

COMMERCIAL

METALS

COMPANY

Performance Steel

**TruSHIELD**



# TruSHIELD, ballistic armor you can trust

As an industry leader in the high-performance steel market, TruSHIELD steel from CMC Impact Metals provides the protection you require for products that will endure even the toughest challenges.



## TruSHIELD offers:

### Dependability

TruSHIELD steel is designed to absorb ballistic impacts without failure in various applications. Our steel meets or exceeds requirements specified by commercial equipment manufacturers and is backed with complete test reports.

### Quality

The advanced metallurgical martensitic grain structure of TruSHIELD steel is produced by our unique heat-treating, quenching and tempering process and results in a steel designed to meet or exceed the required amount of hardness for every application. We produce a lightweight, impact-resistant steel with a wide range of armor grades that is backed with independent laboratory testing.

### Formability and Weldability

The refined chemical composition, along with the heat-treating, quench and tempering processes used to produce TruSHIELD, creates the ductility that is necessary for ease of formability and fabrication in the manufacturing process. Manufacturers and fabricators can use conventional, manual or automated welding processes when working with TruSHIELD products due to the steel's advanced chemical composition. See product specifications for more detail.





**Melted and manufactured in the USA**, our rigorously tested material, backed by an expert metallurgical team, is a leading armor plate product, protecting soldiers around the globe. TruSHIELD delivers complete protection, with each individual plate tested.

With TruSHIELD commercial grade armor plate, you can trust the integrity of our steel to protect you in the most crucial moments, no matter how demanding the situation.

Whenever human life is at stake, there is no room for error, and TruSHIELD armor and ballistic steel plate is there to provide a safe barrier. It meets the most stringent requirements and specifications for chemical and mechanical properties.

### TruSHIELD Applications

Armored military vehicles

Bank counters & cages

Embassy installations

Government vehicles

Body armor inserts

Safe room protection

Cash-in-transit trucks

Vehicle protection kits

Armored cars

Guard buildings

## SUPPORT YOU CAN COUNT ON

CMC Impact Metals is committed to ensuring that you have the support you need at every step in the process. As a TruSHIELD customer, you'll have a dedicated sales team, backed by the expertise of our technical staff, working with you to provide solutions for any application.

As an industry leader, we are confident your business will benefit from your alliance with CMC Impact Metals - receiving the highest levels of quality with TruSHIELD steel, and relying on our industry expertise and personalized customer service that you expect from a trusted partner.



## TruSHIELD Hot Rolled Plate Products

TruSHIELD armor and ballistic steel is available in specifications for both commercial and military original equipment manufacturers (OEMs) in varying grades and sizes, depending on the requirements for the application.

### FLATNESS

CMC Impact Metals offers a flatness guarantee that ensures TruSHIELD plate performs in downstream fabrication processes. Our heat treating, quenching and tempering process reduces and relieves the stresses induced during manufacturing, ensuring the parts remain flat when cut into smaller pieces. CMC is proud to offer our cutting-edge TruFLAT technology for all plate products .300" and thinner, with a flatness of ¼ ASTM A6 standards and significantly exceeding typical standards for flatness.

### SURFACE QUALITY

Our plate has a superior surface quality that produces a smooth finish ready for exposed or painted applications.

## TruSHIELD Ballistic Protection Levels

Ballistic Specification	NIJ III A	NIJ III	NIJ IV	EN 1063 B6	EN 1063 B7	Stanag Level II
TruSHIELD 500	.098" (2.5 mm)	.250" (6.5 mm)	.500" (12.7 mm)	.250" (6.5 mm)	–	–
TruSHIELD 600	–	.197" (5 mm)	.394" (10 mm)	.197" (5 mm)	.394" (10 mm)	.315" (8 mm)
TruSHIELD 650	–	.197" (5 mm)	.394" (10 mm)	.197" (5 mm)	.394" (10 mm)	.315" (8 mm)

Typical minimal required gauges listed. TruSHIELD may also meet other protection level requirements depending on thickness and grade. Please inquire with your CMC representative if a different gauge is required, if you need different specifications or if you have custom requirements.

## TruSHIELD Commercial Specifications

Commercial Specifications	Thicknesses	Widths	Lengths	Carbon Equivalency	Hardness Range	Hardness (nominal HBW)	Charpy Impacts (typical) @ -40°F (-40°C)
TruSHIELD 500	Up to 0.500" (12.7 mm)	Up to 60" (1524 mm)	Up to 288" (7315.2 mm)	0.61	470 - 535	500	22 ft-lbs (29.8 J)
TruSHIELD 550	Up to 0.500" (12.7 mm)	Up to 60" (1524 mm)	Up to 288" (7315.2 mm)	0.70	525 - 570	550	18 ft-lbs (24.4 J)
TruSHIELD 600	Up to 0.500" (12.7 mm)	Up to 60" (1524 mm)	Up to 144" (3657.6 mm)	0.84	570 - 650	600	10 ft-lbs (13.5 J)
TruSHIELD 650	Up to 0.500" (12.7 mm)	Up to 60" (1524 mm)	Up to 144" (3657.6 mm)	1.00	625 - 700	650	10 ft-lbs (13.5 J)

We offer complete test reports for our commercial armor grades, and can offer in metric sizes upon request. Call your CMC Impact Metals representative for additional details and to inquire about product offerings not included here. Charts show typical values unless otherwise noted.



it's what's **inside** that counts

We're Commercial Metals Company – CMC, for short. You'll find our steel in sports stadiums and public buildings as well as highways, bridges, railways and other structures nearly everywhere on the planet.

To serve this global market, CMC maintains facilities across the United States, Europe and Asia. These sites include everything from local recycling centers, steel mini-mills and micro-mills to large-scale fabrication centers, heat-treating facilities and other metals-related operations.

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