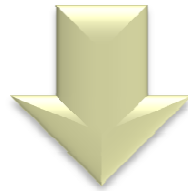




ORGASOL® Ultra-Fine Powders

Metallic Powder Processing





**An binder and solid lubricant
for powder injection molding feedstocks
to improve
process ability and end-products performance**

Two Main Applications



**Plastic
Magnets**

**Metal
Injection
Molding
Feedstocks**

Plastic Magnets



Orgasol® (<5wt%) is mixed with rare earth metal oxide powders



Powders are compounded into pellets



Pellets are used to produce high value magnets by injection

3 Main Assets

Role of **Binder**
→ High Mechanical Properties
for the end- products

Role of **Solid Lubricant**
to help the powder-blending step

**Low & stable melt viscosity of
the compound** → Increase of
metal oxide powder ratio: Higher
Performing Plastic Magnets

Two Main Applications



**Plastic
Magnets**

**Metal
Injection
Molding
Feedstocks**

Metal Injection Molding



Orgasol® is compounded with metal powders and additives



Pieces are produced by an injection or compression molding step : obtention of molded green parts



Rapid Ejection out of the mold



Pyrolysis at high temperature (>500°C)

4 Main Assets

Role of **Solid Lubricant** to help the powder-blending step

Role of **Thermoplastic Binder** → High Capacity to bond metallic powder & to flow under compression thanks to **low melt viscosity** and a **melting point** around 140°C

Orgasol® imparts **high strength** into the **molded green parts** → Avoid damages during the rapid ejection out of the mold

No toxicological components during pyrolysis step

End Products – Recommended Grades



- **Metal Injection Molding end-products → Miniature devices:**
 - **Medical implants**
 - **Micro-system technology**
(digital cameras, key parts in automotive engine)
- **Recommended Grades for Plastic Magnets and Metal Injection Molding:**

- **3501 EXD NAT1**
- **3502 D NAT1**

PA nature (2 for PA12, 1 for PA6, 3 for PA6-12)

Particle size (UD for 5 µm, EXD for 10 µm, D for 20 µm, ES3 - 6 for 30 - 60 µm)

2002 EXD NAT

Melt Viscosity indication
1 < 2

Color (NAT stands for natural)

The information contained in this document is based on trials carried out by our Research Centres and data selected from the literature, but shall in no event be held to constitute or imply any warranty, undertaking, express or implied commitment from our part. Our formal specifications define the limit of our commitment.

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