

SAFETY DATA SHEET

SECTION 1 - IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product Identifier

Product Name: Diogenes Reagent

Product Number: CL-202A

1.2 Relevant Identified Uses of the Substance/Mixture and Uses Advised Against

Investigational research by professional users

1.3 Details of the Supplier of the Safety Data Sheet

Manufacturer

National Diagnostics
305 Patton Drive
Atlanta, GA 30036
(404) 699-2121
(800) 526-3867
info@nationaldiagnostics.com

1.4 Emergency Telephone Number

Chemtrec

1-800 424-9300 (U.S. & Canada)
01-703-527-3887 (outside U.S. & Canada)

SECTION 2 - HAZARDS IDENTIFICATION

2.1 Classification of the Substance or Mixture

Classification according to Regulation (EC) No. 1272/2008 [EU-GHS/CLP]

H302 - Acute Toxicity-Oral (Category 4)
H312 - Acute Toxicity-Dermal (Category 4)
H332 - Acute Toxicity-Inhalation (Category 4)

2.2 Label Elements

GHS LABEL ELEMENTS AND CLASSIFICATION

GHS Label Elements



WARNING

H302 - Harmful if swallowed
H312 - Harmful in contact with skin.
H332 - Harmful if inhaled.
P262 - Do not get into eyes, on skin or on clothing.
P302+P352 - IF ON SKIN: Wash with plenty of soap and water.
P304+P341 - IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
P301+P312 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician IF you feel unwell.

2.3 Other Hazards

None found.

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixture

Chemical Names/Description

Component of the Diogenes system for superoxide detection.

Component List

Component	% Comp.	CAS #	EC #	1278/2008 Classification
SODIUM ORTHOVANADATE	90-100	13721-39-6	237-287-9	H302, H312, H332

SECTION 4 - FIRST AID MEASURES

4.1 Description of First Aid Measures

Inhalation

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

Ingestion

If swallowed, wash out mouth with water provided person is conscious. Call a physician.

Skin

Immediately flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.

Eyes

Immediately flush eyes with plenty of water for at least fifteen minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

4.2 Most Important Symptoms and Effects, Both Acute and Delayed**Inhalation**

The toxicological properties of this substance have not been fully investigated.

Ingestion

The toxicological properties of this substance have not been fully investigated.

Skin

May cause skin irritation.

Eyes

May cause eye irritation.

4.3 Indication of Any Immediate Medical Attention and Special Treatment Needed

Unknown/not applicable

SECTION 5 - FIRE FIGHTING MEASURES**5.1 Extinguishing media**

Water spray, dry chemical, alcohol-resistant foam, or carbon dioxide.

5.2 Special Hazards Arising from the Substance/Mixture**Hazardous Combustion Products**

N.A.

Hazardous Decomposition Products

No information available.

Hazardous Polymerization

Has not been reported

5.3 Advice for Firefighters

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

5.4 Further Information

No data available.

SECTION 6 - ACCIDENTAL RELEASE MEASURES**6.1 Personal Precautions**

Wear appropriate protective equipment as specified in Section 8.

6.2 Environmental Precautions

Prevent discharge into the environment. Dike spills and stop leakage where practical. Do not allow material to enter drains.

6.3 Methods and Materials for Containment and Cleaning Up

Contain spills with absorbing material such as sawdust. Sweep and place in covered disposal container. Wash area with water.

6.4 References to Other Sections

For disposal information, see Section 13. For protective clothing and equipment, see Section 8.

SECTION 7 - HANDLING AND STORAGE**7.1 Precautions for Safe Handling**

Avoid contact and inhalation. Do not get in eyes, on skin, on clothing. Wash thoroughly after handling.

7.2 Conditions for Safe Storage (including any incompatibles)

Keep in a tightly closed container, stored in a cooled, dry, ventilated area. Protect from physical damage. Isolate from incompatible materials (section 10).

Incompatibles

Strong oxidizing agents.

7.3 Specific End Uses

Investigational research by professional users

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PRECAUTIONS

8.1 Control Parameters

ACGIH Threshold Limit Value (TLV): .05 mg/m³

OSHA Permissible Exposure Limit (PEL): .05 mg/m³

8.2 Exposure Controls

Engineering Controls

A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source.

Respiratory Protection

For conditions of use where exposure to the dust or mist is apparent, a full-face dust/mist respirator may be worn. For emergencies or instances where the exposure levels are not known, use a full-face positive-pressure, air-supplied respirator.

Eye Protection

Safety glasses.

Skin Protection

Wear protective gloves and clean body covering clothing.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on Basic Physical & Chemical Properties

a. Appearance	Solid white wafer	b. Odor	None
c. Odor Threshold	N.A.	d. pH	N.A.
e. Melting/Freezing Point (°C)	N.A.	f. Boiling point (°C)	N.A.
g. Flash Point (°C)	N.A.	h. Evaporation Rate	N.A.
i. Flammability	N.A.	j. Upper/Lower Flammability or Explosive Limits	N.A.
k. Vapor Pressure	N.A.	l. Vapor Density (Air = 1)	N.A.
m. Relative Density	N.A.	n. Water Solubility	N.A.
o. Partition Coefficient n-octanol/water	Mixture	p. Autoignition Temperature (°C)	N.A.
q. Decomposition Temperature (°C)	N.A.	r. Viscosity	No data available.
s. Explosive Properties	N.A.	t. Oxidizing Properties	Not an oxidizer

SECTION 10 - STABILITY AND REACTIVITY

10.1 Reactivity

Not reactive under normal conditions of use.

10.2 Chemical Stability

Stable under recommended conditions of use and storage.

10.3 Possibility of Hazardous Reactions

Has not been reported

10.4 Conditions to Avoid

Incompatible materials, dust generation.

10.5 Incompatible Materials

Strong oxidizing agents.

10.6 Hazardous Decomposition Products

No information available.

SECTION 11 - TOXICOLOGICAL INFORMATION

Product LD50 Values

Oral Rat LD50 (mg/kg)

337

Dermal Rabbit LD50 (mg/kg)

No data

Component Cancer List Status

	NTP Carcinogen		IARC Category
	Known	Anticipated	
SODIUM ORTHOVANADATE	No	No	None

Potential Health Effects

Inhalation

Harmful if inhaled. May cause respiratory tract irritation.

Ingestion

Harmful if swallowed. May cause irritation of the digestive tract.

Skin

Harmful if absorbed through the skin.

Eyes

May cause eye irritation.

Carcinogenicity

Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.

Mutagenicity

Micronucleus test (human lymphocytes) = 10 umol/L Cytogenic analysis (Human Lymphocyte) = 20 umol/L

Reproductive Toxicity

TDLo (Oral, mouse) = 300mg/kg; Reproductive - Specific Development Abnormalities - musculoskeletal system.

Teratogenic Effects

No information available.

Routes of Entry

Ingestion, inhalation, skin/eye contact.

Target Organ Statement

No information available.

SECTION 12 - ECOLOGICAL INFORMATION

12.1 Toxicity

	Vertebrates	Invertebrates	Algae	Microorganisms
Aquatic Toxicity (ppm unless otherwise noted)	No data	No data	No data	No data
	Birds	Arthropods	Plants	Microorganisms
Terrestrial Environment Toxicity (ppm unless otherwise noted)	No data	No data	No data	No data

12.2 Persistence and Degradability

No data

12.3 Bioaccumulative Potential

No data

12.4 Mobility in Soil

No data

12.5 Results of PBT and vPvB Assessment

No data

12.6 Other Adverse Effects

None

SECTION 13 - DISPOSAL CONSIDERATIONS

13.1 Waste Treatment Methods

Offer surplus or non-recyclable product to licensed disposal company. Disposal is subject to user compliance with applicable law and product characteristics at time of disposal. Dispose of packaging as product.

SECTION 14 - TRANSPORT INFORMATION

	ADR/RID	IATA	IMO	DOT
14.1 UN Number	N.A.	N.A.	N.A.	N.A.
14.2 Shipping Name	No information available.	No information available.	No information available.	No information available.
14.3 Hazard Class	N.A.	N.A.	N.A.	N.A.
14.4 Packing Group	N.A.	N.A.	N.A.	N.A.
14.5 Environmental Hazards	N.A.	N.A.	N.A.	N.A.
14.6 Special Precautions	N.A.	N.A.	N.A.	N.A.

SECTION 15 - REGULATORY INFORMATION

15.1 Safety, Health and Environmental Regulations/Legislation Specific for the Substance/Mixture United States

TSCA Regulatory Statement

All intentional ingredients are listed on the TSCA Inventory.

SARA 311/312 Hazard Categories

Component	Fire	Pressure	Reactivity	Acute	Chronic
SODIUM ORTHOVANADATE	N.A	N.A	N.A	N.A.	N.A

Europe

EEC Regulatory

All intentional ingredients are listed on the European EINECS Inventory.

SECTION 16 - OTHER INFORMATION

Revisional Updates

5/29/2015 - Updated Sections 2.1 and 3.2

9/27/2013 - Released Version 1.0

NFPA Codes

Health 2 Flammability 0 Reactivity 0

Dangers

SODIUM ORTHOVANADATE

H302 - Harmful if swallowed

H312 - Harmful in contact with skin.

H332 - Harmful if inhaled.

MANUFACTURER DISCLAIMER: The information given herein is offered in good faith as accurate, but without guarantee. Conditions of the use and suitability of the product for particular uses are beyond our control. All risks of use of the product are therefore assumed by the user. Nothing is intended as a recommendation for uses which infringe valid patents or as extending license under valid patents. Appropriate warnings and safe handling procedures should be provided to handlers and users.