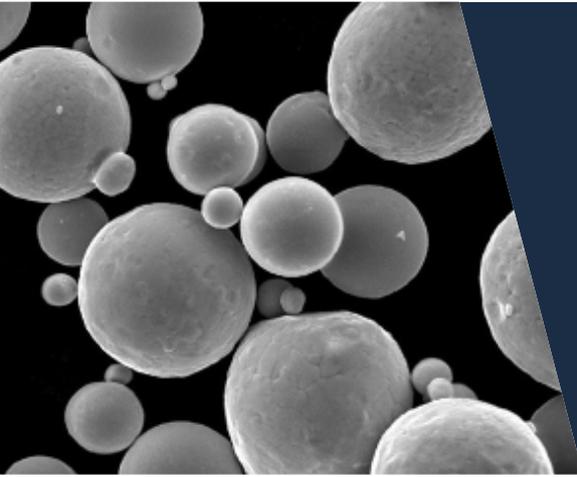


# DPLA



## Dual Phase Low alloy Steel

Dual phase steel is a special class of steel which combines the ductility and formability given by the ferrite matrix with the high strength offered by the islands of martensite. This special microstructure is a result of steel chemistry and intercritical-annealing heat treatment which is mandatory to obtain the targeted properties. DPLA developed by GKN Hoeganaes has a large versatility being able to obtain properties for all different grades of dual phase steels from DP 600 to DP 980 as a function of the heat treatment applied. This material was optimized for use in laser powder bed fusion processing.

### CONTACT INFORMATION

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- Metal Powder for Additive Manufacturing
- Particle Size Engineered for Laser Powder Bed Fusion(LPBF)
- Rigorous Quality Testing of Each Powder Lot
- Heat-treatable to ultimate tensile strength to 600 to 980 MPa

### Typical Powder Characteristics

Laser Particle Size Analysis			Powder Properties		
D10 [ $\mu\text{m}$ ]	D50 [ $\mu\text{m}$ ]	D90 [ $\mu\text{m}$ ]	Apparent Density [ $\text{g}/\text{cm}^3$ ]	Tap Density [ $\text{g}/\text{cm}^3$ ]	Carney Flow [s/50g]
17	33	56	3.90	5.00	4

### Dual Phase Low alloy Steel

Elements [wt.-%]	Fe	Mn	Si	C	Cu Cr Ni & Mo	O	N
Nominal	Bal.	1.70	0.25	0.10	<0.50	0.10	<0.10

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