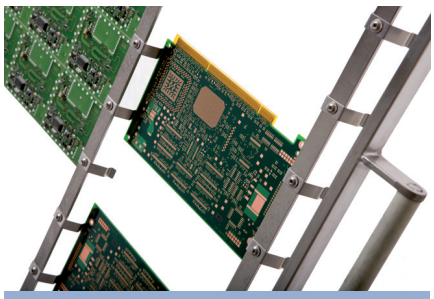
Decotron® 331S

DCT development chemical technologies

Decotron® 331S is a water-based cleaning fluid determined to remove flux residues after the soldering from the PCBs.
Decotron® 331S has **high compatibility with termotransfer printing of PCBs. Emulsion and two phase free formulation.**
Decotron® 331S is used in all the types of cleaning technologies without limitation, thanks to its nonflammability and high material compatibility, mainly in the spray-in-air technologies, ultrasonic and air-based as well.

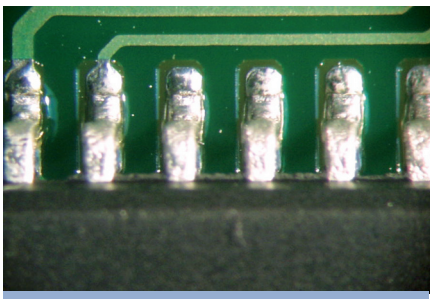
Areas for Use of Decotron® 331S:

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



Misprint

Stencil



flux residues on PCB

Cleaning Process Using Decotron® 331S:

› Decotron® 331S is intended for direct use, no need to dilute!
› stir well before use – Decotron® 331S consists of several components and it is vital that their ratio remains the same in the remaining liquid if it is not used entirely;
› filtration of the fluid: recommended – to extend the service life of Decotron® 331S 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.
› Pb-free compatible – Decotron® 331S is developed also for the cleaning of Pb-free solder pastes.

1.1. Flux residues after the soldering - PCBs

Process stages:	*1. cleaning*	*2. rinse*	*3. drying*
Mediu	*Decotron® 331S*	*Di-water, water **	*air, hot circualting air*
Time (in minutes)	*8 to 15*	*2 to 5*	*10 to 20*
Temperature (°C)	*from 20, best at 45*	*room temperature*	*room temp. to 70*

1.2. Flux residues after the soldering + unsoldered solder paste - PCBs´ misprints and stencils

Process stages:	*1. mytí*	*2. rinse*	*3. drying*
Medium	*Decotron® 351S*	*Di-water, water **	*air, hot circualting air*
Time (in minutes)	*8 to 15*	*2 to 5*	*10 to 20*
Temperature (°C)	*from 20, best at 45*	*room temperature*	*room temp. to 70*

Decotron® 331S Qualities:

› highly compatible no negative influence on PCBs materials, stencils and components of the cleaning devices;
› suitable for closed cleaning processes;
› no flash point – even if heated extremely no self-ignition occurs, also Decotron® 331S cannot be set on fire by direct fire;
› cleaning results better than with solvent cleaning fluids, with the advantages of the water base;
› water base increases safety at work;

Brings new ideas to long standards

DCT s.r.o. / Tovární 85 / 679 21 Černá Hora / **Tel.:** +420 516 432 677 **/ e-mail:** info@dctchemicals.com **/ www.dctchemicals.com**

  - solvent cleaning fluids evaporate heavily and their vapors are harmful to health, in larger amounts very dangerous;
  - solvent cleaning fluids very often have a very low flash point which increases the risk of inflammation of the liquid;
- easy to use – no need of a special training;
- able to clean also at the room temperature – optimum cleaning results in terms of time and the cleaning quality are reached at temperatures from 35 to 50°C, it is possible to use the liquid for cleaning at the room temperature, as well, however, the cleaning would take longer time;
- 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 service life of the cleaning fluid if filtered properly in the cleaning machine; suitable filtration provides by DCT;
  - the water base is not as costly as the solvent one;
  - 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	*transparent*
Odour, aroma	*etheral*
Flash point (°C/°F)	*none*
pH value	*9.5*
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)	*28.3*
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 Decotron® 331S used:
For the liquidation of Decotron® 331S used please contact your company for waste management. While Decotron® 331S has been classified as no hazardous water-base product, the substances it contains after the cleaning cycles as the solder pastes, fluxing agents, SMD adhesives etc. are classified as hazardous and Decotron® 331S used must be liquidated properly by a responsible company.

Packing:
Decotron® 331S is standardly delivered in 25 litres PP cans. Samples are packed individually, should you need a sample, please contact your DCT representative.

Transport:
Decotron® 331S 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 Decotron® 331S.

Storing:
Being the non-flammable product, Decotron® 331S does not require any special placement, should be stored in the original packing at the temperature from –5 to 30°C

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

Decotron® is a registered trademark of DCT
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