



**ACCUFORM®**  
Justrite Safety Group

SAFETY IDENTIFICATION

# How to Choose the Right Sign Material







## Signs are used in virtually every environment and application.

**With all the different sign materials out there, what are the best ones for specific environments?**

Can you imagine a cracked, chipped, and completely faded sign preventing someone from wandering into a dangerous confined space? Probably not. What about the old and faded high voltage sign that's supposed to protect workers from serious electrocution hazards? Are they really protected with an illegible sign? Not at all. Damaged, battered, and faded signs are almost as

useless as having no sign at all, which is why selecting the right material for your sign is every bit as important as the message that goes on it.

Workers depend on the signs warning them of potential hazards in their work areas to be able to withstand the elements and their environment. A sign that falls apart or fades into illegibility after repeated washdowns isn't just a bad purchase – it's a purchase that could cost someone their life or livelihood.

If you don't want to be slammed with a high priced OSHA citation due to an illegible sign or serious workplace injuries and workers compensation claims, it's best to obey OSHA's safety sign requirements. Per OSHA 1910.145(e)(2), "... The wording of any sign should be easily read and concise. The sign should contain sufficient information to be easily understood..."

# What’s the true cost of choosing the wrong sign material?

A safety sign should be easily understood throughout its lifetime – not faded. If the material you’ve selected doesn’t last where you need it to – that’s aggravation you don’t need. Avoid settling for the wrong sign material and the hassle of replacing it year-after-year. No one has time for an unwanted cost like that. Here’s what the true cost of a sign looks like.

Material Name	Initial Cost	15-Year Replacement Frequency	Total Cost
Adhesive Vinyl	\$12.46	8	\$99.68
Plastic	\$13.53	8	\$108.24
Aluminum	\$21.51	3	\$64.53
Dura-Vinyl™	\$14.33	3	\$42.99
Dura-Plastic™	\$26.48	3	\$79.44
Dura-Fiberglass™	\$26.48	2	\$52.96
Aluma-Lite™	\$27.93	2	\$55.86
Accu-Shield™	\$32.86	1	\$32.86

Above cost is based on 10"H x 14"W safety sign incurring industry standard wear and tear.

As you can see, Accu-Shield™ and the other high performance materials cost a little more when it comes to the initial investment, but over the life of the sign it becomes a better option in terms of cost, especially in demanding applications.

Keep your customers and employees safe – at a cost that keeps your bottom line in mind.



Tough, Rugged Conditions



Extreme Weather



UV Exposure



Chemical Exposure

The Right Material For The Right Location  
*Not all signs are placed in harsh environments; but when they are, our performance line of materials provides the best value.*



# Choosing the right sign material is one of the most important decisions you need to make.

Sure, having a wide variety of material options is convenient; it can also complicate the selection process. The key is identifying the material that best meets your needs for durability, longevity, appearance, and budget. If you need a short-term sign material option to identify a temporary hazard, you don't want a material that has a long lifespan – that'll be bad for your budget. On the other hand, taking shortcuts and choosing a sign material that is designed for short-term usage, but will be used for the long-term will frequently need to be replaced.

Environmental conditions will dictate the material you choose. The harshest environments are often outside and those working in the field depend on a sign material that will identify hazards and not fade in repeated exposure to the sunlight.

When you're unsure which sign material to use, it's important to talk to a safety identification expert. Or, use this guide to find industrial materials designed to withstand the elements they're exposed to. And when all else fails and you're numb from the overwhelming variety of similar sounding materials and specs and want to get right to the good, better, best, awesome material options... well, you can always trust adhesive vinyl, plastic, aluminum, or Accu-Shield™ to get the job done.



## Quick Reference Material Chart

	MATERIAL	RIGID	FLEXIBLE	GUARANTEE	UV RESISTANCE	TEMPERATURE RANGE	MAXIMUM REC. SIZE	HOLES
PLASTIC	Accu-Shield™ (XP)	✓		15 Year	15	-60° to 260°F	48" x 96"	✓
	Accu-Shield™ FB-X	✓		15 Year	15	-60° to 212°F	48" x 96"	✓
	Reflecta-Shield™	✓		10 Year	10	-30° to 200°F	48" x 72"	✓
	Lumi-Shield™	✓			5 - 7	-30° to 175°F	24" x 36"	✓
	Plastic (VP)	✓			1 - 3	-90° to 168°F	36" x 48"	✓
	Plastic-Lite	✓			3 - 5	0 to 160°F	48" x 96"	✓
	Plastic Plus	✓			1 - 3	-90° to 168°F	48" x 96"	✓
	Dura-Plastic™ (XT)	✓		7 Year	7	-40° to 251°F	24" x 36"	✓
	Dura-Shield™	✓			4 - 5	-40° to 175°F	24" x 36"	on request
	Lumi-Glow™ Plastic (GP)	✓			3	-20° to 149°F	24" x 48"	✓
	Lumi-Glow™ Plus+ Plastic	✓			3 - 5	-50° to 190°F	48" x 96"	✓
	Lite Corrugated Plastic	✓			1 - 2	-17° to 160°F	24" x 36"	on request
	Max Corrugated Plastic	✓			1 - 2	0 to 140°F	48" x 96"	on request
METAL	Aluminum (VA)	✓		5 Year	5	-40° to 140°F	48" x 96"	✓
	Heavy-Duty, Max-Duty Aluminum	✓		5 Year	5	-40° to 250°F	48" x 96"	✓
	Engineer-Grade Prismatic Reflective Aluminum	✓		5 Year	5 - 7	-30° to 200°F	36" x 48"	✓
	High-Intensity, DG High-Prism Reflective Aluminum	✓		7 Year	7 - 10	-30° to 200°F	36" x 48"	✓
	Heavy-Duty Engineer-Grade Prismatic Reflective Aluminum	✓		5 Year	5	-40° to 180°F	48" x 96"	✓
	Diamond Plate Aluminum	✓		5 Year	5	-40° to 176°F	36" x 48"	✓
	Dura Lumi-Glow™ Aluminum	✓		5 Year	5	-30° to 175°F	24" x 36"	✓
	Galvanized Steel	✓		5 Year	5	-40° to 250°F	48" x 96"	✓
	Perma-Black™ Aluminum	✓		10 Year	10	up to 700°F	20" x 24"	✓
	Perma-Black™ Stainless Steel	✓		15 Year	15	up to 750°F	20" x 24"	✓
	Stainless Steel	✓		10 Year	10	up to 200°F	9" x 12"	✓
	St <sup>2</sup> Laser Signs™	✓		Lifetime	Lifetime	up to 2000°F	14" x 20"	✓
COMPOSITE	Aluma-Lite™ (XL)	✓		10 Year	10	-58° to 175°F	48" x 96"	✓
	Ultra Aluma-Lite™	✓		10 Year	10	-58° to 175°F	48" x 96"	on request
	Max Aluma-Wood	✓			3 - 5	-30° to 200°F	48" x 96"	on request
FIBER-GLASS	Dura-Fiberglass™ (XF)	✓		10 Year	10	-40° to 212°F	48" x 96"	✓
ADHESIVE	Lumi-Glow™ Flex (GF)		✓		3	-30° to 175°F	24" x 36"	
	Lumi-Glow™ Plus+ Flex		✓	5 Year	5	-20° to 125°F	24" x 36"	
	Adhesive Vinyl (VS)		✓		2	-20° to 176°F	36" x 48"	
	Adhesive Dura-Vinyl™ (XV)		✓	5 Year	5	-20° to 176°F	36" x 48"	
	Engineer-Grade Prismatic Adhesive Sheet		✓	5 Year	5 - 7	-30° to 200°F	36" x 48"	
	High-Intensity Prismatic Adhesive Sheet		✓	7 Year	7 - 10	-30° to 200°F	36" x 48"	
NON-ADHESIVE	PF-Poly Paper		✓		6 mos.	-60° to 200°F	18" x 24"	
	Magnetic Co-Poly Vinyl		✓		2 - 4	0 to 160°F	24" x 48"	

# So...What materials are best for different environments and my budget?

**The Harshest Environments** – Every industry has their own example of harsh environments but they're all after the same thing - a durable sign material. Harsh environments can include anything from direct sunlight, chemical exposure, high pressure washdowns, and industrial impacts.



Materials that do best in harsh environments are polycarbonate, aluminum, Dura-Plastic™, Dura-Fiberglass™, and Adhesive Dura-Vinyl™. All of these materials have different attributes and thinking about what type of environment your sign will be exposed to is important. Here are some details about each material:

- **Accu-Shield™ FB-X** – For unmatched reliability in performance under extreme conditions this is the most durable sign material. The non-glare polycarbonate plastic is specially formulated to resist color change, chemicals, corrosion, vandalism, and abrasions.
- **Accu-Shield™** – Specially formulated clear thermoplastic sheet withstands conditions in food and beverage environments – including ammonia washdowns.
- **Aluma-Lite™** – Ultra-lightweight properties combined with high-strength and rugged engineering make this composite aluminum sign extremely durable.
- **Dura-Fiberglass™** – Ideal for harsh indoor and extreme outdoor industrial-strength applications. Under exposure from intense environments, Dura-Fiberglass will not crack, chip, fade, or turn yellow prematurely.
- **Reflecta-Shield** – A rugged reflective material designed for off-road and property applications to withstand outdoor exposure and harsh/abusive environments.
- **Dura-Plastic™** – Polycarbonate offers high impact resistance and durability for outdoor applications and harsh environments.

**Hot Environments** – Employees performing work in boiler rooms, chemical plants, mining, maritime, and petroleum plants are exposed to consistently hot temperatures and need a



material that's just as tough as they are. When looking for the ideal material for hot environments, always check the specified temperature rating. Suitable materials for the hottest environments include stainless steel, Perma-Black Aluminum, Perma-Black Stainless Steel, and St<sup>2</sup> Laser Signs. Here are some details about each material:

- **St<sup>2</sup> Laser Signs™ Stainless Steel** – The longest-lasting and most versatile material. Type 304-26-gauge (.0188") stainless steel remains extremely durable and effective up to 2000°F and has a lifetime guarantee.
- **Stainless Steel** – Designed to withstand tough, abusive environments and exposure to chemicals, textile, petroleum, maritime, and food industries. Service temperature range extends up to 200°F.
- **Perma-Black™ Aluminum** – Ideal for smaller signs that are exposed to salt spray, chemical exposure and government property marking and Unique Identifier (UID) barcodes applications. Service temperature range up to 700°F for one hour.
- **Perma-Black™ Stainless Steel** – Ideal for smaller signs that need to withstand some of the harshest applications in industrial, military, and government environments. Service temperature range extends up to 750°F.

**Cold Environments** – Workers in industries such as, snow cleanup, sanitation, and food processing plants are exposed to cold environments and when thinking about a sign material that will withstand these elements, some do better than others. Most materials can stand up to cold weather, but these are ideal for some of the coldest environments, as low as -90°F:



- **Plastic Plus** – This material can withstand temperatures as low as -90°F.
- **Accu-Shield™** – This material can withstand temperatures as low as -60°F.
- **Ultra Aluma-Lite** – This material can withstand temperatures as low as -58°F.

**Wet Environments** – If moisture gets on a material that's not rated for wet environments or washdowns, you're going to have to quickly replace your sign. Avoid the hassle and select a sign material built to withstand the wet environment it'll be placed in. There are many materials out there that can endure constant moisture and repeated washdowns. Always check the rating of the





material before making your final decision and avoid using these in wet environments:

- **Dura-Shield™**
- **Plastic Plus**
- **Adhesive Vinyl**

**Office Environments** – Some office settings look a little harsh but they don't require extremely durable signs. Signs placed in office environments need to be attractive and tough enough to remain in good shape throughout their lifetime. But you don't want to kill your budget with a material that is ideal for outdoor applications when your sign is going inside. Consider materials like these when looking for material suitable for office environments:



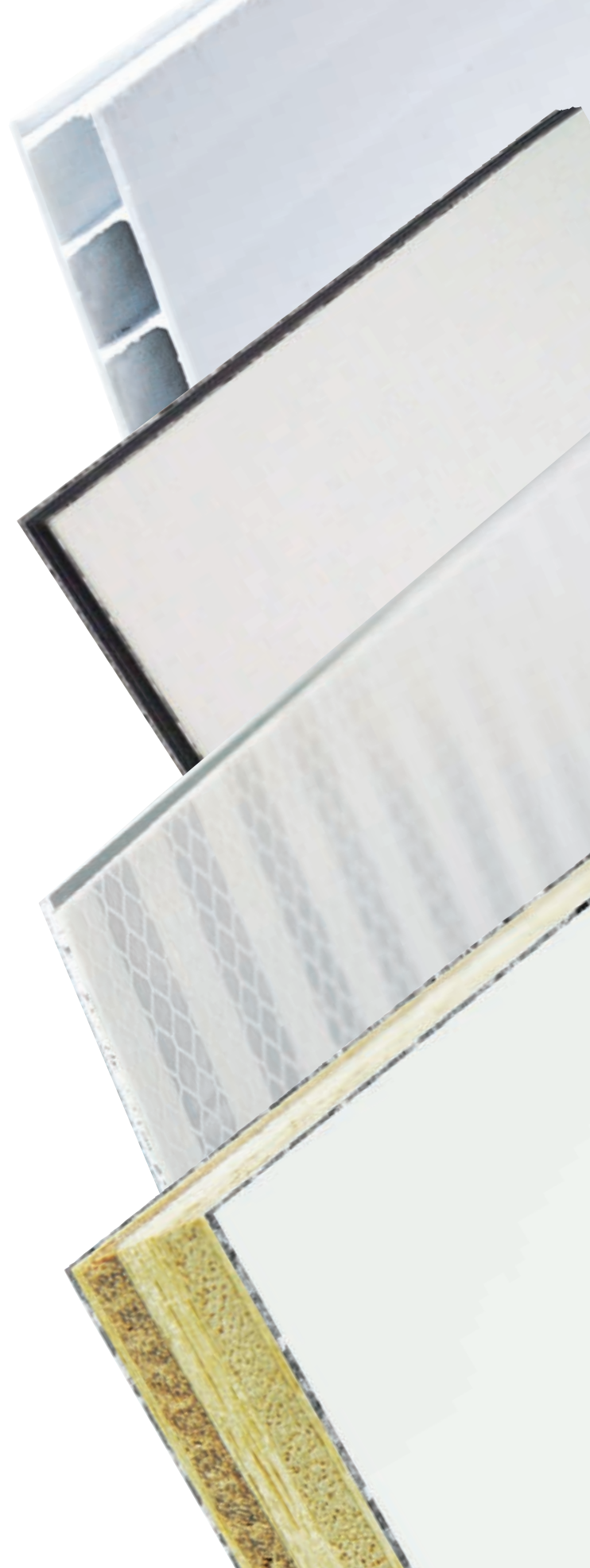
- **Dura-Shield™** – This material is attractive and tough for office environments and ideal for framed signage.
- **Plastic** – Material is impact resistant with slight flexibility and is an economical choice ideal for office environments.
- **Vinyl** – When you need a self-stick sign material for indoor office environments this is a great material.

**Warehouse Environments** – By nature, warehouses have a ton of traffic -- selecting a sign material that's resistant to forklift traffic, skids, and abrasions is necessary. Warehouse signs should be able to withstand chips, scratches, abrasions, and cracking. These materials are perfect for warehouse environments:



- **Diamond Plate Aluminum** – Material has a realistic diamond plate appearance for those rugged areas, withstands rough conditions, and does not corrode, rust, or weigh as much as steel.
- **Dura-Plastic™** – This polycarbonate material is resistant to high impacts and has UV coating that protects the integrity of the sign.
- **Aluminum** – Provides the strength of metal, yet never rusts and features resistance against abrasions and impacts for industrial-strength applications.

When it comes to safety identification, it's never a good idea to cut corners — selecting the right material is critical for the effectiveness of your sign. Without a sign material that's ideal for your environment, you will not be able to effectively inform your workers about dangerous situations in and around the workplace. If you'd like to talk to a sign material expert, Accuform is here for you!



THE CUSTOM EXPERTS – SIGNS, TAGS, LABELS, & MORE!

# CUSTOM SIGNS

MADE EASY... MADE FAST

Customizing your safety program creates an environment that motivates your workforce, improves teamwork, and helps establish safety goals. We drive positive change in your safety culture through effective communication.

- No Set-Up Fees
- No Minimums
- Your Message
- Your Colors
- Your Brand



Download our Whitepaper  
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Personalize It!” by visiting  
[Accuform.com/Whitepaper](http://Accuform.com/Whitepaper)



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