



Amperprint 0638 1.2343

Tool steel for laser powder bed fusion

General material description

Amperprint 0638 is a vacuum induction melted, argon gas atomized, and spherical powder for additive manufacturing. It is a Cr-Mo-V alloyed hot work tool steel, which after hardening and tempering exhibits very good resistance to thermal shock and thermal fatigue. Due to excellent high temperature strength, it is fit for hot pressing tools, extrusion and casting dies. Due to high wear resistance, the alloy is also well fit for cold working tools like punches.

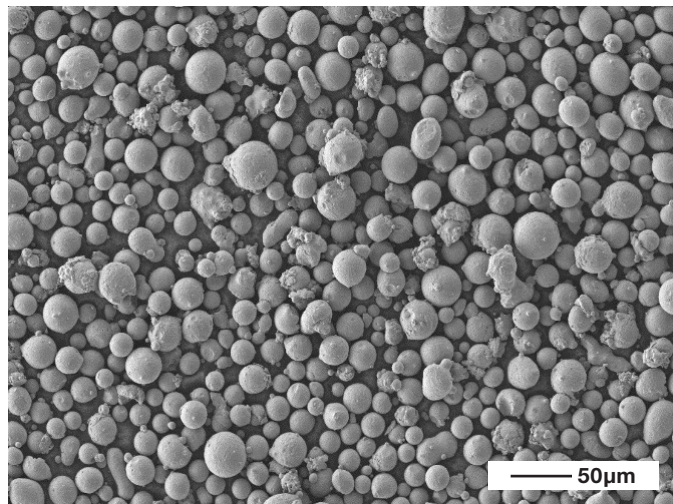
Equivalent materials:

- AISI H11
- DIN 1.2343
- X37CrMoV5-1

For more information on Amperprint and other Höganäs products, please contact your local sales representative.



Chemical composition, % (typical values)	
Element	Content, %
Cr	5.1
Mo	1.3
V	0.4
Si	1.0
C	0.37
Mn	0.35
Fe	Balance



Typical powder properties		
Nominal particle range	15–45 μm (max 5% over- and undersize)	MPIF05, ASTM B214, ISO4497
Hall flow	18 s/50 g	MPIF03, ASTM B213, ISO4490
Apparent density	4.0 g/cc	MPIF04, ASTM B212, ISO3923/1

Heat treatment:

Hardening at 1010–1030 °C, Tempering at 540–530 °C

Standard packaging:

30 kg (6x5 kg, 2.5 L PE bottles packed in cardboard box)

(Other tailored particle sizes and packaging are available under conditions)