

# Material Safety Data Sheet



Revision Date: 10/21/2010



MSDS #: 10126 55-60-03 55-60-04 55-60-05 SPL-PG PhosphaGLO AP Substrate

## 1. PRODUCT AND COMPANY IDENTIFICATION

### Product Description

PhosphaGLO AP Substrate

### CATALOG NO.

55-60-03  
55-60-04  
55-60-05  
SPL-PG

### Hazardous Reagent

PhosphaGLO AP Substrate

### Hazardous Reagent Product code

Catalog No. listed above

**Recommended Use** Reagent

**Contact Manufacturer** KPL, Inc.  
910 Clopper Road  
Gaithersburg, Maryland 20878  
USA

**Phone #:** 1-301-948-7755  
**Fax #:** 1-301-948-0169  
**Web:** www.kpl.com  
**Email:** techserv@kpl.com

### Emergency Telephone Numbers:

AUSTRALIA – POISONS INFORMATION CENTER	Telephone: 13 11 26	Hours: 24 hours
CANADIAN TRANSPORT EMERGENCY CENTER	Telephone: (1 ) 613 996 6666	Hours: 24 hours/day, 7 days/week
UK – THE NATIONAL FOCUS	Telephone: (44) 029 2041 6388	Hours: 09:00-17:00 GMT
USA- NATIONAL RESPONSE CENTER	Telephone: (1 ) 800 424 8802	Hours: 24 hours/day, 7 days/week

## 2. HAZARD IDENTIFICATION

<b>Hazard Type</b>	Health Hazard: Irritant
<b>Principle Route of Exposure</b>	The substance can be absorbed into the body by inhalation, through the skin and by ingestion.
<b>Acute Effects: Eye:</b>	Data for 100% Sodium Azide: Redness. Pain.
<b>Acute Effects: Skin:</b>	Data for 100% Sodium Azide: MAY BE ABSORBED! Redness. Blisters.
<b>Acute Effects: Inhalation:</b>	Data for 100% Sodium Azide: Cough. Headache. Shortness of breath. Unconsciousness. Nasal stuffiness. Blurred vision. Slowing heart beat. Fall in blood pressure.
<b>Acute Effects: Ingestion:</b>	Data for 100% Sodium Azide: Abdominal pain. Nausea. Sweating.
<b>Chronic Effects:</b>	Data for 100% Sodium Azide: The substance irritates the eyes, the skin and the respiratory tract. Exposure slightly above OEL could cause effects on the nervous system.

**Additional Information**

The toxicological properties of 1,2-dioxetane-ene itself have not been investigated.

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

<u>Component</u>	<u>CHEMICAL</u>	<u>% Weight</u>	<u>CAS #:</u>
PhosphaGLO AP Substrate	1,2-dioxetane-ene	<1%	
	Buffer (Tris)	<2%	
	Enhancers (Phosphonium salts of polyvinyl benzyl chloride Non-fluorescent organic molecules)	<1%	
	Sodium Azide	<0.1%	26628-22-8

**4. FIRST AID MEASURES**

<b>General Advice</b>	Wash contaminated clothing before reuse. Consult a physician if irritation persists
<b>Oral Exposure</b>	Rinse mouth. Do NOT induce vomiting. Give plenty of water to drink. Rest. Refer for medical attention.
<b>Inhalation Exposure</b>	Remove subject to fresh air. Seek medical attention if necessary.
<b>Skin Exposure</b>	Remove contaminated clothes. Rinse skin with plenty of water or shower.
<b>Eye Exposure</b>	Rinse with copious amounts of water

**5. FIRE FIGHTING MEASURES**

<b>Extinguishing media</b>	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Water spray. Alcohol-resistant foam. Dry powder. Carbon dioxide.
<b>Unusual Fire and Explosive Hazards</b>	Data for 100% Sodium Azide: Risk of fire and explosion on contact with acids and many metals (lead, brass, copper, mercury, silver).
<b>Flash Point</b>	Not Applicable
<b>Autoignition Temperature</b>	Not Applicable
<b>Flammability Statement</b>	Data for 100% Sodium Azide: Decomposes on heating.
<b>Specific hazards arising from the chemical</b>	Data for 100% Sodium Azide: May explode on heating above melting point, especially on rapid heating, causing fire and explosion hazard. The solution in water is a weak base. Reacts with copper, lead, silver, mercury and carbon disulfide to form particularly shock-sensitive compounds. Reacts with acids, forming toxic and explosive hydrogen azide.
<b>Protective equipment and precautions for firefighters</b>	Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

**6. ACCIDENTAL RELEASE MEASURES**

<b>Personal Precautions</b>	Avoid contact with skin, eyes and clothing.
-----------------------------	---

<b>Environmental Precautions</b>	No special environmental precautions required. Should not be released into the environment.
<b>Method of Containment</b>	Collect leaking and spilled liquid in sealable containers as far as possible.
<b>Methods of Clean-up</b>	Contain spill and then clean-up with copious amounts of water.
<b>Other Information</b>	Not Applicable

## 7. HANDLING AND STORAGE

<b>Handling:</b>	Handle in accordance with good industrial hygiene and safety practice.
<b>Storage:</b>	Store at 2 - 8°C. Protect from light and heat.

## 8. EXPOSURE CONTROL

<b>Respiratory Protection</b>	Personal Protective Equipment is not required if good ventilation is maintained. Otherwise wear P2 filter respirator for harmful particles suitable for vapor or mist concentrations encountered. Ventilation (not if powder), local exhaust, or breathing protection.
<b>Eye Protection</b>	Safety goggles.
<b>Skin Protection</b>	Protective gloves. Protective clothing.
<b>Ingestion</b>	Do not eat, drink, or smoke during work.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance</b>	A multi-component mixture in a clear, aqueous, alkaline solution.
<b>Physical State</b>	Liquid
<b>Odor</b>	Not Available
<b>Odor Threshold</b>	Not Available
<b>pH</b>	Alkaline
<b>Boiling Point</b>	Not Available
<b>Evaporation Rate</b>	Not Available
<b>Vapor Density</b>	Not Available
<b>Vapor Pressure</b>	Not Available
<b>Relative Density</b>	Data for 100% Sodium Azide: (water = 1): 1.8475
<b>Auto-Ignition Temperature</b>	Not Available
<b>Water Solubility</b>	Soluble
<b>Flammability</b>	Not Available
<b>Flash Point</b>	Not Available
<b>Viscosity</b>	Not Available
<b>Oxidizing Properties</b>	Not Available
<b>Explosive Properties</b>	Not Available
<b>Additional Parameters</b>	Not Available

## 10. STABILITY AND REACTIVITY

<b>Chemical Stability</b>	Stable under normal conditions
---------------------------	--------------------------------

<b>Conditions to avoid</b>	Data for 100% Sodium Azide: Separate from acids and many metals (lead, brass, copper, mercury, silver).
<b>Incompatibility Materials to Avoid</b>	Strong oxidizing or reducing agents, acids, combustible materials.
<b>Hazardous Decomposition Products</b>	Carbon Monoxide, Carbon Dioxide, Phosphorus oxides, Phosphines, Hydrogen chloride
<b>Hazardous Polymerization</b>	Will not occur
<b>Possibility of hazardous reactions</b>	Data for 100% Sodium Azide: Reacts with copper, lead, silver, mercury and carbon disulfide to form particularly shock-sensitive compounds. Reacts with acids, forming toxic and explosive hydrogen azide.

## 11. TOXICOLOGY MEASURES

### Acute Toxicity

The toxicological risks are minor due to the low concentration of hazardous ingredients. The following toxicological information is for the hazardous ingredient in pure form.

<b>LD50 Oral</b>	Data for 100% Sodium Azide: SPECIES: Rat ENDPOINT: LD50 VALUE: 27 mg/kg Acutely toxic
<b>LD50 Dermal</b>	Not Available
<b>LC50 Inhalation</b>	Not Available

### Chronic Toxicity

<b>Carcinogenicity</b>	Not Applicable
<b>Irritation</b>	Data for 100% Sodium Azide: Applicable
<b>Corrosivity</b>	Not Applicable
<b>Sensitization</b>	Not Applicable
<b>Neurological Effects</b>	Data for 100% Sodium Azide: Suspected Neurotoxin
<b>Mutagenic Effects</b>	Not Applicable
<b>Reproductive Effects</b>	Not Applicable
<b>Developmental Effects</b>	Not Applicable
<b>Target Organ Effects</b>	Data for 100% Sodium Azide: Eyes, skin, respiratory system, central nervous system, liver, blood, reproductive system
<b>Other adverse effects</b>	Not Applicable

## 12. ECOLOGICAL MEASURES

<b>Ecotoxicity</b>	Data for 100% Sodium Azide: Very ecotoxic in the aquatic environment
<b>Persistence/Degradability</b>	Not Available
<b>Mobility in Environmental Media</b>	Not Available
<b>Bioaccumulation/Accumulation</b>	Not Available

### 13. DISPOSAL MEASURES

- Waste Disposal Method:** Avoid escape into water, drainage, sewer, or the ground. If there is no way of recycling it must be disposed of in compliance with the respective national and local regulations. Data for 100% Sodium Azide - Collection of small amounts of substance: Azides react with acidified nitrite solution forming nitrogen. This method is also suitable for the disposal of larger quantities. Alternative: Azides are disintegrated with iodine in the presence of sodium thiosulphate under the production of nitrogen. Place in collecting containers for salt solutions, adjust for a pH value of 6 - 8, or place in collecting containers for inorganic residues as well as heavy-metal salts and their solutions. Collection vessels must be clearly labelled with a systematic description of their contents and with the hazard symbol and the R and S phrases. Store the vessels in a well-ventilated location. Entrust them to the appropriate authorities for disposal.
- Contaminated Packaging:** Avoid contact with skin and clothing. Place contaminated packaging in a break proof outer vessel and dispose on in compliance with national and local regulations.
- US EPA Waste Number:** Not Available

### 14. TRANSPORTATION MEASURES

- DOT:** Not Regulated
- IATA:** Not Regulated
- ADR (road)/ RID (rail):** Not Regulated
- IMDG (sea):** Not Regulated
- General Transport Regulations** Not Available

### 15. REGULATORY MEASURES

**This product is a mixture that may contain one or more hazardous chemicals. The hazardous ingredients listed are only those as required by 29 CFR 1910.1200 q 2.C1.**

**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains no chemical or chemicals which are subject to the reporting requirements of the Act and and Title 40n of the Code of Federal Regulations, Part 372.

**Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (See 40 CFR 61)**

This product contains no chemical or chemicals which are subject to the reporting requirements of the Clean Air Act.

**State Regulations**

**California Proposition 65:**

This product contains the following Proposition 65 chemicals: Not Listed

**State Right to Know Act**

<b>Chemical Name</b>	1,2-dioxetane-ene	Buffer (Tris)	Enhancers (Phosphonium salts of polyvinyl benzyl chloride Non-fluorescent organic molecules)	Sodium Azide
----------------------	-------------------	---------------	---	--------------

Massachusetts Listed  
 New Jersey Listed  
 Pennsylvania Listed  
 New York Listed  
 Rhode Island Listed

**International Inventories**

Chemical Name	1,2-dioxetane-ene	Buffer (Tris)	Enhancers (Phosphonium salts of polyvinyl benzyl chloride Non- fluorescent organic molecules)	Sodium Azide
TSCA	Listed			
DSL	Listed			
NDSL	Not Listed			
EINECS	Listed			
ELINCS	Not Listed			
CHINA	Listed			
KECL	Listed			
JAPAN:	Listed			
AICS	Listed			

**EU Regulations**

<b>Annex I Index#</b>	Data for 100% Sodium Azide: 011-004-00-7
<b>Classification</b>	T+; R28 - R32 - N; R50-53
<b>Risk Phrases</b>	R28 : Very toxic if swallowed. R32 : Contact with acids liberates very toxic gas. R50/53 : Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
<b>Safety Phrases</b>	S1/2 : Keep locked up and out of the reach of children. S28 : After contact with skin, wash immediately with plenty of water. S45 : In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). S60 : This material and its container must be disposed of as hazardous waste. S61 : Avoid release to the environment. Refer to special instructions/Safety data sheets.
<b>Symbols and Indications of Danger</b>	T+ : Very toxic N : Dangerous for the environment
<b>Specific Concentration Limits</b>	Not Available
<b>Export and Import</b>	This substance is not listed in the Annex I of Regulation (EC) No 689/2008.
<b>European Priority List</b>	This substance is not listed in a priority list (as foreseen under Council Regulation (EEC) No 793/93 on the evaluation and control of the risks of existing substances.).

## 16. OTHER INFORMATION

The above information is believed to be correct, but does not purport to be all inclusive and shall be used only as a guide. KPL shall not be held liable for any damage resulting from handling or from contact with the above product. Users should make their own investigations to determine the suitability of the information for their particular purposes. This material is sold for research purposes and is intended as laboratory reagents only. It is not intended for food, drug, household, agricultural or cosmetic use. Its use must be supervised by a technically qualified individual experienced in handling potentially hazardous chemicals.