

NU-SOFT STEEL SHOT: BUYER'S REFERENCE GUIDE

MANUFACTURED BY ERVIN INDUSTRIES. EXCLUSIVELY DISTRIBUTED BY GMA INDUSTRIES.

Nu-Soft Steel Shot is not a standard abrasive. It was developed specifically for applications where conventional media causes damage, alters tolerances, or creates safety concerns. If someone on our team referred you to this guide, it's because your application likely fits that profile.

This reference covers technical specs, size options, equipment compatibility, cost considerations, and ordering details. If you have questions after reading it, call us directly. Our team has worked with Nu-Soft since 2003 and can help determine the right size and configuration for your specific situation.



TECHNICAL SPECIFICATIONS

Nu-Soft is manufactured by Ervin Industries at their ISO-certified facility in Tecumseh, Michigan, using virgin, premium-grade cast steel. The process starts with standard SAE grade steel shot. A secondary annealing process then lowers the hardness to the 12-15 HRC range, giving Nu-Soft its non-destructive performance characteristics while maintaining the density and machine compatibility of standard shot. Only fully spherical particles are shipped.

SPECIFICATIONS:

- **Shape:** Fully spherical
- **Hardness:** 12-15 Rockwell C (less than 200 HV) / approximately 3-3.5 Mohs scale
- **Carbon content:** Ultra-low (under 1.2%)
- **Density:** Slightly greater than 7 g/cc (approximately equal to standard steel shot)
- **Cycle life:** 30%-50% longer than standard SAE steel shot of the same size per Ervin Industries
- **Appearance:** Gray/silver metallic
- **Flammability:** Non-flammable
- **Hazard classification:** Non-hazardous
- **Size screening:** Follows SAE J444 specifications, same as standard shot sizes

CHEMICAL COMPOSITION:

- Iron: Over 96%
- Carbon: Under 1.2%
- Manganese: Under 1.3%
- Silicon: Under 1.2%
- All other elements (including Chromium and Nickel): Under 0.04%

For the full Safety Data Sheet, visit gmaind.com/data-sheets/

PERFORMANCE VS. CAST ZINC SHOT

The most direct competitor to Nu-Soft for non-destructive blasting applications is cast zinc shot. Both are soft metallic media for applications where standard steel shot causes damage, but each serves a different primary use case. Cast zinc shot, most commonly Transmet's ZA4 alloy, runs at approximately 90 Knoop hardness with a density of 7.1 g/cc.

Nu-Soft runs at 12-15 Rc with a density of 7.4 g/cc, matching standard steel shot exactly. It flows through existing centrifugal wheel machines with no amperage drop and no equipment adjustments, and lasts 30-50% longer than standard SAE steel shot per Ervin Industries.

For ferrous parts, mold and die maintenance, and precision machined surfaces, Nu-Soft is the stronger choice on performance and cost savings

Zinc Shots are
**3X THE
PRICE**
Nu-Soft Shots

WORKS WITH YOUR EXISTING EQUIPMENT

Nu-Soft's density matches standard steel shot at approximately 7.4 g/cc. It flows through blast machines the same way, with no drop in wheel amperage and no operational adjustments needed.

Compatible equipment includes:

- Standard centrifugal wheel blast machines
- Pressure-type air blast cabinets
- Suction-type air blast systems
- Equipment with magnetic separators

Beyond compatibility, Nu-Soft almost totally eliminates wear and tear on blast machine components, including blades, impellers, control cages, and liners. For high-volume operations, that reduction in equipment wear translates directly to **lower maintenance costs and fewer production interruptions.**



AVAILABLE SIZES AND WHERE THEY'RE USED

Nu-Soft is available in sizes NS-70 through NS-330, screened to SAE J444 specifications. Smaller sizes deliver a finer, more controlled cleaning action. Larger sizes carry more mass per particle and suit heavier contamination or larger part geometries. Additional sizes can be made available if a new application requires it.

SIZE	Typical Applications:
NS-70	Very fine detail work, intricate part geometry, serial marking preservation
NS-110	Small castings, powder metal components, fine precision stampings, plated fastener refinishing
NS-170	Aluminum die casting deflash, bearing cage deburring, machined surface cleaning, engine valve scale removal
SIZE	Typical Applications:
NS-230	Mold cleaning, paint fixture stripping, investment casting shell removal, medium-duty scale removal
NS-330	Heavier scale removal, aluminum wheel refinishing, larger casting cleaning where gentle action is still required

Not sure which size fits your application?

Call our team before ordering. We can walk through your part material, geometry, and contamination type to point you to the right starting point.

PACKAGING OPTIONS

Nu-Soft ships in four formats to support both trial runs and full production volume:

- 50-lb. Pail (good starting point for application testing)
- 500-lb. Keg
- 750-lb. Keg
- 2,000-lb. Drum

Our team maintains consistent inventory and can discuss lead times, volume pricing, and blanket order arrangements directly.

COMMON QUESTIONS

HOW IS NU-SOFT DIFFERENT FROM STANDARD STEEL SHOT?

Nu-Soft starts as standard SAE grade cast steel shot. It then goes through an annealing process that lowers the hardness from the standard 42-65 HRC range down to 12-15 HRC. That hardness reduction is what gives it non-destructive cleaning performance. The density stays the same, so it runs in the same equipment without any modifications.

WILL NU-SOFT REMOVE BASE METAL FROM OUR PARTS?

No. Nu-Soft is designed specifically to clean surface contamination without removing base metal or altering dimensions. That's the core reason it's used in precision applications.

CAN WE RUN NU-SOFT IN OUR EXISTING WHEEL BLAST MACHINE?

Yes. Its density equals standard steel shot, so it runs through centrifugal wheel equipment with no adjustments needed. It also works in pressure-fed air blast cabinets and suction-fed blast systems. If your machine uses a magnetic separator, Nu-Soft works with it.

HOW DOES IT HANDLE ALUMINUM PARTS?

Nu-Soft operates below 20 Rc, softer than aluminum in most applications. It cleans aluminum surfaces without generating the fine airborne particles that standard steel shot produces when blasting aluminum. It also preserves any markings or etchings on the surface.

WILL IT WORK HARDEN OUR PARTS?

No. Nu-Soft's metallurgical composition is specifically engineered to avoid work hardening workpieces. Standard steel shot can work harden surfaces over repeated cycles. Nu-Soft does not.

NU-SOFT COSTS MORE THAN STANDARD STEEL SHOT. HOW DO WE JUSTIFY IT?

Nu-Soft costs significantly more than standard steel shot, close to three times as much in direct material cost. Longer media life and reduced machine wear alone don't close that gap. The economics work when there's a finish requirement that standard media can't meet without additional processing steps, or when the part itself is valuable enough that damage or rework from standard media is the bigger cost. If your application requires a secondary finishing step after blasting, or if you're rejecting or re-machining parts because of what your current media does to them, that's where Nu-Soft typically justifies its price.

CAN WE TEST IT ON OUR SPECIFIC PARTS BEFORE COMMITTING TO A FULL ORDER?

Yes. Our 50-lb. pail makes application testing practical before committing to a larger order. We can also discuss your application directly to help you set up a meaningful test before you buy.

IS NU-SOFT A HAZARDOUS MATERIAL?

No. It is non-flammable and non-hazardous. Dust and separator discharge material from a Nu-Soft blasting operation can be handled the same way as waste from standard steel shot. No special disposal requirements apply.

WHAT SIZES ARE AVAILABLE AND CAN CUSTOM SIZES BE MADE?

Nu-Soft is available in NS-70, NS-110, NS-170, NS-230, and NS-330, all screened to SAE J444 specifications. If a new application requires a size outside that range, Ervin Industries can produce additional sizes. **Contact us to discuss.**

READY TO TALK THROUGH ● **YOUR** APPLICATION?

Our team handles Nu-Soft inquiries directly. Whether you need help selecting a size, want to discuss equipment compatibility, or are ready to place an order, reach out and we'll get back to you the same day.

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LEARN MORE ABOUT ● **NU-SOFT** **STEEL SHOT**

Full product details, technical specs, and application information are available on our website.

SCAN TO
LEARN MORE

