

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

Printing date 18.05.2015

Version 8

Revision: 18.05.2015

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

- **1.1 Product identifier**
- **Trade name: FP 600-TC Fixer**


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- **Article number: 00216**
- **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**  
Photochemicals  
Photographic fixer  
Reserved for industrial and professional use.
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
ADEFO-CHEMIE GmbH  
Justus-von-Liebig-Str. 24-26  
D-63128 Dietzenbach  
Tel.: +49 6074 84239-0  
Fax: +49 6074 84239-63  
E-Mail: service@adefo-chemie.de  
www.adefo-chemie.de
- **Informing department:**  
Tel.: +49 6074 84239-0  
Fax: +49 6074 84239-63  
E-Mail: kr@calbe-chemie.de
- **1.4 Emergency telephone number: Tel.: 0700-24112112 (CAL)**

**SECTION 2: Hazards identification**

- **2.1 Classification of the substance or mixture**
  - **Classification according to Regulation (EC) No 1272/2008**  
Eye Dam. 1 H318 Causes serious eye damage.

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  - **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**
- 

GHS05
- **Signal word** Danger
  - **Hazard-determining components of labelling:**  
disodium disulphite
  - **Hazard statements**  
H318 Causes serious eye damage.
  - **Precautionary statements**
- |                |  |
|----------------|--|
| P280           | Wear protective gloves / eye protection.   |
| P262           | Do not get in eyes, on skin, or on clothing.   |
| P305+P351+P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P310           | Immediately call a POISON CENTER/doctor.   |
| P501           | Dispose of contents/container in accordance with local/regional/national/international regulations.                              |

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- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

**SECTION 3: Composition/information on ingredients**

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

• **Dangerous components:**

CAS: 7681-57-4 EINECS: 231-673-0 Index number: 016-063-00-2 Reg.nr.: 01-2119531326-45-xxxx	disodium disulphite ☠ Eye Dam. 1, H318 ☠ Acute Tox. 4, H302	10-15%
CAS: 10043-35-3 EINECS: 233-139-2 Index number: 005-007-00-2 Reg.nr.: 01-2119486683-25-xxxx	boric acid ☠ Repr. 1B, H360FD	1-2%

• **SVHC**

10043-35-3 | boric acid

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

**SECTION 4: First aid measures**

- **4.1 Description of first aid measures**
- **General information**  
Personal protection for the First Aider.  
Instantly remove any clothing soiled by the product.
- **After inhalation** Supply fresh air; consult doctor in case of symptoms.
- **After skin contact**  
The product is not skin irritating.  
Instantly rinse with water.
- **After eye contact**  
Rinse opened eye for several minutes under running water (at least 15 minutes).  
Remove contact lenses, if present and easy to do.  
Use eye protection.  
Call a doctor immediately.
- **After swallowing**  
Rinse out mouth and then drink plenty of water.  
Seek immediate medical advice.
- **4.2 Most important symptoms and effects, both acute and delayed**  
No further relevant information available.
- **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>, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.  
Use fire fighting measures that suit the environment.

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**· 5.2 Special hazards arising from the substance or mixture**

Can be released in case of fire  
sulphur dioxide (SO<sub>2</sub>)

**· 5.3 Advice for firefighters****· Protective equipment:**

Do not inhale explosion gases or combustion gases.  
Wear self-contained breathing apparatus.

### SECTION 6: Accidental release measures

**· 6.1 Personal precautions, protective equipment and emergency procedures**

Wear protective clothing.  
Avoid causing dust.

**· 6.2 Environmental precautions:** Do not allow to enter drainage system, surface or ground water.**· 6.3 Methods and material for containment and cleaning up:**

Collect mechanically.  
Dispose of contaminated material as waste according to item 13.

**· 6.4 Reference to other sections**

See Section 8 for information on personal protection equipment.

### SECTION 7: Handling and storage

**· 7.1 Precautions for safe handling**

Wear protective clothing.  
Prevent formation of dust.

**· Information about protection against explosions and fires:**

No special measures required.  
The product is not flammable

**· 7.2 Conditions for safe storage, including any incompatibilities****· Storage****· Requirements to be met by storerooms and containers:** Keep container tightly sealed.**· Information about storage in one common storage facility:**

Keep away from foodstuffs, beverages and food.

**· Further information about storage conditions:**

Store in cool, dry conditions in well sealed containers.

**· Recommended storage temperature:** 5-25 °C**· Storage class**

LGK 13

(German Technical Rule for Hazardous Substance – TRGS 510)

**· 7.3 Specific end use(s)** No further relevant information available.

### SECTION 8: Exposure controls/personal protection

**· Additional information about design of technical systems:** No further data; see section 7.**· 8.1 Control parameters****· Components with limit values that require monitoring at the workplace:**

7681-57-4 disodium disulphite

WEL | Long-term value: 5 mg/m<sup>3</sup>

**· Additional information:** The lists that were valid during the compilation were used as basis.

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- **8.2 Exposure controls**

- **Personal protective equipment**

- **General protective and hygienic measures**

The usual precautionary measures should be adhered to general rules for handling chemicals.

Take off immediately all contaminated clothing.

Wash hands during breaks and at the end of the work.

Avoid contact with the eyes.

- **Breathing equipment:** Not necessary if room is well-ventilated.

- **Protection of hands:**

Protective gloves.

The protective gloves to be used must comply with the specifications of the EC directive 89/686/EEC and the resultant standard EN 374.

This recommendation applies only to the product stated in the Safety Data Sheet and supplied by us as well as to the purpose specified by us.

Only use chemical-protective gloves with CE-labelling of category III.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**

	Thickness (mm)	Breakthrough time (min)
Nitril rubber	0,38	> 480
Neoprene	0,65	> 240
Butyl rubber	0,36	> 480

Avoid natural rubber gloves.

- **For the permanent contact of a maximum of 15 minutes gloves made of the following materials are suitable:**

Synthetic gloves

Value for permeation: Level:

≥ 3 (60 min)

- **Eye protection:** Tightly sealed safety glasses.

- **Body protection:** Light weight protective clothing

## SECTION 9: Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

**Form:** Solid.

**Colour:** Colourless

- **Odour:** Pungent

- **pH-value (200 g/l) at 20 °C:** 5.3

- **Change in condition**

**Melting point/Melting range:** > 150 °C

**Boiling point/Boiling range:** Not determined

- **Flash point:** Not applicable

- **Ignition temperature:**

**Decomposition temperature:** > 150 °C

- **Self-inflammability:** Product is not selfigniting.

- **Danger of explosion:** Product is not explosive.

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· <b>Density</b>	Not determined
· <b>Settled apparent density at 20 °C</b>	700 kg/m <sup>3</sup>
· <b>Solubility in / Miscibility with Water:</b>	Soluble
· <b>Solvent content:</b>	
· <b>Solids content:</b>	100.0 %
· <b>9.2 Other information</b>	No further relevant information available.

**SECTION 10: Stability and reactivity**

- **10.1 Reactivity**
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**  
No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions**  
Reacts with acids releasing sulphur dioxide  
Reacts with alkalis releasing ammonia
- **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 toxicological effects**
- **Acute toxicity**

· **LD/LC50 values that are relevant for classification:****7681-57-4 disodium disulphite**

Oral | LD50 | 3200 mg/kg (rat)

**10043-35-3 boric acid**

Oral | LD50 | 2660 mg/kg (rat)

**7783-18-8 ammonium thiosulphate**

Oral | LD50 | 1098 mg/kg (gpg)

2890 mg/kg (rat)

- **Primary irritant effect:**
- **Skin corrosion/irritation** No irritant effect.
- **Serious eye damage/irritation** Strong irritant with the danger of severe eye injury.
- **Respiratory or skin sensitisation** No sensitizing effect known.
- **Subacute to chronic toxicity:** No known symptoms to date.

· **Additional toxicological information:**

The product shows the following dangers according to the calculation method of the General EC Classification Guidelines for Mixtures as issued in the latest version:

Irritant

This statement was deduced from the properties of the single components.

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**SECTION 12: Ecological information****12.1 Toxicity****Aquatic toxicity:****123-31-9 1,4-dihydroxybenzene (hydroquinone)**

EC50/48 h	0.29 mg/l (Daphnia magna)
IC50/72 h	0.335 mg/l (Selenastrum capricornutum)
LC50/96 h	0.044 mg/l (Pimephales promelas)

**10043-35-3 boric acid**

EC50/48 h	133 mg/l (Daphnia magna)
LC50/96 h	50 - 100 mg/l (Onchrohynchus mykiss)

- **12.2 Persistence and degradability** Not determined
- **12.3 Bioaccumulative potential** Not determined
- **Behaviour in environmental systems:** Not determined
- **12.4 Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:** No further relevant information available.
- **Behaviour in sewage processing plants:** Not determined
- **Additional ecological information:**
- **General notes:**  
Water hazard class 1 (German Regulation) (Self-assessment): Weakly water-endangering.  
At present there are no ecotoxicological assessments.  
This statement was deduced from the properties of the single components.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

**SECTION 13: Disposal considerations****13.1 Waste treatment methods****Recommendation**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.  
Must be specially treated under adherence to official regulations.

**European waste catalogue**

09 01 04*	fixer solutions
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**Uncleaned packagings:****Recommendation:**

Non contaminated packagings can be used for recycling.  
Empty contaminated packagings thoroughly. They can be recycled after thorough and proper cleaning.  
Packagings that cannot be cleaned are to be disposed of in the same manner as the product.  
EAK-No. 15 01 10

- **Recommended cleaning agent:** Water, if necessary with cleaning agent.

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**SECTION 14: Transport information**

· <b>14.1 UN-Number</b> · <b>ADR, ADN, IMDG, IATA</b>	Void
· <b>14.2 UN proper shipping name</b> · <b>ADR</b> · <b>ADN, IMDG, IATA</b>	Void Void
· <b>14.3 Transport hazard class(es)</b> · <b>ADR, ADN, IMDG, IATA</b> · <b>Class</b>	Void
· <b>14.4 Packing group</b> · <b>ADR, IMDG, IATA</b>	Void
· <b>14.5 Environmental hazards:</b>	Not applicable.
· <b>14.6 Special precautions for user</b>	Not applicable.
· <b>14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable.
· <b>Transport/Additional information:</b>	Not dangerous according to the above specifications.
· <b>UN "Model Regulation":</b>	-

**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.
- **National regulations**
- **Water hazard class:** Water hazard class 1 (Self-assessment): weakly water-endangering.
- **Other regulations, limitations and prohibitive regulations**

**Substances of very high concern (SVHC) according to REACH, Article 57**

10043-35-3 | boric acid

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

**SECTION 16: Other information**

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

**Relevant phrases**

H302 Harmful if swallowed.  
H318 Causes serious eye damage.  
H360FD May damage fertility. May damage the unborn child.

- **Recommended restriction of use** No public product, only for commercial use

**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)  
IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)  
ICAO: International Civil Aviation Organisation

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ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)

ADR: Accord européen sur le transport 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

Acute Tox. 4: Acute toxicity, Hazard Category 4

Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1

Repr. 1B: Reproductive toxicity, Hazard Category 1B

**• Sources**

applicable EEC directives:

- 1907/2006

- 1272/2008

Internal physical tests, MSDS of the ingredients,

Information system on hazardous substances of the German Social Accident Insurance

(GESTIS-database on hazardous substances), <http://www.dguv.de/ifa/en/gestis/stoffdb/index.jsp>**• \* Data compared to the previous version altered.**

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