

### SECTION 1: Identification

#### 1.1. Identification

Product form : Mixture  
Trade name : HANKER-YATES REAGENT  
Product code : 08661

#### 1.2. Recommended use and restrictions on use

Recommended use : Use as laboratory reagent, Manufacture of substances

#### 1.3. Supplier

##### Supplier

Polysciences  
400 Valley Road  
Warrington, PA 18976 - United States  
T +1 215 343 6484 - F +1 215 343 0214  
[info@polysciences.com](mailto:info@polysciences.com) - [www.polysciences.com](http://www.polysciences.com)

#### 1.4. Emergency telephone number

Emergency number : 24-hour emergency phone number ChemTel 1-800-255-3924

### SECTION 2: Hazard(s) identification

#### 2.1. Classification of the substance or mixture

##### GHS US classification

Acute toxicity (oral) Category 3	Toxic if swallowed
Acute toxicity (dermal) Category 4	Harmful in contact with skin
Serious eye damage/eye irritation Category 2B	Causes eye irritation

#### 2.2. GHS Label elements, including precautionary statements

##### GHS US labeling

Hazard pictograms (GHS US) :



Signal word (GHS US) : Danger

Hazard statements (GHS US) : Toxic if swallowed  
Harmful in contact with skin  
Causes eye irritation

Precautionary statements (GHS US) : Wash hands, forearms and face thoroughly after handling.  
Do not eat, drink or smoke when using this product.  
Wear protective gloves/protective clothing/eye protection/face protection.  
If swallowed: Immediately call a poison center or doctor.  
If on skin: Wash with plenty of water.  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

#### 2.3. Other hazards which do not result in classification

No additional information available

#### 2.4. Unknown acute toxicity (GHS US)

Not applicable

### SECTION 3: Composition/Information on ingredients

#### 3.1. Substances

Not applicable

#### 3.2. Mixtures

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Name	Product identifier	%	GHS US classification
1,2-Benzenediol	(CAS-No.) 120-80-9	61 – 70	Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Muta. 2, H341 Carc. 2, H351 Aquatic Acute 2, H401
p-Phenylenediamine dihydrochloride	(CAS-No.) 624-18-0	31 – 40	Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation), H331 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

Full text of hazard classes and H-statements : see section 16

### SECTION 4: First-aid measures

#### 4.1. Description of first aid measures

- First-aid measures general : Call a physician immediately.
- First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.
- First-aid measures after skin contact : Wash skin with plenty of water. Take off contaminated clothing.
- First-aid measures after eye contact : 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.
- First-aid measures after ingestion : Rinse mouth. Call a physician immediately.

#### 4.2. Most important symptoms and effects (acute and delayed)

- Symptoms/effects after eye contact : Mild eye irritation.

#### 4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

### SECTION 5: Fire-fighting measures

#### 5.1. Suitable (and unsuitable) extinguishing media

- Suitable extinguishing media : Water spray. Dry powder. Foam.

#### 5.2. Specific hazards arising from the chemical

- Hazardous decomposition products in case of fire : Toxic fumes may be released.

#### 5.3. Special protective equipment and precautions for fire-fighters

- Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

##### 6.1.1. For non-emergency personnel

- Emergency procedures : Ventilate spillage area. Avoid contact with skin, eyes and clothing.

##### 6.1.2. For emergency responders

- Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

#### 6.2. Environmental precautions

Avoid release to the environment.

#### 6.3. Methods and material for containment and cleaning up

- Methods for cleaning up : Mechanically recover the product.
- Other information : Dispose of materials or solid residues at an authorized site.

#### 6.4. Reference to other sections

For further information refer to section 13.

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### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

- Precautions for safe handling : Ensure good ventilation of the work station. Do not get in eyes, on skin, or on clothing. Wear personal protective equipment.
- Hygiene measures : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

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

- Storage conditions : Store at 4 deg. C. Store locked up. Keep cool. Store in a well-ventilated place.

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

<b>HANKER-YATES REAGENT</b>	
No additional information available	
<b>p-Phenylenediamine dihydrochloride (624-18-0)</b>	
No additional information available	
<b>1,2-Benzenediol (120-80-9)</b>	
<b>USA - ACGIH - Occupational Exposure Limits</b>	
Local name	Catechol
ACGIH TWA (ppm)	5 ppm
Remark (ACGIH)	TLV® Basis: Eye & URT irr; dermatitis. Notations: Skin; A3 (Confirmed Animal Carcinogen with Unknown Relevance to Humans)
ACGIH chemical category	Skin - potential significant contribution to overall exposure by the cutaneous route, Confirmed Animal Carcinogen with Unknown Relevance to Humans
Regulatory reference	ACGIH 2020
<b>USA - NIOSH - Occupational Exposure Limits</b>	
NIOSH REL (TWA) (mg/m³)	20 mg/m³
NIOSH REL TWA [ppm]	5 ppm
US-NIOSH chemical category	Potential for dermal absorption

#### 8.2. Appropriate engineering controls

- Appropriate engineering controls : Ensure good ventilation of the work station.
- Environmental exposure controls : Avoid release to the environment.

#### 8.3. Individual protection measures/Personal protective equipment

##### Hand protection:

Protective gloves

##### Eye protection:

Safety glasses

##### Skin and body protection:

Wear suitable protective clothing

##### Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

##### Personal protective equipment symbol(s):



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### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

Physical state	: Solid
Color	: Colorless
Odor	: Mixture contains one or more component(s) which have the following odour:
Odor threshold	: No data available
pH	: No data available
Melting point	: No data available
Freezing point	: Not applicable
Boiling point	: No data available
Flash point	: Not applicable
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Non flammable.
Vapor pressure	: No data available
Relative vapor density at 20°C	: No data available
Relative density	: No data available
Solubility	: No data available
Partition coefficient n-octanol/water (Log Pow)	: No data available
Auto-ignition temperature	: Not applicable
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosion limits	: Not applicable
Explosive properties	: No data available
Oxidizing properties	: No data available

#### 9.2. Other information

No additional information available

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

#### 10.2. Chemical stability

Stable under normal conditions.

#### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

#### 10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

#### 10.5. Incompatible materials

No additional information available

#### 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

Acute toxicity (oral)	: Toxic if swallowed.
Acute toxicity (dermal)	: Harmful in contact with skin.
Acute toxicity (inhalation)	: Not classified

ATE US (oral)	100 mg/kg body weight
ATE US (dermal)	1100 mg/kg body weight
<b>p-Phenylenediamine dihydrochloride (624-18-0)</b>	
LD50 oral rat	147 mg/kg

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<b>1,2-Benzenediol (120-80-9)</b>	
LD50 oral rat	260 mg/kg
LD50 dermal rat	600 mg/kg body weight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
LD50 dermal rabbit	800 mg/kg

Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Causes eye irritation.
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified

<b>p-Phenylenediamine dihydrochloride (624-18-0)</b>	
IARC group	3 - Not classifiable

<b>1,2-Benzenediol (120-80-9)</b>	
IARC group	2B - Possibly carcinogenic to humans
In OSHA Hazard Communication Carcinogen list	Yes

Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified
Viscosity, kinematic	: No data available
Symptoms/effects after eye contact	: Mild eye irritation.

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general	: The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.
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<b>1,2-Benzenediol (120-80-9)</b>	
LC50 fish 1	3.5 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
EC50 Daphnia 1	1.66 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC50 fish 2	8.9 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [flow-through])

### 12.2. Persistence and degradability

No additional information available

### 12.3. Bioaccumulative potential

<b>1,2-Benzenediol (120-80-9)</b>	
Partition coefficient n-octanol/water (Log Pow)	0.88

### 12.4. Mobility in soil

No additional information available

### 12.5. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Disposal methods

Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
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### SECTION 14: Transport information

#### Department of Transportation (DOT)

In accordance with DOT

Transport document description : UN2811 Toxic solids, organic, n.o.s., 6.1, III  
UN-No.(DOT) : UN2811  
Proper Shipping Name (DOT) : Toxic solids, organic, n.o.s.  
Class (DOT) : 6.1 - Class 6.1 - Poisonous materials 49 CFR 173.132  
Packing group (DOT) : III - Minor Danger  
Hazard labels (DOT) : 6.1 - Poison



DOT Packaging Non Bulk (49 CFR 173.xxx) : 213  
DOT Packaging Bulk (49 CFR 173.xxx) : 240  
DOT Special Provisions (49 CFR 172.102) : IB8 - Authorized IBCs: Metal (11A, 11B, 11N, 21A, 21B, 21N, 31A, 31B and 31N); Rigid plastics (11H1, 11H2, 21H1, 21H2, 31H1 and 31H2); Composite (11HZ1, 11HZ2, 21HZ1, 21HZ2, 31HZ1 and 31HZ2); Fiberboard (11G); Wooden (11C, 11D and 11F); Flexible (13H1, 13H2, 13H3, 13H4, 13H5, 13L1, 13L2, 13L3, 13L4, 13M1 or 13M2).  
IP3 - Flexible IBCs must be sift-proof and water-resistant or must be fitted with a sift-proof and water-resistant liner.  
T1 - 1.5 178.274(d)(2) Normal..... 178.275(d)(2)  
TP33 - The portable tank instruction assigned for this substance applies for granular and powdered solids and for solids which are filled and discharged at temperatures above their melting point which are cooled and transported as a solid mass. Solid substances transported or offered for transport above their melting point are authorized for transportation in portable tanks conforming to the provisions of portable tank instruction T4 for solid substances of packing group III or T7 for solid substances of packing group II, unless a tank with more stringent requirements for minimum shell thickness, maximum allowable working pressure, pressure-relief devices or bottom outlets are assigned in which case the more stringent tank instruction and special provisions shall apply. Filling limits must be in accordance with portable tank special provision TP3. Solids meeting the definition of an elevated temperature material must be transported in accordance with the applicable requirements of this subchapter.  
DOT Packaging Exceptions (49 CFR 173.xxx) : 153  
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 100 kg  
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 200 kg  
DOT Vessel Stowage Location : A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.  
Emergency Response Guide (ERG) Number : 154  
Other information : No supplementary information available.

#### Transportation of Dangerous Goods

Not applicable

#### Transport by sea

Transport document description (IMDG) : UN 2811 TOXIC SOLID, ORGANIC, N.O.S., 6.1, III  
UN-No. (IMDG) : 2811  
Proper Shipping Name (IMDG) : TOXIC SOLID, ORGANIC, N.O.S.  
Class (IMDG) : 6.1 - Toxic substances  
Packing group (IMDG) : III - substances presenting low danger  
Limited quantities (IMDG) : 5 kg

#### Air transport

Transport document description (IATA) : UN 2811 Toxic solid, organic, n.o.s., 6.1, III  
UN-No. (IATA) : 2811

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Proper Shipping Name (IATA)	: Toxic solid, organic, n.o.s.
Class (IATA)	: 6.1 - Toxic Substances
Packing group (IATA)	: III - Low danger

### SECTION 15: Regulatory information

#### 15.1. US Federal regulations

<b>p-Phenylenediamine dihydrochloride (624-18-0)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313	
<b>1,2-Benzenediol (120-80-9)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313 Listed on EPA Hazardous Air Pollutant (HAPS)	
EPA TSCA Regulatory Flag	TP - TP - indicates a substance that is the subject of a proposed TSCA section 4 test rule.
CERCLA RQ	100 lb

#### 15.2. International regulations

##### CANADA

<b>p-Phenylenediamine dihydrochloride (624-18-0)</b>	
Listed on the Canadian DSL (Domestic Substances List)	
<b>1,2-Benzenediol (120-80-9)</b>	
Listed on the Canadian DSL (Domestic Substances List)	
Toxic Substance (CEPA – Schedule I)	Yes

##### EU-Regulations

<b>p-Phenylenediamine dihydrochloride (624-18-0)</b>	
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)	
<b>1,2-Benzenediol (120-80-9)</b>	
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)	

##### National regulations

<b>p-Phenylenediamine dihydrochloride (624-18-0)</b>	
Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory) Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China) Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory Listed on the Japanese ISHL (Industrial Safety and Health Law) Listed on KECL/KECI (Korean Existing Chemicals Inventory) Listed on NZIoC (New Zealand Inventory of Chemicals) Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances) Japanese Poisonous and Deleterious Substances Control Law Listed on the TCSI (Taiwan Chemical Substance Inventory)	
<b>1,2-Benzenediol (120-80-9)</b>	
Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory) Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China) Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory Listed on the Japanese ISHL (Industrial Safety and Health Law) Listed on KECL/KECI (Korean Existing Chemicals Inventory) Listed on NZIoC (New Zealand Inventory of Chemicals) Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances) Japanese Poisonous and Deleterious Substances Control Law Japanese Pollutant Release and Transfer Register Law (PRTR Law) Listed on INSQ (Mexican National Inventory of Chemical Substances) Listed on the TCSI (Taiwan Chemical Substance Inventory)	

#### 15.3. US State regulations

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1,2-Benzenediol (120-80-9)					
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)	Maximum allowable dose level (MADL)
Yes	No	No	No		

Component	State or local regulations
p-Phenylenediamine dihydrochloride(624-18-0)	U.S. - New Jersey - Right to Know Hazardous Substance List
1,2-Benzenediol(120-80-9)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List; U.S. - Pennsylvania - RTK (Right to Know) List

### SECTION 16: Other information

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SDS US (GHS HazCom 2012)

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