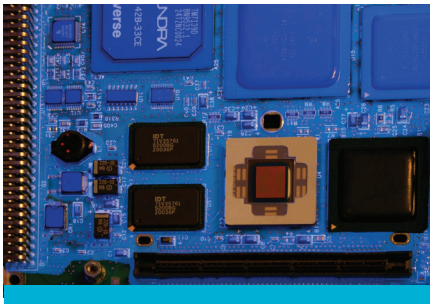
Proton® 532

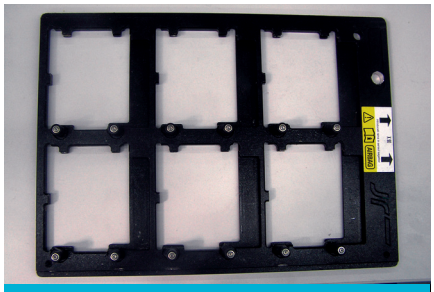
Proton® 532 is a solvent-based cleaning fluid designed to remove cured and uncured conformal coatings from coating frames, coated PCBs and components of machine parts.
Proton® 532 is mainly designed for removeing of **styrene, acrylic, acrylic urethane and polyurethane** coatings.
Proton® 532 is used in all the types of cleaning technologies without limitation, thanks to its high flaspoint and high material compatibility, mainly in the spray-in-air and ultrasonic cleaning machines.
Higher concentration of active components compare to Proton 571.

Areas for Use of Proton® 532:

1. unsoldered solder paste – PCB misprints and stencils	*unrecommended*	
2. SMD adhesives, uncured	*unrecommended*	
3. lead-free flux residues	*unrecommended*	
4. no-clean flux residues	*unrecommended*	
5. resin fluxing agent residues	*unrecommended*	
6. conformal coatings: cured and uncured styrene, acrylic, acrylic urethane and polyurethane coatings	**highly recommended**	**Sonix®, InJet®**



Conformal coated PCB



Coating frames

Cleaning Process Using Proton® 532:

› Proton® 532 is intended for direct use, no need to dilute!
› filtration of the fluid: recommended – to extend the service life of Proton® 532 and to protect certain parts of the cleaning device it is suitable to install filtrations of the cleaning bath. For consultation and the proposal please contact your DCT representative.
› *rinse using normal water – as the water composition and hardness vary substantially in the different places, it is recommended to rinse with normal water only for the cleaning of the soldering frames and machine parts. To rinse PCBs it is highly recommended to use Di-water which would guarantee that no salts and minerals contained in normal water stay on the rinsed surface as these may be dangerous to PCBs in the long run.

1.1. cured and uncured coatings – coated PCBs, coating frames and components of coating machines

Process stages:	*1. cleaning*	*2. drying*
Cleaning fluid:	*Proton® 532*	*air, hot circulating air*
Time (in minutes):	*10 to 30*	*5 to 20*
Temperature (°C):	*35 to 60*	*room temp. to 70*

Proton® 532:

› highly compatible no negative influence on PCBs materials, stencils and components of the cleaning devices;
› suitable for closed cleaning processes;
› easy to use – no need of a special training;
› able to clean also at the room temperature
› tenzide-free technology – no solid residues on the surface being cleaned in comparison with tenzide cleaning fluids being used for these cleaning applications, as well;
› cost-effectiveness of use;
  › a long bath life of the cleaning fluid if filtered properly in the cleaning machine, suitable filtration provides by DCT;
  › possibility to clean the PCBs already assembled.

Environmental Information:

› environment-friendly – completely biodegradable;
› HMIS III, evaluation of the overall product hazardousness:
Health - 0 | 1 | 2 | 3 | 4
Flammability - 0 | 1 | 2 | 3 | 4
Reactivity - 0 | 1 | 2 | 3 | 4

HMIS evaluates the product from the three points of view above, the evaluating parameters are from the minimum risk (0) to the maximum one (4); HMIS rating criteria issue national paint and coating associantion NPCA (www.paint.org).

› ROHS – in accordance with the regulations, does not contain any hazardous substances;
› does not contain dangerous halogens.

Physical and Chemical Properties:

Product appearance	*clear to yellowy*
Odour, aroma	*weak after amines*
Flash point (°C/°F)	*90/194*
pH value	*neutral*
Density (g/ccm) at 20°C (68°F)	*1.02*
Boiling point (°C/°F)	*98 - 213 / 203 - 415*
Freezing point (°C/°F)	*below - 5 / 11*
Surface tension (mN/m) at 25°C (77°F)	*27.3*
Vapour pressure (mbar) at 20°C (68°F)	*28.4*
Water solubility at 17°C (62,6°F)	*soluble*

Technical Support:

DCT offers, free of charge, the technical support, consultation and assistance directly on your manufacturing premises to find the most suitable solution.
To book the date of our visit please contact your DCT representative.

Trial Tests:

To book the date of the trial tests please contact your DCT representative.
When setting the cleaning process, DCT offers the testing of cleaning fluids, free of charge, in the full range directly at the customer's, in the amount as needed to fill and run the cleaning technology during the trial test. The duration and range of the trial tests are individual. If the criteria requested are met, the liquid stays with the customer and the partly used cleaning fluid is paid. If the requested cleaning results are not met, DCT takes the used cleaning fluid back without any request for compensation.

Compatibility:

highly compatible - no negative influence on PCBs materials, stencils and components of the cleaning devices.

Liquidation of used Proton® 532:

For the liquidation of Proton® 532 used please contact your company for waste management. While Proton® 532 has been classified as no hazardous product, the substances it contains after the cleaning cycles as the solder pastes, fluxing agents, SMD adhesives etc. are classified as hazardous and Proton® 532 used must be liquidated properly by a responsible company.

Packing:

Proton® 532 is standardly delivered in 25 litres PP cans. Samples are packed individually, should you need a sample, please contact your DCT representative.

Transport:

Proton® 532 is classified as no hazardous matter, is not subject to any special request for the transport and ADR. No special packing for the land transport and air carrying requested.

Handling, Safety at Work:

DCT recommends to the operating staff to use safety spectacles when working with Proton® 532.

Storage:

Proton® 532 does not require any special placement, should be stored in the original packing at the temperature from –5 to 30°C

Shelf life:

The maximum usable life for this product is 24 months from the production date, if stored as recommended.