

**SAFETY DATA SHEET**  
according to Regulation (EC) No. 1907/2006



**AZ 726 MIF Developer**

Substance No.: SXR054682  
Version 4.0

Revision Date 28.05.2014

Print Date 28.05.2014

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

**1.1 Product identifier**

Trade name : AZ 726 MIF Developer

**1.2 Relevant identified uses of the substance or mixture and uses advised against**

Use of the Substance/Mixture : Electronic industry  
Intermediate for electronic industry

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

Company : AZ Electronic Materials (Germany) GmbH  
Rheingastrasse 190-196 ,  
65203 Wiesbaden Germany

Telephone : +49 (0)611 962 8563

E-mail address of person responsible for the SDS : [PSE@azem.com](mailto:PSE@azem.com)

Responsible/issuing person : Product Safety:  
+49(0)6126-229248 or +49(0)6126-227340

**1.4 Emergency telephone number**

Emergency telephone number : +49 69 305 6418

**SECTION 2: Hazards identification**

**2.1 Classification of the substance or mixture**

**Classification (REGULATION (EC) No 1272/2008)**

**GHS Classification**

Corrosive to metals, Category 1	H290: May be corrosive to metals.
Acute toxicity, Category 4	H302: Harmful if swallowed.
Acute toxicity, Category 4	H312: Harmful in contact with skin.
Skin corrosion, Category 1C	H314: Causes severe skin burns and eye damage.
Specific target organ toxicity - single exposure, Category 2	H371: May cause damage to organs.
Specific target organ toxicity - repeated exposure, Category 2	H373: May cause damage to organs through prolonged or repeated exposure.

**Classification (67/548/EEC, 1999/45/EC)**

**SAFETY DATA SHEET**  
according to Regulation (EC) No. 1907/2006



**AZ 726 MIF Developer**

Substance No.: SXR054682  
Version 4.0

Revision Date 28.05.2014

Print Date 28.05.2014

Toxic  
Corrosive

R24/25: Toxic in contact with skin and if swallowed.  
R34: Causes burns.

**2.2 Label elements**

**GHS-Labeling**

Symbol(s)



Signal word

: Danger

Hazard statements

: H290 May be corrosive to metals.  
H302 + H312 Harmful if swallowed or in contact with skin.  
H314 Causes severe skin burns and eye damage.  
H371 May cause damage to organs.  
H373 May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

: **Prevention:**  
P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.  
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.  
**Response:**  
P308 + P311 IF exposed or concerned: Call a POISON CENTER or doctor/ physician.  
P362 + P364 Take off contaminated clothing and wash it before reuse.

Hazardous components which must be listed on the label:

- 75-59-2 Tetramethylammonium hydroxyde

**2.3 Other hazards**

No information available.

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

**3.2 Mixtures**

**Chemical characterization**

Aqueous alkaline preparation.

Hazardous components

**Tetramethylammonium hydroxyde**

CAS-No. : 75-59-2

**SAFETY DATA SHEET**  
according to Regulation (EC) No. 1907/2006



**AZ 726 MIF Developer**

Substance No.: SXR054682  
Version 4.0

Revision Date 28.05.2014

Print Date 28.05.2014

EC-No. : 200-882-9  
Classification(67/548/EEC) : C-T+-Xn; R34-R27/28-R48/21

Classification : Met. Corr. 1; H290  
(REGULATION (EC) No : Acute Tox. 2; H300  
1272/2008) : Acute Tox. 1; H310  
Skin Corr. 1B; H314  
STOT SE 1; H370  
STOT RE 1; H372  
Aquatic Chronic 2; H411

Concentration [%] :  $\geq 1 - < 2,5$

For explanation of abbreviations see section 16.

**SECTION 4: First aid measures**

**4.1 Description of first aid measures**

- General advice : Take off all contaminated clothing immediately.  
If symptoms persist, call a physician.  
Show this safety data sheet to the doctor in attendance.  
First aider needs to protect himself.
- Inhalation : Move the victim to fresh air.  
Call a physician immediately.  
Show this safety data sheet to the doctor in attendance.
- Skin contact : Wash off immediately with plenty of water for at least 15  
minutes.  
Call a physician immediately.  
Show this safety data sheet to the doctor in attendance.
- Eye contact : Rinse thoroughly with plenty of water for at least 15 minutes  
and consult a physician.  
Remove contact lenses.
- Ingestion : Do NOT induce vomiting.  
If conscious, drink plenty of water.  
Call a physician immediately.  
Show this safety data sheet to the doctor in attendance.

**4.3 Indication of any immediate medical attention and special treatment needed**

- Treatment : Treat symptomatically.

**SAFETY DATA SHEET**  
according to Regulation (EC) No. 1907/2006



**AZ 726 MIF Developer**

Substance No.: SXR054682  
Version 4.0

Revision Date 28.05.2014

Print Date 28.05.2014

**SECTION 5: Firefighting measures**

**5.1 Extinguishing media**

Suitable extinguishing media : Water spray jet  
Dry powder  
Foam  
Carbon dioxide (CO<sub>2</sub>)

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

Specific hazards during firefighting : No information available.

**5.3 Advice for firefighters**

Special protective equipment for firefighters : Use personal protective equipment.  
In the event of fire, wear self-contained breathing apparatus.

Further information : Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

**SECTION 6: Accidental release measures**

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

Personal precautions : See: Exposure controls and personal protection.

**6.2 Environmental precautions**

Environmental precautions : Try to prevent the material from entering drains or water courses.

**6.3 Methods and materials for containment and cleaning up**

Methods for cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).  
Keep in suitable, closed containers for disposal.  
Clean contaminated floors and objects thoroughly while observing environmental regulations.

**6.4 Reference to other sections**

Additional advice : Information regarding Safe handling, see chapter 7.  
Information regarding personal protective measures see, chapter 8.  
Information regarding Waste Disposal, see chapter 13.

**SAFETY DATA SHEET**  
according to Regulation (EC) No. 1907/2006



**AZ 726 MIF Developer**

Substance No.: SXR054682  
Version 4.0

Revision Date 28.05.2014

Print Date 28.05.2014

**SECTION 7: Handling and storage**

**7.1 Precautions for safe handling**

Advice on safe handling : Use only in area provided with appropriate exhaust ventilation.

Advice on protection against fire and explosion : Normal measures for preventive fire protection.

**7.2 Conditions for safe storage, including any incompatibilities**

Requirements for storage areas and containers : Store in original container.

Further information on storage conditions : Keep containers tightly closed in a dry, cool and well-ventilated place.  
Protect from frost, heat and sunlight.

Advice on common storage : Do not store or transport together with foodstuffs

**7.3 Specific end use(s)**

**SECTION 8: Exposure controls/personal protection**

**8.1 Control parameters**

Contains no substances with occupational exposure limit values.

**Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:**

Tetramethylammonium hydroxyde : Exposure routes: Inhalation  
Potential health effects: Chronic effects  
Value: 0,49 mg/m<sup>3</sup>

Exposure routes: Skin contact  
Potential health effects: Chronic effects  
0,14 mg/kg

**Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:**

Tetramethylammonium hydroxyde : Water  
Value: 0,0005 mg/l

Marine water  
Value: 0,00005 mg/l

Fresh water sediment

**SAFETY DATA SHEET**  
according to Regulation (EC) No. 1907/2006



**AZ 726 MIF Developer**

Substance No.: SXR054682  
Version 4.0

Revision Date 28.05.2014

Print Date 28.05.2014

Value: 0,03 mg/kg

Marine sediment  
Value: 0,003 mg/kg

Soil  
Value: 0,0057 mg/kg

**8.2 Exposure controls**

**Engineering measures**

See chapter7; no measures exceeding the ones mentioned are necessary.

**Personal protective equipment**

Respiratory protection : Use respiratory protection in case of insufficient exhaust ventilation or prolonged exposure

Hand protection : Break through time: > 10 min  
Glove thickness: > 0,4 mm  
For short-term exposure (splash protection):  
Nitrile rubber gloves.  
Remarks: These types of protective gloves are offered by various manufacturers. Please note the manufacturers' detailed statements, especially about the minimum thickness and the minimum breakthrough time. Consider also the particular working conditions under which the gloves are being used.

Eye protection : Tightly fitting safety goggles

Skin and body protection : Protective suit

Hygiene measures : When using do not eat, drink or smoke.  
Keep away from food and drink.  
Wash hands before breaks and at the end of workday.  
Use barrier skin cream.

Protective measures : Observe the usual precautions for handling chemicals.  
Avoid contact with skin and eyes.

**Environmental exposure controls**

General advice : Try to prevent the material from entering drains or water courses.

**SECTION 9: Physical and chemical properties**

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

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## AZ 726 MIF Developer

Substance No.: SXR054682  
Version 4.0

Revision Date 28.05.2014

Print Date 28.05.2014

### Appearance

Form : liquid  
Colour : colourless  
Odour : characteristic

### Safety data

Flash point : not applicable  
Ignition temperature : not determined  
Thermal decomposition : not determined  
Lower explosion limit : not determined  
Upper explosion limit : not determined  
Flammability (solid, gas) : not determined  
Oxidizing properties : not determined  
Auto-ignition temperature : not determined  
Burning number : not determined  
pH : ca. 13 (20 °C)  
Freezing point : not determined  
Boiling temperature : ca. 100 °C  
Sublimation point : not determined  
Vapour pressure : ca. 23 hPa, 20 °C  
Density : ca. 1 g/cm<sup>3</sup>, 20 °C  
Water solubility : miscible in all proportions  
Partition coefficient:  
n-octanol/water : not determined  
Solubility in other solvents : not determined  
Viscosity, dynamic : ca. 1 mPas, 20 °C  
Viscosity, kinematic : not determined  
Relative vapour density : not determined  
Corrosive in contact with metals : Corrosive to metals  
Evaporation rate : not determined

### 9.2 Other information

Further information : Remarks: Corrosive effects on Aluminum and Zink.

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

No dangerous reaction known under conditions of normal use.

### 10.2 Chemical stability

No decomposition if stored and applied as directed.

### 10.3 Possibility of hazardous reactions

**SAFETY DATA SHEET**  
according to Regulation (EC) No. 1907/2006



**AZ 726 MIF Developer**

Substance No.: SXR054682  
Version 4.0

Revision Date 28.05.2014

Print Date 28.05.2014

Hazardous reactions : When heated over 110 °C, evolution of Trimethylamine and Methanol can take place.

**10.4 Conditions to avoid**

Conditions to avoid : no data available

**10.5 Incompatible materials**

Materials to avoid : Acids

**10.6 Hazardous decomposition products**

Hazardous decomposition products : when handled and stored appropriately no dangerous decomposition products are known

**SECTION 11: Toxicological information**

**11.1 Information on toxicological effects**

**Product**

Acute oral toxicity : Acute Toxicity Estimate (ATE): 529,9 mg/kg, Calculation method

Acute inhalation toxicity : no data available

Acute dermal toxicity : Acute Toxicity Estimate (ATE): 1.051 mg/kg, Calculation method

Skin corrosion/irritation : Result: Corrosive, category 1C - where responses occur after exposures between 1 hour and 4 hours and observations up to 14 days., By analogy with a similar product.

Serious eye damage/eye irritation : no data available

Respiratory or skin sensitisation : no data available

**Components:**

**Tetramethylammonium hydroxyde :**

Acute oral toxicity : LD50: >= 12,6 mg/kg, rat

Acute dermal toxicity : LD50: > 25 mg/kg, rat

Skin corrosion/irritation : Result: Causes burns.

Serious eye damage/eye irritation : Result: Risk of serious damage to eyes., Source : OECD SIDS

STOT - single exposure : Assessment: Causes damage to organs.

: Target Organs: Eyes, Skin, Respiratory system, Heart, Liver,



**SAFETY DATA SHEET**  
according to Regulation (EC) No. 1907/2006



**AZ 726 MIF Developer**

Substance No.: SXR054682  
Version 4.0

Revision Date 28.05.2014

Print Date 28.05.2014

Nervous system  
Assessment: Causes damage to organs through prolonged or repeated exposure.

**SECTION 12: Ecological information**

**12.1 Toxicity**

**Components:**

**Tetramethylammonium hydroxyde:**

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 462 mg/l  
Exposure time: 96 h

Toxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): 3 mg/l  
aquatic invertebrates Exposure time: 48 h

Toxicity to algae : EC50 (Pseudokirchneriella subcapitata (green algae)): 96 mg/l  
Exposure time: 72 h

Toxicity to daphnia and other : NOEC: 0,025 mg/l  
aquatic invertebrates Species: Daphnia magna (Water flea)  
(Chronic toxicity)

**12.2 Persistence and degradability**

**Product:**

Biodegradability : Result: Readily biodegradable.  
Method: OECD Test Guideline 301B

**Components:**

**Tetramethylammonium hydroxyde :**

Biodegradability : Result: Readily biodegradable.

**12.3 Bioaccumulative potential**

**Components:**

**Tetramethylammonium hydroxyde :**

Bioaccumulation : Remarks: Bioaccumulation is unlikely.

**12.4 Mobility in soil**

no data available

**12.5 Results of PBT and vPvB assessment**

**Product:**

**SAFETY DATA SHEET**  
according to Regulation (EC) No. 1907/2006



**AZ 726 MIF Developer**

Substance No.: SXR054682  
Version 4.0

Revision Date 28.05.2014

Print Date 28.05.2014

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher..

**Components:**

**Tetramethylammonium hydroxyde :**

Assessment : The substance does not fulfill the PBT criteria.. The substance does not fulfill the vPvB criteria..

**12.6 Other adverse effects**

**Product:**

Additional ecological information : Do not dispose of in the environment.

**SECTION 13: Disposal considerations**

**13.1 Waste treatment methods**

Product : Dispose of contents/ container to an approved waste disposal plant.

Contaminated packaging : Dispose of as unused product.

**SECTION 14: Transport information**

**ADR**

UN number : 1835  
Description of the goods : TETRAMETHYLAMMONIUM HYDROXIDE SOLUTION  
Class : 8  
Packing group : III  
Classification Code : C7  
Hazard Identification Number : 80  
Labels : 8  
Environmentally hazardous : no

**IATA**

UN number : 1835  
Description of the goods : Tetramethylammonium hydroxide, solution  
Class : 8  
Packing group : III  
Labels : 8  
Environmentally hazardous : no

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## AZ 726 MIF Developer

Substance No.: SXR054682  
Version 4.0

Revision Date 28.05.2014

Print Date 28.05.2014

### IMDG

UN number : 1835  
Description of the goods : TETRAMETHYLAMMONIUM HYDROXIDE SOLUTION  
Class : 8  
Packing group : III  
Labels : 8  
EmS Number 1 : F-A  
EmS Number 2 : S-B  
Marine pollutant : no

### RID

UN number : 1835  
Description of the goods : TETRAMETHYLAMMONIUM HYDROXIDE SOLUTION  
Class : 8  
Packing group : III  
Classification Code : C7  
Hazard Identification Number : 80  
Labels : 8  
Environmentally hazardous : no

## SECTION 15: Regulatory information

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

International Chemical Weapons Convention (CWC) Schedules of Toxic Chemicals and Precursors : Neither banned nor restricted

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII) : Neither banned nor restricted

Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals : Neither banned nor restricted

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). : This product does not contain substances of very high concern (Regulation (EC) No 1907/2006 (REACH), Article 57).

REACH - List of substances subject to authorisation (Annex XIV) : Neither banned nor restricted

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer : Neither banned nor restricted

Regulation (EC) No 850/2004 on persistent organic pollutants : Neither banned nor restricted

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## AZ 726 MIF Developer

Substance No.: SXR054682  
Version 4.0

Revision Date 28.05.2014

Print Date 28.05.2014

### 15.2 Chemical Safety Assessment

A Chemical Safety Assessment is not required for a mixture.

### SECTION 16: Other information

#### Full text of R-phrases referred to under sections 2 and 3

R24/25	Toxic in contact with skin and if swallowed.
R27/28	Very toxic in contact with skin and if swallowed.
R34	Causes burns.
R48/21	Harmful: danger of serious damage to health by prolonged exposure in contact with skin.

#### Full text of H-Statements referred to under sections 2 and 3.

H290	May be corrosive to metals.
H300	Fatal if swallowed.
H302	Harmful if swallowed.
H310	Fatal in contact with skin.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H370	Causes damage to organs.
H371	May cause damage to organs.
H372	Causes damage to organs through prolonged or repeated exposure.
H373	May cause damage to organs through prolonged or repeated exposure.
H411	Toxic to aquatic life with long lasting effects.

Decimal notation: "Thousands" places are identified with a dot (example: 2.000 mg/kg means "two thousand mg/kg"). Decimal places are identified with a comma (example: 1,35 g/cm<sup>3</sup>)

#### Further information

Further information : Observe national and local legal requirements

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

AZ is a trademark or a registered trademark and the AZ logo is a registered trademark of AZ Electronic Materials.

**SAFETY DATA SHEET**  
according to Regulation (EC) No. 1907/2006



**AZ 726 MIF Developer**

Substance No.: SXR054682  
Version 4.0

Revision Date 28.05.2014

Print Date 28.05.2014