Additive manufacturing, also called 3D printing, is a game-changing technology opening up new horizons for many markets. This fast-growing innovative technology leads to entirely new ways of designing and manufacturing complex parts, impossible to produce with conventional technologies.

**Pearl® Micro metal powders** are tailored for the most demanding applications and markets:
- Aeronautics
- Space Industry
- Energy
- Automotive/Motorsport

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**Pearl® Micro metal powders** are designed for the full range of additive manufacturing processes:
- Powder Bed
  - Laser Beam Melting
  - Electron Beam Melting
  - Binder Jetting & Sintering
- Blown Powders
  - Laser Metal Deposition
  - Cold Spray

For almost a century, Aubert & Duval has been providing highly reliable metallurgical solutions that are developed, made and processed for the most critical industrial applications. Thanks to our strong metallurgical expertise and long-standing experience in powder atomization, we can support our customers to achieve success in their development and series production made by additive manufacturing.

Since 1969, Aubert & Duval and its company sister Erasteel, part of Eramet Group, have been world leading producers of gas-atomized powders.

**Key Benefits of Additive Manufacturing:**
- Design freedom
- Weight reduction
- Material savings
- No tools
- Less machining and assembly operations
A know-how dedicated to your needs

Pearl® Micro powders

- **NiSA**
  - Ni718: Excellent mechanical properties up to temperatures around 650°C. Good resistance to high temperature oxidation.
  - HX: Excellent mechanical properties at high temperatures (1100°C). Very good resistance to oxidation.
  - Ni625: Excellent mechanical properties at high temperatures up to 980°C. Excellent corrosion resistance. Good low temperature toughness.
  - Ni247: High strength and superior creep resistance. Excellent mechanical properties at high temperatures up to 1000°C.
  - Ni738: Excellent high temperature creep rupture strength (980°C) combined with hot corrosion resistance.

- **CoSA**
  - CoCrMo (F75): Corrosion resistance.

- **HPS**
  - 17-4PH: Excellent toughness properties. High strength, and corrosion resistance.
  - 316L: Good overall corrosion resistant properties. Excellent toughness even to cryogenic temperatures.

Our offer includes:
- Standard & customized compositions
- Tailored particle size distribution
- Packaging in plastic bottles or metallic containers
- Handling, HSE and storage recommendations
- Flexible service

Quality control

With 40 years of experience in high quality gas-atomized powders, Aubert & Duval has a high level of expertise and also dedicated laboratory equipment ensuring the highest quality for Pearl® Micro powders:

- Powder size distribution: sieving and laser diffraction.
- Morphology: SEM pictures
- Chemical composition: X-Ray, Optical Emission Spectrometer (OES) and Atomic Absorption Spectrometer (GFAAS)
- Other physical properties: density, flowability

Our research centers and development teams support customers to develop new alloys and optimize powder characteristics to achieve the best material performance and processability for all additive manufacturing technologies.

Aubert & Duval partners with main global players to develop value-creating solutions.
Thanks to the most advanced technology in powder metallurgy and different scale of production units, Aubert & Duval can support you from first stages of development through industrial-scale production.

Key benefits:
- Melting in VIM furnace or with ESH technology
- N- or Ar-atomization
- High cleanliness level
- Highly spherical powder morphology
- Fully controlled low oxygen and carbon levels
- Minimize satellites & internal porosities
- High stability and reproducibility
- Broad range of batch sizes

Quality certifications
- EN 9100
- ISO 9001
- Customer accreditations
The information and the data presented herein are typical or average values and are not a guarantee of maximum or minimum values. Applications specifically suggested for material described herein are made solely for the purpose of illustration to enable the reader to make his own evaluation and are not intended as warranties, either express or implied, of fitness for these or other purposes. Aubert & Duval’s liability shall not extend, under any circumstances, to the choice of the Product and its consequences.