BIOCONNECTIONS
BRINDLEY COURT
VICTORIA BUSINESS PARK
KNYPERSLEY
ST8 7PP
Tel 01782 516010 Fax 01782 510733

PRODUCT SAFETY DATA SHEET

1: IDENTIFICATION

Catalog Number/Product Name: CK9058, Ninhydrin 3.5% Solution.

Other Common Names: Dropit-Hippurate Reagent

Recommended Use/Restrictions: For in-vitro diagnostic use only by trained professionals.

Manufacturer/Supplier:
BioConnections
Brindley Court
Victoria Business Park
Knypersley
ST8 7PP

Phone Number: 01782 516010

Emergency Phone Number: None available

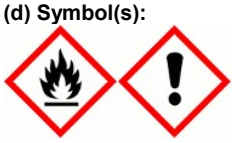
2: HAZARD(S) IDENTIFICATION

(a) Classification of the chemical:
Flammable liquids (Category 2), H225
Acute toxicity, Oral (Category 4), H302
Skin irritation (category 2), H315
Serious eye damage (Category 1), H318
Specific target organ toxicity – single exposure (Category 3), H335, H336

(b) Signal word:
Danger

(c) Hazard statement(s):
H225 – flammable liquid and vapour
H302 – harmful if swallowed
H315 – causes skin irritation
H318 – causes serious eye damage
H335 – may cause respiratory irritation
H336 – may cause drowsiness or dizziness

(d) Symbol(s):



(e) Precautionary statement(s):
P210 – keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233 – keep container tightly closed.
P261 – avoid breathing dust / fume / gas / mist / vapours / spray.
P280 – Wear protective gloves / eye protection / face protection.
P305 + P351 + P358 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P280 – wear protective gloves / protective clothing / eye protection / face protection

(f) Describe any hazards not otherwise classified that have been identified during the classification process:
None

3: COMPOSITION/ INFORMATION ON INGREDIENTS

Chemical Name	Common Name/Synonym	CAS Number	Concentration (%)
Ninhydrin	-	485-47-2	<15%
Isopropyl Alcohol	-	67-63-0	45-100%
Dimethyl Sulfoxide	-	67-68-5	45-100%

4: FIRST-AID MEASURES

(a) Routes of Exposure:

Eyes: If splashed into eyes, rinse with water for 10 to 15 minutes. Keep eyelids open. Gently remove contact lenses if present and continue rinsing. If irritation persists, seek medical advice

Ingestion: Rinse mouth. Do NOT induce vomiting unless directed by medical personnel. Seek medical advice immediately. Contact poison control if necessary. If victim is conscious and alert, give 2 to 4 cupful's of milk or water. Never give anything by mouth to an unconscious person

Inhalation: Remove victim to fresh air. If not breathing begin artificial respiration and seek medical advice immediately

Skin: Wash off with warm water and soap. Get medical attention if irritation develops and persists. Avoid touching contaminated clothing.

(b) Important symptoms/effects(acute and delayed): The most important known symptoms and effects are described in sections 2C and 11

(c) Indication of immediate medical attention and special treatment needed: No data available. Contact poison control and/or a physician. Treat symptomatically and supportively

5: FIRE-FIGHTING MEASURES

(a) Suitable (and unsuitable) extinguishing media: Use alchohol resistant foam, carbon dioxide, dry powder or water fog. Do not use water jet.

(b) Specific hazards arising from the chemical: Flammable liquid, vapours may ignite by spark or hot surface. Carbon oxides

(c) Special protective equipment and precautions for fire-fighters: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6: ACCIDENTAL RELEASE MEASURES

(a) Personal precautions, protective equipment, and emergency procedures: Wear PPE and chemical resistant gloves. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations

(b) Methods and materials for containment and cleaning up: Avoid the spillage or runoff entering drains. Contain spillage with sand, earth or other suitable non-combustible material. Discard according to local regulations.

7: HANDLING AND STORAGE

(a) Precautions for safe handling: Wear appropriate PPE, avoid inhalation of vapour or mist. Keep away from sources of ignition

(b) Conditions for safe storage: Store according to label instructions. Store in a dry and cool place not exceeding 8°C

8: EXPOSURE CONTROLS / PERSONAL PROTECTION

(a) OSHA permissible exposure limit (PEL), American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Value (TLV), and any other exposure limit used or recommended by the chemical manufacturer, importer, or employer preparing the safety data sheet, where available:

Chemical Name	CAS Number	Value	Control parameters	Basis
Isopropyl Alchohol	67-63-0	TWA	400 ppm 999 mg/m^3	UK. EH40 WEL – Workplace Exposure Limits
		STEL	500 ppm 1250 mg/m^3	UK. EH40 WEL – Workplace Exposure Limits

(b) Appropriate engineering controls: Eye bath. Safety shower.

(c) Individual protection measures, such as personal protective equipment:
Eye Protection: Safety glasses with side-shields.

Ingestion: Do not swallow. Product may cause permanent damage to the digestive tract.

Inhalation: Ensure adequate ventilation, especially in confined spaces.

Skin and Hand Protection: Wear protective gloves, safety glasses and long sleeved clothing.

9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Physical State: Liquid.
Color: Clear yellow.
Odor: No data available
Odor Threshold: No data available.
pH: <1.0 at 20°C
Melting Point/Freezing Point: Range -32 to -50°C
Boiling Point/Boiling Range: No data available
Flash Point: 57°C -TCC
Evaporation Rate: No data available.
Flammability: No information available.
Upper and Lower Flammability/Explosive Limits: Upper explosion limit: 2.0 Lower explosion limit: 12.0
Vapor Pressure: No data available.
Vapor Density: No data available.
Relative Density: No data available
Solubility: Completely miscible with water.
Partition coefficient (n-octanol/water): No data available.
Auto-ignition Temperature: No data available.
Decomposition Temperature: No data available.
Viscosity: No data available.

10: STABILITY AND REACTIVITY

(a) Reactivity: Not determined.

(b) Chemical stability: Stable under normal conditions.

(c) Possibility of hazardous reactions: Not determined

(d) Conditions to avoid (e.g., static discharge, shock, or vibration): Avoid moisture. Avoid heat, flames and sparks.

(e) Incompatible materials: May react strongly with oxidising agents, acids and alkaline substances

(f) Hazardous decomposition products: Sulphur oxides and Carbon oxides generated under fire conditions.

11: TOXICOLOGICAL INFORMATION

Acute Toxicity – Isopropyl Alcohol	**Acute Toxicity – Ninhydrin**	**Acute Toxicity – Dimethyl Sulfoxide**
LD50 Oral, Rat – 5840 mg/kg	LD50 Oral, Rat – 600 mg/kg	LD50 Oral, Rat – 28300 mg/kg
LC50 Inhalation, Rat – 4 hour, 37.5 mg/L		LC50 Inhalation, Rat – 4 hour, 5.33 mg/L
LD50 Dermal, Rabbit – 12800 mg/kg		LD50 Dermal, Rat – 40000 mg/kg
Skin Corrosion/Irritation	**Skin Corrosion/Irritation**	**Skin Corrosion/Irritation**
Rabbit, no skin irritation – 4 hours	Causes skin irritation	Rabbit, slight skin irritation – 4 hours
Serious Eye Damage/Eye Irritation	**Serious Eye Damage/Eye Irritation**	**Serious Eye Damage/Eye Irritation**
Rabbit, eye irritation	Causes serious eye irritation	Rabbit, slight irritation – 24 hours
Respiratory or Skin Sensitisation	**Respiratory or Skin Sensitisation**	**Respiratory or Skin Sensitisation**
Buehler test, Guinea Pig – negative	No data available	Maximisation test, Guinea Pig - negative
		Local Lymph Node Assay, Mouse - negative
Germ Cell Mutagenicity	**Germ Cell Mutagenicity**	**Germ Cell Mutagenicity**
Ames Test, S. typhimurium - negative	No data available	Ames Test, S. typhimurium - negative
In vitro mammalian cell gene mutation test, Chinese hamster ovary cells - negative		Sister chromatid exchange assay, Chinese hamster ovary cells - negative
Mouse, bone marrow - negative		Mutagenicity (mammal cell test): chromosome aberration, Chinese hamster ovary cells - negative
Carcinogenicity	**Carcinogenicity**	**Carcinogenicity**
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	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	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
Reproductive Toxicity	**Reproductive Toxicity**	**Reproductive Toxicity**
No data available	No data available	No data available
Specific target organ toxicity – single exposure	**Specific target organ toxicity – single exposure**	**Specific target organ toxicity – single exposure**
Inhalation, oral – may cause drowsiness or dizziness. Classified according to regulation (EU) 1272/2008, Annex VI (table 3.1/3.2), acute inhalation toxicity – Central nervous system	No data available	No data available
Specific target organ toxicity – repeated exposure	**Specific target organ toxicity – repeated exposure**	**Specific target organ toxicity – repeated exposure**
No data available	No data available	No data available
Aspiration hazard	**Aspiration hazard**	**Aspiration hazard**
No data available	No data available	No data available
Additional information	**Additional information**	**Additional information**
RTECS: NT8050000	RTECS: NK542500	RTECS: PV6210000

12: ECOLOGICAL INFORMATION

Toxicity
Toxicity to fish: LC50 – Pimephales promelas (flathead minnow): 34000mg/L – 96 hours
LC50 – Oncorhynchus mykiss (rainbow trout): 35000mg/L – 96 hours
LC50 – Lepomis macochirus (blue gill): 14000mg/L – 96 hours
Toxicity to invertebrates: EC50 – Daphnia magna (water flea): 246000mg/L – 48 hours (OECD Test Guideline 202)
Toxicity to algae: EC50 – Pseudokirchneriella subcapitata (green algae): 17000mg/L – 48 hours (OECD Test Guideline 201)

Persistence and degradability
Result – 31% - not readily biodegradable (OECD test guideline 301D)

Bioaccumulative potential
No data available

Mobility in soil
No data available

Stability in water
0.12 to 1.2 hours at 30°C, hydrolyses readily

Other adverse effects
No data available

13: DISPOSAL CONSIDERATIONS

Burn in a chemical incinerator equipped with an afterburner and scrubber, exert extra care in igniting as this material is highly flammable.
Dispose as clinical waste

14: TRANSPORT INFORMATION

DOT Hazard Class: 3
Shipping name: Combustible liquid, Isopropanol
Identification number: UN
Packing group: Group II

15: REGULATORY INFORMATION

This Material Safety Data Sheet complies with the requirements of Regulation (EC) No. 1907/2006.

16: OTHER INFORMATION

The above information, to the best of our knowledge, is accurate. BioConnections assumes no liability whatsoever for the accuracy or completeness of the information stated above. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards may be described, we cannot guarantee that these are the only hazards that exist.

Revision Date: October, 2020