Two Topics of Interest

Topic	Percent Very or Extremely Important
Hiring and Training	21.37%
Inflation	20.56%

*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	19%	34%	37%	8%	2%
Supply Chain Disruptions	52%	34%	5%	7%	2%
Hydrogen Use	4%	7%	22%	42%	24%
Tax	13%	38%	23%	21%	4%
Regulation of Styrene	30%	30%	22%	10%	8%
Hiring and Training	51%	39%	6%	2%	2%
Inflation	44%	44%	8%	3%	0%

Company Count
111
116
98
104
108
117
115

Manufacturer

Topic	Extremely Important	Very important	Somewhat important	Not very important	Not at all important
Sustainability and Recycling	18%	32%	39%	7%	3%
Supply Chain Disruptions	58%	29%	5%	7%	1%
Hydrogen Use	2%	7%	25%	41%	26%
Tax	15%	43%	24%	16%	3%
Regulation of Styrene	26%	33%	21%	11%	9%
Hiring and Training	49%	41%	8%	1%	0%
Inflation	47%	43%	4%	6%	0%

Company Count
71
73
61
68
70
73
72

Supplier / Distributor

Topic	Extremely Important	Very important	Somewhat important	Not very important	Not at all important
Sustainability and Recycling	17%	37%	34%	11%	0%
Supply Chain Disruptions	45%	45%	3%	8%	0%
Hydrogen Use	6%	9%	19%	44%	22%
Tax	10%	32%	26%	32%	0%
Regulation of Styrene	38%	24%	24%	9%	6%
Hiring and Training	53%	39%	3%	3%	3%
Inflation	42%	47%	11%	0%	0%

Company Count
35
38
32
31
34
38
38

Affiliate

Topic	Extremely Important	Very important	Somewhat important	Not very important	Not at all important
Sustainability and Recycling	40%	40%	20%	0%	0%
Supply Chain Disruptions	20%	40%	20%	0%	20%
Hydrogen Use	20%	0%	20%	40%	20%
Tax	20%	20%	0%	20%	40%
Regulation of Styrene	25%	25%	25%	0%	25%
Hiring and Training	67%	17%	0%	0%	17%
Inflation	20%	40%	40%	0%	0%

Company Count
5
5
5
5
4
6
5

Small: 1 - 10 Employees

Topic	Extremely Important	Very important	Somewhat important	Not very important	Not at all important
Sustainability and Recycling	43%	29%	29%	0%	0%
Supply Chain Disruptions	14%	43%	14%	14%	14%
Hydrogen Use	14%	0%	14%	43%	29%
Tax	0%	57%	0%	29%	14%
Regulation of Styrene	17%	0%	33%	33%	17%
Hiring and Training	50%	13%	13%	0%	25%
Inflation	14%	43%	43%	0%	0%

Company Count
7
7
7
7
6
8
7

Medium: 11 - 100 Employees					
Topic	Extremely Important	Very important	Somewhat important	Not very important	Not at all important
Sustainability and Recycling	26%	11%	53%	11%	0%
Supply Chain Disruptions	45%	45%	9%	0%	0%
Hydrogen Use	0%	6%	25%	38%	31%
Tax	20%	30%	25%	25%	0%
Regulation of Styrene	25%	25%	25%	5%	20%
Hiring and Training	38%	57%	5%	0%	0%
Inflation	33%	62%	5%	0%	0%

Company Count
19
22
16
20
20
21
21

Large: 101+ Employees					
Topic	Extremely Important	Very important	Somewhat important	Not very important	Not at all important
Sustainability and Recycling	15%	40%	34%	8%	2%
Supply Chain Disruptions	56%	31%	3%	8%	1%
Hydrogen Use	4%	8%	23%	43%	23%
Tax	13%	39%	25%	19%	4%
Regulation of Styrene	32%	33%	21%	10%	5%
Hiring and Training	55%	38%	6%	2%	0%
Inflation	49%	40%	6%	5%	0%

Company Count
85
87
75
77
82
88
87

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

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 3Q23 were as follows:

Total Respondents 120

Manufacturers 75

Supplier/Distributor 39

Affiliates 6

Data collection was conducted between 6/7 and 6/26/2023.

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