EMIL OTTO

FLUX- AND SURFACE TECHNOLOGY

PRODUCTS FOR THE ELECTRONIC INDUSTRY

CLEANING AGENTS

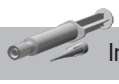
CLEANING AGENTS ETIMOL

SOLDERING AIDS

 Canister

 Spray bottle

 Bottle

 Injection

 Spray

Cleaning agents

We offer cleaning agents for a wide variety of applications. We can offer you an efficient and gentle cleaning agent, both for the removal of flux residues on circuit boards as well as for the reliable removal of dirt and impurities on machines, stainless steel stencils, coating frames etc. All cleaning agents are developed and tested by us.

EO-RA-001

Cat.-No. 2940

Electronics cleaner for removal of flux residues from PCBA

With the EO-RA-001 soldering flux residues can be accurately manually removed from printed circuit boards assembly. The cleaning agent is available in different container units to enable accurate application to the printed circuit boards assembly.

Customer added value:

- Efficient and precise removal of flux residues

The picture may differ from the original product.

Technical Data:

Application Area:	flux remover
Appearance/smell:	colorless, alcoholic
Density at 20 °C:	0,79–0,80 g/cm³
Flash point:	12 °C
Consistency:	liquid
Substances:	isopropyl alcohol
Durability:	36 months

Packaging units

EO-RA-004

Cat.-No. 2943

Electronics cleaner for removal of flux residues from PCBA

With the EO-RA-004, soldering flux residues can be accurately manually removed from printed circuit boards assembly. The cleaning agent is available in different container units to enable accurate application to the printed circuit boards assembly.

Customer added value:
- Efficient and precise removal of crystalline, solid and pasty flux residues
- Strong cleaning power
- Wide range of applications
- Low-VOC

The picture may differ from the original product.

Technical Data:

Application area:	flux remover
Appearance/smell:	colorless to light yellow, like glycol
Density at 20 °C:	0,90–0,92 g/cm³
Flash point:	>80 °C
Consistency:	liquid
Substances:	glycols, ether, additives, acetate
Durability:	36 months

Packaging units

EO-RA-005

Cat.-No. 2944

Electronics cleaner for removal of flux residues

With the EO-RA-005, soldering flux residues can be accurately manually removed from printed circuit boards assembly. The cleaning agent is available in different container units to enable accurate application to the printed circuit boards assembly.

Customer added value:

- Efficient and precise removal of crystalline, solid and pasty flux residues
- Residue-free removal of acryl-, OSP-coating- and varnish remains

The picture may differ from the original product.

Technical Data:

Application area:	flux remover
Appearance/smell:	colorless to light yellow, similar to ketone
Density at 20 °C:	0,82–0,84 g/cm³
Flash point:	12 °C
Consistency:	liquid
Substances:	ketone, ether, alcohol
Durability:	36 months

Packaging units

EO-RA-007

Cat.-No. 2947

Special cleaning agent for manual cleaning of PCBA and other surfaces
WEEE/RoHS-conform

Flux remover EO-RA-007 has been developed especially for the manual removal of flux residues of PCBA. This special formula easily cleans the most organic residues from soldering processes, as well as greasy substances, fingerprints and dust on circuit boards and other surfaces. EO-RA-007 evaporates very fast and dries-up residue-free on the cleaned area. The evaporation is optimized to easily remove impurities from the circuit board with an ESD cloth. With the additionally developed brush attachment, flux- or paste residue can be effectively softened and removed from all areas of the circuit board.

The picture may differ from the original product.

Technical Data:

Anwendungsbereich:	flux remover
Appearance/smell:	spray can, compressed gas packaging: Colorless aerosol / cleaning liquid: Colorless, clear liquid
Density at 20 °C:	spray can: <0.7 g/cm³ / cleaning liquid: 0.76–0.79 g/cm³
Boiling point/boiling range:	spray can: Approx. -40 °C (Aerosol, Gas) °C
Flash point:	spray can: Approx. -80 °C (Aerosol, Gas) / cleaning liquid: 12 °C
Substances:	spray can: Isopropyl alcohol-solvent mixture / cleaning liquid: Isopropyl alcohol-solvent mixture
Storage conditions:	cool, dry and protected from light at 5°C–25°C

Packaging units

Canister with 5–30 liters content – Other packaging sizes on request. Spray can with 400 ml.

EO-RA-008

Cat.-No. 2948

SPECIAL CLEANING AGENT
Cleaning agent for the manual cleaning of oils, greases and pastes
WEEE/RoHS-compliant

EO-RA-008 has been developed especially for the removal removal of residues containing oil, grease and paste. This special formula easily cleans off kind of greasy residue, as well as completely dried up paste residues from different application processes. This special cleaning agent is perfectly suitable for both the electronics cleaning and also performs well within the field of toolmaking and mechanical engineering. A wide range of contaminants like adjusting pastes, lacquers, marking inks and oily contaminants are efficiently removed. EO-RA-008 evaporates very quickly and dries off residue-free. The evaporation has been optimised to completely remove contamination from the surface with a cloth.

Benefits with the use of EO-RA-008:

- Ideal for the electronics- and toolmaking/ mechanical engineering sector
- Easy, fast and precise removal of oily, greasy contaminants
- Highly efficient cleaning effect
- Fast dissolving performance
- Quick evaporation
- Produces clean surfaces
- High material compatibility
- Economical

The picture may differ from the original product.

Technical Data:

Application area:	flux remover
Appearance/smell:	colourless clear liquid
Density at 20 °C:	0,72–0,75 g/cm³
Flash point:	12 °C
Substances:	ester-naphtha mixture
Storage conditions:	cool, dry and protected from light at 5°C–25°C

Packaging units

Canisters each with 5 l to 30 l contents other packaging sizes on request

LP-M

Cat.-No. 1024

Alkaline flux remover for frames and masks, concentrate

The cleaning agent, LP-M, is an alkaline soldering flux remover for stencils, stencil frames and masks. The cleaning agent is available in different packaging to enable accurate application to the printed circuit boards assembly.

Customer added value:

- Effective, manual cleaning of masks and frames
- Removes polar and non-polar residues

The picture may differ from the original product.

Technical Data:

Application area:	coating frame- and mask cleaning
Appearance/smell:	colorless to light yellow, unspecified, faintly like glycol
ph-value:	(1/100) = 9–12
Density at 20 °C:	1,0 +/- 0,1 g/cm³
Flash point:	>80 °C
Consistency:	liquid
Substances:	amine complex, glycols, ether, additives
Durability:	12 months

Packaging units

LM-208

Cat.-No. 1020

Electronics cleaner for removal of flux residues from PCBA

With the LM-208, soldering flux residues can be removed. The cleaning agent is available in different container units to enable accurate application to the printed circuit boards assembly.

Customer added value:

- Efficient removal of flux residues

The picture may differ from the original product.

Technical Data:

Application area:	flux remover
Appearance/smell:	colorless, alcoholic
Density at 20 °C:	0,790 +/- 0,003 g/cm³
Flash point:	12 °C
Consistency:	liquid
Substances:	mixture of short-chain alcohols, i.a. isopropyl
Durability:	12 months

Packaging units

Cleaning agents Etimol

Etimol SEM 10 RAA

Cat.-No. 5101

Soldering Equipment Maintenance

The water-based, alkaline cleaning medium efficiently removes flux residues and outgassing from circuit boards from reflow-, wave-, selective- and vapour-phase soldering systems. Due to the foaming formula an improved effect is achieved, even when used with still hot soldering machines, the mild inherent odor convinces.The cleaning medium is sprayed onto the surfaces to be cleaned at room temperature and wiped off after several minutes. Due to the innovative formula when reaching soldering temperatures of >200 degrees, no cleaning agent residues of any kind remain in the soldering machine system.

Technical Data:

Application area:	soldering machine cleaning
Appearance/smell:	colorless to slightly yellow, clear
Application:	ready-to-use
ph-value:	alkaline
Density at 20 °C:	0,997 +/- 0,005 g/cm³
Boiling point/boiling range:	>100 °C
System:	waterbased
Operations temperature:	room temperature
Reliable cleaning results with:	flux residues, Condensate from PCB boards
Durability:	36 months
Storage conditions:	ideal in original packaging at 10°C–25°C
Transportation:	non-DG

The picture may differ from the original product.

Packaging units  5 L / 20 l plastic can 

Etimol SEM 11 RAA

Cat.-No. 5114

Soldering Equipment Maintenance

The water-based, alkaline cleaning medium efficiently removes flux residues and outgassing from circuit boards from reflow-, wave-, selective- and vapour-phase soldering systems. Due to the foaming formula an improved product effect is achieved, when used on still hot soldering machines, the mild inherent odor convinces. The cleaning medium is sprayed onto the surfaces to be cleaned at room temperature and wiped off after several minutes. Due to the innovative formula when reaching soldering temperatures of >200 degrees, no cleaning agent residues of any kind remain in the soldering machine system.

Technical Data:

Application area:	soldering machine cleaning
Appearance/smell:	colorless to slightly yellow, clear
Application	ready-to-use
ph-value:	alkaline
Density at 20 °C:	1,000 +/- 0,005 g/cm³
Boiling point/boiling range:	>100 °C
System:	waterbased
Operations temperature:	room temperature
Reliable cleaning results with:	flux residues, Condensate from PCB boards
Durability:	36 months
Storage conditions:	ideal in original packaging at 10°C–25°C
Transportation:	non-DG

The picture may differ from the original product.

Packaging units  5 l / 20 l plastic can 

Etimol SW 20 CN

Cat.-No. 5107

SMT-Stencil cleaning within automatic equipment

The water-based, pH-neutral cleaning concentrate is diluted in the ratio 1:4 with DI water (corresponds to ready to use Etimol SW 25 RAN) and then efficiently removes residues of solder paste containing lead, lead-free or so-called No-Clean solder pastes as well as of SMT adhesives from SMD stencils in automatic washing machines. The pH-neutral formula features excellent compatibility with the common stencil materials. Due to the innovative formula, high bath loading values are achieved in comparison to standard cleaners, so that the intervals between the bath changes can be extended significantly and the resulting volumes of waste for disposal are reduced.

The cleaner can be excellently rinsed with water and itself. The cleaning medium is filled in the cleaning tank of the stencil washing system at room temperature.

Technical Data:

Application area:	(automatic) SMT stencil cleaning
Appearance/smell::	colorless to slightly yellow, clear
Application:	1 part concentrate : 4 parts DI water
ph-value:	neutral
Density at 20 °C:	0,922 +/- 0,005 g/cm³
Boiling point/boiling range:	>100 °C
System:	waterbased (ready-mix)
Operations temperature:	room temperature
Reliable cleaning results with:	leaded, lead-free, no-clean solder pastes, SMT-adhesives
Durability:	36 months
Storage conditions:	ideal in original packaging at 10°C–25°C
Transportation:	non-DG

The picture may differ from the original product.

Packaging units  5 l / 20 l plastic can

Etimol SW 21 CA

Cat.-No. 5113

SMT-Stencil cleaning within automatic equipment

The water-based, slightly alkaline adjusted cleaning concentrate is diluted with DI water in the ratio 1:4 (then corresponds to ready to use Etimol SW 26 RAA) and then efficiently removes residues of solder paste containing lead, lead-free or so-called No-Clean solder pastes as well as of SMT adhesives from SMD stencils in automatic washing machines. The formula features excellent compatibility with the stencil materials commonly used and, especially with µ-GBA and Fine-Pitch stencils, has an efficient cleaning effect. Due to the innovative formula, high bath loading values are achieved in comparison to standard cleaners, so that the intervals between the bath changes can be extended significantly and the resulting volumes of waste for disposal are reduced.

The cleaning agent can be excellently rinsed with water. The cleaning medium is filled in the cleaning tank of the stencil washing system at room temperature.

Technical Data:

Application area:	(automatic) SMT stencil cleaning
Appearance/smell:	colorless to slightly yellow, clear
Application:	1 part concentrate : 4 parts DI water
ph-value:	alkaline
Density at 20 °C:	0,923 +/- 0,005 g/cm³
Boiling point/boiling range:	>100 °C
System:	waterbased (ready-mix)
Operations temperature:	room temperature
Reliable cleaning results with:	leaded, lead-free, no-clean solder pastes, SMT-adhesives
Durability:	36 months
Storage conditions:	ideal in original packaging at 10°C–25°C
Transportation:	non-DG

The picture may differ from the original product.

Packaging units  5 l / 20 l plastic can

Etimol SW 25 RAN

Cat.-No. 5104

SMT-Stencil cleaning within automatic equipment

The water-based, pH-neutral cleaning medium efficiently removes residues of solder paste containing lead, lead-free or so-called No-Clean solder pastes as well as of SMT adhesives from SMT stencils in automatic washing machines. The pH-neutral formula features excellent compatibility with the stencil materials commonly used. Due to the innovative formula, high bath loading values are achieved in comparison to standard cleaning agents, so that the intervals between bath changes can be significantly extended and the resulting volumes of waste for disposal are reduced. The cleaning agent can be excellently rinsed with water and itself. The cleaning medium is filled in the cleaning tank of the stencil washing machine at room temperature.

Technical Data:

Application area:	(automatic) SMT stencil cleaning
Appearance/smell:	colorless to slightly yellow, clear
Application	ready-to-use
ph-value	neutral
Density at 20 °C	0,981 +/- 0,005 g/cm³
Boiling point/boiling range:	>100 °C
System:	waterbased
Operations temperature	room temperature
Reliable cleaning results with:	leaded, lead-free, no-clean solder pastes, SMT-adhesives
Durability:	36 months
Storage conditions:	ideal in original packaging at 10°C–25°C
Transportation:	non-DG

The picture may differ from the original product.

Packaging units  5 l / 20 l plastic can

Etimol SW 26 RAA

Cat.-No. 5105

SMT-Stencil cleaning within automatic equipment

The water-based, slightly alkaline adjusted cleaning medium efficiently removes residues of solder pastes containing lead, lead-free or so-called No-Clean solder pastes as well as of SMT adhesives from SMT stencils in automatic washing machines. The formula features excellent compatibility with the stencil materials commonly used, and especially with µ-GBA and Fine-Pitch stencils, has an efficient cleaning effect. Due to the innovative formula, high bath loading values are achieved in comparison to standard cleaning agents, so that the intervals between bath changes can be extended significantly and the resulting volumes of waste for disposal can in some cases be reduced considerably. The cleaning agent can be excellently rinsed with water. The cleaning medium is filled in the cleaning tank of the stencil washing machine at room temperature.

Technical Data:

Application Area:	(automatic) SMT stencil cleaning
Appearance/smell:	colorless to slightly yellow, clear
Application:	ready-to-use
ph-value:	alkaline
Density at 20 °C:	0,981 +/- 0,005 g/cm³
Boiling point/boiling range:	>100 °C
System:	waterbased
Operations temperature:	room temperature
Reliable cleaning results with:	leaded, lead-free, no-clean solder pastes, SMT-adhesives
Durability:	36 months
Storage conditions:	ideal in original packaging at 10°C–25°C
Transportation:	non-DG

The picture may differ from the original product.

Packaging units  5 l / 20 l plastic can

Etimol PC 50 RAA

Cat.-No. 5106

Maintenance Cleaning

The water-based, alkaline cleaning medium efficiently removes flux residues and outgassing from printed circuit boards assembly, from condensate traps and from machine parts. Due to the foam-free formula, the product can be used in compressed-air supported systems as well as spray systems, in most cases without the addition of defoaming agents. Depending on the case of application, the cleaning medium is filled in the automatic cleaning system ready to use or diluted 1:1 with DI water at room temperature. Cleaning at increased temperature (40-45°C) also accelerates the cleaning effect. For the cleaning of soldering frames an application temperature of at least 45°C is recommended.

Technical Data:

Application Area:	solder frame cleaning, condensate trap cleaning
Appearance/smell:	colorless to slightly yellow, clear
Application:	ready-to-use up to 1 part concentrate + 1 part DI-Water
ph-value:	alkaline
Density at 20 °C:	0,995 +/- 0,005 g/cm³
Boiling point/boiling range:	>100 °C
System:	waterbased
Operations temperature:	room temperature
Reliable cleaning results with:	flux residues, condensate from PCB boards
Durability:	36 months
Storage conditions:	ideal in original packaging at 10°C–25°C
Transportation:	non-DG

The picture may differ from the original product.

Packaging units  20 l plastic can / 200 l plastic drum

Etimol PC 55 CA

Cat.-No. 5110

Maintenance Cleaning

The water-based, alkaline cleaning medium efficiently removes flux residues from soldering frames, from condensate traps and from machine parts. Due to the foam-free formula, the product can be used in compressed-air supported systems as well as spray systems, in most cases without the addition of defoaming agents.

Depending on the case of application, the cleaning medium is diluted 1:7-1:10 with DI water and filled in the automatic cleaning system. Recommended cleaning temperature between 45°C-65°C.

Technical Data:

Application Area:	solder frame cleaning, condensate trap cleaning
Appearance/smell:	colorless to slightly yellow, clear
Application:	ready-to-use up to 1 part concentrate + 7-10 part DI-water
ph-value:	alkaline
Density at 20 °C:	0,956+/- 0,005 g/cm³
Boiling point/boiling range:	>100 °C
System:	waterbased (ready diluted)
Operations temperature:	ideal at 45°C–65°C
Reliable cleaning results with:	flux residues
Durability:	36 months
Storage conditions:	ideal in original packaging at 10°C–25°C
Transportation:	non-DG

The picture may differ from the original product.

Packaging units  5 l / 20 l plastic can

Etimol SUC 61 RAN

Cat.-No. 5102

Stencil underside-wiping during printing process

The water-based, pH-neutral cleaning medium efficiently removes residues of solder pastes containing lead, lead-free or so-called No-Clean solder pastes as well as of SMT adhesives from the underside of the stencil. After the printing process, Etimol SUC 61 RAN optimally wets both the cleaning roller or the cleaning fleece as well as the underside of the stencil, so that constant high and qualitatively reproducible cleaning results are achieved. The innovative homogeneous formula and the optimal drying behaviour grant reliable process stability, printing repeatability and defined solderpaste printing sharpness. Depending on the printer model and manufacturer the cleaning medium is either filled undiluted directly into the reserve tank of the stencil printer at room temperature or aspirated directly from the delivery drum.

Technical Data:

Application area:	underside cleaning in stencil printer
Appearance/smell:	colorless to slightly yellow, clear
Application	ready-to-use
ph-value:	neutral
Density at 20 °C:	0,965 +/- 0,005 g/cm³
Boiling point/boiling range:	>100 °C
System:	waterbased
Flash point	61 °C
Operations temperature:	room temperature
Reliable cleaning results with:	leaded, lead-free, no-clean solder pastes, SMT-adhesives
Durability:	36 months
Storage conditions:	ideal in original packaging at 10°C–25°C
Transportation:	non-DG

The picture may differ from the original product.

Packaging units  5 l / 20 l plastic can

Etimol SUC 63 RSN

Cat.-No. 5103

Stencil underside-wiping during printing process

The solvent-based, pH-neutral cleaning media efficiently removes residues of solder pastes containing lead, lead-free or so-called No-Clean solder pastes as well as of SMT adhesives from the underside of the stencil. After the printing process, Etimol SUC 63 RAN optimally wets both the cleaning roller or the cleaning fleece as well as the underside of the stencil, so that constant high and qualitatively reproducible cleaning results are achieved. The mild odor formula unites good cleaning properties with low odor and optimal drying properties, as a result the smearing of solder paste components on the underside of the stencil is significantly minimized. Depending on the printer model and manufacturer the cleaning medium is either filled undiluted directly into the reserve tank of the stencil printer at room temperature or aspirated directly from the delivery drum. With automatic washing machines, their suitability for the use of the medium is to be checked beforehand.

Technical Data:

Application area:	underside cleaning in stencil printer
Appearance/smell:	colorless to slightly yellow, clear
Application:	ready-to-use
ph-value:	neutral
Density at 20 °C:	0,821 +/- 0,005 g/cm³
Boiling point/boiling range:	170–210 °C
System:	waterbased
Flash point:	63 °C
Operations temperature:	room temperature
Reliable cleaning results with:	leaded, lead-free, no-clean solder pastes, SMT-adhesives
Durability:	36 months
Storage conditions:	ideal in original packaging at 10°C–25°C
Transportation:	non-DG

The picture may differ from the original product.

Packaging units  5 l / 20 l plastic can

Etimol CR 65 RS

Cat.-No. 5108

Conformal-Coating frame cleaning

The solvent-based, ready to use Etimol CR 65 RS has been developed especially for the removal of silicon lacquers (conformal coating) from lacquering frames.

The cleaning medium is filled in an automatic cleaning system (in most cases ultrasonic) at room temperature. Cleaning takes place ideally at 45-50°C.

Technical Data:

Application area:	cleaning of coating frames (conformal coating) silicon
Appearance/smell:	colorless to slightly yellow, clear
Application:	ready-to-use
ph-value:	not relevant
Density at 20 °C:	0,811 +/- 0,005 g/cm³
Boiling point/boiling range:	182–234 °C
System:	solventbased
Flash point:	65 °C
Operations temperature:	room temperature to max. 50°C
Reliable cleaning results with:	silicone lacquers
Durability:	36 months
Storage conditions:	ideal in original packaging at 10°C–25° C
Transportation:	non-DG

The picture may differ from the original product.

Packaging units  5 l / 20 l plastic can

Etimol CR 66 RSA

Cat.-No. 5109

Conformal-Coating frame cleaning

The solvent-based, ready to use Etimol CR 66 RSA has been developed especially for the removal of acrylic- and urethane lacquers (Conformal Coating) from lacquering frames.

The cleaning medium is filled in an automatic cleaning system (in most cases ultrasonic) at room temperature. For urethane lacquers cleaning takes place ideally at temperatures greater than 60°C.

Technical Data:

Application area:	cleaning of coating frames (conformal coating) acrylate, urethane
Appearance/smell:	colorless to slightly yellow, clear
Application:	ready-to-use
ph-value:	alkaline
Density at 20 °C:	0,997 +/- 0,005 g/cm³
Boiling point/boiling range:	>180 °C
System:	solventbased
Flash point:	95 °C
Operations temperature:	room temperature to max. 80°C
Reliable cleaning results with:	acrylate lacquers, urethane lacquers
Durability:	36 months
Storage conditions:	ideal in original packaging at 10°C–25°C
Transportation:	non-DG

The picture may differ from the original product.

Packaging units  5 l / 20 l plastic can

Etimol DFX 80 CA

Cat.-No. 5112

PCBA-Defluxing

Depending on the case of application, the cleaning medium Etimol DFX 80 CA is filled in the automatic cleaning system diluted 1:4 to 1:5 with DI water at room temperature, the recommended cleaning temperature is in between 55-65°C. It efficiently removes flux residues from electronic assemblies. It is mostly used in spray and ultrasonic systems.

Technical Data:

Application area:	assembly cleaning
Appearance/smell:	colorless to slightly yellow, clear
Application:	1 part concentrate + 4-5 parts DI-water
ph-value:	alkaline
Density at 20 °C:	0,967 +/- 0,005 g/cm³
Boiling point/boiling range:	>100 °C
System:	waterbased (ready-mixed)
Operations temperature:	55-65°C
Reliable cleaning results with:	flux residues
Durability:	36 months
Storage conditions:	ideal in original packaging at 10°C–25°C
Transportation:	non-DG

The picture may differ from the original product.

Packaging units  5 l / 20 l plastic can

Etimol NC 88 RSN

Cat.-No. 5111

Nozzle cleaner for dispensing equipment

The solvent-based, pH-neutral medium is suitable especially for cleaning nozzles and dispenser needles from solder paste as well as SMT adhesive residues.

It is used in suitable cleaning systems (e.g. ultrasonic) at room temperature, increasing the cleaning temperature (40-55°C) accelerates the process and improves the cleaning. The cleaned component is then rinsed with DI water.

Technical Data:

Application area:	dispenser cleaning
Appearance/smell:	colorless to slightly yellow, clear
Application:	ready-to-use
ph-value:	neutral
Density at 20 °C:	1,111 +/- 0,005 g/cm³
Boiling point/boiling range:	>100 °C
System:	solventbased
Flash point:	88 °C
Operations temperature:	room temperature to max. 70°C
Reliable cleaning results with:	solder pastes, SMT adhesives
Durability:	36 months
Storage conditions:	ideal in original packaging at 10°C–25°C
Transportation:	non-DG

The picture may differ from the original product.

Packaging units:  5 l / 20 l plastic can

Turn over again,
then you will learn how to
selective solder in a more reliable way!

Soldering aids

For reliable selective soldering we offer various nozzle cleaners. These can be used for cleaning coated and non-coated solder nozzles and support the removal of scaling and scraping deposits.
The range of soldering aids is completed by a covering oil.

EO-COVERFLUID TESU

Cat.-No. 2010

Covering Oil for Pump Shafts of Wave-Soldering Machines

Covering oils provide different functions when used in wave-soldering machines. Firstly, they protect the metal alloys from oxidation, which prevents the formation of oxide layers around the solder wave. Secondly, they provide a lubricating effect on the pump shaft. During the development of the covering oil EO-COVERFLUID TESU, Emil Otto focussed on a good thermal stability and an optimum evaporation rate. Rigid deposits can thus be avoided. Compared to products containing waxes or mineral oil-based oils, the use of EO-COVERFLUID TESU can ensure very long oil lives. It reduces the maintenance and repair efforts of wave-soldering machines to a minimum.

The picture may differ from the original product.

Technical Data:

Application Area:	covering oil for pump chambers of wave soldering machines
Appearance/smell:	clear, colourless
Application:	up to 285°C
Flash point:	non inflammable °C
Max. evaporation rate (24 hours/250°C):	0,5 %

Packaging units: Bottle of 200 and 1000 g

EO-NCF-001

Cat.-No. 2951

Special cleaning fluid for automatically cleaning selective soldering systems

Nozzle cleaner EO-NCF-001 was developed for cleaning selective soldering systems' non-coated soldering nozzles. Scaling and dross deposits in particular can be excellently removed.

Added customer value

- Very good cleaning effect with scaling and dross deposits on selective soldering machines' non-coated soldering nozzles
- Exact metering
- No demixing

The picture may differ from the original product.

Packaging units: 100 ml, 250 ml, 500 ml, or 1 l canisters

EO-NCF-002

Cat.-No. 2952

Electronic nozzle cleaner for cleaning soldering nozzles of selective soldering machines / Halogen-free activation complex
RoHS / WEEE-compliant, ISO-9454: 2231 (2.2.3.A)

EO-NCF-002 is activated on an organic base and halogen-free. It was developed especially for the cleaning of solder nozzles. Due to its activation complex, this nozzle cleaner removes scaling and scraping deposits on solder nozzles of selective soldering machines.

Processing notes:

With light to moderate deposits on the nozzle: Switch off selective wave, wet nozzle with EO-NCF-002, allow to act and switch the wave back on again after approx. 2–3 minutes (possibly also allow the wave to run "lightly" for 2–3 minutes and then bring up to operating performance). With heavy deposits on the nozzle: Switch off selective wave, wet nozzle with EO-NCF-002, allow to act and switch the wave back on again after approx. 2–3 minutes. Afterwards remove the deposits with a brush or similar and then switch the wave back on again. If the deposits have not been sufficiently removed, repeat procedure.

Technical Data:

Application area:	medium for the automatic nozzle cleaning of selective soldering machines
Appearance/smell:	colorless to light amber-colored liquid
ph-value:	115–135 mg KOH/g
Density 20 °C:	0,84–0,86 g/cm³
Flash point:	12 °C
Substances:	mixture of monohydric alcohols
Durability:	with proper storage between 15°C and 25°C the shelf life is 12 months
Activators:	resin-di-carboxylic acid-complex, halogen-free

The picture may differ from the original product.

Packaging units: Canisters with 100 ml, 500 ml, 1 liter, 5 liters and 20 liters

EO-NCF-1003

Cat.-No. 2991

Special cleaning fluid for cleaning selective soldering systems' nozzles

Nozzle cleaner EO-NCF-1003 was developed for cleaning selective soldering machines' non-coated soldering nozzles. Scaling and dross deposits in particular can be excellently removed.

Application process (recommended): cleaning the non-coated soldering nozzles of selective soldering systems

The picture may differ from the original product.

Added customer value:

- Very good cleaning effect of scaling and dross deposits on selective soldering machines' non-coated soldering nozzles
- Exact metering
- No demixing
- VOC free

Packaging units: 100 ml, 250 ml, 500 ml, or 1 l canisters

NC-260/RF "Nozzle Clean"

Cat.-No. 2995

Special paste for activation and cleaning of mini-waves (ISO-9454:1.2.3.C)

The NC-260/RF EO "Nozzle Clean" is a special paste for cleaning of mini-wave-noozles (ISO-9454: 1.2.3.C).

Customer added value:

- Very good cleaning effects for scaling and contamination of non-coated soldering nozzles of selective soldering systems
- Broad processing window (very high thermal stability, very high activity over a long interval)
- Excact dosage
- No separation
- Flux residues visible under UV light

Technical Data:

Application Area:	special paste for the activation of non-coated solder nozzles
Appearance/smell:	bright yellow, waxy, synthetic
Density 20 °C:	0,9–1,0 g/cm^3
Consistency:	pasty
Substances:	resin, dicarboxylic acids, additives, paste additives, UV-additives
Durability:	12 months

Packaging units: syringes with 5 or 10 ml, cartridge

The picture may differ from the original product.

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