



LINDQUIST STEELS, INC.
TOOL STEEL SPECIALISTS

ADVANCED ADDITIVE MANUFACTURING POWDERED METAL

HTC 40[®], HTC 45[®], & HTC 50[®]

UNIQUE IN TODAY'S CURRENT MARKETPLACE

HTC 40[®], HTC 45[®], & HTC 50[®] combine all the attributes of a true tool steel powder that has been specifically and painstakingly researched and developed for additive manufacturing (metal 3D printing).

THE FAMILY OF POWDERS

The HTC[®] ("High Thermal Conductivity") family of powders are designed to excel and outperform current materials utilized in molds, dies, tooling and other applications. The materials are produced on state-of-the-art equipment using the industry's most stringent quality assurance system to ensure qualitatively stable and consistent products. These spherical powders are gas atomized with low oxygen content and optimally sized for use with today's printers

THE HTC[®] GRADES OFFER:

- Physical properties that are equal to or superior to conventional materials
- Superior thermal conductivity
- Excellent toughness at hardness
- Superior printability & flowability
- Simple post-print heat treatment
- Remarkable ease of printing
- Wide range of suitable applications

Particle Size (μm)

-53 / +25



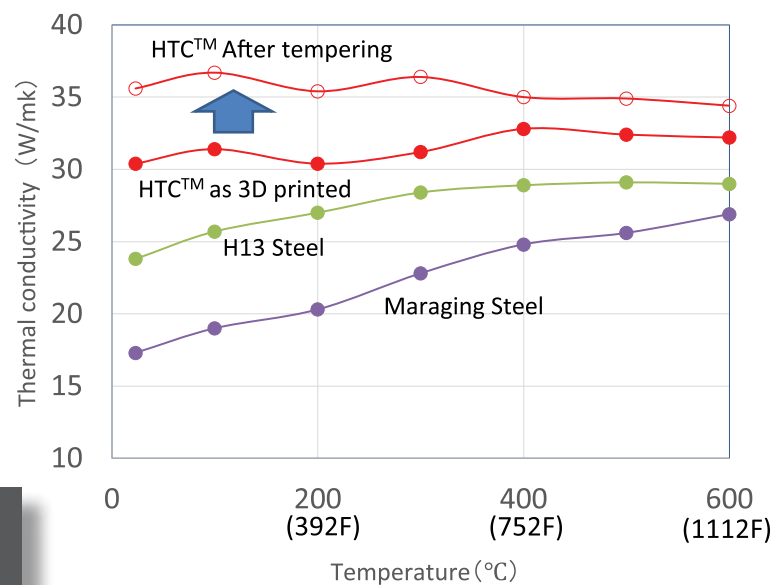
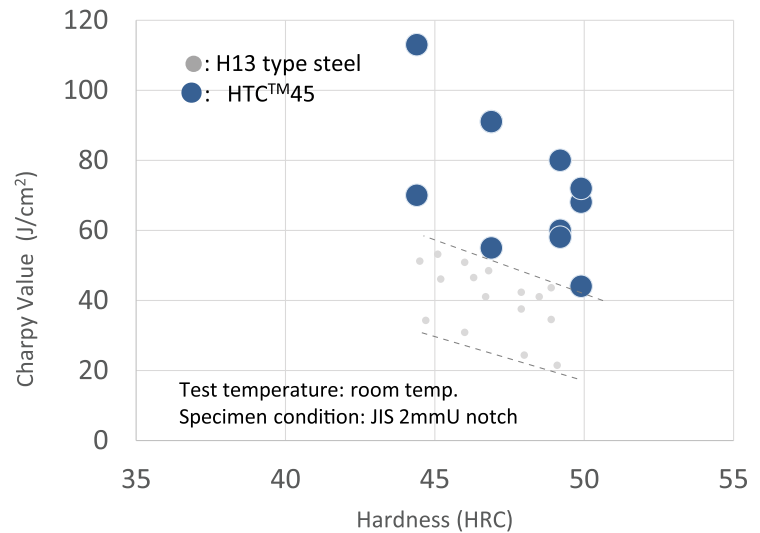
APPLICATION EXAMPLES

- DIE CAST DIES & COMPONENTS
- PLASTICS INJECTION MOLDS & COMPONENTS
- INJECTION NOZZLES
- FIXTURES
- WEAR COMPONENTS
- AND MUCH MORE

RECOMMENDATIONS FOR OPTIMAL PERFORMANCE

- Heat the build plate to 392 Deg F (200 C)
- Utilize a Chess board type for laser scanning
- Double temper the printed part & the base plate immediately after printer at 1,022 Deg F (550 C)

Properties	HTC40	HTC45	HTC50	Maraging Powder
Hardness (HRC)	35-45	40-50	45-52	50-60
Ductility (Elongation %)	14-15	12-14	5-10	2-4
Thermal Conductivity (Room temperature)	1.5 times better than H13			0.75 times compared to H13
Case Harden -Nitriding	Equal to H13			—
Softening resistance	Equal to H13			—
Wear resistance	Equal to H13 (when both are same hardness)			—



Custom Base Plates Available

Due to our expansive inventory of wrought steel materials and our in-house equipment, we can produce cost effective custom build/base plates to fit your printer and project. These plates can be produced from a number of available grades in squares, rectangles, rounds, or custom shapes. With or without hold down holes.



TO LEARN MORE ABOUT THESE AND OTHER POWDERS OFFERED BY LINDQUIST STEELS-DIV OF CHAPIN & BANGS CO. PLEASE LOG ON TO OUR WEBSITE:

3DPOWDERMETAL.COM

OR CONTACT US AT:

1-800-972-9615

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