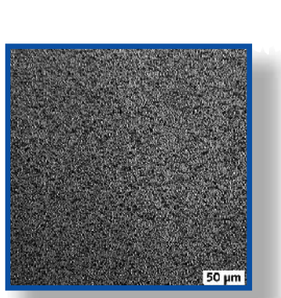
RSP Technology BV is an innovative firm, specialised in the development, production and marketing of Rapidly Solidified Aluminium (RSA) and its semi-finished products.

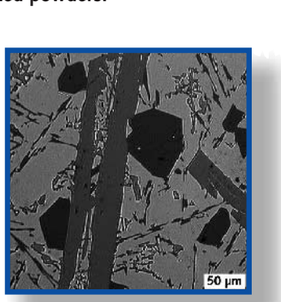
RSP Technology uses a rapid solidification process called '*meltspinning*', which generates aluminium with properties much superior to conventional aluminium alloys.

RSP microstructure

Thanks to the rapid quenching of the meltspinning process grain sizes are very small (± 2 micron). Intermetallic phases and non-soluble constituents are refined and homogeneously distributed into the matrix and are characterised by a more favourable morphology. To a large extent, these factors contribute to an improved ductility of RSP. The pictures below show the difference in micro-structure between RSP and a conventional cast aluminium alloy with an identical chemical composition. Due to their particle size RSP flakes are less hazardous than atomized powders.



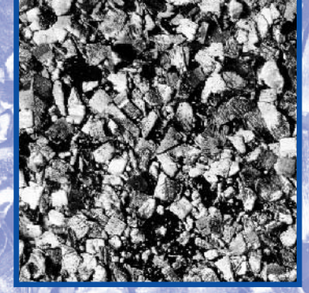
RSP microstructure



Conventional microstructure

Flakes as a raw material in finished products

Aluminium flakes are applied in a wide variety of markets. New application fields are discovered frequently. At this moment aluminium flakes are applied for:



Reflection

- Chaff material
- Reflective (roof) coatings
- Road marking paints

Decoration

- Decorative paints
- Glitters
- Decorative finishes

Flammability

- Glitters in pyrotechnics
- Energy carriers for explosives
- Propulsion for rocket boosters

Thermal and electrical conductivity

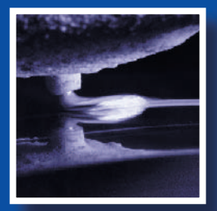
- EMC aluminium shielding material
- Floor heating systems
- High temperature paints

Other

- Reactants in chemicals
- Light weight concrete
- Feedstock for chemical processes
- Ceramics

Meltspinning process

During the meltspinning process, molten aluminium hits a fast rotating wheel and almost instantaneously releases a continuous metal ribbon at room temperature.



This ribbon is converted into flakes and finally into an extrusion product, after which a special heat treatment may be applied. The name Rapid Solidification Process stems from the sudden temperature drop that takes place at a rate of more than 1,000,000˚C per second as the aluminium comes in contact with the wheel.

Alloying ▸ **Meltspinning** ▸ output: RSP ribbon ▸ **Chopping** ▸ output: RSP 'flakes'