

Water-based Process

PERFORMANCES

Used in several number of industries either interoperational or final cleaning, the High-Tech PROMOCLEAN™ detergents are specially formulated and match with many substrate-contaminant couples.

The PROMOCLEAN™ are concentrated products composed of blends of high performance detergents, liquid, mainly alkaline, and specially formulated to be used by dipping or by spraying to clean any type of contaminants.

Their very low surface tension provides outstanding cleaning properties.

Most of these PROMOCLEAN™ detergents have exceptional rust inhibition characteristics.

Our formulations are compliant with regulations in force concerning chemical substances (REACH*, RoHS*, FGas*, not CMR*...) and are implemented by INVENTEC.

TECHNICAL GUIDE

pH	Temperature	Use conditions
Highly alkaline: pH = 12-14	> 50°C	- Ferrous - Degreasing, stripping or surface attack - Strong pollution
Slightly alkaline: pH = 9-12	> 40°C	- All metals - Light and medium pollution
Neutral: pH = 7-9	> 20°C	- Fragile alloys
Slightly acid: pH = 6-3	> 50°C	- Cleaning and phosphatation steel - Removing oxides (aluminum, copper) - Light pollution
Highly acid: pH = 3-1	Room temperature	- Stripping and surface attack - Removing metallic oxides - Mineral pollution

*REACH a new normative document to be implemented in next years concerning chemicals substances for Registration Evaluation and Authorisation of Chemicals.

*RoHS European Directive from 2006 concerning the Restriction of Hazardous Substances.

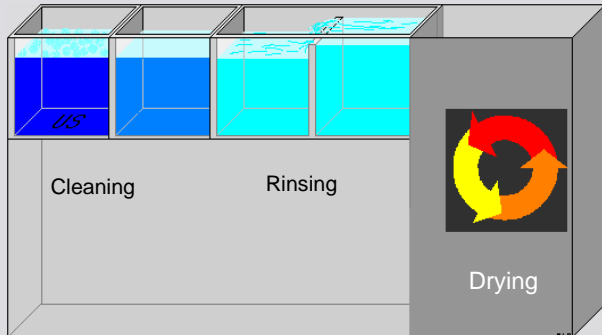
*FGas European Directive from 2006 concerning in prevent and thereby reduce emissions of fluorinated greenhouse gases covered by Kyoto protocol.

*CMR Carcinogenic, Mutagenic Reprotoxic substances

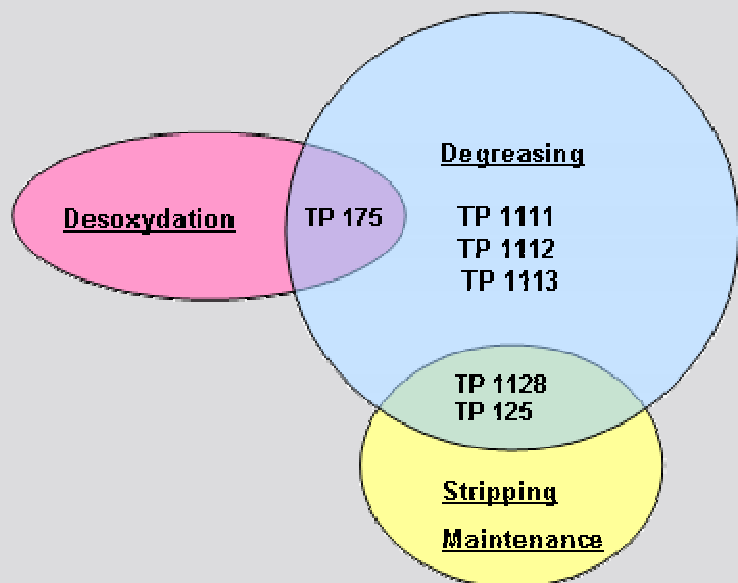
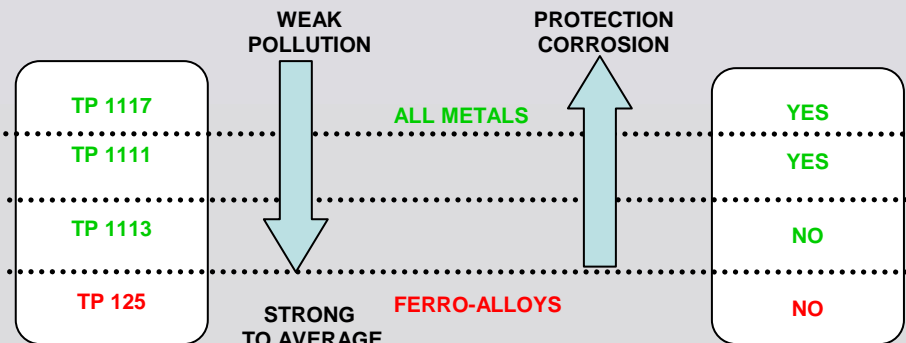


IMMERSION PROCESS

- Parts are immersed in the cleaning tank containing the detergent
- The parts are rinsed in hard water and/or DI water depending on the cleanliness requirements
- Final step drying with hot air

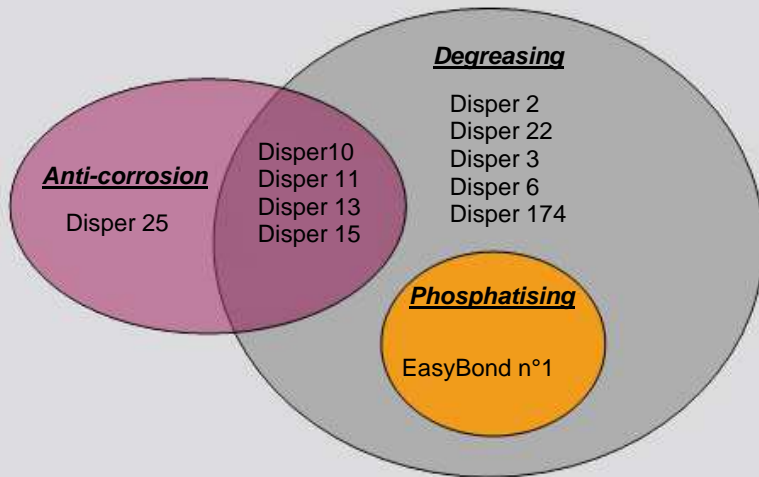


Core Products
Promoclean TP 1111
Promoclean TP 1112
Promoclean TP 1113
Promoclean TP 125



SPRAYING PROCESS

- ▶ The detergent is sprayed on the parts
- ▶ The parts are rinsed by spraying hard and/or DI water depending on the cleanliness requirements
- ▶ Finally dried in the same chamber by hot air



Core Products

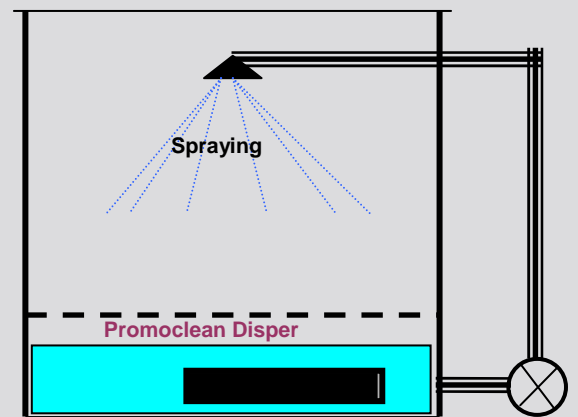
Promoclean DISPER 2

Promoclean DISPER 10

Promoclean DISPER 15

Promoclean DISPER 25

Pistons in aluminium for automotive



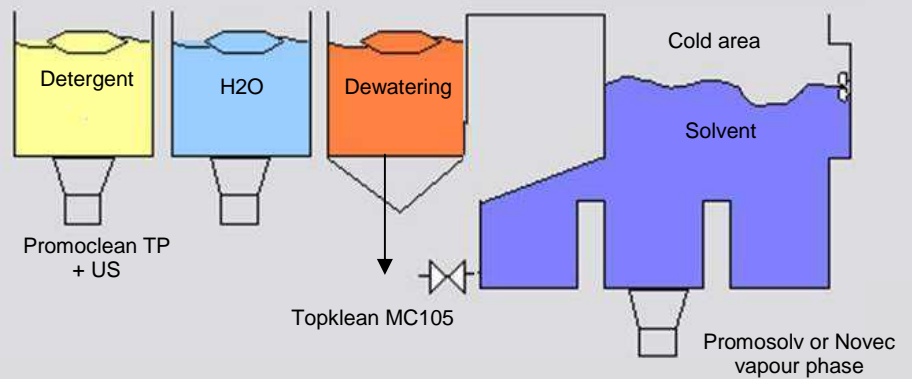


HYBRID PROCESS (DETERGENT + SOLVENT)

Dedicated process to remove various and/or very hard pollution. Indeed it combines detergent and solvent-based cleaners to get a high level of cleanliness.

Cleaning cycle steps

- Parts are immersed in the cleaning tank containing the detergent
- The parts are rinsed in hard water and/or DI water depending on the cleanliness requirements
- Second rinsing with a dewatering product to remove the water excess
- Final step: drying in the vapour phase.





PROMOCLEAN DEWAX: Fine removal of wax to substitute Trichloroethylene

Cleaning cycle
Cleaning: Promoclean Dewax Concentration: 30% Temperature: 95°C Time: 15min
Rinsing: hard water
Drying: Ventilated hot air



PROMOCLEAN TP 1111: Specially developed for the elimination of polish on all metals (steel, brass, aluminium, zamak, plastics and other supports).

Cleaning cycle
Cleaning: Promoclean TP 1111 Concentration: 5% Temperature: 60°C Time: a few minutes
Rinsing: DI water
Drying: Ventilated hot air

M-AERO Product Range: Approved by many actors in Aeronautics market, cleaning by dipping with US or by spraying; good separation with oils

Conform to aeronautical demands of Boeing, Pratt and Whitney, Rolls-Royce, Safran

Cleaning cycle
Cleaning: maintenance Concentration : 5% to 20% Temperature: 60°C
Drying: ambient air or finishing with HFE





BLUEGOLD: Cleaning of parts and equipments in contact with oxygen in substitution of 141B
 Cleaning by dipping with US or by spraying; no residues remained after drying

Homologated by the American association: "Compressed Gas Association Inc."

Cleaning cycle
Cleaning: Bluegold Concentration : 2% to 5% Temperature: 40 and 60°C
Drying: ambient air or finishing with Novec™ 7100



PROMOCLEAN EASYBOND: Phosphate layer deposit on the parts before storage

2 additives to enhance the Promoclean Easybond N°1 phosphatation action:

- Promoclean Easybond AD1 (speed up the degreasing to increase the phosphate layer thickness)
- Promoclean Easybond pH1 (to optimize the phosphatation)

Cleaning cycle
Cleaning: Promoclean Easybond N°1 Concentration: 5% Temperature: 60°C Time : 5min
Rinsing: hard water
Drying: Ventilated hot air

