

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 <u>mail@szabo-scandic.com</u> www.szabo-scandic.com

Ruthenium(III) chloride: sc-253439



MATERIAL SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name:Ruthenium(III) chlorideProduct Number:sc-253439

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 Corrosive GHS Classification Skin corrosion (Category 1B) Serious eye damage (Category 1) GHS Label elements, including precautionary statements Pictogram

Signal word		Danger
Hazard statement	(s)	
H314		Causes severe skin burns and eye damage.
Precautionary sta	tement(s)	
P280		Wear protective gloves/ protective clothing/ eye protection/ face protection.
P305 + P35	1 + 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	on	
Health haza	ard:	3
Flammability:		0
Physical hazards:		0
NFPA Rating		
Health haza	ard:	3
Fire:		0
Reactivity Hazard:		0
Potential Health E	ffects	
Inhalation	May be harn	nful if inhaled. Material is extremely destructive to the tissue of the mucous
	membranes	and upper respiratory tract.
Skin	May be harn	nful if absorbed through skin. Causes skin burns.
Eyes	Causes eye	burns.
Ingestion	May be harm	nful if swallowed.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Formula: RuCl3 Molecular Weight: 207.43

CAS-No.	EC-No.	Index-No.	Concentration
Ruthenium trichloride			
10049-08-8	233-167-5	-	-

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

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 - hydrogen chloride gas, ruthenium oxide.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

Environmental precautions

Do not let product enter drains.

Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.

Conditions for safe storage

Keep container tightly closed in a dry and well-ventilated place. Store at room temperature. Hygroscopic.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Contains no substances with occupational exposure limit values.

Personal protective equipment

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.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) 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).

Eye protection

Face shield and safety glasses 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 Melting point/freezing point Flash point Autoignition temperature Upper explosion limit Density at 25 °C Relative vapor density Odor Threshold Partition coefficient n-octanol/water crystalline no data available not applicable no data available no data available 3.11 g/mL no data available no data available no data available pH Boiling point Ignition temperature Lower explosion limit Vapor pressure Water solubility Odor Evaporation rate no data available 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 Zinc Hazardous decomposition products Hazardous decomposition products formed under fire conditions - hydrogen chloride gas, ruthenium oxide. Other decomposition products no data available Thermal decomposition > 360 °C

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 LD50 Intraperitoneal - rat - 360 mg/kg Skin corrosion/irritation no data available Serious eye damage/eye irritation 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. May be harmful if absorbed through skin. Causes skin burns. Skin Causes eye burns. Eyes Ingestion May be harmful if swallowed. Signs and Symptoms of Exposure Cough, Shortness of breath, Headache, Nausea, Vomiting Synergistic effects no data available

Additional Information RTECS: VM2650000

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

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: 3260 Class: 8 Packing group: II Proper shipping name: Corrosive solid, acidic, inorganic, n.o.s. (Ruthenium trichloride) Marine pollutant: No Poison Inhalation Hazard: No IMDG UN number: 3260 Class: 8 Packing group: II EMS-No: F-A. S-B Proper shipping name: CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (Ruthenium trichloride) Marine pollutant: No IATA UN number: 3260 Packing group: II Class: 8 Proper shipping name: Corrosive solid, acidic, inorganic, n.o.s. (Ruthenium trichloride) **15. REGULATORY INFORMATION OSHA** Hazards Corrosive SARA 302 Components SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302. SARA 313 Components

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards

Acute Health Hazard

Massachusetts Right To Know Components

No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know Components Ruthenium trichloride	CAS-No. 10049-08-8
New Jersey Right To Know Components Ruthenium trichloride	CAS-No. 10049-08-8

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.

11/20/2013