

## Glasreiniger / Glass cleaning agent: FLUX



Der hervorragende Glasreiniger mit schnellwirkenden, schmutzlösenden Substanzen trocknet sofort und hinterlässt keine Rückstände. Er hat sich insbesondere bei AR-beschichteten Gläsern bei verschiedenen Automotive OEM's und Tier 1's als bester Glasreiniger bewährt. Ob Fingerabdrücke, Schlieren oder ölige Rückstände, der Flux Glasreiniger schenkt der Oberfläche wieder eine streifenlose, glänzende Sauberkeit. Die bedruckten Flächen werden dabei natürlich nicht angegriffen.

Bestellungen und weitere Informationen:  
[flux@glastroesch.com](mailto:flux@glastroesch.com)

This excellent glass cleaning agent with quick effective, dirt-solving substances is drying fast without any residues. Especially for AR coated glasses, many Tier 1's and OEM's rated Flux as the best glass cleaning agent. Whether fingerprints, marks or oily residues, the Flux cleaning agent creates a wonderful, glossy surface again. Of course, there is no negative effect onto a potential printing.

Orders and further information:  
[flux@glastroesch.com](mailto:flux@glastroesch.com)

## Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.02.2023

Version number 4 (replaces version 3)

Revision: 08.02.2023

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1 Product identifier

Trade name: Flux Glass Cleaner

Article number: 1540

UFI: X784-70PC-W00A-KN35

1.2 Relevant identified uses of the substance or mixture and uses advised against  
No further relevant information available.

Application of the substance / the mixture *Cleaning agent/ Cleaner*

#### 1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier:

Glas Trösch AG

Zweigniederlassung Rail

Unterdorf 45

CH-4937 Ursenbach

Further information obtainable from:

Abteilung Labor

info@winoil.ch

1.4 Emergency telephone number:

Tox Info Suisse

24-h-Emergency number: 145 (from abroad: +41 44 251 51 51)

Information: +41 44 251 66 66

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008



GHS02 flame

Flam. Liq. 3 H226 Flammable liquid and vapour.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2 H319 Causes serious eye irritation.

#### 2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008

The product is classified and labelled according to the CLP regulation.

Hazard pictograms



GHS02



GHS07

(Contd. on page 2)

CH/

# Safety data sheet

## according to 1907/2006/EC, Article 31

Printing date 08.02.2023

Version number 4 (replaces version 3)

Revision: 08.02.2023

**Trade name: Flux Glass Cleaner**

(Contd. of page 1)

- **Signal word** Warning
- **Hazard statements**  
 H226 Flammable liquid and vapour.  
 H315 Causes skin irritation.  
 H319 Causes serious eye irritation.
- **Precautionary statements**  
 P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
 P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.  
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P337+P313 If eye irritation persists: Get medical advice/attention.  
 P370+P378 In case of fire: Use CO<sub>2</sub>, powder or water spray to extinguish.  
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

<b>Determination of endocrine-disrupting properties</b>	
78-93-3	butanone
	List II

### SECTION 3: Composition/information on ingredients

- **3.2 Mixtures**
- **Description:** Mixture of substances listed below with nonhazardous additions.

<b>Dangerous components:</b>		
CAS: 111-76-2	2-butoxyethanol	10-25%
EINECS: 203-905-0	⚠ Acute Tox. 3, H311; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319 ATE: LD50 oral: 1.200 mg/kg	
CAS: 64-17-5	ethanol	2,5-10%
EINECS: 200-578-6	⚠ Flam. Liq. 2, H225; ⚠ Eye Irrit. 2, H319	
CAS: 1336-21-6	ammonia	<1%
EINECS: 215-647-6	⚠ Skin Corr. 1B, H314; ⚠ Aquatic Acute 1, H400; Aquatic Chronic 2, H411 Specific concentration limit: STOT SE 3; H335: C ≥ 5 %	
CAS: 78-93-3	butanone	<1%
EINECS: 201-159-0	⚠ Flam. Liq. 2, H225; ⚠ Eye Irrit. 2, H319; STOT SE 3, H336, EUH066	

- **Additional information:** For the wording of the listed hazard phrases refer to section 16.

### SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **General information:** Immediately remove any clothing soiled by the product.
- **After inhalation:** In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:**  
 Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** If symptoms persist consult doctor.
- **4.2 Most important symptoms and effects, both acute and delayed**  
 No further relevant information available.

(Contd. on page 3)

CHI

# Safety data sheet

## according to 1907/2006/EC, Article 31

Printing date 08.02.2023

Version number 4 (replaces version 3)

Revision: 08.02.2023

Trade name: Flux Glass Cleaner

(Contd. of page 2)

- **4.3 Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

### SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**  
CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **5.2 Special hazards arising from the substance or mixture**  
No further relevant information available.
- **5.3 Advice for firefighters**
- **Protective equipment:** No special measures required.

### SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**  
Wear protective equipment. Keep unprotected persons away.
- **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.
- **6.4 Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

### SECTION 7: Handling and storage

- **7.1 Precautions for safe handling** No special precautions are necessary if used correctly.
- **Information about fire - and explosion protection:**  
Keep ignition sources away - Do not smoke.  
Protect against electrostatic charges.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Store away from oxidising agents.
- **Further information about storage conditions:** Keep container tightly sealed.
- **7.3 Specific end use(s)** No further relevant information available.

### SECTION 8: Exposure controls/personal protection

- **8.1 Control parameters**

- **Ingredients with limit values that require monitoring at the workplace:**

#### 111-76-2 2-butoxyethanol

MAK (Switzerland)	Short-term value: 98 mg/m <sup>3</sup> , 20 ppm Long-term value: 49 mg/m <sup>3</sup> , 10 ppm H B SSc;
-------------------	---------------------------------------------------------------------------------------------------------------

#### 64-17-5 ethanol

MAK (Switzerland)	Short-term value: 1920 mg/m <sup>3</sup> , 1000 ppm Long-term value: 960 mg/m <sup>3</sup> , 500 ppm SSc;
-------------------	-----------------------------------------------------------------------------------------------------------------

(Contd. on page 4)

# Safety data sheet

## according to 1907/2006/EC, Article 31

Printing date 08.02.2023

Version number 4 (replaces version 3)

Revision: 08.02.2023

**Trade name: Flux Glass Cleaner**

(Contd. of page 3)

**78-93-3 butanone**

MAK (Switzerland)	Short-term value: 590 mg/m <sup>3</sup> , 200 ppm Long-term value: 590 mg/m <sup>3</sup> , 200 ppm H B SSc;
-------------------	-------------------------------------------------------------------------------------------------------------------

· **Ingredients with biological limit values:****111-76-2 2-butoxyethanol**

BAT (Switzerland)	150 mg/g Kreatinin Untersuchungsmaterial: Urin Probennahmezeitpunkt: Expositionsende bzw. Schichtende, bei Langzeitexposition: Nach mehreren vorangegangenen Schichten Biol. Parameter: Butoxyessigsäure (nach Hydrolyse)
-------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

**78-93-3 butanone**

BAT (Switzerland)	2 mg/l Untersuchungsmaterial: Urin Probennahmezeitpunkt: Expositionsende bzw. Schichtende Biol. Parameter: 2-Butanon (MEK)
-------------------	-------------------------------------------------------------------------------------------------------------------------------------

· **Additional information:** The lists valid during the making were used as basis.· **8.2 Exposure controls**

- **Appropriate engineering controls** No further data; see item 7.
- **Individual protection measures, such as personal protective equipment**

· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.  
Immediately remove all soiled and contaminated clothing  
Wash hands before breaks and at the end of work.  
Avoid contact with the eyes and skin.

· **Respiratory protection:** Not required.· **Hand protection**

Protective gloves

Wear suitable gloves.

Chemical protection gloves are suitable, which are tested according to EN 374.

For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned below together with the supplier of these gloves.

- **Material of gloves** Butyl rubber (0.7mm)
- **Penetration time of glove material** > 480 minutes
- **Eye/face protection**



Tightly sealed goggles

## SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**· **General Information**

- |                                                                   |                 |
|-------------------------------------------------------------------|-----------------|
| · <b>Colour:</b>                                                  | Light blue      |
| · <b>Odour:</b>                                                   | Ammonia-like    |
| · <b>Odour threshold:</b>                                         | Not determined. |
| · <b>Melting point/freezing point:</b>                            | Undetermined.   |
| · <b>Boiling point or initial boiling point and boiling range</b> | 78 °C           |
| · <b>Flammability</b>                                             | Not applicable. |

(Contd. on page 5)

# Safety data sheet

## according to 1907/2006/EC, Article 31

Printing date 08.02.2023

Version number 4 (replaces version 3)

Revision: 08.02.2023

Trade name: Flux Glass Cleaner

(Contd. of page 4)

<ul style="list-style-type: none"> <li>· <b>Lower and upper explosion limit</b></li> <li>· <b>Lower:</b> 1,1 Vol %</li> <li>· <b>Upper:</b> 10,6 Vol %</li> <li>· <b>Flash point:</b> 23 - 60 °C</li> <li>· <b>Ignition temperature:</b> 240 °C</li> <li>· <b>Decomposition temperature:</b> Not determined.</li> <li>· <b>pH at 20 °C</b> 10</li> <li>· <b>Solubility</b></li> <li>· <b>water:</b> Not miscible or difficult to mix.</li> <li>· <b>Partition coefficient n-octanol/water (log value)</b> Not determined.</li> <li>· <b>Vapour pressure at 20 °C:</b> 23 hPa</li> <li>· <b>Density and/or relative density</b></li> <li>· <b>Density at 20 °C:</b> 0,969 g/cm<sup>3</sup></li> <li>· <b>Relative density</b> Not determined.</li> <li>· <b>Vapour density</b> Not determined.</li> </ul>	
<ul style="list-style-type: none"> <li>· <b>9.2 Other information</b> VOC (CH): 19,92 %</li> <li>· <b>Appearance:</b></li> <li>· <b>Form:</b> Fluid</li> <li>· <b>Important information on protection of health and environment, and on safety.</b></li> <li>· <b>Auto-ignition temperature:</b> Product is not selfigniting.</li> <li>· <b>Explosive properties:</b> Product is not explosive. However, formation of explosive air/vapour mixtures are possible.</li> <li>· <b>Solvent content:</b></li> <li>· <b>Organic solvents:</b> 20,0 %</li> <li>· <b>Water:</b> 79,8 %</li> <li>· <b>Solids content:</b> 0,0 %</li> <li>· <b>Change in condition</b></li> <li>· <b>Evaporation rate</b> Not determined.</li> </ul>	
<ul style="list-style-type: none"> <li>· <b>Information with regard to physical hazard classes</b></li> <li>· <b>Explosives</b> Void</li> <li>· <b>Flammable gases</b> Void</li> <li>· <b>Aerosols</b> Void</li> <li>· <b>Oxidising gases</b> Void</li> <li>· <b>Gases under pressure</b> Void</li> <li>· <b>Flammable liquids</b> Flammable liquid and vapour.</li> <li>· <b>Flammable solids</b> Void</li> <li>· <b>Self-reactive substances and mixtures</b> Void</li> <li>· <b>Pyrophoric liquids</b> Void</li> <li>· <b>Pyrophoric solids</b> Void</li> <li>· <b>Self-heating substances and mixtures</b> Void</li> <li>· <b>Substances and mixtures, which emit flammable gases in contact with water</b> Void</li> <li>· <b>Oxidising liquids</b> Void</li> <li>· <b>Oxidising solids</b> Void</li> <li>· <b>Organic peroxides</b> Void</li> <li>· <b>Corrosive to metals</b> Void</li> <li>· <b>Desensitised explosives</b> Void</li> </ul>	

### SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.

(Contd. on page 6)

CH/

# Safety data sheet

## according to 1907/2006/EC, Article 31

Printing date 08.02.2023

Version number 4 (replaces version 3)

Revision: 08.02.2023

Trade name: Flux Glass Cleaner

(Contd. of page 5)

- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**  
No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

### SECTION 11: Toxicological information

- **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**
- **Acute toxicity** Based on available data, the classification criteria are not met.

- **LD/LC50 values relevant for classification:**

#### 111-76-2 2-butoxyethanol

Oral	LD50	1.200 mg/kg (ATE) 1.480 mg/kg (rat)
Dermal	LD50	400 mg/kg (rab)

- **Skin corrosion/irritation**  
Causes skin irritation.
- **Serious eye damage/irritation**  
Causes serious eye irritation.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.
- **11.2 Information on other hazards**

- **Endocrine disrupting properties**

78-93-3 butanone

List II

### SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Endocrine disrupting properties**  
For information on endocrine disrupting properties see section 11.
- **12.7 Other adverse effects**
- **Additional ecological information:**
- **General notes:**  
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water  
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

CH/

(Contd. on page 7)

# Safety data sheet

## according to 1907/2006/EC, Article 31

Printing date 08.02.2023

Version number 4 (replaces version 3)

Revision: 08.02.2023


Trade name: Flux Glass Cleaner

(Contd. of page 6)

### SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**  
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Waste disposal key:** 07 01 04
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

### SECTION 14: Transport information

<ul style="list-style-type: none"> <li>· <b>14.1 UN number or ID number</b></li> <li>· <b>ADR, IMDG, IATA</b></li> </ul>	UN1993
<ul style="list-style-type: none"> <li>· <b>14.2 UN proper shipping name</b></li> <li>· <b>ADR</b></li> <li>· <b>IMDG</b></li> <li>· <b>IATA</b></li> </ul>	UN1993 FLAMMABLE LIQUID, N.O.S. (ETHANOL (ETHYL ALCOHOL)) FLAMMABLE LIQUID, N.O.S. (ETHANOL (ETHYL ALCOHOL)) FLAMMABLE LIQUID, N.O.S. (ETHANOL)
<ul style="list-style-type: none"> <li>· <b>14.3 Transport hazard class(es)</b></li> <li>· <b>ADR, IMDG, IATA</b></li> </ul>	<div style="text-align: center;">  </div>
<ul style="list-style-type: none"> <li>· <b>Class</b></li> <li>· <b>Label</b></li> </ul>	3 Flammable liquids. 3
<ul style="list-style-type: none"> <li>· <b>14.4 Packing group</b></li> <li>· <b>ADR, IMDG, IATA</b></li> </ul>	III
<ul style="list-style-type: none"> <li>· <b>14.5 Environmental hazards:</b></li> <li>· <b>Marine pollutant:</b></li> </ul>	No
<ul style="list-style-type: none"> <li>· <b>14.6 Special precautions for user</b></li> <li>· <b>Hazard identification number (Kemler code):</b></li> <li>· <b>EMS Number:</b></li> <li>· <b>Stowage Category</b></li> </ul>	Warning: Flammable liquids. 30 F-E, S-E A
<ul style="list-style-type: none"> <li>· <b>14.7 Maritime transport in bulk according to IMO instruments</b></li> </ul>	Not applicable.
<ul style="list-style-type: none"> <li>· <b>Transport/Additional information:</b></li> </ul>	<ul style="list-style-type: none"> <li>· <b>ADR</b></li> <li>· <b>Limited quantities (LQ)</b></li> <li>· <b>Excepted quantities (EQ)</b></li> <li>· <b>Transport category</b></li> <li>· <b>Tunnel restriction code</b></li> </ul>
<ul style="list-style-type: none"> <li>· <b>IMDG</b></li> <li>· <b>Limited quantities (LQ)</b></li> <li>· <b>Excepted quantities (EQ)</b></li> </ul>	5L Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml 3 D/E 5L Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000

(Contd. on page 8)

CH/



# Safety data sheet

## according to 1907/2006/EC, Article 31

Printing date 08.02.2023

Version number 4 (replaces version 3)

Revision: 08.02.2023

Trade name: Flux Glass Cleaner

(Contd. of page 7)

	ml
· <b>UN "Model Regulation":</b>	UN 1993 FLAMMABLE LIQUID, N.O.S. (ETHANOL (ETHYL ALCOHOL)), 3, III

### SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **Seveso category P5c** FLAMMABLE LIQUIDS
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 5.000 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 50.000 t
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3

- **DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II**

None of the ingredients is listed.

- **REGULATION (EU) 2019/1148**

- **Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))**

None of the ingredients is listed.

- **Annex II - REPORTABLE EXPLOSIVES PRECURSORS**

None of the ingredients is listed.

- **Regulation (EC) No 273/2004 on drug precursors**

78-93-3 butanone

3

- **Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors**

78-93-3 butanone

3

- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Department issuing SDS:** Abteilung Labor

- **Contact:** Laborleiter Winoil AG

- **Date of previous version:** 25.08.2021

- **Version number of previous version:** 3

- **Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

ICAO: International Civil Aviation Organisation

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 2: Flammable liquids – Category 2

Flam. Liq. 3: Flammable liquids – Category 3

(Contd. on page 9)

CH/

**Safety data sheet**  
**according to 1907/2006/EC, Article 31**

Printing date 08.02.2023

Version number 4 (replaces version 3)

Revision: 08.02.2023

**Trade name: Flux Glass Cleaner**

(Contd. of page 8)

Acute Tox. 4: Acute toxicity – Category 4  
Acute Tox. 3: Acute toxicity – Category 3  
Skin Corr. 1B: Skin corrosion/irritation – Category 1B  
Skin Irrit. 2: Skin corrosion/irritation – Category 2  
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2  
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3  
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1  
Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2

· \* **Data compared to the previous version altered.**

CH/