

**AZ Remover 880**Version  
1.1Revision Date:  
04.10.2018SDS Number:  
70MDGM555786**SECTION 1. IDENTIFICATION****Product identifier**

Product name : AZ Remover 880

Product number : 555786

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

Recommended use : Materials for use in technical applications

**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

Acute toxicity : Category 4

Skin irritation : Category 2

Eye irritation : Category 1

**GHS label elements**

Hazard pictograms :



Signal Word : Danger

Hazard Statements : H290 May be corrosive to metals.

## AZ Remover 880

Version  
1.1

Revision Date:  
04.10.2018

SDS Number:  
70MDGM555786

H302 Harmful if swallowed.  
H318 Causes serious eye damage.  
H315 Causes skin irritation.

Precautionary Statements :

**Prevention:**

P202 Do not handle until all safety precautions have been read and understood.  
P234 Keep only in original container.  
P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.  
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

**Response:**

P302 + P352 IF ON SKIN: Wash with plenty of water.  
P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P333 If skin irritation or rash occurs:  
P337 + P313 If eye irritation persists: Get medical advice/ attention.

**Storage:**

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

**Disposal:**

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

**Other hazards**

The following percentage of the mixture consists of ingredient(s) with unknown acute toxicity: 7.88 %

### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

**Hazardous ingredients**

Chemical name	Concentration (% w/w)		CAS-No.
dicarboxylic acid	1 -	5	67829000004-7809P
(2-methoxymethylethoxy)propanol	50 -	60	34590-94-8
sulfonic acid	>= 0 -	<= 5	67829000004-7701P
Polar aprotic solvent	30 -	40	67829000004-7822P

**AZ Remover 880**Version  
1.1Revision Date:  
04.10.2018SDS Number:  
70MDGM555786

---

**SECTION 4. FIRST AID MEASURES**

- If inhaled : Fresh air.
- In case of skin contact : rinse out with polyethylene glycol 400 or a mixture of polyethylene glycol 300/ethanol 2:1 and wash with plenty of water. If neither is available wash with plenty of water. Immediately take off contaminated clothing. Seek medical advice immediately.
- In case of eye contact : Rinse out with plenty of water.  
Remove contact lenses.
- If swallowed : Never give anything by mouth to an unconscious person.
- Most important symptoms and effects, both acute and delayed : We have no description of any toxic symptoms.
- Notes to physician : No information available.

---

**SECTION 5. FIRE-FIGHTING MEASURES**

- Suitable extinguishing media : Water  
Foam  
Carbon dioxide (CO<sub>2</sub>)  
Dry powder
- Unsuitable extinguishing media : For this substance/mixture no limitations of extinguishing agents are given.
- Specific hazards during fire fighting : Combustible.
- Vapors are heavier than air and may spread along floors. Development of hazardous combustion gases or vapors possible in the event of fire.
- Further information : Suppress (knock down) gases/vapors/mists with a water spray jet.  
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.  
Avoid breathing vapors and keep upwind.
- Special protective equipment for fire-fighters : Well closed full protective clothing (coat and pants) including helmet.

## AZ Remover 880

Version  
1.1

Revision Date:  
04.10.2018

SDS Number:  
70MDGM555786

### 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. Chemizorb® H<sup>+</sup>, Art. No. 101595). Dispose of properly. Clean up affected area.

### SECTION 7. HANDLING AND STORAGE

#### Precautions for safe handling

- Advice on safe handling : Avoid contact with skin and eyes.  
Keep away from flames and sparks.

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

- Conditions for safe storage : Store in original container.  
Keep tightly closed in a dry, cool and well-ventilated place.
- Storage conditions : Risks from decomposition products: see section 10

### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
(2-methoxymethylethoxy)propano l	34590-94-8	TWA	100 ppm	ACGIH
		STEL	150 ppm	ACGIH
		TWA	100 ppm 600 mg/m <sup>3</sup>	NIOSH REL
		STEL	150 ppm 900 mg/m <sup>3</sup>	NIOSH REL
		TWA	100 ppm	OSHA Z-1

## AZ Remover 880

Version  
1.1

Revision Date:  
04.10.2018

SDS Number:  
70MDGM555786

			600 mg/m <sup>3</sup>	
		TWA	100 ppm 600 mg/m <sup>3</sup>	OSHA P0
		STEL	150 ppm 900 mg/m <sup>3</sup>	OSHA P0
dicarboxylic acid	6782900000 4-7809P	TWA	1 mg/m <sup>3</sup>	ACGIH
		STEL	2 mg/m <sup>3</sup>	ACGIH
		TWA	1 mg/m <sup>3</sup>	NIOSH REL
		STEL	2 mg/m <sup>3</sup>	NIOSH REL
		TWA	1 mg/m <sup>3</sup>	OSHA Z-1
		TWA	1 mg/m <sup>3</sup>	OSHA P0
		STEL	2 mg/m <sup>3</sup>	OSHA P0

### Hazardous components without workplace control parameters

Components	CAS-No.
Polar aprotic solvent	6782900000 4-7822P

**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** : General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.

**Eye protection** : Safety glasses

**Hygiene measures** : Avoid contact with skin, eyes and clothing. Wash hands and face before breaks and immediately after handling the product. Keep away from food and drink.

**AZ Remover 880**Version  
1.1Revision Date:  
04.10.2018SDS Number:  
70MDGM555786**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Physical state	solution
Form	liquid
Color	light yellow
Odor	characteristic of solvents
Odor Threshold	No information available.
pH	< 1
Melting point	No information available.
Boiling point	No information available.
Flash point	approximately 199 °F (93 °C) Method: closed cup
Evaporation rate	No information available.
Flammability (solid, gas)	No information available.
Lower explosion limit	No information available.
Upper explosion limit	No information available.
Vapor pressure	No information available.
Relative vapor density	No information available.
Density	1.071 g/cm <sup>3</sup> at 68 °F (20 °C)
Relative density	No information available.
Water solubility	partly soluble - phase separation
Partition coefficient: n- octanol/water	No information available.

**AZ Remover 880**Version  
1.1Revision Date:  
04.10.2018SDS Number:  
70MDGM555786

---

Autoignition temperature	No information available.
Decomposition temperature	No information available.
Viscosity, dynamic	No information available.
Explosive properties	No information available.
Oxidizing properties	No information available.
Viscosity, kinematic	8.21 cSt at 68 °F (20 °C)

---

**SECTION 10. STABILITY AND REACTIVITY**

Reactivity	: Forms explosive mixtures with air on intense heating. No dangerous reaction known under conditions of normal use.  A range from approx. 15 Kelvin below the flash point is to be rated as critical.
Chemical stability	: The product is chemically stable under standard ambient conditions (room temperature) .
Possibility of hazardous reactions	: no information available
Conditions to avoid	: Heat, flames and sparks.  no information available
Incompatible materials	: no information available
Hazardous decomposition products	: in the event of fire: See section 5.

---

**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

**AZ Remover 880**Version  
1.1Revision Date:  
04.10.2018SDS Number:  
70MDGM555786

---

OSHA human carcinogen by IARC.  
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.

*Likely route of exposure*  
Eye contact, Skin contact

*Acute oral toxicity*  
Acute toxicity estimate: > 5,000 mg/kg  
Calculation method

*Acute dermal toxicity*  
Acute toxicity estimate: > 5,000 mg/kg  
Calculation method

**Experience with human exposure**

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

**Components**

*dicarboxylic acid (67829000004-7809P):*

*Acute oral toxicity*  
LD50 Rat: 375 mg/kg

*Acute dermal toxicity*  
LD50 Rabbit: 20,000 mg/kg

*Eye irritation*  
Rabbit  
Result: Corrosive

*(2-methoxymethylethoxy)propanol (34590-94-8):*

*Acute oral toxicity*  
LD50 Rat: > 5,000 mg/kg  
OECD Test Guideline 401(ECHA)

*Acute inhalation toxicity*  
LC50 Rat: 55 - 60 mg/l; 4 h ; vapor (External MSDS)



**AZ Remover 880**Version  
1.1Revision Date:  
04.10.2018SDS Number:  
70MDGM555786

*Acute dermal toxicity*  
LD50 Rabbit: 9,500 mg/kg  
OECD Test Guideline 402 (ECHA)

*Skin irritation*  
Rabbit  
Result: No irritation  
OECD Test Guideline 404  
(ECHA)

*Eye irritation*  
Rabbit  
Result: slight irritation  
Draize Test

*Sensitization*  
Patch test: Human  
Result: negative  
(IUCLID)

*Repeated dose toxicity*  
Rabbit  
male and female  
NOAEL: 2,850 mg/kg  
OECD Test Guideline 411  
(ECHA)

*Germ cell mutagenicity*  
*Genotoxicity in vitro*  
Ames test  
Result: negative  
(IUCLID)

**sulfonic acid (67829000004-7701P):**

*Acute oral toxicity*  
LD50 Oral Rat: 500 - 2,000 mg/kg (External MSDS)

*Acute dermal toxicity*  
LD50 Dermal Rabbit: > 2,000 mg/kg (External MSDS)

*Skin irritation*  
Result: Causes severe burns.  
(External MSDS)

*Eye irritation*  
Result: Risk of serious damage to eyes.  
(External MSDS)

**Polar aprotic solvent (67829000004-7822P):**

*Acute oral toxicity*  
LD50 Rat: 1,941 mg/kg (RTECS)

## AZ Remover 880

Version  
1.1

Revision Date:  
04.10.2018

SDS Number:  
70MDGM555786

---

*Acute inhalation toxicity*

LC50 Rat: 12 mg/l; 4 h ; aerosol (Regulation (EC) No 1272/2008, Annex VI) (ECHA)  
Test substance: yes

*Acute dermal toxicity*

LD50 Rat: > 2,000 mg/kg (ECHA)

*Skin irritation*

Rabbit  
Result: No irritation  
(ECHA)

*Eye irritation*

Rabbit  
Result: slight irritation  
(ECHA)

*Sensitization*

Sensitization test: Guinea pig  
Result: negative  
Method: OECD Test Guideline 406

*Repeated dose toxicity*

Rat  
male and female  
Oral  
28 d  
daily  
NOAEL: 200 mg/kg  
(ECHA)

Guinea pig  
inhalation (vapor)  
90 - 110 d  
daily  
NOAEL: 0.159 mg/l  
(ECHA)

*Germ cell mutagenicity*

*Genotoxicity in vitro*  
Ames test  
Escherichia coli/Salmonella typhimurium  
Result: negative  
Metabolic activation: with and without metabolic activation  
Method: OECD Test Guideline 471

Mutagenicity (mammal cell test):  
MOUSE LYMPHOMA TEST  
Result: negative  
Metabolic activation: with and without metabolic activation  
Method: OECD Test Guideline 476

*Reproductive toxicity*

Rat  
Method: OECD Test Guideline 421  
Regarding the available data the classification criteria are not fulfilled.  
*CMR effects*

**AZ Remover 880**Version  
1.1Revision Date:  
04.10.2018SDS Number:  
70MDGM555786

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

*Teratogenicity*  
Application Route: Oral  
Rat  
Number of exposures: daily  
Method: OECD Test Guideline 414

**SECTION 12. ECOLOGICAL INFORMATION****Ecotoxicity  
Product****Persistence and degradability**

No information available.

**Bioaccumulative potential**

No information 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.

**Components***dicarboxylic acid (67829000004-7809P):*

No information available.

*(2-methoxymethylethoxy)propanol (34590-94-8):*

*Toxicity to fish*  
static test LC50 *Poecilia reticulata* (guppy): > 1,000 mg/l; 96 h  
Analytical monitoring: yes  
OECD Test Guideline 203 (ECHA)

*Toxicity to daphnia and other aquatic invertebrates*  
static test EC50 *Daphnia magna* (Water flea): 1,919 mg/l; 48 h  
OECD Test Guideline 202 (ECHA)

*Toxicity to algae*  
static test ErC50 *Pseudokirchneriella subcapitata* (green algae): > 969 mg/l; 96 h  
Analytical monitoring: yes  
OECD Test Guideline 201 (ECHA)

## AZ Remover 880

Version  
1.1

Revision Date:  
04.10.2018

SDS Number:  
70MDGM555786

---

*Toxicity to bacteria*

static test EC10 *Pseudomonas putida*: 4,168 mg/l; 18 h (ECHA)

*Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)*

flow-through test NOEC *Daphnia magna* (Water flea):  $\geq 0.5$  mg/l; 22 d

OECD Test Guideline 211 (ECHA)

*Biodegradability*

96 %; 28 d; aerobic  
OECD Test Guideline 301F  
(ECHA)  
Readily biodegradable.

*Biochemical Oxygen Demand (BOD)*

650 mg/g (20 d)  
(External MSDS)

*Partition coefficient: n-octanol/water*

log  $P_{ow}$ : 0.004 (25 °C)  
OECD Test Guideline 107  
Bioaccumulation is not expected.

*Surface tension*

68.7 mN/m  
at 20 °C  
Method: OECD Test Guideline 115

*sulfonic acid (67829000004-7701P):*

*Toxicity to fish*

LC50: 1.67 mg/l; 96 h (External MSDS)

*Toxicity to daphnia and other aquatic invertebrates*

EC50 *Daphnia*: 2.4 mg/l; 48 h (External MSDS)

*Toxicity to algae*

EC50 algae: 47.3 mg/l; 72 h

*Biodegradability*

Readily biodegradable.

**AZ Remover 880**Version  
1.1Revision Date:  
04.10.2018SDS Number:  
70MDGM555786*Polar aprotic solvent (67829000004-7822P):**Toxicity to fish*

static test LC50 *Oryzias latipes* (Orange-red killifish): > 100 mg/l; 96 h  
Analytical monitoring: yes  
OECD Test Guideline 203

*Toxicity to daphnia and other aquatic invertebrates*

EC50 *Daphnia magna* (Water flea): 852 mg/l; 48 h  
Analytical monitoring: yes  
OECD Test Guideline 202 (ECHA)

NOEC *Daphnia magna* (Water flea): 171 mg/l; 48 h

Analytical monitoring: yes  
OECD Test Guideline 202

*Toxicity to algae*

static test EC50 *Pseudokirchneriella subcapitata* (green algae): > 1,000 mg/l; 72 h  
Analytical monitoring: yes  
OECD Test Guideline 201

static test NOEC *Pseudokirchneriella subcapitata* (green algae): 556 mg/l; 72 h

Analytical monitoring: yes  
OECD Test Guideline 201

*Biodegradability*

10.1 %; 14 d; aerobic  
OECD Test Guideline 301C  
Not readily biodegradable.

*Partition coefficient: n-octanol/water*

log Pow: < 0 (20 °C)  
OECD Test Guideline 117  
Bioaccumulation is not expected.

Substance does not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex XIII.

**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 3265  
Proper shipping name : Corrosive liquid, acidic, organic, n.o.s.

## AZ Remover 880

Version  
1.1

Revision Date:  
04.10.2018

SDS Number:  
70MDGM555786

(Dicarboxylic acid)  
Class : 8  
Packing group : II  
Labels : CORROSIVE  
ERG Code : 153  
Marine pollutant : no

### International Regulations

#### IATA-DGR

UN/ID No. : UN 3265  
Proper shipping name : Corrosive liquid, acidic, organic, n.o.s.  
(Dicarboxylic acid)

Class : 8  
Packing group : II  
Labels : Corrosive  
Packing instruction (cargo aircraft) : 855  
Packing instruction (passenger aircraft) : 851

#### IMDG-Code

UN number : UN 3265  
Proper shipping name : CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.  
(Dicarboxylic acid)

Class : 8  
Packing group : II  
Labels : 8  
EmS Code : F-A, S-B  
Marine pollutant : no  
Remarks : Acids

## SECTION 15. REGULATORY INFORMATION

### EPCRA - Emergency Planning and Community Right-to-Know

#### CERCLA Reportable Quantity

\*: 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.

## AZ Remover 880

Version  
1.1

Revision Date:  
04.10.2018

SDS Number:  
70MDGM555786

### 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).

The following chemical(s) are listed under the U.S. Clean Air Act Section 111 SOCM I Intermediate or Final VOC's (40 CFR 60.489):

Polar aprotic solvent	67829000004-7822P
-----------------------	-------------------

### Clean Water Act

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

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

sulfonic acid	67829000004-7701P
---------------	-------------------

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

sulfonic acid	67829000004-7701P
---------------	-------------------

### US State Regulations

#### Massachusetts Right To Know

dicarboxylic acid	67829000004-7809P
-------------------	-------------------

(2-methoxymethylethoxy)propanol	34590-94-8
---------------------------------	------------

sulfonic acid	67829000004-7701P
---------------	-------------------

Polar aprotic solvent	67829000004-7822P
-----------------------	-------------------

#### Pennsylvania Right To Know

dicarboxylic acid	67829000004-7809P
-------------------	-------------------

(2-methoxymethylethoxy)propanol	34590-94-8
---------------------------------	------------

sulfonic acid	67829000004-7701P
---------------	-------------------

Polar aprotic solvent	67829000004-7822P
-----------------------	-------------------

#### New Jersey Right To Know

dicarboxylic acid	67829000004-7809P
-------------------	-------------------

# SAFETY DATA SHEET



## AZ Remover 880

Version  
1.1

Revision Date:  
04.10.2018

SDS Number:  
70MDGM555786

---

(2-methoxymethylethoxy)propanol

34590-94-8

sulfonic acid

67829000004-7701P

### 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 : This product or its components are listed on or compliant with the DSL.

TSCA : All components of the product are listed in the TSCA-inventory.

### TSCA list

The following substance(s) is/are subject to TSCA 12(b) export notification requirements:  
dicarboxylic acid 67829000004-7809P

---

## SECTION 16. OTHER INFORMATION

The information provided in this Material 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.