

# MATERIAL SAFETY DATA SHEET

## Pyruvate Oxidase-G

### Section 1: Product and Company Identification

Material name	Pyruvate Oxidase-G		
Synonyms	Pyruvate oxidase		
Product No.	70-1691-00; 70-1691-01		
Product description	Lyophilized powder containing enzyme (protein) and buffering salts.		
Product use	Enzyme reagent for laboratory use.		
<u>Emergency Telephone Numbers</u>	<u>Distributor</u>	<u>Corporate Headquarters</u>	
Americas: +1-760-476-3962	Sekisui Diagnostics LLC	Sekisui Diagnostics LLC	
Europe, Middle East & Africa: +1-760-476-3961	31 New York Avenue	31 New York Avenue	
Asia Pacific: +1-760-476-3960	Framingham, MA 01701	Framingham, MA 01701	
Access code: 333512	USA	USA	
	Phone: 508-661-1835	Phone: 508-661-1835	

### Section 2: Hazards Identification

OSHA regulatory status	This preparation is classified as hazardous under U.S. OSHA 29 CFR 1910.1200; E.C. Directive 1999/45/EC; Canadian R.S. 1985, c. H-3; U.K. CHIP 2002 No. 1689; and/or U.N. GHS ST/SG/AC 10/30. Refer to Sec. 15, Regulatory Information, for details regarding hazard classification.		
Precautionary statements	None of the components present in this preparation at concentrations equal to or greater than 0.1% are listed by IARC, NTP, OSHA or ACGIH as a carcinogen. CAUTION! The chemical, physical and toxicological properties of this preparation have not been thoroughly characterized. Avoid contact with eyes and skin. Do not ingest or inhale. Preparation appearance: yellow powder.		
Potential health effects:			
Routes of exposure	Occupational exposure routes may include eye contact, skin contact and inhalation.		
Eyes	No data available. Eye exposure may cause irritation, redness and itching.		
Skin	No data available. Skin contact may cause irritation, dryness and redness.		
Inhalation	No data available. Although there is no evidence that the enzyme(s) in this preparation induces specific respiratory hypersensitivity, all proteins are potential respiratory allergens and may result in respiratory sensitization in certain individuals after repeated and/or prolonged inhalation exposure, producing mild to severe symptoms similar to pollen allergy or asthma, including mucous membrane or eye irritation, itching of the skin or eyes, sneezing, nasal or sinus congestion, coughing, and tightness in the chest. These symptoms may develop as late as 12 hours after exposure.		
Ingestion	No data available.		
Chronic effects	No data available. Repeated inhalation may result in respiratory sensitization.		
Target organs	Unknown.		
Potential environmental effects	No data available.		

### Section 3: Composition / Information on Ingredients

Ingredient Name	CAS #	EC #	% (wt/wt)
Pyruvate oxidase	9001-96-1	232-644-5	1 - 99
EC R-Phrases: None			
Inorganic (buffering) salts	EC Hazard Class: None	Mixture	1 - 99
EC R-Phrases: None	Mixture		
	EC Hazard Class: None		

NOTE - Pyruvate oxidase - Enzyme source: Aerococcus viridans, Enzyme Commission number: 1.2.3.3

### Section 4: First Aid Measures

First aid procedures:	
Eye contact	Immediately flush eyes with plenty of tepid water for 15 minutes while separating eyelids with fingers. Remove contact lenses if worn. Obtain medical attention if needed or if symptoms, such as redness or irritation persist.
Skin contact	In case of contact, flush skin with cool water and remove contaminated clothing. Obtain medical attention if needed or if irritation or other symptoms develop.
Inhalation	If inhaled, move from exposure area to fresh air. Seek medical attention if breathing becomes difficult or if cough or other symptoms develop.
Ingestion	In case of ingestion, contact a poison control center or physician for instructions.

### Section 5: Fire Fighting Measures

<b>Flammable properties</b>	Material may burn when exposed to sufficient heat.
<b>Suitable extinguishing media</b>	Use extinguishing media suitable for surrounding fire, such as carbon dioxide, chemical foam, dry chemical or water spray.
<b>Unsuitable extinguishing media</b>	Unknown.
<b>Specific hazards arising from the chemical</b>	Toxic gases may be generated by combustion, including. carbon monoxide (CO) and carbon dioxide (CO <sub>2</sub> ).
<b>Standard protective equipment and precautions for firefighters</b>	Firefighters should wear NIOSH-approved or equivalent Self-Contained Breathing Apparatus and full protective gear.

### Section 6: Accidental Release Measures

<b>Personal precautions</b>	Avoid physical contact with material and avoid generating or inhaling dust. Ensure adequate ventilation. Wear Personal Protective Equipment (PPE) as indicated in Section 8. Wash hands thoroughly after handling.
<b>Environmental precautions</b>	No information available.
<b>Methods and materials for containment and clean-up</b>	Do not dry sweep powder. Use HEPA-filtered vacuum, if available, otherwise wet mop to clean up a powder spill. Decontaminate the spill site following standard procedures. Dispose of materials in accordance with all applicable federal, state, local and provincial environmental regulations, per Section 13.

### Section 7: Handling and Storage

<b>Handling</b>	Follow good laboratory hygiene practices. See Section 8, Engineering Controls. Minimize contact and contamination of personal clothing and skin. Wash hands thoroughly after handling.
<b>Storage</b>	Store desiccated at -20°C (-4°F). Do not store with incompatible substances; see Section 10.

### Section 8: Exposure Controls / Personal Protection

<b>Exposure guidelines</b>	There are no ACGIH, NIOSH, OSHA or country-specific occupational exposure limits currently established for components present in this preparation at concentrations equal to or greater than 1% (0.1% if carcinogen).
<b>Engineering controls</b>	Use in well ventilated areas. If handling large quantities or there is a potential for dust or aerosol generation, use local exhaust ventilation. Facilities storing or using this material should be equipped with an eyewash fountain and a safety shower.
<b>Personal protective equipment:</b>	
<b>Eye / face protection</b>	Wear appropriate protective chemical safety glasses.
<b>Skin protection</b>	Wear lab coat or other protective garments. Remove contaminated clothing promptly.
<b>Hand protection</b>	Wear chemical resistant protective gloves.
<b>Respiratory protection</b>	A respirator is not required under normal conditions of use.
<b>General</b>	Follow company-specific safety procedures.

### Section 9: Physical and Chemical Properties

<b>Appearance</b>	Yellow powder
<b>Odor</b>	Not available
<b>pH</b>	6 - 7 (in aqueous solution)
<b>Melting point/Freezing point</b>	Not available / Not applicable
<b>Boiling point</b>	Not applicable
<b>Evaporation rate</b>	Not applicable
<b>Flash point</b>	Not applicable
<b>Flammability/explosivity limits in air, upper</b>	Not applicable
<b>Flammability/explosivity limits in air, lower</b>	Not applicable
<b>Vapor pressure</b>	Not available
<b>Density</b>	Not available
<b>Solubility</b>	Water-soluble
<b>Partition coefficient (n-octanol/water)</b>	Not available
<b>Auto-ignition temperature</b>	Not available

**Section 10: Chemical Stability and Reactivity Information**

<b>Possibility of hazardous reactions</b>	Hazardous polymerization will not occur.
<b>Chemical stability</b>	Stable under ordinary conditions of use and storage. See Section 7.
<b>Conditions to avoid</b>	Unknown.
<b>Incompatible materials</b>	Unknown.
<b>Hazardous decomposition products</b>	Thermal decomposition may lead to release of irritating gases and vapors.

**Section 11: Toxicological Information**

<b>Acute effects</b>	No data available.
<b>Local effects</b>	No data available.
<b>Chronic effects</b>	No data available.
<b>Sensitization</b>	No data available.
<b>Carcinogenicity</b>	No data available.
<b>Mutagenicity</b>	No data available.
<b>Reproductive effects</b>	No data available.
<b>Teratogenicity</b>	No data available.

**Section 12: Ecological Information**

<b>Ecotoxicity</b>	No data available.
<b>Persistence and degradability</b>	No data available.
<b>Bioaccumulation potential</b>	No data available.
<b>Mobility in environmental media</b>	No data available.

**Section 13: Disposal Considerations**

<b>Methods of disposal</b>	Dispose of unused product, spilled material and waste in accordance with all applicable federal, state, local and provincial environmental and hazardous waste regulations.
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**Section 14: Transport Information**

<b>Basic shipping description</b>	Not classified as dangerous goods. Not regulated per IATA and DOT regulations.
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**Section 15: Regulatory Information****International Regulations:****Inventory - European Union - European Inventory of Existing Commercial Chemical Substances (EINECS)**

Pyruvate oxidase 9001-96-1 232-644-5

**Canadian Hazardous Products**

WHMIS Status Non-controlled

**European Communities Dangerous Substances/Preparations**

EC Hazard Class None

Risk Phrases None

Safety Phrases None

**Section 16: Other Information****Further Information:**

This MSDS has been prepared in accordance with the ANSI Z400.1 format. Every effort has been made to adhere to the hazard criteria and content requirements of the U.S. OSHA Hazard Communication Standard, Canadian Controlled Products Regulation (CPR), UK Chemical Hazard Information and Packaging Regulations, European Communities REACH Regulation, and UN Globally Harmonized System of Classification and Labelling of Chemicals.

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