

UNICERAL[®] 108



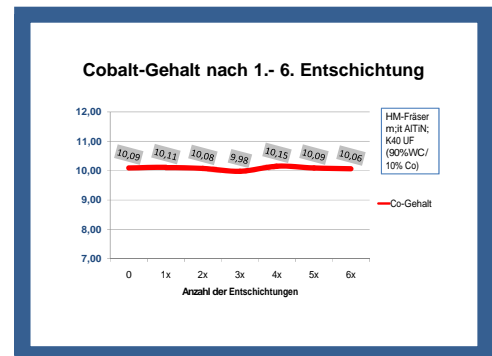
Decoating of Carbide and HSS

coatings

- TiN / TiCN, ZrN
- AlTiN, TiAlN
- AlCrN
- TiAlSiN
- Si, DLC (Ti/Ta, Si)

substrates

- Carbide (K, M, P)
- HSS
- Stainless steel
- Alumina



Description of product

The decoating product UNICERAL[®] 108 represents a new generation of high-efficiency decoating products for a safe and rapid decoating of especially CARBIDE with extreme stripping ratios up to 1 micron an hour. UNICERAL[®] 108 is applicable broadly for all *Titanium* and *Alumina* containing PVD/CVD coatings, even for AlTiN, AlCrN and also DLC. The brightness and shiny appearance of your toolings is always preserved, even after 6 times decoating (see Cobalte leeching diagram)!

Substrates made of High Speed Steel, Stainless Steel or Alumina are decoatable with UNICERAL[®] 108 as well – without any restrictions, or problems!

Decoating / stripping with UNICERAL[®]108 is easy to operate cause of just diving process. It's application is safe and free of danger; the decoating solution is of extreme stability; not any exothermic reaction can occur due to lack of any Peroxide component used or required in this formula.

The liquid concentrate is to be heated up to between 60 and 80°C undiluted and is ready to use then. The averagely achievable stripping ratios are between 0,4 and 1 micron an hour if using optimal equipment.

It is available in 10 liter PE cans (1-way).

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Special features

The main point of this really easy-to-run decoating / stripping process are the perfect surfaces one retains after decoating, the moderate operating parameters (T max *~ 80°C), the absolutely safe and free-of-fault handling and the enormous life span of decoating / stripping bath which makes even this decoating process most cost efficient.

This new process is applicable also in existing (decoating) facilities; operating overnight or even during week end is important part of product's advantages. No refills or level controls are required anymore.

In following a short review about the performance of decoating product UNICERAL[®] 108:



- 1 solution for almost all decoating jobs
- Surface's protection by 100%
- High stripping ratios
- Always reproducible and perfect results
- No investments in facility/ equipments
- Long-termed life time of bath and high efficiency in costs
- Simple and safe operating
- Low-cost in environmental care

Capacity / costs

UNICERAL[®] 108 is of high receptabilty having for this a long termed life span of bath. The average numbers of batches processable in 1 filling is between 8 and 10.

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For example the load of a 20 liter UNICERAL[®] 108 bath with toolings of diameter 10mm and length of 70mm :

	Pieces/batch	Cost each (€)
20 litre UNICERAL [®] 108 / 5 batches	1.000	0,16
20 litre UNICERAL [®] 108 / 10 batches	2.000	0,08

Preparation of bath

Shake UNICERAL[®] 108 vigorously before use; fill into heatable tank to level as required; set temperature of bath to between 70 and 80°C for 1h; the formerly slightly opaque liquid may turn into clear and transparent solution; then bath is ready to use.

Decoating

For decoating put already cleaned toolings or components (free of oil and fats) into heated decoating solution UNICERAL[®] 108 covering them completely; please consider that filling level can drop a little due to evaporation effects; in this case refill bath simply again with UNICERAL[®] 108.

Please use always only trays and baskets made of Carbon steel if decoating Carbide; those made of Stainless Steel are not suitable for carbide decoating.

After decoating take out parts from bath and rinse them properly with water (city water sufficient); please clean also cooling channels throughout with rinsing water; dry with hot air (80-120°C).

Stripping ratios

Referring to a 2 micron coating and to optimal technical conditions the overall decoating / stripping time for a TiN is 2-4h, for AlTiN approx. 4-8h; Chrome as part of coating or nanostructured coatings can effect remarkably the duration of decoating. The same is valid for carbon coatings like DLC/Ti or DLC/Si in which the accessibility of soluble phases (Ti, Si) is restricted by being covered with chemically inert layers (DLC).

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The overall duration can be lowered predominantly by increasing bath temperature to 95°C; however, the life span of decoating bath eventually can be effected then.

Basically the time of exposing the toolings into solution doesn't matter anyway as long as operating is exercised properly. Due to this parts can be decoated 6 times easily without any danger of harming the substrate (for example by Co leeching). For this decoating processes can be run safely and comfortably just overnight or even throughout weekend regardless the effective (much shorter) decoating time.

Working safety

Decoating with UNICERAL[®] 108 is very safe if application proceeds in proper and in full accordance with instructions as given herein. The results are always reproducible; overboiling or development of combustible vapours or gases cannot occur due to lack of any Peroxide Compound inside.

Environmentals

Add to 1 liter wasted UNICERAL[®] 108 solutions and under continuous stirring a solution of Alkaline in water; afterwards either discharge retained solution into wasted alkaline aqueous cleaners or decant superstitious and clear aqueous solution into sewage after all precipitations has been dropped down to bottom of tank/container if this proceeding is in accordance to local environmental government rules. In any case, the precipitate is to be cared for as special waste.

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