

# MATERIAL SAFETY DATA SHEET

## SECTION 1 — PRODUCT INFORMATION

Product Identifier:	Simon's Reagent
Product Use:	Colorimetric testing
Supplier:	Syntharise Chemical Inc.
Emergency Contact:	3E Company
Emergency Telephone:	1-(800)360-3220

## SECTION 2 — HAZARDOUS INGREDIENTS

Hazardous Ingredients	%	CAS Number	LD50 of Ingredient	LC50 of Ingredient
Bottle A				
Sodium pentacyanonitrosylferrate(III) dihydrate	2%	13755-38-9	LD50 Oral-Rat-99 mg/kg	Not Available
Acetaldehyde	4%	75-07-0	Lowest observed effect level Oral-Rat-675 mg/kg LD50 Dermal-Rabbit-3,540 mg/kg	LC50 Inhalation-Rat-4 h-13300 ppm
Distilled Water	94%	7732-18-5	Rat, oral >90000mg/kg	
Bottle B				
Sodium Carbonate	2%	497-19-8	Acute oral toxicity (LD50): 4090 mg/kg [Rat].	Acute toxicity of the dust (LC50): 1200 mg/m <sup>3</sup> 2 hours [Mouse]
Distilled Water	98%	7732-18-5	Rat, oral >90000mg/kg	

## SECTION 3 — PHYSICAL DATA

Physical State :	Liquid
Odour & Appearance :	Bottle A: pungent, red liquid Bottle B: clear liquid
Odour Threshold (ppm):	Not Available
Specific Gravity:	Not Available
Vapour Density (air = 1) :	Not Available
Vapour Pressure (mmHg) :	Not Available
Evaporation Rate:	Not Available
Boiling Point (°C) :	Not Available
Freezing Point (°C):	Not Available
pH	Not Available

## SECTION 4 — FIRE AND EXPLOSION DATA

Means of Extinction:	Acetaldehyde (100%); CO <sub>2</sub> , extinguishing powder or water spray.
Flashpoint (°C) and Method :	Acetaldehyde (100%); -39.99C closed cup
Upper Flammable Limit (% by volume) :	N/A
Lower Flammable Limit (% by volume):	N/A
Autoignition Temperature (°C):	N/A
Explosion Data — Sensitivity to Impact:	No
Explosion Data — Sensitivity to Static Discharge:	No
Hazardous Combustion Products:	Carbon Monoxide, Carbon Dioxide, Hydrogen Cyanide, Sodium Oxides, Nitrogen Oxides, Iron Oxides. Self-contained breathing apparatus is required for fire-fighting purposes.

## SECTION 5 — REACTIVITY DATA

Chemically Stable	Yes, both bottles A & B
Incompatibility:	Strong oxidizing agents,
Conditions to be avoided:	Heat and direct sunlight
Hazardous Decomposition Products:	Under fire conditions; Carbon Monoxide, Carbon Dioxide, Hydrogen Cyanide, Sodium Oxides, Nitrogen Oxides, Iron Oxides.

**SECTION 6 — TOXICOLOGICAL PROPERTIES**

Routes of Exposure:	Inhalation, ingestion, skin & eyes
Acute Exposure:	Sodium pentacyanonitrosylferrate(III) dehydrate: LD50 Oral-Rat-99 mg/kg Acetaldehyde: Lowest observed effect level Oral-Rat-675 mg/kg, LD50 Dermal-Rabbit-3,540 mg/kg Sodium Carbonate: Acute oral toxicity (LD50): 4090 mg/kg [Rat]. Harmful in contact with skin, toxic if swallowed.
Chronic Exposure:	Not available
Exposure Limits: (value, source, date)	Sodium pentacyanonitrosylferrate(III) dehydrate: OEL TWA 1mg/m3 OEL STEL 2mg/m3 ACGIH C 5mg/m3 (TLV) ACGIH TWA 1mg/m3 TLV Acetaldehyde: OEL C 25ppm ACGIH C 25ppm
Irritancy:	May cause irritation.
Sensitization:	Not Available
Carcinogenicity:	Acetaldehyde: Suspected of causing cancer. IARC-2B: Possibly carcinogenic to humans
Reproductive Toxicity:	Acetaldehyde: The Registry of Toxic Effects of Chemical Substances (RTECS) contains reproductive data for this substance. Sodium Carbonate: The Registry of Toxic Effects of Chemical Substances (RTECS) contains reproductive data for this substance.
Teratogenicity:	Not Available
Mutagenicity :	Acetaldehyde: The Registry of Toxic Effects of Chemical Substances (RTECS) contains mutation data for this substance.
Synergistic Products:	Not Available

**SECTION 7 — PREVENTIVE MEASURES**

Personal Protective Equipment:	Respiratory protection when high concentrations are present, Chemical resistant gloves, chemical safety goggles and lab coat/protective work clothing.
Handling:	Avoid inhalation and contact with skin, eyes and clothing. Always wear protective gloves while working with product. Safety glasses are required to prevent potential eye contact, irritation or injury. Wear appropriate protective clothing and boots as required to prevent skin contact. For field use, a rubber apron may be worn as additional protection. Use good industrial hygiene. Work carefully with the reagent and always wear protective equipment.
Leak and Spill Procedure:	Avoid breathing vapours. Wear protective equipment. Keep unprotected persons away. Ensure adequate ventilation. Absorb with liquid binding material (sand, diatomite, universal binders)
Waste Disposal:	Dispose of according to local and regional authority requirements. Prevent from entering sewers or waterways.
Engineering Controls:	If user operations generate vapour or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.
Storage Requirements:	Protect from light and heat.
Special Shipping Information:	UN#3316 - Chemical Kit, Class 9, Packing Group II

**SECTION 8 — FIRST AID MEASURES**

Inhalation:	Place victim in well-ventilated area. If victim is not breathing, perform artificial respiration. Seek immediate medical attention.
Ingestion:	Do not induce vomiting. Seek immediate medical help.
Skin Contact:	Immediately wash with water and soap and rinse thoroughly. Seek medical advice.
Eye Contact:	Rinse opened eye(s) for several minutes under running water. Then consult a doctor.

**SECTION 9 — PREPARATION INFORMATION**

Prepared by:	Syntharise Chemical Inc.
Telephone Number:	1(647)766-1657
Preparation Date:	March 2 <sup>nd</sup> , 2015

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.