

**SECTION 1: PRODUCT IDENTIFIER & IDENTIFIER FOR THE CHEMICAL****Product Identifier****Product Form:** Mixture**Product Name:** GC-Rich Polymerase Mix**Product Reference #:** 145187**Intended Use of the Product**

Gene Protein Reaction (GPR)

**Name, Address, and Telephone of the Responsible Party****Company**

Asuragen, Inc.

2150 Woodward St. Suite 100

Austin, TX 78744

USA

T: +1 512-681-5200

USA, Toll-free T: +1 877-777-1874

E-mail: [support@asuragen.com](mailto:support@asuragen.com)Web address: [www.asuragen.com](http://www.asuragen.com)**Importer****Emergency Telephone Number****Emergency Number** : Tel: +1 -512-681-5200 US

Toll-free Tel: 1-877-777-1874

(Australia)

**SECTION 2: HAZARDS IDENTIFICATION****Classification of the Substance or Mixture****Classification (GHS-AU)**

Not classified.

**Label Elements****GHS-AU Labelling**

No labelling applicable

**Non-GHS Hazards**

No additional information available

**Other Hazards**

Exposure may aggravate pre-existing eye, skin, or respiratory conditions.

**Unknown Acute Toxicity**

No additional information available

**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS****Substances**

Not applicable

**Mixture**

Name	Product Identifier	%*	GHS-AU Classification
1,2,3-Propanetriol	(CAS-No.) 56-81-5	45 – 55	Not classified.

\*Percentages are listed in weight by weight percentage (w/w%) for liquid and solid ingredients. Gas ingredients are listed in volume by volume percentage (v/v%)

Full text of H- statements: see section 16

**SECTION 4: FIRST AID MEASURES****Description of 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).

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**Inhalation:** When symptoms occur: go into open air and ventilate suspected area. Obtain medical attention if breathing difficulty persists.

**Skin Contact:** Remove contaminated clothing. Drench affected area with water for at least 5 minutes. Obtain medical attention if irritation develops or persists.

**Eye Contact:** Rinse cautiously with water for at least 5 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention if irritation develops or persists.

**Ingestion:** Rinse mouth. Do NOT induce vomiting. Obtain medical attention.

**Personal Protection in First Aid and Measures:** Use appropriate personal protective equipment (PPE).

### **Most Important Symptoms and Effects Both Acute and Delayed**

**General:** Not expected to present a significant hazard under anticipated conditions of normal use.

**Inhalation:** Prolonged exposure may cause irritation.

**Skin Contact:** Prolonged exposure may cause skin irritation.

**Eye Contact:** May cause slight irritation to eyes.

**Ingestion:** Ingestion may cause adverse effects.

**Chronic Symptoms:** None expected under normal conditions of use.

### **Indication of Any Immediate Medical Attention and Special Treatment Needed**

If exposed or concerned, get medical advice and attention. If medical advice is needed, have product container or label at hand.

## **SECTION 5: FIRE-FIGHTING MEASURES**

### **Extinguishing Media**

**Suitable Extinguishing Media:** Water spray, fog, carbon dioxide (CO<sub>2</sub>), alcohol-resistant foam, or dry chemical.

**Unsuitable Extinguishing Media:** Do not use a heavy water stream. Use of heavy stream of water may spread fire.

### **Special Hazards Arising From the Substance or Mixture**

**Fire Hazard:** Not considered flammable but may burn at high temperatures.

**Explosion Hazard:** Product is not explosive.

**Reactivity:** Hazardous reactions will not occur under normal conditions.

### **Advice for Firefighters**

**Precautionary Measures Fire:** Exercise caution when fighting any chemical fire.

**Firefighting Instructions:** Use water spray or fog for cooling exposed containers.

**Protection During Firefighting:** Do not enter fire area without proper protective equipment, including respiratory protection.

**Hazardous Combustion Products:** Glycerin decomposes to produce corrosive fumes of Acrolein. Carbon oxides (CO, CO<sub>2</sub>). Potassium oxides. Nitrogen oxides.

**HAZCHEM Emergency Action Code (Australia):** Not applicable.

### **Reference to Other Sections**

Refer to Section 9 for Flammability Properties

## **SECTION 6: ACCIDENTAL RELEASE MEASURES**

### **Personal Precautions, Protective Equipment and Emergency Procedures**

**General Measures:** Avoid prolonged contact with eyes, skin and clothing. Avoid breathing (vapour, mist, spray).

#### **For Non-Emergency Personnel**

**Protective Equipment:** Use appropriate personal protective equipment (PPE).

**Emergency Procedures:** Evacuate unnecessary personnel.

#### **For Emergency Personnel**

**Protective Equipment:** Equip cleanup crew with proper protection.

**Emergency Procedures:** Upon arrival at the scene, a first responder is expected to recognise the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit. Ventilate area.

### **Environmental Precautions**

Prevent entry to sewers and public waters.

### **Methods and Materials for Containment and Cleaning Up**

**For Containment:** Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

**Methods for Cleaning Up:** Clean up spills immediately and dispose of waste safely. Absorb and/or contain spill with inert material. Transfer spilled material to a suitable container for disposal. Contact competent authorities after a spill.

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### Reference to Other Sections

See Section 8 for exposure controls and personal protection and Section 13 for disposal considerations.

## SECTION 7: HANDLING AND STORAGE

### 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. Avoid prolonged contact with eyes, skin and clothing. Avoid breathing (vapour, mist, spray).

**Hygiene Measures:** Handle in accordance with good industrial hygiene and safety procedures.

### Conditions for Safe Storage, Including Any Incompatibilities

**Technical Measures:** Comply with applicable regulations.

**Storage Conditions:** Keep container closed when not in use. Store in a dry, cool place. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials.

**Incompatible Materials:** Strong acids, strong bases, strong oxidisers.

### Specific End Use(s)

Gene Protein Reaction (GPR)

## SECTION 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

### Control Parameters

For substances listed in section 3 that are not listed here, there are no established exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), AIHA (WEEL), and Australia OELs.

1,2,3-Propanetriol (56-81-5)		
Australia	OES TWA [1]	10 mg/m <sup>3</sup> (containing no Asbestos and <1% Crystalline silica-inhalable dust, mist)

### Exposure Controls

**Appropriate Engineering Controls:** Suitable eye/body wash equipment should be available in the vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed.

### Personal Protective Equipment

**Personal Protective Equipment:** Gloves. Protective clothing. Protective goggles.



**Materials for Protective Clothing:** Chemically resistant materials and fabrics.

**Hand Protection:** Wear protective gloves.

**Eye and Face Protection:** Chemical safety goggles.

**Skin and Body Protection:** Wear suitable protective clothing.

**Respiratory Protection:** If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn. In case of inadequate ventilation, oxygen deficient atmosphere, or where exposure levels are not known wear approved respiratory protection.

**Other Information:** When using, do not eat, drink or smoke.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### Information on Basic Physical and Chemical Properties

Physical State	: Liquid
Appearance/Colour	: No data available
Odour	: No data available
pH	: No data available
Melting Point	: No data available
Freezing Point	: No data available
Boiling Point	: No data available
Flash Point	: No data available
Auto-ignition Temperature	: No data available
Decomposition Temperature	: No data available
Flammability	: Not applicable

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Lower Flammable Limit	: No data available
Upper Flammable Limit	: No data available
Vapour pressure	: No data available
Relative vapour density at 20°C	: No data available
Relative Density	: No data available
Solubility	: No data available
Partition Coefficient n-Octanol/Water	: No data available
Viscosity, Kinematic	: No data available
Particle Size	: No data available
Particle Size Distribution	: No data available
Particle Shape	: No data available
Particle Size Distribution	: No data available

## SECTION 10: STABILITY AND REACTIVITY

### 10.1. Reactivity

Hazardous reactions will not occur under normal conditions.

### 10.2. Chemical Stability

Stable under recommended handling and storage conditions (see section 7).

### 10.3. Possibility of Hazardous Reactions

Hazardous polymerisation will not occur.

### 10.4. Conditions to Avoid

Direct sunlight, extremely high or low temperatures, and incompatible materials. Moisture.

### 10.5. Incompatible Materials

Strong acids, strong bases, strong oxidisers.

### 10.6. Hazardous Decomposition Products

Not expected to decompose under ambient conditions.

## SECTION 11: TOXICOLOGICAL INFORMATION

### Information on Toxicological Effects - Product

**Likely routes of exposure:** Dermal, Eye Contact, Inhalation, Oral.

**Acute Toxicity (Oral):** Not classified.

**Acute Toxicity (Dermal):** Not classified.

**Acute Toxicity (Inhalation):** Not classified.

#### LD50 and LC50 Data:

No additional information available

**Skin Corrosion/Irritation:** Not classified.

**Serious Eye Damage/Irritation:** Not classified.

**Respiratory or Skin Sensitisation:** Not classified.

**Germ Cell Mutagenicity:** Not classified.

**Carcinogenicity:** Not classified.

**Reproductive Toxicity:** Not classified.

**Specific Target Organ Toxicity (Single Exposure):** Not classified.

**Specific Target Organ Toxicity (Repeated Exposure):** Not classified.

**Aspiration Hazard:** Not classified.

**Symptoms/Injuries After Inhalation:** Prolonged exposure may cause irritation.

**Symptoms/Injuries After Skin Contact:** Prolonged exposure may cause skin irritation.

**Symptoms/Injuries After Eye Contact:** May cause slight irritation to eyes.

**Symptoms/Injuries After Ingestion:** Ingestion may cause adverse effects.

**Chronic Symptoms:** None expected under normal conditions of use.

### Information on Toxicological Effects - Ingredient(s)

#### LD50 and LC50 Data:

<b>1,2,3-Propanetriol (56-81-5)</b>	
LD50 Oral Rat	12600 mg/kg (Source: NLM_CIP)
LD50 Dermal Rabbit	> 10 g/kg (Source: NLM_CIP)

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LC50 Inhalation Rat

> 2.75 mg/l/4h (No mortalities)

## SECTION 12: ECOLOGICAL INFORMATION

### Toxicity

**Hazardous To The Aquatic Environment, Short-Term (Acute):** Not classified.

**Hazardous To The Aquatic Environment, Long-Term (Chronic):** Not classified.

#### 1,2,3-Propanetriol (56-81-5)

LC50 Fish 1

54000 (51000 – 57000) mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static])

### Persistence and Degradability

#### GC-Rich Polymerase Mix

Persistence and Degradability

Not established.

### Bioaccumulative Potential

#### GC-Rich Polymerase Mix

Bioaccumulative Potential

Not established.

#### 1,2,3-Propanetriol (56-81-5)

BCF Fish 1

(no bioaccumulation)

Partition coefficient n-octanol/water  
(Log Pow)

-1.75 (at 25 °C (at pH 7.4)

### Mobility in Soil

No additional information available

### Other Adverse Effects

**Other Information:** Avoid release to the environment.

**Ozone:** Not classified.

## SECTION 13: DISPOSAL CONSIDERATIONS

**Waste Disposal Recommendations:** Dispose of contents/container in accordance with local, regional, national, territorial, provincial, and international regulations.

**Ecology - Waste Materials:** Avoid release to the environment.

## SECTION 14: TRANSPORT INFORMATION

The shipping description(s) stated herein were prepared in accordance with certain assumptions at the time the SDS was authored, and can vary based on a number of variables that may or may not have been known at the time the SDS was issued.

### According to the UNRTDG and ADG Code

Not regulated for transport

**HAZCHEM Emergency Action** : Not applicable.

**Code (Australia)**

## SECTION 15: REGULATORY INFORMATION

### National Regulations

#### 1,2,3-Propanetriol (56-81-5)

Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active

Listed on the Canadian DSL (Domestic Substances List)

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

Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory)

Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory

Listed on KECL/KECI (Korean Existing Chemicals Inventory)

Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)

Listed on NZIoC (New Zealand Inventory of Chemicals)

Listed on the Japanese ISHL (Industrial Safety and Health Law)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

Listed on the TCSI (Taiwan Chemical Substance Inventory)

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In accordance with The Model Work Health and Safety Regulations, and the Globally Harmonized System of Classification and Labelling of Chemicals 7th Revised Edition.

Listed on the NCI (Vietnam - National Chemical Inventory)

Listed on Thailand Existing Chemicals Inventory (DIW)

### International Agreements

#### 1,2,3-Propanetriol (56-81-5)

This chemical is subject to the International Convention for the Prevention of Pollution from Ships (MARPOL)

### Australia National Regulations

#### 1,3-Propanediol, 2-amino-2-(hydroxymethyl)- (77-86-1)

Relevant Poisons Schedule number	Schedule 4
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#### Potassium chloride (7447-40-7)

Relevant Poisons Schedule number	Schedule 4
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High Volume Industrial Chemicals List	Present
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#### 1,2,3-Propanetriol (56-81-5)

High Volume Industrial Chemicals List	Present
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#### Water (7732-18-5)

High Volume Industrial Chemicals List	Present
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## SECTION 16: ADDITIONAL INFORMATION

Date of Preparation or Latest : 16/05/2024

#### Revision

Data Sources : Information and data obtained and used in the authoring of this safety data sheet could come from database subscriptions, official government regulatory body websites, product/ingredient manufacturer or supplier specific information, and/or resources that include substance specific data and classifications according to GHS or their subsequent adoption of GHS.

Other Information : In accordance with The Model Work Health and Safety Regulations, and the Globally Harmonized System of Classification and Labelling of Chemicals 7th Revised Edition.

### Indication of Changes

No additional information available

### Abbreviations and Acronyms

ACGIH – American Conference of Governmental Industrial Hygienists  
ADG – Australian Dangerous Goods (Code)  
AIHA – American Industrial Hygiene Association  
ATE - Acute Toxicity Estimate  
AU - Australia  
BCF - Bioconcentration Factor  
BEI - Biological Exposure Indices (BEI)  
BOD – Biochemical Oxygen Demand  
CAS No. - Chemical Abstracts Service Number  
COD – Chemical Oxygen Demand  
EC50 - Median Effective Concentration  
ErC50 - EC50 in Terms of Reduction Growth Rate  
EU - European Union  
GHS – Globally Harmonized System of Classification and Labeling of Chemicals  
IARC - International Agency for Research on Cancer  
LC50 - Median Lethal Concentration  
LD50 - Median Lethal Dose  
LOAEL - Lowest Observed Adverse Effect Level  
LOEC - Lowest-Observed-Effect Concentration  
Log Koc - Soil Organic Carbon-water Partitioning Coefficient  
Log Kow - Octanol/water Partition Coefficient

Log Pow - Ratio of the equilibrium concentration (C) of a dissolved substance in a two-phase system consisting of two largely immiscible solvents, in this case octanol and water  
NOAEL - No-Observed Adverse Effect Level  
NOEC - No-Observed Effect Concentration  
NTP – National Toxicology Program  
OEL - Occupational Exposure Limits  
pH – Potential Hydrogen  
SADT - Self Accelerating Decomposition Temperature  
SDS - Safety Data Sheet  
STEL - Short Term Exposure Limit  
ThOD – Theoretical Oxygen Demand  
TLM - Median Tolerance Limit  
TLV - Threshold Limit Value  
TPQ - Threshold Planning Quantity  
TWA - Time Weighted Average  
UN – United Nations  
UN RTDG – United Nations Recommendations on the Transport of Dangerous Goods  
VOC – Volatile Organic Compounds  
WEEL - Workplace Environmental Exposure Levels

### Glossary of Data Source Abbreviations

ATSDR: Agency for Toxic Substances and Disease Registry (U.S. Department of Health and Human Services)  
AU\_WES: Australia WES  
CHEMVIEW: ChemView (U.S. Environmental Protection Agency)  
EC\_RAR: European Commission Renewal Assessment Report  
EC\_SCOEL: European Commission Scientific Committee on Occupational

FOOD\_JOURN: Food Research Journal (1956)  
IARC: The International Agency for Research on Cancer  
IDLH: National Institute for Occupational Health and Safety Immediately Dangerous to Life or Health Value Profiles  
IUCLID: International Uniform Chemical Information Database  
JAPAN\_GHS: Japan GHS Basis for Classification Data

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Exposure Limits	JP_J-CHECK: Japan J-Check
ECETOC: European Centre for Ecotoxicology and Toxicology of Chemicals Reports	KR_NIER: South Korea National Institute of Environmental Research Evaluations
ECHA_API: European Chemicals Agency API	NICNAS: Australia National Industrial Chemicals Notification and Assessment Scheme
ECHA_RAC: ECHA Committee for Risk Assessment	NIOSH: National Institute for Occupational Health and Safety (U.S. Department of Health and Human Services)
EFSA: European Food Safety Authority	NLM_CIP: National Library of Medicine ChemID plus database
EPA: U.S. Environmental Protection Agency	NLM_HSDB: National Library of Medicine Hazardous Substance Data Bank
EPA_AEGL: Acute Exposure Guideline Levels (U.S. Environmental Protection Agency)	NLM_PUBMED: National Library of Medicine PubMed database
EPA_FIFRA: Federal Insecticide, Fungicide, and Rodenticide Act Reregistration Eligibility Decision (U.S. Environmental Protection Agency)	NTP: National Toxicology Program
EPA_HPVC: High Production Volume Chemicals (U.S. Environmental Protection Agency)	NZ_CCID: New Zealand Chemical Classification and Information Database
EPA_TRED: Risk Assessment for Tolerance Reassessment Eligibility Decision (U.S. Environmental Protection Agency)	OECD_EHSP: Environment, Health, and Safety Publication (Organisation for Economic Co-operation and Development)
EU_CLH: European Union Harmonised Classification and Labelling Proposal	OECD_SIDS: Screening Information Data Sets (Organisation for Economic Co-operation and Development)
EU_RAR: European Union Risk Assessment Report	WHO: World Health Organization

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.*

Australia GHS SDS