



Standard indications

January 2009

By considering these directions in your preparations and application, you can obtain the most optimal result with our coatings.

- 1. The group of materials that will form a complete bond with our coatings include: (chromium/nickel) steel, except nitrogen treated steel* and steel (once) exceeding HRc 50, and most copper alloys.** Aluminium if pre-treated with electroless nickel and nickel (not nickel alloys) can deliver a slightly reduced but generally acceptable bond. Steel containing aluminium is less favourable. *The bond of the coating increases if the nitride layer is ground off. (The bond increases from 40µm, 1.6/1000")
- 2. As form many coatings, a perfect coating bond is not guaranteed between Lunac and steel, (once) exceeding HRc 50.** The chance of edges snipping of increases in this case. Grinding should be done with caution (machining in the direction of the underlying material). The application of thinner coatings (15µm) is recommended in this case. Thicker coatings can diminish the need for hardening.
- 3. In case the material to be treated is not new, a good bond is not guaranteed.** Absorbed foreign particles (especially organic materials such as plastics) are mainly the cause. Grinding over a depth of 40µm can offer a relieve. The Lunac coatings are able to replace this shortage completely.
- 4. Some less-homogeneous (such as C45 or cast iron) or used materials (see 3) can provoke the formation of (shallow) pinholes**.** The smoother the steel has ground, the smaller this risk is. **Ask for our experience list, dealing with the influences of various kinds of steel.
- 5. Lunac 1 generally possesses a high chemical resistance against most weather conditions, acids and alkalis. Lunac 1 and 2+ are not resistant against nitric acid. Caution is encouraged in oxidizing acidic environments and acids at high temperatures.** Though Lunac 2+ is more corrosion resistant than (chromium) steel, the Lunac 2+ corrosion resistance can be limited in various corrosive environments. Lunac 1 and 2+ are able to seal most materials without any pore or crack**. **Rough cast iron, rusted parts that have been etched clean or sand blasted steel can deliver micro porous coatings.**
- 6. Perfect surfaces and a very low roughness can be obtained with the Lunac 1 flow polish effect, ranging from Ra = 0.02 µm (0.79 µinch) to Ra = 0.002 µm (0.079 µinch). For this the surface beforehand must possess a maximum roughness of Ra = 0.30 µm (11.8 µinch) at Rt = +/- 2 µm (78.7 µinch).** A low substrate surface roughness Ra <0.17 (6.6µinch) / Rz <1.8 µm (71µinch) offers the most pore free Lunac coatings.
- 7. The coating thickness of both Lunac 1 & 2+ is generally 35-60 µm (1.37-2.36/1000"). Thicker coatings can be applied (up to 250 µm, 9.84/1000"), these are however vulnerable.** The maximum elongation of Lunac 1 is 0,11% and Lunac 2+ 0,28% after hardening.
- 8. In case of hard coatings, thinner than 45 µm, (1.77/1000")(including Lunac 1 & 2+), the chance of a push-through in a softer underground significantly increases with dynamic (point) burdening.**
- 9. (Hardened) Lunac 2+ can only be properly dressed with diamond based products.** Especially stainless steel can slightly deform due to the Lunac hardening temperature of 310°C (590 F).
- 10. Do never let hard plastics like PC cool down slowly on a Lunac surface without rinsing.** Lunac 1 should only be cleaned with non-abrasive cleaners.

In case Lunac coatings need to resist harsh (corrosive or mechanical) conditions, we recommend to conduct a test first for a longer period. These indications mount our widespread technical support. Do not hesitate to contact our technical staff for additional support. Side effects we do not know yet can still show up. If necessary we can conduct an experiment in our laboratory for material and tribological research.