

**AZ 400K Developer 1:3**Version  
4.8Revision Date:  
21.04.2020SDS Number:  
70MDGM184433**SECTION 1. IDENTIFICATION****Product identifier**

Product name : AZ 400K Developer 1:3

Product number : 184433

**Recommended use of the chemical and restrictions on use**

Recommended use : Intermediate for electronic industry

**Details of the supplier of the safety data sheet**Company : EMD Performance Materials Corp., an Affiliate of Merck KGaA,  
Darmstadt, Germany, 1200 Intrepid Avenue, Suite 300,  
Philadelphia, PA 19112, 1-888-367-3275, www.emd-pm.comEmergency telephone : 1-800-424-9300 CHEMTREC (USA)  
1-703-741-5970 CHEMTREC (International)  
24 Hours/day; 7 Days/week**SECTION 2. HAZARDS IDENTIFICATION****GHS Classification**

Corrosive to Metals : Category 1

Eye irritation : Category 2A

Reproductive toxicity : Category 2

**GHS label elements**

Hazard pictograms :



Signal Word : Warning

Hazard Statements : H290 May be corrosive to metals.  
H319 Causes serious eye irritation.  
H361f Suspected of damaging fertility.

## AZ 400K Developer 1:3

Version  
4.8

Revision Date:  
21.04.2020

SDS Number:  
70MDGM184433

Precautionary Statements :

**Prevention:**

P201 Obtain special instructions before use.  
 P202 Do not handle until all safety precautions have been read and understood.  
 P234 Keep only in original container.  
 P264 Wash skin thoroughly after handling.  
 P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

**Response:**

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P308 + P313 IF exposed or concerned: Get medical advice/ attention.  
 P337 + P313 If eye irritation persists: Get medical advice/ attention.  
 P390 Absorb spillage to prevent material damage.

**Storage:**

P405 Store locked up.  
 P406 Store in corrosive resistant container with a resistant inner liner.

**Disposal:**

P501 Dispose of contents/ container to an approved waste disposal plant.

**Other hazards**

None known.

### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

**Hazardous ingredients**

Chemical name	Concentration (% w/w)	CAS-No.
Potassium borate	>= 1 - < 5	20786-60-1

### SECTION 4. FIRST AID MEASURES

If inhaled : Fresh air.

In case of skin contact : Take off immediately all contaminated clothing. Rinse skin with water/ shower.

**AZ 400K Developer 1:3**Version  
4.8Revision Date:  
21.04.2020SDS Number:  
70MDGM184433

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In case of eye contact	:	Rinse out with plenty of water. Remove contact lenses.
If swallowed	:	Make victim drink water (two glasses at most). Consult doctor if feeling unwell.
Most important symptoms and effects, both acute and delayed	:	We have no description of any toxic symptoms.
Notes to physician	:	No information available.

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**SECTION 5. FIRE-FIGHTING MEASURES**

Suitable extinguishing media	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media	:	For this substance/mixture no limitations of extinguishing agents are given.
Specific hazards during fire fighting	:	Not combustible.  Ambient fire may liberate hazardous vapors.
Further information	:	Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
Special protective equipment for fire-fighters	:	In the event of fire, wear self-contained breathing apparatus.

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**SECTION 6. ACCIDENTAL RELEASE MEASURES**

Personal precautions, protective equipment and emergency procedures	:	Advice for non-emergency personnel: Do not breathe vapors, aerosols. Evacuate the danger area, observe emergency procedures, consult an expert. Advice for emergency responders: Protective equipment see section 8. Indications about waste treatment see section 13.
Environmental precautions	:	No special precautionary measures necessary.
Methods and materials for containment and cleaning up	:	Observe possible material restrictions (see sections 7 and 10). Take up with liquid-absorbent and neutralizing material (e.g.

## AZ 400K Developer 1:3

Version  
4.8

Revision Date:  
21.04.2020

SDS Number:  
70MDGM184433

Chemizorb® OH<sup>-</sup>, Art. No. 101596). Dispose of properly.  
Clean up affected area.

### SECTION 7. HANDLING AND STORAGE

#### Precautions for safe handling

Advice on safe handling : Observe label precautions.  
Avoid contact with skin, eyes and clothing.

#### Conditions for safe storage, including any incompatibilities

Conditions for safe storage : Store in original container.  
No metal containers.  
Storage conditions : Tightly closed.  
Risks from decomposition products: see section 10

### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Contains no substances with occupational exposure limit values.

#### Hazardous components without workplace control parameters

Components	CAS-No.
Potassium borate	20786-60-1

**Engineering measures** : Ensure that eye flushing systems and safety showers are located close to the working place.  
Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.  
See section 7.

#### Personal protective equipment

Respiratory protection : Not required; except in case of aerosol formation.  
Hand protection  
Additional Protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products.  
Eye protection : Safety glasses  
Hygiene measures : Avoid contact with skin, eyes and clothing.  
Wash hands and face before breaks and immediately after

**AZ 400K Developer 1:3**Version  
4.8Revision Date:  
21.04.2020SDS Number:  
70MDGM184433

---

handling the product.  
Keep away from food and drink.

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**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Physical state	liquid
Form	liquid
Color	clear colorless
Odor	odorless
Odor Threshold	No information available.
pH	12
Melting point	No information available.
Boiling point/boiling range	approximately 212 °F (100 °C)
Flash point	Not applicable
Evaporation rate	Note: not determined
Flammability (solid, gas)	No information available.
Lower explosion limit	Not applicable
Upper explosion limit	Not applicable
Vapor pressure	No data available
Relative vapor density	No information available.
Density	1.022 g/cm <sup>3</sup>
Relative density	No information available.
Water solubility	miscible in all proportions
Partition coefficient: n-octanol/water	No data available
Autoignition temperature	No information available.

## AZ 400K Developer 1:3

Version  
4.8

Revision Date:  
21.04.2020

SDS Number:  
70MDGM184433

---

Decomposition temperature	No information available.
Viscosity, dynamic	No information available.
Explosive properties	No information available.
Oxidizing properties	No information available.
Corrosion	Corrosive to metals

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### SECTION 10. STABILITY AND REACTIVITY

Reactivity	: See below
Chemical stability	: The product is chemically stable under standard ambient conditions (room temperature) .
Possibility of hazardous reactions	: The generally known reaction partners of water.
Conditions to avoid	: no information available
Incompatible materials	: Metals Acids Bases Oxidizing agents
Hazardous decomposition products	: no information available

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### SECTION 11. TOXICOLOGICAL INFORMATION

#### Information on toxicological effects

##### Product

##### Carcinogenicity

IARC	No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
OSHA	No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.
NTP	No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

## AZ 400K Developer 1:3

Version  
4.8

Revision Date:  
21.04.2020

SDS Number:  
70MDGM184433

---

*Likely route of exposure*  
Eye contact, Skin contact

*Skin irritation*  
Rabbit  
Result: No skin irritation  
(in analogy to similar compounds)

*Eye irritation*  
Rabbit  
Result: Eye irritation

*CMR effects*

Teratogenicity / Reproductive toxicity:  
Suspected of damaging fertility.

### **Experience with human exposure**

Other Relevant Toxicity Information:  
Handle in accordance with good industrial hygiene and safety practice.

### **Components**

*Potassium borate (20786-60-1):*

*CMR effects*

Reproductive toxicity:  
Some evidence of adverse effects on sexual function and fertility, based on animal experiments.

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## SECTION 12. ECOLOGICAL INFORMATION

### **Ecotoxicity**

#### **Product**

### **Persistence and degradability**

No information available.

### **Bioaccumulative potential**

*Partition coefficient: n-octanol/water*

No data available

### **Mobility in soil**

No information available.

*Additional ecological information*

No ecological problems are to be expected when the product is handled and used with due care and attention.

**AZ 400K Developer 1:3**Version  
4.8Revision Date:  
21.04.2020SDS Number:  
70MDGM184433**Components***Potassium borate (20786-60-1):**Partition coefficient: n-octanol/water  
log Pow: -1.09 (22 °C)  
(ECHA)***SECTION 13. DISPOSAL CONSIDERATIONS**

Product Waste : Waste material must be disposed of in accordance with national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

**SECTION 14. TRANSPORT INFORMATION****DOT / 49CFR**

UN/ID/NA number : UN 1814  
Proper shipping name : Potassium hydroxide, solution  
  
Class : 8  
Packing group : III  
Labels : CORROSIVE  
ERG Code : 154  
Marine pollutant : no  
Remarks : LTD QTY =< 5 L or 5 KG net capacity, as per 49 CFR 173.154

**International Regulations****IATA-DGR**

UN/ID No. : UN 1814  
Proper shipping name : Potassium hydroxide solution  
Class : 8  
Packing group : III  
Labels : Corrosive  
Packing instruction (cargo aircraft) : 856  
Packing instruction (passenger aircraft) : 852

**IMDG-Code**

UN number : UN 1814



**AZ 400K Developer 1:3**Version  
4.8Revision Date:  
21.04.2020SDS Number:  
70MDGM184433

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Proper shipping name : POTASSIUM HYDROXIDE SOLUTION

Class : 8

Packing group : III

Labels : 8

EmS Code : F-A, S-B

Marine pollutant : no

Remarks : Alkalis

**Special precautions for user**

Not applicable

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**SECTION 15. REGULATORY INFORMATION****EPCRA - Emergency Planning and Community Right-to-Know****CERCLA Reportable Quantity**

Potassium hydroxide 1310-58-3 1000lbs

\*: Calculated RQ exceeds reasonably attainable upper limit.

**SARA 304 Extremely Hazardous Substances Reportable Quantity**

This material does not contain any components with a section 304 EHS RQ.

**SARA 302**

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 313**

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**Clean Air Act**

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCM I Intermediate or Final VOC's (40 CFR 60.489).

**Clean Water Act**

The following Hazardous Substances are listed under the U.S. CleanWater Act, Section 311, Table 116.4A:

Potassium hydroxide 1310-58-3

The following Hazardous Chemicals are listed under the U.S. CleanWater Act, Section 311, Table 117.3:

**AZ 400K Developer 1:3**Version  
4.8Revision Date:  
21.04.2020SDS Number:  
70MDGM184433

---

Potassium hydroxide

1310-58-3

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

**US State Regulations****Massachusetts Right To Know**

No components are subject to the Massachusetts Right to Know Act.

**Pennsylvania Right To Know**

Potassium hydroxide

1310-58-3

**California Prop. 65**

This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

**The ingredients of this product are reported in the following inventories:**

DSL : All components of this product are on the Canadian DSL

TSCA : All substances listed on the TSCA Active Inventory.

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**SECTION 16. OTHER INFORMATION**

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.