



# **SPECIAL REPORT:** **ATSSA Raw Materials Update** May 2022



American Traffic Safety Services Association  
ATSSA.com

## Summary

Since the first quarter of 2021, the American Traffic Safety Services Association (ATSSA) has monitored the availability of several key raw materials on behalf of the roadway safety infrastructure industry as it has impacted ATSSA's primary focus to move Toward Zero Deaths on our nation's roads.

ATSSA conducted its third member survey on raw materials availability in April of 2022 and found that 92% of respondents were experiencing shortages.

In the latest ATSSA survey, 92% of respondents were experiencing shortages, which is up from 88% in June 2021 and 75% in March 2021.

The raw materials in limited supply have remained consistent throughout this period, according to the April 2022 survey. The top three items mentioned in the survey include:

- **Metals** (steel and aluminum) are used for a variety of purposes and were identified as an issue by five out of the six ATSSA manufacturer types: guardrail, pavement marking, temporary traffic control, traffic signal and sign manufacturers.
- **Resins** are used in a variety of ways and are utilized in many divisions within ATSSA including guardrail manufacturers, high friction surface treatment (HFST), pavement marking, sign and temporary traffic control. Therefore, when this product is in short supply, many members are impacted. Thirty-two survey respondents across multiple manufacturing divisions within ATSSA identified resin as a material in short supply.
- **Electronic components** affect temporary traffic control including intelligent transportation systems (ITS) and traffic signals divisions as well as divisions that use technology to assist with the application or removal of traffic control products. Electronic components have broad application throughout the roadway safety infrastructure industry.

A separate issue that emerged from the survey was the impact of the significant increases in freight costs as well as prices for specific raw materials. Some of these costs are associated with the significant increases in diesel fuel costs, costs and delays from shipping overseas, and incentive payments for drivers due to labor shortages in this industry.

The top three raw material items mentioned in ATSSA's April 2022 survey were metals (steel and aluminum), resin and electronic components.

The overall conclusion of the responses to the survey is that the roadway safety infrastructure industry continues to operate in the midst of a raw material shortage and that ATSSA members expect it to continue for another six months or more. Additionally, there has been an impact on cost and price on many products as the increased demand for these raw materials as well as the shipping costs are continuing to rise.

## **BACKGROUND**

The impetus for this survey was to follow up on market tightening due to external factors that started in 2020 with reduced production from plant shutdowns as a result of COVID-19, followed by extreme weather events in the Midwest/Texas in February 2021, and then compounded by supply chain disruptions in obtaining materials from overseas and in getting them from U.S. ports to their final destination with ATSSA members. The question at this point was the ongoing impact of those factors as well as the effects of recent global events such as the war in Ukraine.

This report provides the findings of the third of three member surveys conducted by ATSSA on the raw materials supply issues.

In March of 2021, ATSSA conducted the first survey and found that 75% of members who responded were experiencing raw materials shortages. The second member survey, conducted in June of 2021, found that 88% of respondents were experiencing shortages, an increase of 13% of ATSSA members experiencing raw material shortages in three months.

Two months later, in August of 2021, ATSSA learned the two biggest manufacturers of glass beads had declared force majeure—an inability to fulfill a contract due to circumstances beyond their control—because they could not obtain the oxygen needed to produce them.

ATSSA members' supply of oxygen was cut by 70% in some geographic areas and 100% in others because of the significant increase of hospitalizations due to the spread of COVID-19 variants and the national trend of oxygen producers realigning their supplies from industrial customers to medical needs in support of the pandemic, according to information from ATSSA members. This situation directly affected the pavement marking industry as members tried to find alternatives to the shortfalls in glass beads.

ATSSA reached out to department of transportation (DOT) leaders across the country on behalf of members at each stage of the materials shortage to explain the situation and seek their support in the midst of the nationwide crisis.

In April of this year, ATSSA chose to again survey members to assess the current situation in the roadway safety industry.

This report details the findings from the April 2022 ATSSA survey.

## **SURVEY FINDINGS**

Ninety-five members within ATSSA's Manufacturing Division provided input for the April 2022 raw materials survey, which was the third of three ATSSA surveys on this topic and is identified as Survey 3.

As shown in Table 1, respondents to Survey 3 included representation from the pavement marking industry (34), temporary traffic control (12), guardrail (10), signs (8),

traffic signals (6) and HFST (3) specialties. An additional 22 respondents classified themselves as “other” and represented companies offering traffic control products, high tension cable barrier, portable traffic signals, crash attenuators and pavement marking removal companies.

**Table 1: Number of respondents by ATSSA division for the April 2022 member survey (Survey 3)**

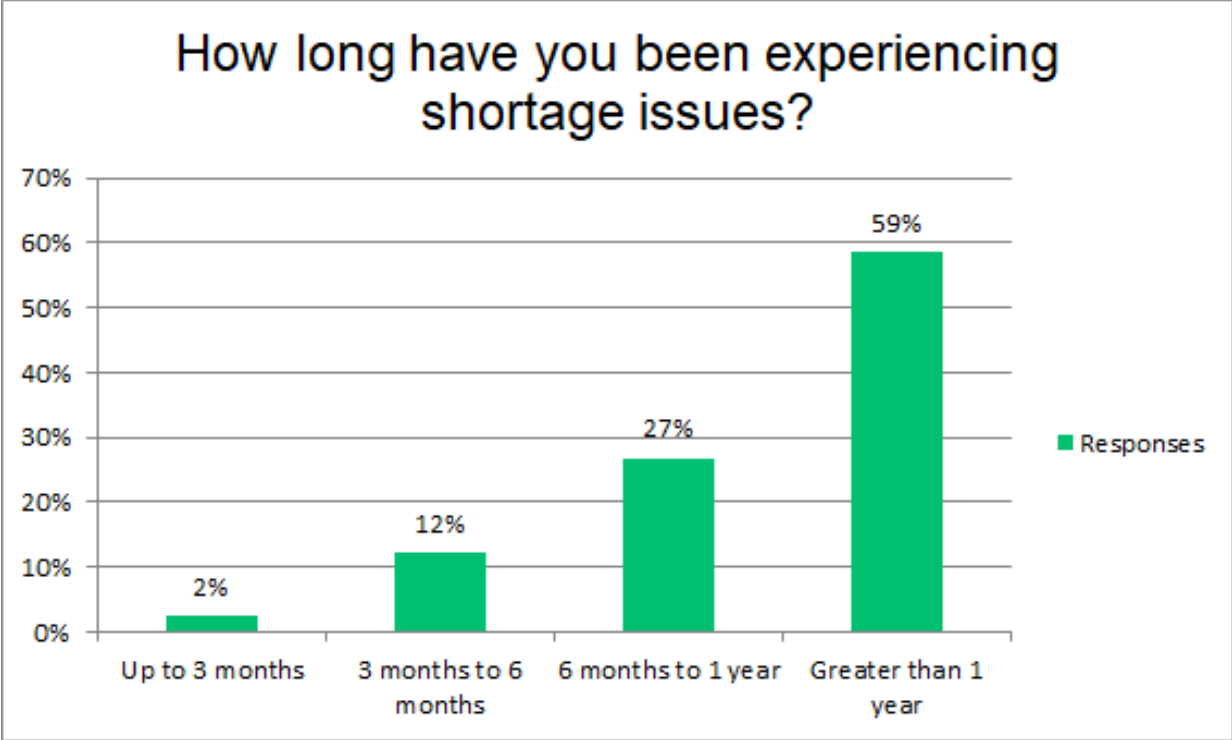
<b>ATSSA Division</b>	<b>Number of Respondents (Survey 3)</b>
Pavement Marking	34
Temporary Traffic Control	12
Guardrail	10
Signs	8
Traffic Signals	6
High Friction Surface Treatment (HFST)	3
Other	22
<b>Total</b>	<b>95</b>

The first survey sent to ATSSA members in March 2021 included responses from 66 members. The second survey in June 2021 included 45 respondents. A breakdown of the number of respondents by division is shown in Table 2.

**Table 2 - Number of respondents by ATSSA division for member Surveys 1 and 2**

<b>ATSSA Division</b>	<b>Number of Respondents (Survey 1)</b>	<b>Number of Respondents (Survey 2)</b>
Pavement Marking	21	7
Temporary Traffic Control	16	10
Guardrail	7	6
Signs	9	9
Traffic Signals	NA	NA
High Friction Surface Treatment (HFST)	3	3
Other	10	10
<b>Total</b>	<b>66</b>	<b>45</b>

As can be seen by the following chart, Survey 3 found the largest percentage of survey respondents – 59% – have been experiencing shortage issues for greater than one year. Another 27% have been experiencing a shortage issue for six months to a year.



**Figure 1: Percentage of Survey 3 respondents experiencing shortages with respect to time**

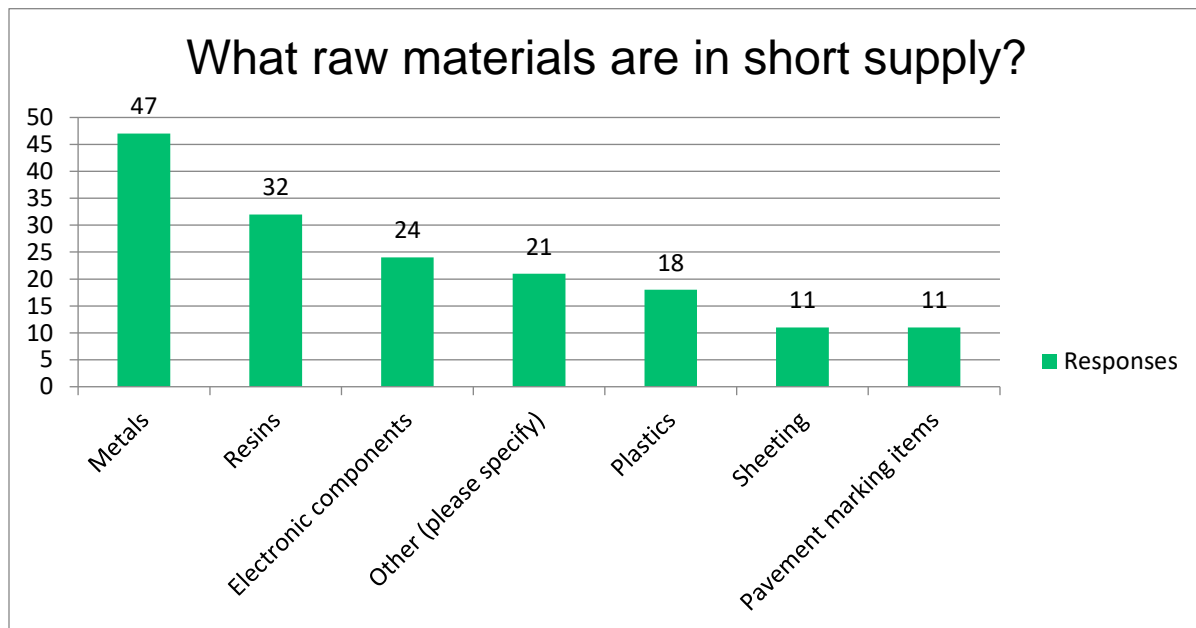
The responses from ATSSA members identified many raw materials that are in short supply, which continued from both surveys in 2021. The top three raw materials identified were:

- Metals** (steel and aluminum) – Forty-seven respondents, representing five of the six manufacturer types, identified steel or aluminum as a product in short supply. Some of the issues contributing to the shortage of metals identified in the survey include labor shortage issues and competing market segments like auto and fiber optics manufacturers. Many mills are producing at capacity and are competing with other industries like the fiber optics industry, which is carrying out a large initiative to place fiber optic cable in rural areas. As reported in the Winter Issue of ATSSA’s Roadway Safety magazine, there is hope for some relief as two big domestic steelmakers – Nucor and U.S. Steel – announced plans to construct new plants and are searching for locations. Some of the specific items identified in the survey included issues with fasteners, high tension cables and hydraulic pumps.
- Resins** – Thirty-two respondents across multiple divisions within ATSSA identified resin as a material in short supply. This product is used in a variety of ways and utilized in many divisions within ATSSA including by guardrail, HFST, pavement marking, sign and temporary traffic control manufacturers. Therefore, when this product is in short supply, many ATSSA members are impacted.
- Electronic components** – Twenty-four respondents from four out of six manufacturing categories indicated electronic components were in short supply. This

mainly affects both the temporary traffic control and traffic signals divisions. These electronic components are part of the global semiconductor chip shortage and are utilized in many ATSSA members' products. Everything from computers to modems to solar panels and test equipment have been in high demand for the past two years and there are mixed reports on whether the demand and supply gaps have been shrinking, which would signal an end of the shortage.

The following chart - Figure 2 - shows the breakdown of all responses to Survey 3.

**Figure 2: Types of raw materials in short supply (Survey 3 responses)**



Responses provided under the "other" category included: fasteners, hydraulic pumps, Calcined Bauxite aggregate for HFST, plywood and truck chassis. Comparing this data to the previous year's surveys, metals and resins top the chart from both the March 2021 and June 2021 surveys.

After identifying the raw materials in short supply, the question is how this will affect products manufactured and supplied by ATSSA members. The results obtained from the April 2022 survey are similar to those obtained from the previous surveys, with the chief impact on products falling under pavement markings, signs, traffic control devices and products with electronic components in them such as signals and solar-panel type devices. The list includes:

- Crash cushions
- Delineator posts and plastic channelizers
- Guardrail and guardrail terminals
- High tension cable barriers
- Pavement markings (all paints, thermoplastic and preformed thermoplastic)
- Portable message signs



- Portable traffic signals
- Reflective products
- Solar products
- Temporary traffic control devices
- Traffic signs
- Truck mounted attenuators.

To gauge the impact of the shortage of raw material supply on the production of safety hardware and devices industry, the survey asked members to estimate how long they expected the shortage to last.

Ninety percent of respondents indicated they thought it would last greater than six additional months, with 49% of those respondents thinking it will last greater than a year. This situation puts ATSSA members in the position of seeking ways to address unmet demand while simultaneously working to secure additional projects for this year's construction season and finding creative solutions for future projections.



90 % OF RESPONDENTS THINK  
THE RAW MATERIALS  
SHORTAGE WILL LAST AT LEAST  
6 MORE MONTHS OR LONGER.

When asked about their ability to meet customer needs for the 2022 construction season, less than half – 42% – of respondents thought they could succeed based on the current supply and demand for raw materials. That was based on the additional lead times currently needed to obtain products. Some ATSSA members said lead times had increased to four to six weeks. Others said the time had doubled.

On a positive note, the percentage of ATSSA members unable to meet contractual obligations had significantly improved between the June 2021 and April 2022 surveys.

In June 2021, 34% of ATSSA members expected to be able to meet contractual obligations. However, 57% of respondents to the April 2022 survey expected to meet them.

Other topics identified in the survey included:

- Challenges in finding domestic metals to comply with the Buy America Act policy;
- Continued labor shortages in multiple markets that are directly impacting the roadway safety industry;
- Extended lead times – 4 to 6 weeks or more on some products;
- Increases in raw material costs;
- Lack of price escalator clauses in contracts; and
- Limited suppliers of certain products.

## CONCLUSION

The April 2022 ATSSA survey received a significant response, with 95 ATSSA manufacturing members providing input.

Each of the ATSSA surveys showed that raw materials shortages were having a major impact on members who are directly engaged in providing roadway safety infrastructure, which poses a nationwide safety risk because their work is designed to save lives on streets and highways across the country.

In addition, the surveys showed that the percentage of members experiencing raw material shortages consistently increased between March 2021 and April 2022.

On the face of it, 92% of ATSSA members surveyed are experiencing a raw material shortage that 90% of members expect to last for another six months or longer. Overall, the top three raw material shortages that were identified include metals (steel and aluminum specifically), resins and electronic components, which has a widespread impact within all divisions of ATSSA as members continue to manufacture the roadway safety devices utilized on our nation's roadways.

Additionally, there has been an impact on cost and price on many products as the increased demand for these raw materials as well as the shipping costs are continuing to rise.

As ATSSA members learn from the experience of volatile raw material markets and additional lead times from the past two years, the result could lead to better business practices to meet their contractual obligations.

Significant supply chain disruptions remain due to global events since the start of the pandemic and currently ongoing that are delaying product shipments and significantly increasing freight costs. Overall, costs continue to be volatile as there are still a lot of unknowns moving forward with geopolitical issues globally, freight costs, potential unmet demand in other competing industries such as auto manufacturing, and a large influx of projects that are on the horizon from the Infrastructure Investment and Jobs Act (IIJA). The increase in funding from the IIJA is great for the roadway safety industry; however, the current inflationary pressures will potentially influence the number of roadway safety projects and, in the end, the number of lives being saved on our roadways.

Moving forward, the outlook is good for the roadway safety infrastructure industry and ATSSA members as they learn how to leverage their resources and manage their businesses in an extremely volatile situation on many fronts.





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