according to OSHA HCS (29CFR 1910.1200) and WHMIS 2015 Regulations

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1 Identification

· Product identifier

· Trade name: D-Glucose, Anhydrous, ACS Grade

· Product code: GL1010-K

· CAS Number:

50-99-7

- · Recommended use and restriction on use
- · Recommended use: Laboratory chemicals
- Restrictions on use: No relevant information available.
- Details of the supplier of the Safety Data Sheet
- · Manufacturer/Supplier:

AquaPhoenix Scientific, Inc.

860 Gitts Run Road

Hanover, PA 17331 USA

Tel +1 (717)632-1291

Toll-Free: (866)632-1291

info@aquaphoenixsci.com

· Distributor:

AquaPhoenix Scientific 860 Gitts Run Road, Hanover, PA 17331

(717) 632-1291

· Emergency telephone number:

ChemTel Inc.

(800)255-3924 (North America)

+1 (813)248-0585 (International)

2 Hazard(s) identification

· Classification of the substance or mixture

Combustible Dust May form combustible dust concentrations in air.

- · Label elements
- · GHS label elements

The product is classified and labeled according to the Globally Harmonized System (GHS).

- Hazard pictograms: None.
- · Signal word: Warning
- · Hazard statements:

May form combustible dust concentrations in air.

• Other hazards There are no other hazards not otherwise classified that have been identified.

3 Composition/information on ingredients

- Chemical characterization: Substances
- · CAS No. Description

50-99-7 glucose

according to OSHA HCS (29CFR 1910.1200) and WHMIS 2015 Regulations

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4 First-aid measures

- Description of first aid measures
- · General information: No special measures required.
- · After inhalation: Supply fresh air; consult doctor in case of complaints.
- · After skin contact:

Brush off loose particles from skin.

Rinse with warm water.

If skin irritation is experienced, consult a doctor.

· After eye contact:

Protect unharmed eye.

Remove contact lenses if worn.

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

After swallowing:

Rinse out mouth and then drink plenty of water.

Do not induce vomiting; immediately call for medical help.

Most important symptoms and effects, both acute and delayed:

Nausea in case of ingestion.

May cause gastro-intestinal irritation if ingested.

· Indication of any immediate medical attention and special treatment needed:

If medical advice is needed, have product container or label at hand.

5 Fire-fighting measures

- Extinguishing media
- · Suitable extinguishing agents: Use fire fighting measures that suit the environment.
- · For safety reasons unsuitable extinguishing agents: No relevant information available.
- · Special hazards arising from the substance or mixture

May form combustible dust concentrations in air.

Formation of toxic gases is possible during heating or in case of fire.

- Advice for firefighters
- · Protective equipment:

Wear self-contained respiratory protective device.

Wear fully protective suit.

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation.

Keep away from ignition sources.

- · Environmental precautions No special measures required.
- · Methods and material for containment and cleaning up

Sweep up and place into an appropriate container.

Send for recovery or disposal in suitable receptacles.

Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

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See Section 13 for disposal information.

7 Handling and storage

Handling

· Precautions for safe handling:

Use only in well ventilated areas.

Prevent formation of dust.

Any deposit of dust which cannot be avoided must be regularly removed.

Do not dry clean dust covered objects and floors. Wash thoroughly with plenty of water.

Information about protection against explosions and fires:

May form combustible dust concentrations in air.

· Conditions for safe storage, including any incompatibilities

Requirements to be met by storerooms and receptacles:

Protect from humidity and water.

Avoid storage near extreme heat.

Information about storage in one common storage facility:

Store away from foodstuffs.

Do not store together with alkalis (caustic solutions).

Store away from oxidizing agents.

Store away from reducing agents.

Further information about storage conditions:

Keep containers tightly sealed.

This product is hygroscopic.

Store in cool, dry conditions in well sealed receptacles.

· **Specific end use(s)** No relevant information available.

8 Exposure controls/personal protection

· Control parameters

· Components with limit values that require monitoring at the workplace:

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

Exposure controls

General protective and hygienic measures:

The usual precautionary measures for handling chemicals should be followed.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Store protective clothing separately.

- **Engineering controls:** Provide adequate ventilation.
- · Breathing equipment:

Not required under normal conditions of use.

Use suitable respiratory protective device when high concentrations are present.

Protection of hands:

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Protective gloves

· Material of gloves

Butyl rubber, BR Fluorocarbon rubber (Viton) Natural rubber, NR Nitrile rubber, NBR Neoprene gloves

Sensibilization by the components in the glove materials is possible.

Eye protection:



Safety glasses

Follow relevant national guidelines concerning the use of protective eyewear.

- Body protection: Not required under normal conditions of use.
- Limitation and supervision of exposure into the environment

No relevant information available.

9 Physical and chemical properties

Odor threshold: PH-value: Melting point/Melting range: Boiling point/Boiling range: Not determined. Not applicable. Not determined. Not applicable. Flash point: Not applicable. Flammability (solid, gaseous): Product is not flammable. Auto-ignition temperature: Not determined. Decomposition temperature: Not determined. Danger of explosion: May form combustible dust concentrations in air. Explosion limits Lower: Upper: Not determined.	Appearance: Form:	Powder
Odor: Characteristic Odor threshold: Not determined. PH-value: Not applicable. Melting point/Melting range: Not determined. Boiling point/Boiling range: Not determined. Flash point: Not applicable. Flammability (solid, gaseous): Product is not flammable. Auto-ignition temperature: Not determined. Decomposition temperature: Not determined. Danger of explosion: May form combustible dust concentrations in air. Explosion limits Lower: Not determined. Upper: Not determined. Oxidizing properties: Non-oxidizing.	Color:	White
Odor threshold: PH-value: Not applicable. Not determined. Not determined. Not determined. Not determined. Not applicable. Not applicable. Not applicable. Flash point: Not applicable. Flammability (solid, gaseous): Product is not flammable. Auto-ignition temperature: Not determined. Decomposition temperature: Not determined. Danger of explosion: May form combustible dust concentrations in air. Explosion limits Lower: Upper: Not determined. Non-oxidizing.		001011000
pH-value: Melting point/Melting range: Boiling point/Boiling range: Not determined. Not applicable. Flash point: Not applicable. Flammability (solid, gaseous): Product is not flammable. Auto-ignition temperature: Not determined. Decomposition temperature: Not determined. Danger of explosion: May form combustible dust concentrations in air. Explosion limits Lower: Upper: Not determined.	-	
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Melting point/Melting range: Boiling point/Boiling range: Not determined. Not applicable. Flash point: Not applicable. Flammability (solid, gaseous): Product is not flammable. Auto-ignition temperature: Not determined. Decomposition temperature: Not determined. Danger of explosion: May form combustible dust concentrations in air. Explosion limits Lower: Upper: Not determined. Not determined. Not determined. Not determined. Not determined. Not determined. Non-oxidizing.	pH-value:	Not applicable.
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Decomposition temperature: Not determined. Danger of explosion: Explosion limits Lower: Upper: Not determined. Not determined. Not determined. Not determined. Not determined. Non-oxidizing.	Flammability (solid, gaseous):	Product is not flammable.
Danger of explosion: Explosion limits Lower: Upper: Oxidizing properties: May form combustible dust concentrations in air. Not determined. Not determined. Non-oxidizing.	Auto-ignition temperature:	Not determined.
Explosion limits Lower: Not determined. Upper: Not determined. Oxidizing properties: Non-oxidizing.	Decomposition temperature:	Not determined.
Lower: Not determined. Upper: Not determined. Oxidizing properties: Non-oxidizing.	Danger of explosion:	May form combustible dust concentrations in air.
Lower: Not determined. Upper: Not determined. Oxidizing properties: Non-oxidizing.	Explosion limits	
Oxidizing properties: Non-oxidizing.	-	Not determined.
	Upper:	Not determined.
Vapor pressure: Not determined.	Oxidizing properties:	Non-oxidizing.
	Vapor pressure:	Not determined.

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Relative density:Not determined.Vapor density:Not applicable.Evaporation rate:Not applicable.

· Solubility in / Miscibility with

Water: Soluble.

· Partition coefficient (n-octanol/water): Not determined.

· Viscosity

Dynamic: Not applicable. **Kinematic:** Not applicable.

• Other information No relevant information available.

10 Stability and reactivity

- · Reactivity: No relevant information available.
- · Chemical stability: Stable under normal temperatures and pressures.
- · Thermal decomposition / conditions to be avoided:

No decomposition if used and stored according to specifications.

· Possibility of hazardous reactions

May form combustible dust concentrations in air.

Reacts with reducing agents.

Reacts with strong oxidizing agents.

Reacts with strong alkali.

Toxic fumes may be released if heated above the decomposition point.

- · Conditions to avoid Excessive heat.
- Incompatible materials

Alkalis

Reducing agents.

Oxidizers

· Hazardous decomposition products

Under fire conditions only:

Carbon monoxide and carbon dioxide

11 Toxicological information

- Information on toxicological effects
- · Acute toxicity: Based on available data, the classification criteria are not met.
- · LD/LC50 values that are relevant for classification:

50-99-7 Glucose

Oral LD50 25800 mg/kg (rat)

- Primary irritant effect:
- · On the skin: Based on available data, the classification criteria are not met.
- · On the eye: Based on available data, the classification criteria are not met.
- Sensitization: Based on available data, the classification criteria are not met.
- · IARC (International Agency for Research on Cancer):

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Substance is not listed.

· NTP (National Toxicology Program):

Substance is not listed.

OSHA-Ca (Occupational Safety & Health Administration):

Substance is not listed.

· Probable route(s) of exposure:

Ingestion.

Inhalation.

Eye contact.

Skin contact.

- · Acute effects (acute toxicity, irritation and corrosivity): No relevant information available.
- · Repeated dose toxicity: No relevant information available.
- · Germ cell mutagenicity: Based on available data, the classification criteria are not met.
- · Carcinogenicity: Based on available data, the classification criteria are not met.
- · Reproductive toxicity: Based on available data, the classification criteria are not met.
- STOT-single exposure: Based on available data, the classification criteria are not met.
- STOT-repeated exposure: Based on available data, the classification criteria are not met.
- · Aspiration hazard: Based on available data, the classification criteria are not met.

12 Ecological information

- · Toxicity
- · Aquatic toxicity No relevant information available.
- Persistence and degradability No relevant information available.
- · Bioaccumulative potential: No relevant information available.
- Mobility in soil: No relevant information available.
- · Additional ecological information
- · General notes:

Negative ecological effects are, according to the current state of knowledge, not expected.

• Other adverse effects No relevant information available.

13 Disposal considerations

- · Waste treatment methods
- · Recommendation:

The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes.

- **Uncleaned packagings**
- · Recommendation: Disposal must be made according to official regulations.

14 Transport information

· UN-Number

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		(Cont'd. of page
· DOT, ADR/RID/ADN, IMDG, IATA	Not regulated.	
· UN proper shipping name · DOT, ADR/RID/ADN, IMDG, IATA	Not regulated.	
Transport hazard class(es)		
· DOT, ADR/RID/ADN, IMDG, IATA · Class	Not regulated.	
· Packing group · DOT, ADR/RID/ADN, IMDG, IATA	Not regulated.	
· Environmental hazards	Not applicable.	
· Special precautions for user	Not applicable.	
Transport in bulk according to Annex MARPOL73/78 and the IBC Code	II of Not applicable.	

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- · United States (USA)
- ·SARA
- Section 302 (extremely hazardous substances):

Substance is not listed.

· Section 313 (Specific toxic chemical listings):

Substance is not listed.

TSCA (Toxic Substances Control Act)

All ingredients are listed or exempt.

- · Proposition 65 (California)
- · Chemicals known to cause cancer:

Substance is not listed.

· Chemicals known to cause developmental toxicity for females:

Substance is not listed.

· Chemicals known to cause developmental toxicity for males:

Substance is not listed.

Chemicals known to cause developmental toxicity:

Substance is not listed.

· EPA (Environmental Protection Agency):

Substance is not listed.

· IARC (International Agency for Research on Cancer):

Substance is not listed.

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· Canadian Domestic Substances List (DSL):

Substance is not listed.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Abbreviations and acronyms:

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

OSHA: Occupational Safety & Health Administration

· Sources

Website, European Chemicals Agency (echa.europa.eu)

Website, US EPA Substance Registry Services (ofmpub.epa.gov/sor internet/registry/substreg/home/overview/home.do)

Website, Chemical Abstracts Registry, American Chemical Society (www.cas.org)

Patty's Industrial Hygiene, 6th ed., Rose, Vernon, ed. ISBN: 978-0-470-07488-6

Casarett and Doull's Toxicology: The Basic Science of Poisons, 8th Ed., Klaasen, Curtis D., ed., ISBN: 978-0-07-176923-5.

Safety Data Sheets, Individual Manufacturers