SZABO SCANDIC

Part of Europa Biosite

Produktinformation

- Forschungsprodukte & Biochemikalien
- Zellkultur & Verbrauchsmaterial
- Diagnostik & molekulare Diagnostik
- Laborgeräte & Service

Weitere Information auf den folgenden Seiten!
See the following pages for more information!

Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

mail@szabo-scandic.com

www.szabo-scandic.com

linkedin.com/company/szaboscandic

Ruthenium(III) nitrosyl nitrate solution: sc-236683

MATERIAL SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Ruthenium(III) nitrosyl nitrate solution
Product Number: sc-236683

Supplier: Santa Cruz Biotechnology, Inc.
2145 Delaware Avenue
Santa Cruz, CA 95060
800.457.3801 or 831.457.3800

Emergency: ChemWatch
Within the US & Canada: 877-715-9305
Outside the US & Canada: +800 2436 2255 (1-800-CHEMCALL) or call +613 9573 3112

2. HAZARDS IDENTIFICATION

Emergency Overview

OSHA Hazards

Target Organ Effect, Corrosive

Target Organs

Lungs, Teeth., Cardiovascular system.

GHS Classification

Oxidizing liquids (Category 3)
Skin corrosion (Category 1A)
Serious eye damage (Category 1)

GHS Label elements, including precautionary statements

Pictogram

Signal word: Danger

Hazard statement(s)

H272	May intensify fire; oxidizer.
H314	Causes severe skin burns and eye damage.

Precautionary statement(s)

P220	Keep/Store away from clothing/ combustible materials.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER or doctor/ physician.

HMIS Classification

Health hazard:	3
Chronic Health Hazard:	*
Flammability:	0
Physical hazards:	2

NFPA Rating

Health hazard:	3
Fire:	0
Reactivity Hazard:	0

Potential Health Effects

Inhalation	May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
Skin	May be harmful if absorbed through skin. Causes skin burns.
Eyes	Causes eye burns. Causes severe eye burns.
Ingestion	May be harmful if swallowed.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Product Description : Ruthenium(III) nitrosyl nitrate solution
Formula : HN4O10Ru
Molecular Weight : 318.10 g/mol
CAS No. : 34513-98-9

Component		Classification	Concentration
Nitric acid			
CAS-No. EC-No. Index-No.	7697-37-2 231-714-2 007-004-00-1	Ox. Liq. 3; Skin Corr. 1A; H272, H314	10 - 30 %

4. FIRST AID MEASURES

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.
If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
In case of skin contact
Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.
In case of eye contact
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.Continue rinsing eyes during transport to hospital.
If swallowed
Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIREFIGHTING MEASURES

Conditions of flammability
Not flammable or combustible.
Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Special protective equipment for firefighters
Wear self contained breathing apparatus for fire fighting if necessary.
Hazardous combustion products
Hazardous decomposition products formed under fire conditions - nitrogen oxides (NOx), Ruthenium oxide
Further information
Use water spray to cool unopened containers.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions
Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.
Environmental precautions
Do not let product enter drains.
Methods and materials for containment and cleaning up
Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13).

7. HANDLING AND STORAGE

Precautions for safe handling

Avoid inhalation of vapor or mist. Keep away from sources of ignition - No smoking. Keep away from heat and sources of ignition.

Conditions for safe storage

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Store at room temperature.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value	Control parameters	Basis
Nitric acid	7697-37-2	TWA	2 ppm	USA. ACGIH Threshold Limit Values (TLV)
Remarks	Eye & Upper Respiratory Tract irritation Dental erosion			
		STEL	4 ppm	USA. ACGIH Threshold Limit Values (TLV)
	Eye & Upper Respiratory Tract irritation Dental erosion			
		ST	4 ppm 10 mg/m3	USA. NIOSH Recommended Exposure Limits
		TWA	2 ppm 5 mg/m3	USA. NIOSH Recommended Exposure Limits
		TWA	2 ppm 5 mg/m3	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
	The value in mg/m3 is approximate.			
		TWA	2 ppm 5 mg/m3	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
		STEL	4 ppm 10 mg/m3	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000

Personal protective equipment

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Eye protection

Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and body protection

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form	liquid	pH	no data available
Melting point/freezing point	no data available	Boiling point	no data available
Flash point	no data available	Ignition temperature	no data available
Auto-ignition temperature	no data available	Lower explosion limit	no data available
Upper explosion limit	no data available	Vapor pressure	no data available
Density	1.070 g/cm3	Water solubility	no data available
Relative vapor density	no data available	Odor	no data available
Odor Threshold	no data available	Evaporation rate	no data available
Partition coefficient: n-octanol/water	no data available		

10. STABILITY AND REACTIVITY

Chemical stability
Stable under recommended storage conditions.
Possibility of hazardous reactions
no data available
Conditions to avoid
no data available
Materials to avoid
Alkali metals, Strong oxidizing agents, Acetic anhydride, Organic materials, Alcohols, Acetonitrile, Acrylonitrile
Hazardous decomposition products
Hazardous decomposition products formed under fire conditions - nitrogen oxides (NOx), Ruthenium oxide
Other decomposition products
no data available

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Oral LD50 no data available
Inhalation LC50 no data available
Dermal LD50 no data available
Other information on acute toxicity no data available

Skin corrosion/irritation
no data available
Serious eye damage/eye irritation
Eyes: no data available
Respiratory or skin sensitization
no data available
Germ cell mutagenicity
no data available
Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity
no data available
Teratogenicity
no data available
Specific target organ toxicity - single exposure (Globally Harmonized System)
no data available

Specific target organ toxicity - repeated exposure (Globally Harmonized System)
no data available
Aspiration hazard
no data available
Potential health effects

Inhalation	May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
Ingestion	May be harmful if swallowed.
Skin	May be harmful if absorbed through skin. Causes skin burns.
Eyes	Causes eye burns. Causes severe eye burns.

Signs and Symptoms of Exposure
Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin, spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, burning sensation, cough, wheezing, laryngitis, shortness of breath, headache, nausea
Synergistic effects
no data available
Additional Information
RTECS: Not available

12. ECOLOGICAL INFORMATION

Toxicity
no data available
Bioaccumulative potential
no data available
PBT and vPvB assessment
no data available
Persistence and degradability
no data available
Mobility in soil
no data available
Other adverse effects
no data available

13. DISPOSAL CONSIDERATIONS

Product
Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.
Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)
UN number: 2031 Class: 8 Packing group: II
Proper shipping name: Nitric acid
Reportable Quantity (RQ): 5000 lbs
Marine pollutant: No
Poison Inhalation Hazard: No
IMDG
UN number: 2031 Class: 8 Packing group: II EMS-No: F-A, S-B
Proper shipping name: NITRIC ACID
Marine pollutant: No
IATA
UN number: 2031 Class: 8 Packing group: II
Proper shipping name: Nitric acid

15. REGULATORY INFORMATION

OSHA Hazards

Target Organ Effect, Corrosive

SARA 302 Components

The following components are subject to reporting levels established by SARA Title III, Section 302:

Nitric acid	CAS-No.7697-37-2

SARA 313 Components

The following components are subject to reporting levels established by SARA Title III, Section 313:

Nitric acid	CAS-No.7697-37-2

SARA 311/312 Hazards

Acute Health Hazard, Chronic Health Hazard

Massachusetts Right To Know Components

Nitric acid	CAS-No.7697-37-2

Pennsylvania Right To Know Components

Water	CAS-No.7732-18-5
Nitric acid	CAS-No.7697-37-2

New Jersey Right To Know Components

Water	CAS-No.7732-18-5
Nitric acid	CAS-No.7697-37-2
Ruthenium	CAS-No.7440-18-8

California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

16. OTHER INFORMATION

The above information is believed to be correct but does not purport to be complete and should be used only as a guide. The burden of safe use of this material rests entirely with the user.

03/18/2014