

# SAFETY DATA SHEET

## 1. Identification

**Product identifier:** HYDRA-POINT™ COULOMETRIC GENERATOR SOLUTION

### Other means of identification

**Product No.:** 6281

### Recommended use and restriction on use

**Recommended use:** Not determined.

**Restrictions on use:** Not determined.

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

	Avantor Performance Materials, LLC. 3477 Corporate Parkway Center Valley, PA 18034
Telephone:	
	Customer Service: 855-282-6867
Fax:	610-573-2610
Contact Person:	Environmental Health & Safety
E-mail:	info@avantormaterials.com

### Emergency telephone number:

CHEMTREC: 1-800-424-9300 within US and Canada

## 2. Hazard(s) identification

### Hazard Classification

#### Physical Hazards

Flammable liquids	Category 3
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#### Health Hazards

Acute toxicity (Oral)	Category 4
Acute toxicity (Dermal)	Category 4
Skin Corrosion/Irritation	Category 3
Serious Eye Damage/Eye Irritation	Category 2B
Toxic to reproduction	Category 1B

#### Unknown toxicity - Health

Acute toxicity, oral	0 %
Acute toxicity, dermal	20 %
Acute toxicity, inhalation, vapor	100 %
Acute toxicity, inhalation, dust or mist	100 %

### Environmental Hazards

Acute hazards to the aquatic environment

Category 3

**Unknown toxicity - Environment**

Acute hazards to the aquatic environment	17,8 %
Chronic hazards to the aquatic environment	100 %

**Label Elements**

**Hazard Symbol:**



**Signal Word:** Danger

**Hazard Statement:** Flammable liquid and vapor.  
Harmful if swallowed or in contact with skin.  
Causes mild skin irritation.  
Causes eye irritation.  
May damage fertility or the unborn child.  
Harmful to aquatic life.

**Precautionary Statements**

**Prevention:** Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep container tightly closed. Ground and bond container and receiving equipment. Use explosion-proof [electrical/ventilating/lighting] equipment. Use non-sparking tools. Take action to prevent static discharges. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection.

**Response:** IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth. IF ON SKIN (or hair): Take off immediately all contaminated clothing and wash it before reuse. Rinse skin with water [or shower]. If skin irritation occurs: Get medical advice/attention. Call a POISON CENTER/doctor if you feel unwell. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. IF exposed or concerned: Get medical advice/attention.

**Storage:** Store in a well-ventilated place. Keep cool. Store locked up.

**Disposal:** Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

**Other hazards which do not result in GHS classification:** None.

### 3. Composition/information on ingredients

#### Mixtures

Chemical name	Common name and synonyms	CAS number	Content in percent (%)*
2-METHOXYETHANOL		109-86-4	60 - 80%
Proprietary Azole, TSRN004314011-5016		Proprietary	20 - 40%
SULFUR DIOXIDE		7446-09-5	2,5 - 10%
Iodine		7553-56-2	0 - 2,2%

\* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

### 4. First-aid measures

<b>General information:</b>	Get medical advice/attention if you feel unwell. If medical advice is needed, have product container or label at hand.
<b>Ingestion:</b>	Call a physician or poison control center immediately. Rinse mouth. Never give liquid to an unconscious person. Do not induce vomiting without advice from poison control center.
<b>Inhalation:</b>	Move to fresh air. Call a physician or poison control center immediately. Apply artificial respiration if victim is not breathing. If breathing is difficult, give oxygen.
<b>Skin Contact:</b>	Immediately remove contaminated clothing and shoes and wash skin with soap and plenty of water. Call a physician or poison control center immediately. If skin irritation or an allergic skin reaction develops, get medical attention. Wash contaminated clothing before reuse. Destroy or thoroughly clean contaminated shoes.
<b>Eye contact:</b>	Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Call a physician or poison control center immediately.

#### Most important symptoms/effects, acute and delayed

**Symptoms:** Harmful if swallowed. May cause skin and eye irritation.

**Hazards:** None known.

#### Indication of immediate medical attention and special treatment needed

**Treatment:** Symptoms may be delayed.

### 5. Fire-fighting measures

**General Fire Hazards:** In case of fire and/or explosion do not breathe fumes.

#### Suitable (and unsuitable) extinguishing media

**Suitable extinguishing media:** Water spray, fog, CO<sub>2</sub>, dry chemical, or alcohol resistant foam.

**Unsuitable extinguishing media:**

Avoid water in straight hose stream; will scatter and spread fire.

**Specific hazards arising from the chemical:**

Exposure to fire can generate toxic fumes. Vapor from the solvent may accumulate in container headspace resulting in flammability hazard. Vapors may travel considerable distance to a source of ignition and flash back.

**Special protective equipment and precautions for firefighters**
**Special fire fighting procedures:**

Move containers from fire area if you can do so without risk. Use water spray to keep fire-exposed containers cool.

**Special protective equipment for fire-fighters:**

Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

**6. Accidental release measures**
**Personal precautions, protective equipment and emergency procedures:**

See Section 8 of the SDS for Personal Protective Equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep unauthorized personnel away. Ventilate closed spaces before entering them. Ensure suitable personal protection (including respiratory protection) during removal of spillages in a confined area.

**Methods and material for containment and cleaning up:**

In case of leakage, eliminate all ignition sources. Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Dike far ahead of larger spill for later recovery and disposal.

**Notification Procedures:**

Inform authorities if large amounts are involved.

**Environmental Precautions:**

Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so.

**7. Handling and storage**
**Precautions for safe handling:**

Do not handle until all safety precautions have been read and understood. DO NOT handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Obtain special instructions before use. Wash hands thoroughly after handling. Use personal protective equipment as required. Avoid contact with eyes, skin, and clothing. Take precautionary measures against static discharges. Use only with adequate ventilation.

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

Store in a cool, dry place with adequate ventilation. Keep away from incompatible materials, open flames, and high temperatures. Keep container tightly closed. Keep away from food, drink and animal feeding stuffs. Ground container and transfer equipment to eliminate static electric sparks.

**8. Exposure controls/personal protection**
**Control Parameters**
**Occupational Exposure Limits**

Chemical Identity	Type	Exposure Limit Values	Source
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2-METHOXYETHANOL	TWA	0,1 ppm 0,3 mg/m3	Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2) (07 2009)
2-METHOXYETHANOL	TWA	0,1 ppm	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
2-METHOXYETHANOL	TWA	0,1 ppm	Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act) (03 2011)
2-METHOXYETHANOL	TWA	0,1 ppm	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)
2-METHOXYETHANOL	8 HR ACL	5 ppm	Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21) (05 2009)
	15 MIN ACL	8 ppm	Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21) (05 2009)
2-METHOXYETHANOL	TWA	5 ppm 16 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)
2-METHOXYETHANOL	TWA	0,1 ppm	US. ACGIH Threshold Limit Values (2011)
SULFUR DIOXIDE	STEL	5 ppm 13 mg/m3	Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2) (07 2009)
	TWA	2 ppm 5,2 mg/m3	Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2) (07 2009)
SULFUR DIOXIDE	TWA	2 ppm	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
	STEL	5 ppm	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
SULFUR DIOXIDE	STEL	0,25 ppm	Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act) (03 2011)
SULFUR DIOXIDE	STEL	5 ppm 10,4 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)
	TWA	2 ppm 5,2 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)
SULFUR DIOXIDE	8 HR ACL	2 ppm	Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21) (05 2009)
	15 MIN ACL	5 ppm	Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21) (05 2009)
SULFUR DIOXIDE	STEL	5 ppm 13 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)
	TWA	2 ppm 5,2 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)

SULFUR DIOXIDE	STEL	0,25 ppm	US. ACGIH Threshold Limit Values (2011)
Iodine	CEILING	0,1 ppm 1 mg/m3	Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2) (07 2009)
Iodine	CEILING	0,1 ppm	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (09 2011)
Iodine - Inhalable fraction and vapor.	TWA	0,01 ppm	Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act) (03 2014)
Iodine - Vapor and aerosol.	STEL	0,1 ppm	Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act) (03 2014)
Iodine - Inhalable fraction and vapor.	TWA	0,01 ppm	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)
Iodine	Ceiling	0,1 ppm	Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21) (05 2009)
Iodine	CEILING	0,1 ppm 1,0 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)
Iodine - Vapor and aerosol.	STEL	0,1 ppm	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (06 2015)
Iodine - Inhalable fraction and vapor.	TWA	0,01 ppm	US. ACGIH Threshold Limit Values (03 2014)
Iodine - Vapor and aerosol.	STEL	0,1 ppm	US. ACGIH Threshold Limit Values (03 2014)

#### Appropriate Engineering Controls

No data available.

#### Individual protection measures, such as personal protective equipment

<b>General information:</b>	Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. An eye wash and safety shower must be available in the immediate work area.
<b>Eye/face protection:</b>	Wear safety glasses with side shields (or goggles) and a face shield.
<b>Skin Protection</b>	
<b>Hand Protection:</b>	No data available.
<b>Other:</b>	Wear suitable protective clothing and gloves.
<b>Respiratory Protection:</b>	If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Chemical respirator with organic vapor cartridge and full facepiece.
<b>Hygiene measures:</b>	Observe good industrial hygiene practices. Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Wash contaminated clothing before reuse. Wash hands before breaks and immediately after handling the product. Do not get in eyes. Avoid contact with skin.

## 9. Physical and chemical properties

### Appearance

<b>Physical state:</b>	Liquid
<b>Form:</b>	No data available.
<b>Color:</b>	Brown

<b>Odor:</b>	strong
<b>Odor threshold:</b>	No data available.
<b>pH:</b>	No data available.
<b>Melting point/freezing point:</b>	estimated -38 °C
<b>Initial boiling point and boiling range:</b>	estimated 145 °C
<b>Flash Point:</b>	> 46 °C
<b>Evaporation rate:</b>	No data available.
<b>Flammability (solid, gas):</b>	No data available.
<b>Upper/lower limit on flammability or explosive limits</b>	
<b>Flammability limit - upper (%):</b>	estimated 13 %(V)
<b>Flammability limit - lower (%):</b>	estimated 1,6 %(V)
<b>Explosive limit - upper (%):</b>	No data available.
<b>Explosive limit - lower (%):</b>	No data available.
<b>Vapor pressure:</b>	48,1 kPa
<b>Vapor density:</b>	No data available.
<b>Density:</b>	1,1 g/ml (20 °C)
<b>Relative density:</b>	1,1 (20 °C)
<b>Solubility(ies)</b>	
<b>Solubility in water:</b>	Miscible with water.
<b>Solubility (other):</b>	No data available.
<b>Partition coefficient (n-octanol/water):</b>	No data available.
<b>Auto-ignition temperature:</b>	estimated 365 °C
<b>Decomposition temperature:</b>	No data available.
<b>Viscosity:</b>	No data available.

## 10. Stability and reactivity

<b>Reactivity:</b>	No dangerous reaction known under conditions of normal use.
<b>Chemical Stability:</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions:</b>	Hazardous polymerization does not occur.
<b>Conditions to avoid:</b>	Heat, sparks, flames.
<b>Incompatible Materials:</b>	Strong oxidizing agents.
<b>Hazardous Decomposition Products:</b>	Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors.

## 11. Toxicological information

### Information on likely routes of exposure

<b>Inhalation:</b>	Spray mists irritate the respiratory system, and cause coughing and difficulties in breathing.
<b>Skin Contact:</b>	Causes skin irritation.
<b>Eye contact:</b>	Severely irritating to eyes.
<b>Ingestion:</b>	Irritating. May cause nausea, stomach pain and vomiting.

## Information on toxicological effects

### Acute toxicity (list all possible routes of exposure)

#### Oral

**Product:** ATEmix: 229,58 mg/kg

#### Dermal

**Product:** ATEmix: 1.280 mg/kg

#### Inhalation

**Product:** No data available.

### Repeated dose toxicity

**Product:** No data available.

### Skin Corrosion/Irritation

**Product:** No data available.

### Serious Eye Damage/Eye Irritation

**Product:** No data available.

### Respiratory or Skin Sensitization

**Product:** May cause sensitization by inhalation and skin contact.

### Carcinogenicity

**Product:** This substance has no evidence of carcinogenic properties.

### IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:

No carcinogenic components identified

### US. National Toxicology Program (NTP) Report on Carcinogens:

No carcinogenic components identified

### ACGIH Carcinogen List:

No carcinogenic components identified

### Germ Cell Mutagenicity

#### In vitro

**Product:** No data available.

#### In vivo

**Product:** No data available.

### Reproductive toxicity

**Product:** May damage fertility or the unborn child.

### Specific Target Organ Toxicity - Single Exposure

**Product:** No data available.

### Specific Target Organ Toxicity - Repeated Exposure

**Product:** No data available.

### Aspiration Hazard

**Product:** No data available.

#### Other effects:

No data available.



## 12. Ecological information

### Ecotoxicity:

#### Acute hazards to the aquatic environment:

##### Fish

**Product:** No data available.

##### Aquatic Invertebrates

**Product:** No data available.

#### Chronic hazards to the aquatic environment:

##### Fish

**Product:** No data available.

##### Aquatic Invertebrates

**Product:** No data available.

##### Toxicity to Aquatic Plants

**Product:** No data available.

### Persistence and Degradability

##### Biodegradation

**Product:** There are no data on the degradability of this product.

##### BOD/COD Ratio

**Product:** No data available.

### Bioaccumulative potential

#### Bioconcentration Factor (BCF)

**Product:** No data available on bioaccumulation.

### Partition Coefficient n-octanol / water (log K<sub>ow</sub>)

**Product:** No data available.

### Mobility in soil:

The product is partly soluble in water. May spread in the aquatic environment.

### Other adverse effects:

Expected to be toxic to aquatic organisms. May cause long-term adverse effects in the environment.

## 13. Disposal considerations

### Disposal instructions:

Discharge, treatment, or disposal may be subject to national, state, or local laws. Since emptied containers retain product residue, follow label warnings even after container is emptied.

### Contaminated Packaging:

No data available.

## 14. Transport information

### TDG

UN Number:	UN 1188
UN Proper Shipping Name:	ETHYLENE GLYCOL MONOMETHYL ETHER SOLUTION
Transport Hazard Class(es)	
Class:	3
Label(s):	3
Packing Group:	III
Marine Pollutant:	No
Special precautions for user:	Not determined.

### IMDG

UN Number:	UN 1188
UN Proper Shipping Name:	ETHYLENE GLYCOL MONOMETHYL ETHER SOLUTION
Transport Hazard Class(es)	
Class:	3
Label(s):	3
EmS No.:	F-E, S-D
Packing Group:	III
Marine Pollutant:	No
Special precautions for user:	Not determined.

### IATA

UN Number:	UN 1188
UN Proper Shipping Name:	Ethylene glycol monomethyl ether solution
Transport Hazard Class(es):	
Class:	3
Label(s):	3
Packing Group:	III
Marine Pollutant:	No
Special precautions for user:	Not determined.
Cargo aircraft only:	Allowed.

Transport in bulk according to Annex II of MARPOL and the IBC Code: Not applicable

## 15. Regulatory information

### Canada Federal Regulations

#### List of Toxic Substances (CEPA, Schedule 1)

##### Chemical Identity

2-METHOXYETHANOL  
SULFUR DIOXIDE

#### Export Control List (CEPA 1999, Schedule 3)

##### Chemical Identity

2-METHOXYETHANOL

### National Pollutant Release Inventory (NPRI)

#### Canada. National Pollutant Release Inventory (NPRI) Substances, Part 5, VOCs with Additional Reporting Requirements

NPRI PT5	Not Regulated
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#### Canada. National Pollutant Release Inventory (NPRI) (Schedule 1, Parts 1-4)

NPRI	2-METHOXYETHANOL SULFUR DIOXIDE
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### Greenhouse Gases

Not Regulated

### Controlled Drugs and Substances Act

CA CDSI Not Regulated

CA CDSII Not Regulated

CA CDSIII Not Regulated

CA CDSIV Not Regulated

CA CDSV Not Regulated

CA CDSVII Not Regulated

CA CDSVIII Not Regulated

### Precursor Control Regulations

Not Regulated

### International regulations

#### Montreal protocol

Not applicable

#### Stockholm convention

Not applicable

#### Rotterdam convention

Not applicable

#### Kyoto protocol

Not applicable

### Inventory Status:

Australia AICS:	On or in compliance with the inventory
Canada DSL Inventory List:	On or in compliance with the inventory
EU EINECS List:	On or in compliance with the inventory
EU ELINCS List:	Not in compliance with the inventory.
Japan (ENCS) List:	Not in compliance with the inventory.
EU No Longer Polymers List:	Not in compliance with the inventory.
China Inv. Existing Chemical Substances:	On or in compliance with the inventory
Korea Existing Chemicals Inv. (KECI):	On or in compliance with the inventory
Canada NDSL Inventory:	Not in compliance with the inventory.
Philippines PICCS:	On or in compliance with the inventory
US TSCA Inventory:	On or in compliance with the inventory
New Zealand Inventory of Chemicals:	On or in compliance with the inventory
Switzerland Consolidated Inventory:	Not in compliance with the inventory.
Japan ISHL Listing:	Not in compliance with the inventory.
Japan Pharmacopoeia Listing:	Not in compliance with the inventory.

### 16. Other information, including date of preparation or last revision

Revision Date: 17.05.2018

Version #: 2.1

**Further Information:** No data available.

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