



# SAFETY DATA SHEET

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

### 1.1 Product Identifier

**Product Name:** SSCP Stop Solution

**Product Number:** EC-848

### 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

Not a hazardous substance or mixture according to regulation (EC) No. 1272/2008.

### 2.2 Label Elements

This product has no labeling elements associated with EC directives or respective national laws.

### 2.3 Other Hazards

None found.

## SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

### 3.2 Mixture

#### Chemical Names/Description

Alkaline formamide loading buffer

#### Component List

Component	% Comp.	CAS #	EC #	1278/2008 Classification
Formamide	95	75-12-7	200-842-0	H351, H360
Water	5	7732-18-5	231-791-2	N.A.
Bromophenol Blue	<1	115-39-9	204-086-2	N.A.
Sodium Hydroxide	<1	1310-73-2	215-185-5	H290, H314
Xylene Cyanol	<1	2650-17-1	220-167-5	H315, H319, H335

## 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

DO NOT INDUCE VOMITING. If swallowed and the person is conscious, immediately give large amounts of water. Get medical attention.

#### 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

**Formamide:**

Symptoms may include coughing, shortness of breath. Excessive inhalation of vapor may cause symptoms that parallel ingestion, ranging from headache to unconsciousness, depending upon the duration and level of the exposure.

**Water:**

No information found.

**Bromophenol Blue:**

Coughing and shortness of breath.

**Sodium Hydroxide:**

Sneezing, sore throat or runny nose.

**Xylene Cyanol:**

Coughing, sore throat.

### Ingestion

**Formamide:**

May cause headache, dizziness, nausea, vomiting, abdominal pain, and unconsciousness. May affect the reproductive system.

**Water:**

No information found.

**Bromophenol Blue:**

Effects not determined.

**Sodium Hydroxide:**

Bleeding, vomiting, diarrhea, fall in blood pressure. Symptoms may appear days after exposure.

**Xylene Cyanol:**

None identified.

### Skin

**Formamide:**

Symptoms include redness, itching, and pain. May be absorbed through the skin with symptoms parallel to ingestion.

**Water:**

No information found.

**Bromophenol Blue:**

Redness and pain.

**Sodium Hydroxide:**

Redness, pain, burns.

**Xylene Cyanol:**

Pain and redness.

### Eyes

**Formamide:**

Redness and pain.

**Water:**

No information found.

**Bromophenol Blue:**

Redness and pain.

**Sodium Hydroxide:**

Redness, pain, tearing.

**Xylene Cyanol:**

Pain and redness.

## 4.3 Indication of Any Immediate Medical Attention and Special Treatment Needed

Unknown/not applicable

## SECTION 5 - FIRE FIGHTING MEASURES

### 5.1 Extinguishing media

Use media appropriate to the primary cause of fire.

### 5.2 Special Hazards Arising from the Substance/Mixture

#### Hazardous Combustion Products

N.A.

#### Hazardous Decomposition Products

Sodium oxide. Decomposition by reaction with certain metals releases flammable and explosive hydrogen gas.

#### Hazardous Polymeriation

Will not occur under normal conditions of use (See Sections 10.4 & 10.5).

### 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

##### Formamide:

Acids, alkalines, iodine, pyridine, and sulfur trioxide. Copper, brass, lead, and rubber are attacked by formamide.

##### Water:

No incompatibility data found.

##### Bromophenol Blue:

Strong oxidizers.

##### Sodium Hydroxide:

Acids, aluminum, tin and zinc metals.

##### Xylene Cyanol:

Strong oxidizing agents, strong reducing agents.

### 7.3 Specific End Uses

Investigational research by professional users

## SECTION 8 - EXPOSURE CONTROLS/PERSONAL PRECAUTIONS

### 8.1 Control Parameters

#### Component: Formamide

ACGIH Threshold Limit Value (TLV): 10 ppm TWA

OSHA Permissible Exposure Limit (PEL): None established

**Component: Water**

ACGIH Threshold Limit Value (TLV): None established  
 OSHA Permissible Exposure Limit (PEL): None established

**Component: Bromophenol Blue**

ACGIH Threshold Limit Value (TLV): none established  
 OSHA Permissible Exposure Limit (PEL): None established

**Component: Sodium Hydroxide**

ACGIH Threshold Limit Value (TLV): 2 mg/m<sup>3</sup> (TLV)  
 OSHA Permissible Exposure Limit (PEL): 2 mg/m<sup>3</sup>

**Component: Xylene Cyanol**

ACGIH Threshold Limit Value (TLV): none established  
 OSHA Permissible Exposure Limit (PEL): None established

**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**

Use chemical safety goggles and/or a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities in work area.

**Skin Protection**

Wear protective gloves and clean body covering clothing.

**SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES****9.1 Information on Basic Physical & Chemical Properties**

<b>a. Appearance</b>	Clear colorless solu	<b>b. Odor</b>	None
<b>c. Odor Threshold</b>	N.A.	<b>d. pH</b>	13 - 14
<b>e. Melting/Freezing Point (°C)</b>	2-3	<b>f. Boiling point (°C)</b>	210
<b>g. Flash Point (°C)</b>	154	<b>h. Evaporation Rate</b>	N.A.
<b>i. Flammability</b>	N.A.	<b>j. Upper/Lower Flammability or Explosive Limits</b>	N.A.
<b>k. Vapor Pressure</b>	1mbar @700 deg C	<b>l. Vapor Density (Air = 1)</b>	> 1.0
<b>m. Relative Density</b>	1.1300 g/cm <sup>3</sup>	<b>n. Water Solubility</b>	1 g/ 0.9 ml water
<b>o. Partition Coefficient n-octanol/water</b>	Mixture	<b>p. Autoignition Temperature (°C)</b>	N.A.
<b>q. Decomposition Temperature (°C)</b>	N.A.	<b>r. Viscosity</b>	No data available.
<b>s. Explosive Properties</b>	N.A.	<b>t. Oxidizing Properties</b>	N.A.

**SECTION 10 - STABILITY AND REACTIVITY****10.1 Reactivity****10.2 Chemical Stability**

Stable under ordinary conditions of use and storage. Very hygroscopic. Can slowly pick up moisture from air and react with carbon dioxide from air to form sodium carbonate.

**10.3 Possibility of Hazardous Reactions**

Will not occur under normal conditions of use (See Sections 10.4 & 10.5).

**10.4 Conditions to Avoid**

Moisture, dusting, and incompatibles.

**10.5 Incompatible Materials****Formamide:**

Acids, alkalines, iodine, pyridine, and sulfur trioxide. Copper, brass, lead, and rubber are attacked by formamide.

**Water:**

No incompatibility data found.

**Bromophenol Blue:**

Strong oxidizers.

**Sodium Hydroxide:**

Acids, aluminum, tin and zinc metals.

**Xylene Cyanol:**

Strong oxidizing agents, strong reducing agents.

**10.6 Hazardous Decomposition Products**

Sodium oxide. Decomposition by reaction with certain metals releases flammable and explosive hydrogen gas.

**SECTION 11 - TOXICOLOGICAL INFORMATION****Product LD50 Values****Oral Rat LD50 (mg/kg)****Dermal Rabbit LD50 (mg/kg)**

50000

**Component Cancer List Status**

	NTP Carcinogen		IARC Category
	Known	Anticipated	
Formamide	No	No	None
Water	No	No	None
Bromophenol Blue	No	No	None
Sodium Hydroxide	No	No	None
Xylene Cyanol	No	No	None

**Potential Health Effects****Inhalation****Formamide**

Causes irritation to the respiratory tract.

**Water**

No information found.

**Bromophenol Blue**

May cause irritation to the respiratory tract.

**Sodium Hydroxide**

Severe irritant. Effects from inhalation of mist vary from mild irritation to serious damage of the upper respiratory tract, depending on severity of exposure. Severe pneumonitis may occur.

**Xylene Cyanol**

None identified.

**Ingestion****Formamide**

Causes irritation to the gastrointestinal tract. Affects the central nervous system. May affect the reproductive system.

**Water**

No information found.

**Bromophenol Blue**

Large oral doses may cause irritation to the gastrointestinal tract.

**Sodium Hydroxide**

Corrosive! Swallowing may cause severe burns of mouth, throat, and stomach. Severe scarring of tissue and death may result.

**Xylene Cyanol**

May be irritating to the mucous membranes and upper respiratory tract.

**Skin****Formamide**

Causes irritation to the skin. May be absorbed through the skin.

**Water**

No information found.

**Bromophenol Blue**

May cause irritation to the skin.

**Sodium Hydroxide**

Corrosive! Contact with skin may cause irritation or severe burns and scarring with greater exposures.

**Xylene Cyanol**

Irritation.

**Eyes****Formamide**

Causes irritation to the eyes.

**Water**

No information found.

**Bromophenol Blue**

May cause irritation to the eyes.

**Sodium Hydroxide**

Corrosive! Causes irritation of eyes, and with greater exposures it can cause burns that may result in permanent impairment of vision, even blindness.

**Xylene Cyanol**

Irritation.

**Carcinogenicity****Formamide**

Not listed as a known or anticipated carcinogen by NTP or IARC.

**Water**

No information available.

**Bromophenol Blue**

Not listed as a known or anticipated carcinogen by NTP or IARC.

**Sodium Hydroxide**

Not listed as a carcinogen by either NTP or IARC.

**Xylene Cyanol**

Not listed by NTP or IARC as a known or possible carcinogen.

**Mutagenicity****Formamide**

No information found.

**Water**

No information available.

**Bromophenol Blue**

No information found.

**Sodium Hydroxide**

No information found.

**Xylene Cyanol**

No information found.

**Reproductive Toxicity****Formamide**

May cause congenital malformation of the fetus.

**Water**

No information available.

**Bromophenol Blue**

No information found.

**Sodium Hydroxide**  
No information found.

**Xylene Cyanol**  
No information found.

## Teratogenic Effects

**Formamide**  
May cause congenital malformation of the fetus.

**Water**  
No information available.

**Bromophenol Blue**  
No information found.

**Sodium Hydroxide**  
No information found.

**Xylene Cyanol**  
No information found.

## Routes of Entry

**Formamide**  
Ingestion, inhalation, and absorption through the skin.

**Water**  
No information available

**Bromophenol Blue**  
No information found.

**Sodium Hydroxide**  
Inhalation or ingestion.

**Xylene Cyanol**  
No information found.

## Target Organ Statement

**Formamide**  
No information found.

**Water**  
No information available

**Bromophenol Blue**  
No information found.

**Sodium Hydroxide**  
Persons with pre-existing skin disorders or eye problems or impaired respiratory function may be more susceptible to the effects of the substance.

**Xylene Cyanol**  
No information found.

## SECTION 12 - ECOLOGICAL INFORMATION

### 12.1 Toxicity

COMPONENT: Formamide

	Vertebrates	Invertebrates	Algae	Microorganisms
Aquatic Toxicity (ppm unless otherwise noted)	6569 @ 96 hrs	>500 @ 48 hrs	>500 @ 96 hrs	>1000 @ 30min

	Birds	Arthropods	Plants	Microorganisms
Terrestrial Environment Toxicity (ppm unless otherwise noted)	no data	no data	no data	no data

COMPONENT: Water

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

**COMPONENT: Bromophenol Blue**

	<b>Vertebrates</b>	<b>Invertebrates</b>	<b>Algae</b>	<b>Microorganisms</b>
Aquatic Toxicity (ppm unless otherwise noted)	No data	No data	No data	No data

	<b>Birds</b>	<b>Arthropods</b>	<b>Plants</b>	<b>Microorganisms</b>
Terrestrial Environment Toxicity (ppm unless otherwise noted)	No data	No data	No data	No data

**COMPONENT: Sodium Hydroxide**

	<b>Vertebrates</b>	<b>Invertebrates</b>	<b>Algae</b>	<b>Microorganisms</b>
Aquatic Toxicity (ppm unless otherwise noted)	LC50 (48hrs, golden orfe) 189mg/L	EC50 (48hr, daphnia) 40mg/L	No data	No data

	<b>Birds</b>	<b>Arthropods</b>	<b>Plants</b>	<b>Microorganisms</b>
Terrestrial Environment Toxicity (ppm unless otherwise noted)	No data	No data	No data	No data

**COMPONENT: Xylene Cyanol**

	<b>Vertebrates</b>	<b>Invertebrates</b>	<b>Algae</b>	<b>Microorganisms</b>
Aquatic Toxicity (ppm unless otherwise noted)	No data	No data	No data	No data

	<b>Birds</b>	<b>Arthropods</b>	<b>Plants</b>	<b>Microorganisms</b>
Terrestrial Environment Toxicity (ppm unless otherwise noted)	No data	No data	No data	No data

## 12.2 Persistence and Degradability

**Formamide**

Readily biodegradable (99% degradation at 28 days)

**Water**

No data

**Bromophenol Blue**

No data

**Sodium Hydroxide**

No data

**Xylene Cyanol**

No data

## 12.3 Bioaccumulative Potential

**Formamide**

low expected bioaccumulation log BCF 0.5

**Water**

No data

**Bromophenol Blue**

No data

**Sodium Hydroxide**

No data

**Xylene Cyanol**

No data

## 12.4 Mobility in Soil

**Formamide**

log Koc: 0.93



**Water**  
No data

**Bromophenol Blue**  
No data

**Sodium Hydroxide**  
No data

**Xylene Cyanol**  
No data

## 12.5 Results of PBT and vPvB Assessment

**Formamide**  
No Data

**Water**  
No data

**Bromophenol Blue**  
No data

**Sodium Hydroxide**  
Mineral salt

**Xylene Cyanol**  
No data

## 12.6 Other Adverse Effects

**Formamide**  
No data

**Water**  
None

**Bromophenol Blue**  
None

**Sodium Hydroxide**  
None

**Xylene Cyanol**  
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	Not regulated.	Not regulated.	Not regulated.	Not regulated.
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
Formamide	No	No	No	Yes	Yes
Water	No	No	No	No	No

Bromophenol Blue	No	No	No	Yes	No
Sodium Hydroxide	No	No	Yes	Yes	No
Xylene Cyanol	No	No	No	Yes	Yes

## 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

4/16/2013 - Released Version 1.0

### NFPA Codes

Health 3 Flammability 1 Reactivity 2

### Dangers

#### Formamide

H351 - Suspected of causing cancer.

H360 - May damage fertility or the unborn child.

#### Water

None

#### Bromophenol Blue

None

#### Sodium Hydroxide

H290 - May be corrosive to metals.

H314 - Causes severe skin burns and eye damage.

#### Xylene Cyanol

H315 - Causes skin irritation.

H319 - Causes serious eye irritation.

H335 - May cause respiratory irritation.

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