

# WATER-BASED FLUXES

ELECTRONIC



EMIL  OTTO



The name Emil Otto represents the highest quality since 1901. As an owner-run company, we have dedicated ourselves to the development and production of high quality fluxes and other consumables. In particular, the ecological and sustainable development of fluxes is a major concern for us, which we underline with our broad portfolio of water-based fluxes.

We were not only concerned with an ecological end product, but also with environmentally friendly production and simplified, CO<sub>2</sub>-reducing transport. Our “Green Line” products are water-based and thus completely ecologically degradable, are therefore not subject to the class of hazardous goods and do not pollute the environment. The soldering results are comparable to those of alcohol-based fluxes.

At Emil Otto, your process is our focus and we provide you with the suitable flux that perfectly fits your requirements, sustainably and ecologically. A change to ecological, water-based fluxes is therefore easily possible for you.

Your Emil Otto Team

Do you have questions about our products?  
We will be happy to advise you under: +49 (6123) 70 46–0



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## EO-G-001 (MULTIFLUX)

Cat.-No. 6012

No Clean-Flux, water-based  
Di-carboxylic acids, VOC-free, resin-free, halogen-free (WEEE/RoHS compliant)  
Type ISO 9454: 2.1.3.1 \ \ DIN EN 61190-1-1 (ORLO)



### Customer added values:

- Non-flammable (no legal restrictions for transport, storage and handling)
- 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)

### Application method:

Wave and selective soldering

### Packaging units:

Canister 20 l



### Technical data:

Appearance:	colourless, clear liquid
Solids content:	3.5 wt.-%
Acid number:	28 – 32 mg KOH/g
Activators:	di-carboxylic acids, VOC-free, resin-free, halogen-free
Solvents:	water-based
Flash point:	non-flammable
Durability:	12 months

## EO-G-003 (MULTIFLUX)

Cat.-No. 6008

No Clean-Flux, water-based  
Di-carboxylic acids, VOC-free, resin-free, halogen-free (WEEE/RoHS compliant)  
Type ISO 9454: 2.1.3.1 \ \ DIN EN 61190-1-1 (ORLO)



### Customer added values:

- Non-flammable (no legal restrictions for transport, storage and handling)
- 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)

### Application method:

Wave and selective soldering

### Packaging units:

Canister 20 l



### Technical data:

Appearance:	colourless, clear liquid
Solids content:	3.3 wt.-%
Acid number:	27 – 32 mg KOH/g
Activators:	di-carboxylic acids, VOC-free, resin-free, halogen-free
Solvents:	water-based
Flash point:	non-flammable
Durability:	12 months

## EO-G-002 (MULTIFLUX)

Cat.-No. 6015

No Clean-Flux, water-based  
Di-carboxylic acids, VOC-free, synthetic resin, halogen-free (WEEE/RoHS compliant)  
Type ISO 9454: 2.1.3.1 \ \ DIN EN 61190-1-1 (ORLO)



### Customer added values:

- Non-flammable (no legal restrictions for transport, storage and handling)
- 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)

### Application method:

Wave and selective soldering

### Packaging units:

Canister 20 l



### Technical data:

Appearance:	colourless, minimal whitish, clear to slightly turbid liquid
Solids content:	3.0 wt.-%
Acid number:	24 – 27 mg KOH/g
Activators:	di-carboxylic acids, VOC-free, synthetic resin, halogen-free
Solvents:	water-based
Flash point:	non-flammable
Durability:	12 months

## EO-G-005 (MULTIFLUX)

Cat.-No. 6091

No Clean-Flux, water-based  
Di-carboxylic acids, VOC-free (WEEE/RoHS compliant)  
Type ISO 9454: 2131 \ \ DIN EN 61190-1-1 (avv. J-STD004) (IEC ORM1)



### Customer added values:

- Non-flammable (no legal restrictions for transport, storage and handling)
- 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)

### Application method:

Wave soldering (spray fluxing),  
hand and selective soldering

### Packaging units:

Canister 5 l and 20 l



### Technical data:

Appearance:	transparent, clear liquid
Solids content:	4.0 wt.-%
Acid number:	28 – 35 mg KOH/g
Activators:	di-carboxylic acid complex, VOC-free
Solvents:	water-based
Flash point:	non-flammable
Durability:	12 months

# EO-G-006 (MULTIFLUX)

Kat.-Nr. 6131

No Clean-Flux, water-based, Di-carboxylic acid complex, VOC-free, halogen-free (WEEE/RoHS compliant) [OSP compatible]  
Type ISO 9454: 2.1.3.1 \ \ DIN EN 61190-1-1 8 (acc. J-STD004) (IEC ORLO)



## Customer added values:

- Non-flammable (no legal restrictions for transport, storage and handling)
- 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)

## Application method:

Wave soldering (spray fluxing), hand and selective soldering

## Packaging units:

Canister 20 l  
Concentrate  
Metering bottle  
Metering pen



## Technical data:

Appearance:	colourless, transparent liquid
Solids content:	5.0 wt.-%
Acid number:	40 – 46 mg KOH/g
Activators:	di-carboxylic acid complex, VOC-free, halogen-free
Solvents:	water-based
Flash point:	non-flammable
Durability:	12 months

# EO-G-006A (MULTIFLUX)

Cat.-No. 6135

No Clean-Flux, water-based, Di-carboxylic acid complex, VOC-free, halogen-free (WEEE/RoHS compliant) [OSP compatible]  
Type ISO-9454: 2131 DIN EN 61190-1-1 8 (acc. J-STD004): L0 (IPC: ORL0)



## Customer added values:

- Non-flammable (no legal restrictions for transport, storage and handling)
- 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)
- Recommended for N2-systems

## Application method:

Wave soldering (spray fluxing), hand and selective soldering

## Packaging units:

Canister 5 l and 20 l



## Technical data:

Appearance:	colourless, transparent liquid
Solids content:	2.0 wt.-%
Acid number:	16 – 19 mg KOH/g
Activators:	di-carboxylic acid complex, VOC-free, halogen-free
Solvents:	water with additives
Flash point:	non-flammable
Durability:	12 months

# EO-G-006B (MULTIFLUX)

Cat.-No. 6133

No Clean-Flux, water-based, Di-carboxylic acid complex, VOC-free, halogen-free (WEEE/RoHS compliant) [OSP compatible]  
Type ISO-9454: 2131 DIN EN 61190-1-1 (acc. J-STD004): L0 (IPC: ORL0)



## Customer added values:

- Non-flammable (no legal restrictions for transport, storage and handling)
- Very good soldering properties (capillarity, wetting)
- Available as concentrate (granulate)
- Broad process window (high thermal stability, good activity over a long interval)
- Also suitable for nickel pins
- Very good residue behaviour (optically very clean, high SIR)

## Application method:

Wave soldering (spray fluxing), hand and selective soldering

## Packaging units:

Canister 5 l and 20 l



## Technical data:

Appearance:	colourless, transparent liquid
Solids content:	2.9 – 3.1 wt.-%
Acid number:	24 – 28 mg KOH/g
Activators:	di-carboxylic acid complex, VOC-free, halogen-free
Solvents:	water with additives
Flash point:	non-flammable
Durability:	12 months

# EO-G-006C (MULTIFLUX)

Cat.-No. 6134

No Clean-Flux, water-based, Di-carboxylic acid complex, VOC-free, halogen-free (WEEE/RoHS compliant) [OSP compatible]  
Type ISO-9454: 2131 DIN EN 61190-1-1 (acc. J-STD004): L0 (IPC: ORL0)



## Customer added values:

- Non-flammable (no legal restrictions for transport, storage and handling)
- Very good soldering properties (capillarity, wetting)
- Available as concentrate (granulate)
- Broad process window (high thermal stability, good activity over a long interval)
- Also suitable for nickel pins
- Very good residue behaviour (optically very clean, high SIR)

## Application method:

Wave soldering (spray fluxing), hand and selective soldering

## Packaging units:

Canister 5 l and 20 l



## Technical data:

Appearance:	colourless, transparent liquid
Solids content:	3.9 – 4.1 wt.-%
Acid number:	32 – 37 mg KOH/g
Activators:	di-carboxylic acid complex, VOC-free, halogen-free
Solvents:	water with additives
Flash point:	non-flammable
Durability:	12 months

## EO-G-007 (MULTIFLUX) Cat.-No. 6132

No Clean-Flux, water-based  
Di-carboxylic acids, VOC-free, halogen-free (WEEE/RoHS compliant)  
Type ISO 9454: 2131 (2.1.3.A) \ \ DIN EN-61190-1-1 (acc. J-STD-004) (ORLO)



### Customer added values:

- Non-flammable (no legal restrictions for transport, storage and handling)
- 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)

### Application method:

Wave soldering (spray fluxing),  
hand and selective soldering

### Packaging units:

Canister 5 l and 20 l



### Technical data:

Appearance:	transparent liquid
Solids content:	7.0 wt.-%
Acid number:	55 – 60 mg KOH/g
Activators:	di-carboxylic acids, VOC-free, halogen-free
Solvents:	water-based
Flash point:	non-flammable
Durability:	12 months

## EO-WB-30/EK 1401 (MULTIFLUX) Cat.-No. 2107

No Clean-Flux, water-based  
Di-carboxylic acids, VOC-free, synthetic resin, halogen-free (WEEE/RoHS compliant)  
Type ISO 9454: 2.1.3.1 \ \ DIN EN 61190-1-1 (ORLO)



### Customer added values:

- Non-flammable (no legal restrictions for transport, storage and handling)
- 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)
- Very good price-performance ratio

### Application method:

Wave and selective soldering

### Packaging units:

Canister 20 l



### Technical data:

Appearance:	colourless, minimal whitish liquid
Solids content:	3.0 wt.-%
Acid number:	24 – 27 mg KOH/g
Activators:	di-carboxylic acids, VOC-free, synthetic resin, halogen-free
Solvents:	water-based
Flash point:	non-flammable
Durability:	12 months

## EO-WB-35/SOX (MULTIFLUX) Cat.-No. 2118

No Clean-Flux water-based  
Di-carboxylic acids, VOC-free, resin-free, halogen-free (WEEE/RoHS compliant)  
Type ISO 9454: 2.1.3.1 \ \ DIN EN 61190-1-1 (ORLO)



### Customer added values:

- Non-flammable (no legal restrictions for transport, storage and handling)
- 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)

### Application method:

Wave and selective soldering

### Packaging units:

Canister 20 l



### Technical data:

Appearance:	colourless, clear liquid
Solids content:	3.5 wt.-%
Acid number:	28 – 32 mg KOH/g
Activators:	di-carboxylic acids, VOC-free, resin-free, halogen-free
Solvents:	water-based
Flash point:	non-flammable
Durability:	12 months

## EO-WB-35/SOX-DT (MULTIFLUX) Cat.-No. 2125

No Clean-Flux, water-based  
Di-carboxylic acids, VOC-free, resin-free, halogen-free (WEEE/RoHS compliant)  
Type ISO 9454: 2.1.3.1 \ \ DIN EN 61190-1-1 (ORLO)



### Customer added values:

- Non-flammable (no legal restrictions for transport, storage and handling)
- Very good soldering properties (capillarity, wetting)
- Broad process window (high thermal stability, good activity over a long interval)
- Very good residue behaviour (optically clean, high SIR)

### Application method:

Wave and selective soldering

### Packaging units:

Canister 20 l



### Technical data:

Appearance:	colourless, clear liquid
Solids content:	3.5 wt.-%
Acid number:	28 – 32 mg KOH/g
Activators:	di-carboxylic acids, VOC-free, resin-free, halogen-free
Solvents:	water-based
Flash point:	non-flammable
Durability:	12 months



# PRODUCTS FOR THE ELECTRONICS INDUSTRY

ELECTRONIC



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