

**SECTION 1: Identification**
**1.1. Identification**

Product form	: Substance
Trade name	: POLY-Q® 40-770
Chemical name	: N,N,N',N'-TETRAKIS(2-HYDROXYLPROPYL)ETHYLENEDIAMINE
CAS-No.	: 102-60-3
Formula	: C14H32N2O4
Synonyms	: 1,1',1'',1'''-(Ethanediylnitrilo)tetrakis(2-propanol) / 1,1',1'',1'''-Ethylenedinitrietetrapropan-2-ol / N,N,N',N'-Tetrakis(2-hydroxypropyl)ethylenediamine / 2-Propanol, 1,1',1'',1'''-(ethylenedinitrilo)tetrakis- / TETRAHYDROXYPROPYL ETHYLENEDIAMINE / Tetrahydroxypropyl ethylenediamine / Tetrakis (2-hydroxypropyl) ethylenediamine / 1,1',1'',1'''-(Ethylenedinitrilo)tetra-2-propanol

**1.2. Recommended use and restrictions on use**

Use of the substance/mixture	: chemical intermediate for urethane polymer production
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**1.3. Supplier**

Monument Chemical  
 2450 Olin Road  
 Brandenburg, KY 40108 - USA  
 T (270)422-6860  
[sds@monumentchemical.com](mailto:sds@monumentchemical.com) - [www.monumentchemical.com](http://www.monumentchemical.com)

**1.4. Emergency telephone number**


Emergency number	: 24 HR CHEMTREC: 1-800-424-9300 (International +1 703-741-5970); 24 HR Emergency Assistance: 1-270-422-6860
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**SECTION 2: Hazard(s) identification**
**2.1. Classification of the substance or mixture**
**GHS US classification**

Serious eye damage/eye irritation Category 2A	H319	Causes serious eye irritation
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Full text of H statements : see section 16

**2.2. GHS Label elements, including precautionary statements**
**GHS US labeling**

Hazard pictograms (GHS US)	:	
Signal word (GHS US)	:	Warning
Hazard statements (GHS US)	:	H319 - Causes serious eye irritation
Precautionary statements (GHS US)	:	P264 - Wash hands thoroughly after handling. P280 - Wear eye protection, protective clothing, protective gloves. P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337+P313 - If eye irritation persists: Get medical advice/attention.

**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**

Name	Product identifier	%
N,N,N',N'-TETRAKIS(2-HYDROXYLPROPYL)ETHYLENEDIAMINE (Main constituent)	(CAS-No.) 102-60-3	99 – 100

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

### 3.2. Mixtures

Not applicable

## SECTION 4: First-aid measures

### 4.1. Description of first aid measures

- |                                       |   |
|---------------------------------------|---|
| First-aid measures general            | : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).   |
| First-aid measures after inhalation   | : Allow affected person to breathe fresh air. Allow the victim to rest.   |
| First-aid measures after skin contact | : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.   |
| 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: Consult an eye specialist. Get medical advice/attention. |
| First-aid measures after ingestion    | : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.  |

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

- |   |   |
|---|---|
| Potential Adverse human health effects and symptoms | : Based on available data, the classification criteria are not met. |
| Symptoms/effects after eye contact                  | : Causes serious eye irritation.                                    |

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

No additional information available

## SECTION 5: Fire-fighting measures

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

- |                                |  |
|--------------------------------|--|
| Suitable extinguishing media   | : Foam. Dry powder. Carbon dioxide. Water spray. Sand. |
| Unsuitable extinguishing media | : Do not use a heavy water stream.                     |

### 5.2. Specific hazards arising from the chemical

No additional information available

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

- |                                |   |
|--------------------------------|---|
| Firefighting instructions      | : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment. |
| Protection during firefighting | : Do not enter fire area without proper protective equipment, including respiratory protection.   |

## SECTION 6: Accidental release measures

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

#### 6.1.1. For non-emergency personnel

- |                      |                                   |
|----------------------|-----------------------------------|
| Emergency procedures | : Evacuate unnecessary personnel. |
|----------------------|-----------------------------------|

#### 6.1.2. For emergency responders

- |                      |  |
|----------------------|--|
| Protective equipment | : Equip cleanup crew with proper protection. |
| Emergency procedures | : Ventilate area.                            |

### 6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

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

- |                         |  |
|-------------------------|--|
| Methods for cleaning up | : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials. |
|-------------------------|--|

### 6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

- |                               |   |
|-------------------------------|---|
| Precautions for safe handling | : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor. |
| Hygiene measures              | : Wash hands thoroughly after handling.   |

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

Storage conditions	: Keep only in the original container in a cool, well ventilated place away from : Ignition sources, Incompatible materials. Keep container closed when not in use.
Incompatible products	: Strong bases. Strong acids.
Incompatible materials	: Sources of ignition. Direct sunlight.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### N,N,N',N'-TETRAKIS(2-HYDROXYLPROPYL)ETHYLENEDIAMINE (102-60-3)

No additional information available

### 8.2. Appropriate engineering controls

No additional information available

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

#### Personal protective equipment:

Avoid all unnecessary exposure.

#### Hand protection:

Wear protective gloves.

#### Eye protection:

Chemical goggles or safety glasses

#### Respiratory protection:

Wear appropriate mask

#### Other information:

Do not eat, drink or smoke during use.

## SECTION 9: Physical and chemical properties

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

Physical state	: Liquid
Appearance	: Colorless to pale yellow liquid.
Color	: Colourless to yellow
Odor	: mild
Odor threshold	: No data available
pH	: 10 – 12 (@ 25 Deg. C) 10/6 Isopropanol / water
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: 193 °C (Open cup)
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Non flammable.
Vapor pressure	: < 1 mm Hg (@ 25 Deg. C)
Relative vapor density at 20 °C	: No data available
Relative density	: 1.02 – 1.04 (@ 25 Deg. C)
Molecular mass	: ~ 290 g/mol
Solubility	: Insoluble in water.
Partition coefficient n-octanol/water (Log Pow)	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available

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Viscosity, dynamic	: No data available
Explosion limits	: No data available
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

No additional information available

### 10.2. Chemical stability

Not established.

### 10.3. Possibility of hazardous reactions

Not established.

### 10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

### 10.5. Incompatible materials

Strong acids. Strong bases.

### 10.6. Hazardous decomposition products

fume. Carbon monoxide. Carbon dioxide.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

<b>N,N,N',N'-TETRAKIS(2-HYDROXYLPROPYL)ETHYLENEDIAMINE (102-60-3)</b>	
LD50 oral rat	3280 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
ATE US (oral)	3280 mg/kg body weight

Skin corrosion/irritation	: Not classified pH: 10 – 12 (@ 25 Deg. C) 10/6 Isopropanol / water
Serious eye damage/irritation	: Causes serious eye irritation. pH: 10 – 12 (@ 25 Deg. C) 10/6 Isopropanol / water
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified
Viscosity, kinematic	: No data available
Potential Adverse human health effects and symptoms	: Based on available data, the classification criteria are not met.
Symptoms/effects after eye contact	: Causes serious eye irritation.

## SECTION 12: Ecological information

### 12.1. Toxicity

<b>N,N,N',N'-TETRAKIS(2-HYDROXYLPROPYL)ETHYLENEDIAMINE (102-60-3)</b>	
LC50 fish 1	> 1000 mg/l Pimephales promelas
EC50 Daphnia 1	1435 mg/l

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ErC50 (algae)	662 mg/l Green algae
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#### 12.2. Persistence and degradability

### N,N,N',N'-TETRAKIS(2-HYDROXYLPROPYL)ETHYLENEDIAMINE (102-60-3)

Persistence and degradability	Not established.
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#### 12.3. Bioaccumulative potential

### N,N,N',N'-TETRAKIS(2-HYDROXYLPROPYL)ETHYLENEDIAMINE (102-60-3)

Bioaccumulative potential	Not established.
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#### 12.4. Mobility in soil

No additional information available

#### 12.5. Other adverse effects

Other information : Avoid release to the environment.

## SECTION 13: Disposal considerations

#### 13.1. Disposal methods

Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.  
Ecology - waste materials : Avoid release to the environment.

## SECTION 14: Transport information

#### Department of Transportation (DOT)

In accordance with DOT

Not regulated

#### Transport by sea

Not regulated

#### Air transport

Not regulated

## SECTION 15: Regulatory information

#### 15.1. US Federal regulations

### N,N,N',N'-TETRAKIS(2-HYDROXYLPROPYL)ETHYLENEDIAMINE (102-60-3)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

This product or mixture is not known to contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

#### 15.2. International regulations

##### CANADA

### N,N,N',N'-TETRAKIS(2-HYDROXYLPROPYL)ETHYLENEDIAMINE (102-60-3)

Listed on the Canadian DSL (Domestic Substances List)

##### EU-Regulations

### N,N,N',N'-TETRAKIS(2-HYDROXYLPROPYL)ETHYLENEDIAMINE (102-60-3)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

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### National regulations

#### **N,N,N',N'-TETRAKIS(2-HYDROXYLPROPYL)ETHYLENEDIAMINE (102-60-3)**

Listed on the AICS (Australian Inventory of Chemical Substances)  
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)  
Listed on INSQ (Mexican National Inventory of Chemical Substances)  
Listed on the TCSI (Taiwan Chemical Substance Inventory)

### 15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

## SECTION 16: Other information

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Revision date : 07/05/2020

Other information : None.

Full text of H-phrases:

H319	Causes serious eye irritation
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SDS US (GHS HazCom 2012)

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