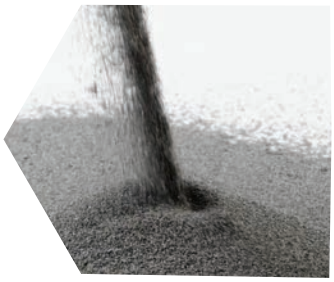
LINDQUIST STEELS, INC.
TOOL STEEL SPECIALISTS

DAP™-HTC ADDITIVE METAL POWDERS



THE MOST ADVANCED TOOLING SPECIFIC GRADES AVAILABLE

DAP™-HTC ADDITIVE METAL POWDERS ARE CURRENTLY IN STOCK & AVAILABLE FOR NEXT DAY DELIVERY IN BOTH HTC 40® & HTC 45®.

The HTC® ("High Thermal Conductivity") powders are designed to excel and outperform current materials in molds, dies, general tooling, & other demanding applications where traditional tool steels are used. All while leveraging the many advantages that 3D printing allows like conformal cooling, light weighting, unique and complex geometries, less material waste and so much more.

ENGINEERED TO HAVE BETTER CRACK RESISTANCE AND THERMAL CONDUCTIVITY COMPARED TO MARAGING AND H13 STEEL.

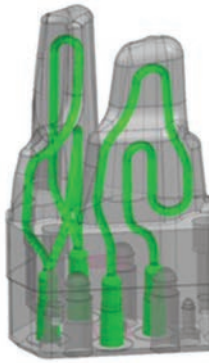
0.23%C
HTC™45 / 48 HRC

0.37%C
H13 / 54 HRC

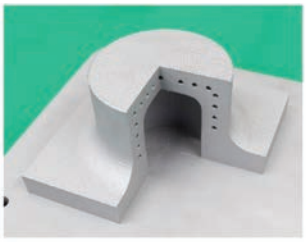
THE DAP™-HTC ADDITIVE METAL POWDERS OFFER:

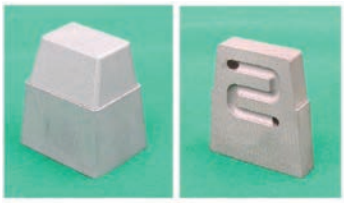
- Superior thermal conductivity
- Physical Properties that are equal to or superior to conventional grades
- High resistance to cracking
- Excellent toughness at hardness
- Superior flowability & printability
- Simple post-print heat treatment
- Wide range of suitable applications
- Leadtime reduction
- Faster prototypes
- Improved cycle times & part quality
- Green manufacturing

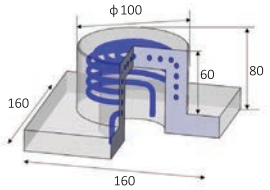
Conformal cooling channel



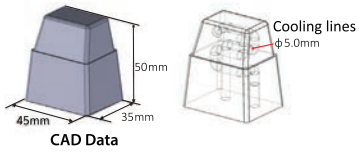
lindquiststeels.com | 1-800-972-9615 | sales@lindquiststeels.com







CAD Data



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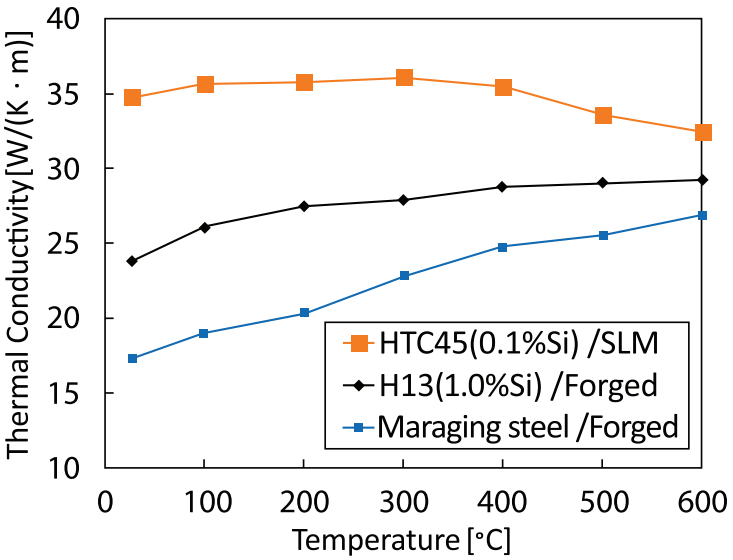
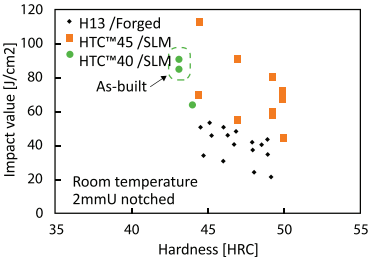
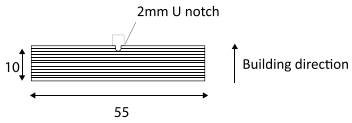


Impact Toughness

Comparing in the same hardness range, the impact values of HTC™45 and HTC™40 are higher than that of forged H13





Size of built samples : 15 x 60 x 15 mm
Heat treatment Condition
HTC™45 : Tempered to 45~50HRC
HTC™40 : As-built(43HRC)
Tempered to 44HRC

DAP™-HTC 40 IS DESIGNED TO BE USED AT A HARDNESS OF 40-45 RC.

DAP™-HTC 45 IS DESIGNED TO BE USED AT A HARDNESS OF 45-50 RC.

BOTH MATERIALS WHEN PRINTED PROPERLY HAVE A DENSITY OF 99.96% AND DUE TO THE POWDERS EXCELLENT FLOW RATE THE SURFACE FINISH IS SMOOTH AND CONSISTENT ENOUGH TO BE POLISHED WITH EASE.

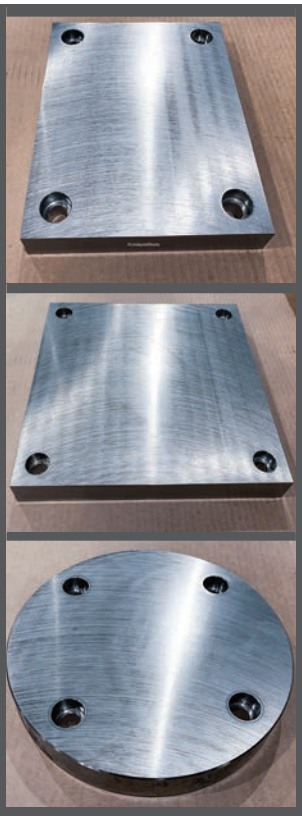
Particle Size (µm)

-53 / +25

EACH GRADE HAS BEEN PROVEN AND QUALIFIED ON ALL MAJOR SLM, EBM, & PBF PRINTERS. PLEASE CONTACT US FOR ASSISTANCE WITH OPTIMAL PRINTING PARAMETERS.

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.



APPLICATION EXAMPLES

- Plastic Injection Molds & Components
- Die Cast Dies & Components
- Tool & Die
- Complex Fixtures
- Wear Components
- Special Tooling
- Hybrid Tool & Dies
- & Much More

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