EMIL OTTO

ALCOHOL AND WATER BASED FLUXES

FLUX- AND SURFACE TECHNOLOGY

PRODUCTS FOR THE ELECTRONIC INDUSTRY

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Canister


Granulate


Injection


Dispenser bottle

Alcohol and water based flux

Alcohol- and water-based fluxes, also called hybrid fluxes, have been developed for use in wave- and selective soldering. These fluxes have a very wide range of applications, with very good soldering properties, in particular with the step-through and the wetting of the circuit board. The process window is very wide, with high thermal stability. After the application of the flux, the circuit boards are visually clean.

SD-35

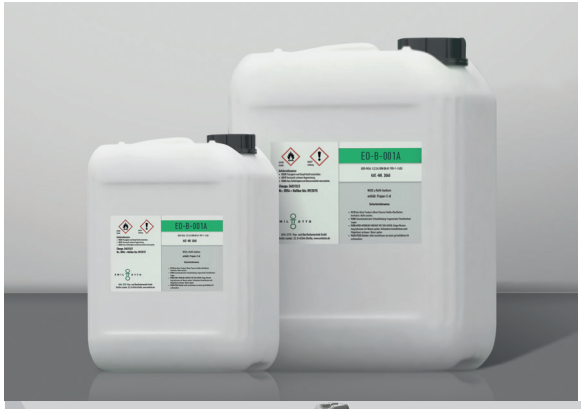
Cat.-No. 6335

No clean, alcohol and water based flux, di-carboxylic acids,
resin free, halogen-free (WEEE/RoHS conformant)
Type 2131 // ORL0 acc. ISO 9454 // DIN EN 61 190-1-1

The SD-35 is a halogen-free soldering flux with a reduced alcohol component. It has been developed for selective and wave soldering processes. It has a solids content of 3.5% and is characterized by excellent soldering properties. The chosen combination of alcohol and water makes it possible to make optimum use of the advantages of both solvents. The evaporation behaviour of SD-35 is considerably better than with water-based fluxes. Therefore it is also suitable for manual and dip soldering and thereby fulfills all the requirements of a multiflux.
Practice has shown, that with the correct application, no washing of assembled printed circuit boards soldered with this flux is needed.
The surfaces of the soldered printed circuit boards are very clean after the soldering process.

Customer added value:

- Wide range of applications (multiflux)
- Very good soldering properties (capillarity, wetting)
- Broad process window (high thermal stability, good activity over a long interval)
- Very good residue behaviour (optically very clean, high SIR)



Technical Data:

Application Area:	Wave- and selective soldering, manual- and repair soldering, dip soldering
Appearance/smell:	colorless, clear
Solids content:	3.5 Gew.-%
Density at 20 °C:	0.87 (+/- 0.01) g/ml
Acid number:	28–32 mg KOH/g
Activators:	di-carboxylic acids
Solvents:	short-chain alcohols and water
Flash point:	12 °C
Durability:	24 months

Packaging units: 20 l

The picture may differ from the original product.

EO-Y-001

Cat.-No. 6009

No clean, alcohol and water based flux, di-carboxylic acids,
resin free, halogen-free (WEEE/RoHS conformant)
Type 2131 // ORL0 acc. ISO 9454 // DIN EN 61 190-1-1

The EO-Y-001 has been developed to be used with wave and selective soldering. In addition, the flux can also be used for manual soldering and cable tinning (multiflux).

Practice has shown that with the correct application, no washing of assembled printed circuit boards soldered with this flux is needed.

Customer added value:

- Wide range of applications (multiflux)
- Very good soldering properties (capillarity, wetting)
- Broad process window (high thermal stability, good activity over a long interval)
- Very good residue behaviour (optically very clean, high SIR)

Technical Data:

Application Area:	Wave- and selective soldering, manu-al- and repair soldering, dip soldering
Appearance/smell:	colorless liquid, clear
Solids content:	2.7 Gew.-%
Density at 20 °C:	0.87 (+/- 0.01) g/ml
Acid number:	22–26 mg KOH/g
Activators:	di-carboxylic acids
Solvents:	short-chain alcohols and water
Flash point:	12 °C
Durability:	24 months

Packaging units: 20 l

The picture may differ from the original product.

EO-Y-003

Cat.-No. 6024

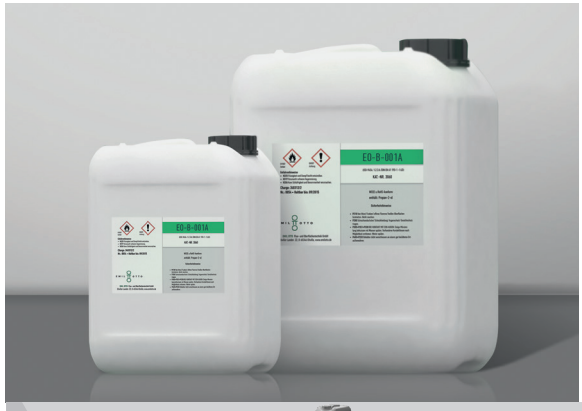
No clean, alcohol and water based flux, di-carboxylic acids,
resin free, halogen-free (WEEE/RoHS conformant)
Type 2131 // ORL0 acc. ISO 9454 // DIN EN 61 190-1-1

The EO-Y-003 has been developed to be used with wave and selective soldering.

Practice has shown that with the correct application, no washing of assembled printed circuit boards soldered with this flux is needed.

Customer added value:

- Wide range of applications
- Very good soldering properties (capillarity, wetting)
- Broad process window (high thermal stability, good activity over a long interval)
- Very good residue behaviour (optically very clean, high SIR)



Technical Data:

Application Area:	Wave- and selective soldering
Appearance/smell:	colorless to light yellow, clear
Solids content:	3.3 Gew.-%
Density at 20 °C:	0.9 - 1.0 g/ml
Acid number:	27 - 32 mg KOH/g
Activators:	di-carboxylic acids, resin free
Solvents:	short-chain alcohols and water
Flash point:	not easily flammable °C
Durability:	12 months

Packaging units: 20 l

The picture may differ from the original product.

EO-Y-004

Cat.-No. 6025

No clean, alcohol-water based flux, di-carboxylic acids, resin free,
halogen-free (WEEE/RoHS conformant)
Type 2131 // ORL0 acc. ISO 9454 // DIN EN 61 190-1-1

The hybrid EO-Y-004 flux was developed to be used in wave and selective soldering. It exhibits a solids content of 3.5% to 3.7%. It has been developed for a very broad range of applications. The soldering properties are very good, particularly with rise-through and circuit-board wetting. The processing window is very broad with great thermal stability. Practice has shown that with proper application, no washing of circuit boards soldered with this flux is needed. The circuit boards are visually clean. The flux is available as a ready-to-use-mix or in a granulate-based concentrate.

Customer added value:
- Very good soldering properties (capillarity, wetting)
- Available as concentrate (granulate)
- Broad process window (high thermal stability, good activity over a long interval)
- Very good residue behaviour (optically very clean, high SIR)

Technical Data:

Application Area:	Wave- and selective soldering
Appearance/smell:	clear, colourless to light yellow
Solids content:	3.5 - 3.7 Gew.-%
Density at 20 °C:	0.9 - 1.0 g/ml
Acid number:	28 - 32 mg KOH/g
Activators:	di-carboxylic acids
Solvents:	short-chain alcohols and water
Flash point:	not easily flammable °C
Durability:	24 months

Packaging units: 20 l Granulate for 10 l The picture may differ from the original product.

EO-Y-005A

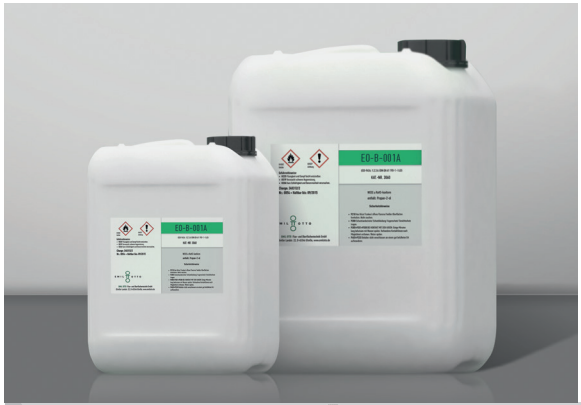
Cat.-No. 6092

Water-based flux with alcohol additive (LOW VOC),
activated halogen-free, with synthetic resin. (rosin-free)
ISO-9454: Typ 2231 (2.2.3.A) DIN EN 61190-1-1 (J-STD-004): ORL0 (WEEE/RoHS-compliant)

EO-Y-005A is universally suitable for the wave- and selective soldering of printed circuit boards and contains organic, halogen-free, activating additives formulated with a small amount of synthetic resin. This flux was developed in a combination with lead- and lead-free solders, coordinated especially to the thermal requirements of the soldering process. EO-Y-005A contains special alcoholic additives for the stabilization and improvement of the drying time in comparison with conventional water- or partially water-based fluxes.

Recommendations for the processing of this flux:
This flux is very versatile in use and OSP-compatible. Good results are achieved with manual-, wave- and selective soldering as well as for cable manufacture/strand tinning. The generally applicable rule, to select as little of the applied flux as possible, is also valid for this product.
Foam fluxes:
Not recommended

Spray fluxes: With the possibility of dosing the amount of fluxing agent, first set to 30–40 ml/min., observe the even distribution of flux on the circuit board (if necessary test with heat-sensitive paper) and then adjust to the optimal amount.
Pre-heating: With "simple" circuit boards a pre-heating temperature of 80–110 °C is recommended on the top side of the circuit board, with "more complex" boards a temperature of 100–130 °C is recommended. The operation can be carried out both in solder systems containing lead as well as lead-free solder systems.



Technical Data:

Application Area:	Wave- and selective soldering
Appearance/smell:	colorless-transparent liquid
Solids content:	2.0 Gew.-%
Density at 20 °C:	0.9–1.0 g/ml
Acid number:	16–19 mg KOH/g
Activators:	dicarboxylic acids, synthetic resin
Solvents:	water with alcohol additive
Flash point:	not easily flammable
VOC:	7 %

Packaging units: Canisters with 5 and 20 liters – larger containers also available The picture may differ from the original product.

EO-Y-005B

Cat.-No. 6093

Water-based flux with alcohol additive (LOW VOC),
activated halogen-free, with synthetic resin. (rosin-free)
ISO-9454: 2231 (2.2.3.A) DIN EN 61190-1-1 (J-STD-004): ORL0 (WEEE/RoHS-compliant)

EO-Y-005B is universally suitable for the wave- and selective soldering of circuit boards and contains organic, halogen-free, activating additives formulated with a small amount of synthetic resin. This flux was developed in a combination with lead- and lead-free solders, coordinated especially to the thermal requirements of the soldering process.
EO-Y-005B contains special alcoholic additives for the stabilization and improvement of the drying time in comparison with conventional water- or partially water-based fluxes.

Recommendations for the processing of this flux:
This flux is very versatile in use and OSP-compatible. Good results are achieved with manual-, wave- and selective soldering as well as for cable manufacture/strand tinning. The generally applicable rule, to select as little of the applied flux as possible, is also valid for this product.
Foam fluxes: Not recommended
Spray fluxes: With the possibility of dosing the amount of fluxing agent, first set to 30–40 ml/min., observe the even distribution of flux on the circuit board (if necessary test with heat-sensitive paper) and then adjust to the optimal amount.
Pre-heating: With "simple" circuit boards a pre-heating temperature of 80–110 °C is recommended on the top side of the circuit board, with "more complex" boards a temperature of 100–130 °C is recommended. The operation can be carried out both in solder systems containing lead as well as lead-free solder systems.

Technical Data:

Application Area:	Wave- and selective soldering
Appearance/smell:	colorless-transparent liquid
Solids content:	3.0 Gew.-%
Density at 20 °C:	0.9–1.0 g/ml
Acid number:	24–27 mg KOH/g
Activators:	di-carboxylic acids, synthetic resin
Solvents:	water with alcohol additive
Flash point:	not easily flammable
VOC:	7 %

Packaging units: Canisters with 5 and 20 liters – larger containers also available

The picture may differ from the original product.

EO-Y-005C

Cat.-No. 6026

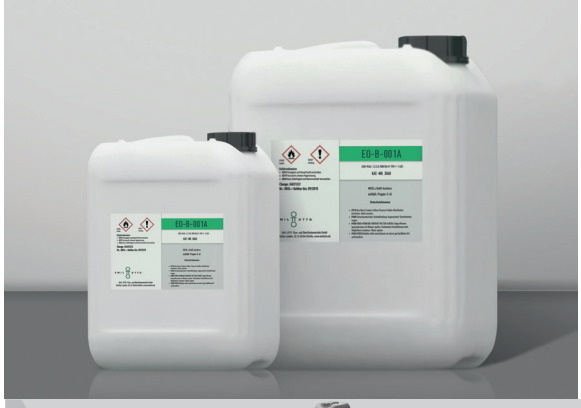
Water-based flux with alcohol additive (LOW VOC),
activated halogen-free, with synthetic resin. (rosin-free)
ISO-9454: 2231 (2.2.3.A) DIN EN 61190-1-1 (J-STD-004): ORL0 (WEEE/RoHS-compliant)

EO-Y-005C is universally suitable for wave- and selective-soldering of PCBs. It contains organic, halogen-free, activating additives as well as synthetic resin in a combination specially tuned to the thermal requirements of the wave-soldering process with lead and lead-free solders.

EO-Y-005C contains small amounts of special alcoholic additives for stabilization and improved drying time compared to conventional water-based fluxes.

This flux must be applied by spraying.

After application, it is advisable to dry the flux in order to transform the liquid into the fusible phase which favours the soldering operation.



Technical Data:

Application Area:	Wave- and selective soldering
Appearance/smell:	Clear, colourless liquid
Solids content:	4.0 Gew.-%
Density at 20 °C:	0.9–1.0 g/ml
Acid number:	33–36 mg KOH/g
Activators:	di-carboxilic acids, resin
Solvents:	Water
Additive:	Wetting agents, alcohol compound <8%
VOC:	7 %

Packaging units: Jerricans with 5, 10 and 20 liters

The picture may differ from the original product.

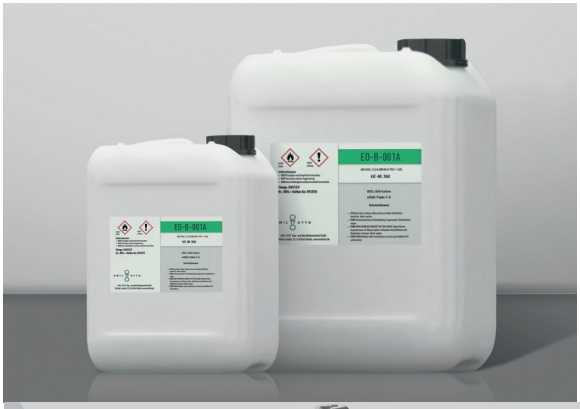
EO-Y-006

Cat.-No. 6065

Alcohol-based, partially aqueous flux, activated halogen-free,
with synthetic resin. (rosin-free) (WEEE/RoHS-compliant, (LOW VOC),
IPC: DIN EN 61190-1-1: ((IEC OR/L0) or type 2231 (2.2.3.A) acc. ISO 9454))

EO-Y-006 is universally suitable for the wave- and selective soldering of circuit boards and contains organic, halogen-free, activating additives formulated with a small amount of synthetic resin. This flux was developed in a combination with lead- and lead-free solders, coordinated especially to the thermal requirements of the soldering process. EO-Y-006 contains special alcoholic additives for the stabilization and improvement of the drying time in comparison with conventional water- or partially water-based fluxes.

Recommendations for the processing of this flux:
This flux is very versatile in use and OSP-compatible. Good results are achieved with manual-, wave- and selective soldering as well as for cable manufacture/strand tinning. The generally applicable rule, to basically select as little of the applied flux as possible, is also valid for this product.
Foam fluxes: Not recommended
Spray fluxes: With the possibility of dosing the amount of fluxing agent, first set to 30–40 ml/min., observe the even distribution of flux on the circuit board (if necessary test with heat-sensitive paper) and then adjust to the optimal amount.
Pre-heating: With "simple" circuit boards a pre-heating temperature of 80–110 °C is recommended on the top side of the circuit board, with "more complex" boards a temperature of 100–130 °C is recommended. The operation can be carried out both in solder systems containing lead as well as lead-free solder systems.



Technical Data:

Application Area:	Wave- and selective soldering
Appearance/smell:	colorless-transparent liquid
Solids content:	3.0 Gew.-%
Density at 20 °C:	0.86–0.88 g/ml
Acid number:	24–27 mg KOH/g
Activators:	di-carboxylic acids, synthetic resin
Solvents:	alcohol- / partial water-based
Flash point:	12 °C
Durability:	wetting agent, alcohol combination <60%
VOC:	60 %

Packaging units: Canisters with 5 and 20 liters – larger containers also available

The picture may differ from the original product.

ELM/KF

Cat.-No. 2052

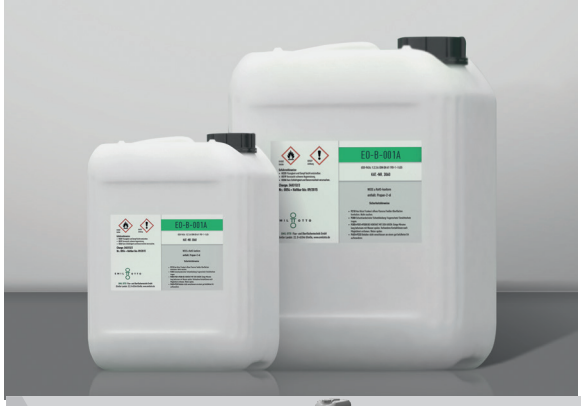
Alcohol and water-based flux, special product,
resin free, halogenated (WEEE/RoHS conformant)
Type 2124 // ORM1 acc. ISO 9454 // DIN EN 61 190-1-1

ELM/KF is a special soldering flux based on halogen-substituted organic compounds and has the advantages of a very wide temperature range (approx. 150-290°C). Therefore the soldering flux can be used for numerous soldering and tinning processes.

The active substances contained in the ELM-KF flux are water-soluble. This also applies to the flux residues remaining after tinning as long as the product has not been subjected to extremely high thermal loads. Customary washing equipment serves for post-cleaning.

Customer added value:

- Very good soldering properties (capillarity, wetting)
- Broad processing window (high thermal stability, good activity over a long interval)
- Very good residue behaviour (optically very clean, high SIR)



Technical Data:

Application Area:	Dip- and strand tinning, special applications
Appearance/smell:	salmon pink, clear
Solids content:	Not applicable Gew.-%
Density at 20 °C:	1.035–1.050 g/ml
Activators:	di-carboxylic acids
Solvents:	carboxylic acids
Flash point:	not easily flammable °C
Durability:	12 months

Packaging units: 20 l

The picture may differ from the original product.

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