

PROPERTIES & PERFORMANCE

LUBODRY PRODUCTIONS has over 20 years of experience in developing and impinging cutting-edge anti-friction and anti-adhesive processes. LUBODRY PRODUCTIONS is the leading European source for impinged dry lubricant coatings. Research & development is our passion and our dedicated team assists industry leaders in identifying, thus validating, the ultimate lubricant solution. Doing so, we ensure

that your cost, performance and lifetime objectives are met. The selection criteria between the LUBODRY® G (GRAPHITE), LUBODRY® M (MOS2) & LUBODRY® W (WS2) coatings essentially depend on the functional temperature and chemical compatibility of your operating environment. Notwithstanding, each of our impinged dry lubricant coatings has its own physical and functional properties, as per described in the comparative chart below :

	LUBODRY® G	LUBODRY® M	LUBODRY® W
COMPOSITION	Graphite (C)	Molybdenum Disulfide (MOS2)	Tungsten Disulfide (WS2)
APPEARANCE / COLOUR	Gray / dark gray	Silver / gray / blue-gray	Silver / gray / polished rhodium
SUBSTRATES	All kinds of metals, platings, plastics and man-made materials		
SURFACE	No modification on surface and structure		
DENSITY	2 090 - 2 230 kg/m3	5 060 kg/m3	7 500 kg/m3
THICKNESS	0,0001"	0,0001"	0,00002"
MOLECULAR WEIGHT	12,0107 g/mol	160,07 g/mol	247,97 g/mol
RADIATION STABILITY	Stable under radiation		
OUTGASSING	Low		Very low
ADHESION TYPE	Physicochemical binding by molecular adsorption, without any flaking, peeling or delamination. Marginal migration of the surface treatment, which could easily be removed on demand		Physicochemical binding by molecular adsorption, without any flaking, peeling or delaminating. No migration of the surface treatment
APPLICATION PROCESS	High pressure projection using a tailor made suction nozzle with pressurized air (101,6 psi to 203,19 psi). May also be applied into deep bores with a ratio of 1 to 7 with the diameter		High pressure projection using a tailor made suction nozzle with pressurized air (101,6 psi to 203,19 psi). May also be applied into deep bores with a ratio of 1 to 7 with the diameter
APPLICATION TEMPERATURE	Application at ambiente temperature and polymerization at ambiente temperature during 7 days, or : 3 hours at 90°C or 1.5 hour at 140°C		Application at 20-35°C, no need for heat treatment.
TEMPERATURE RANGE			
- Normal atmosphere :	From -250°C to +1100°C	From -200°C to +400°C	From -200°C to +600°C
- Vacuum :	From -250°C to +1500°C	From -200°C to +800°C	From -200°C to +800°C
LOAD CAPACITY	Same as the substrate, up to 2,750 Mpa	Same as the substrate, up to 1,720 Mpa	Same as the substrate, up to 2,750 Mpa
ANTI-ADHESION PROPERTIES	Good : process recognized for its anti-adhesive properties (example : plastic injection molds)		
CONDUCTIVITY	Good : Same electrical properties as semi-conductors	Acceptable	Good : Same electrical properties as semi-conductors
MAGNETISM			Non-magnetic
COEFFICIENT OF FRICTION			
- In motion :	0,02 -0,07	0,02 - 0,07	0,03 max.
- Vacuum :	Low	Low	Low
CORROSION PREVENTION	- With additional treatment : Excellent corrosion resistance - Without treatment : Minor delay of corrosion, superior to bare substrate		
CHEMICAL STABILITY	Excellent chemical stability : inert substance, non-corrosive, insoluble in water, compatible with oils, alcohols and most fuels and solvents		
VACUUM STABILITY			
10-9 Torr : LUBODRY® G & LUBODRY® M	Good - no degassing		Very low outgassing
10-14 Torr : LUBODRY® W			
ATEX	No use restriction		
COMPATIBILITY	Compatible with most oils, fuels, solvents, alcohols, paints and coatings		Compatible with most oils, fuels, solvents, alcohols, paints and coatings. Not compatible with acid (pH<6) and alkalin solutions (pH>8)
BIOCOMPATIBILITY			Yes