

## Technical data of Dry Lubricant LAM'LCOAT®

(Based on technology originally developed by the NASA)

### LAM'LCOAT® properties:

- Guaranteed thickness of 1µm (± 0,5 µm)
- High velocity propulsion of LAM'LCOAT material conditioned gas, at room temperature, without curing
- Very low friction coefficient: 0,03 dynamic (graphite: 0,074) and 0,07 static (→ reduces the operational temperature and noise)
- Lubricating power increases with load applied: friction coefficient of 0,044 under 14 kg/mm<sup>2</sup> increasing to 0,024 under 140 kg/mm<sup>2</sup> and remains stable up to 280 kg/mm<sup>2</sup> (nearly 2.5 times the load bearable by solid lubricant films, deposited using an organic binder)
- Is anti-stick, anti-seize, hydrophobic and oleophilic
- Substrates: bond to most substrates (metals, alloys, composites, elastomers, glass fibers, all plastics, etc...)
- Bonds to the substrate at molecular level and is uniformly an integral part once applied. Induces no degradation of the substrate (deformation, stress...)
- Is mechanically resistant, and can only be removed by machining/microsandblasting, grinding or wear of the substrate
- It does not flake, does not delaminate, and does not crack, preventing coatings scraps to damage mechanical sets
- Preserves the initial characteristics of hardness, dimensions (patterns, angles, edges...) and of surface of the finished article (including surface treatments) before coating. The best results are obtained with surface roughness (before coating) from 0,3 to 0,5 Ra and hardness above 50 HRc (+ or - 530 Vickers)
- Perfectly follows the mechanical or thermal deformation of the substrate on which it is applied
- Working temperatures: from -273°C to +600°C continuous (up to 650°C peak)
- Vacuum maximum working temperatures: from -188°C to +1 315°C at 10<sup>-14</sup> Torr
- Chemically inert; non-organic; non-toxic; does not change anti-corrosion properties (but is not anti-corrosion)
- Compatible with most solvents, fuel, lubricants, oils, basis, acids and mold release agents
- Non-magnetic
- Environmentally friendly, it does not migrate
- Qualified FDA for the food industry (USA)
- Qualified Mil Spec DOD-L-85645-A Type 1 for military applications (USA)
- Qualified ISO 10993 Certification (USA) and USP Class VI Bio-compatibility (Intl) for medical devices

### Different applications for the LAM'LCOAT®

<u>Sectors:</u>		<u>Machines/Tools:</u>	
- Aeronautic	- Military	- Axles, Shafts, Pins, Guide rails	- Ejectors, Slide bars, Spindles
- Aerospace	- Nuclear	- Balls, Liners, Bodies, Guides	- Moulds, Patterns, Nuts, Inserts
- Aluminium injection	- Petrochemical	- Blades, Scalpels	- Pistons, Chains, Transmissions
- Auto/Moto-racing	- Plastic injection	- Compressors, rheostats	- Pumps, Valves, Screws
- Cutting tools	- Pneumatic	- Control units	- Rollers, Gears
- Food	- Power transmission	- Cylinder heads, Segments, Cam shafts	- Springs, Bearings
- Hydraulic	- Precision engineering	- Drawers, Cales, Latches	- Washers, Bushes, Ball and socket joints
- Industrial valves	- Press tooling	- Drill bits, Cutters, Plates	- Worm gears, Nuts, Bolts
- Medical			