

# Safety Data Sheet

## Ziehl-Neelsen Carbol Fuchsin

### Section 1 - Chemical Product and Company Identification

**SDS Name:** Ziehl-Neelsen Carbol Fuchsin

**Catalog Numbers:** SO-471, A-100-1, A-103-1

**Company Identification:** Transene Company, Inc., DBA ROWLEY BIOCHEMICAL, Inc.  
10 ELECTRONICS AVENUE  
DANVERS, MA 01923

**For information, call:** 978-739-4883

**Emergency Number:** 800-424-9300

**For CHEMTREC assistance, call:** 800-424-9300

### Section 2 - Hazards Identification

#### GHS Classifications

H227-Flammable liquids: 4

H315-Skin corrosion/irritation: 2

H319-Serious eye damage/eye irritation: 2A

H341-Germ cell mutagenicity: 2

H350-Carcinogenicity: 1B

H371-Specific target organ toxicity, single exposure: 2

H373-Specific target organ toxicity, repeated exposure: 2

H402-Hazardous to the aquatic environment, acute hazard: 3

H412-Hazardous to the aquatic environment, long-term hazard: 3

9.2% of the mixture consists of ingredients of unknown acute dermal toxicity.

#### Pictograms or Hazard symbols and Hazard statement(s):



Signal Word: Danger

#### Hazard Statements:

H227-Combustible liquid

H315-Causes skin irritation

H319-Causes serious eye irritation

H341-Suspected of causing genetic defects  
 H350-May cause cancer  
 H371-May cause damage to organs (target organs: respiratory system, central nervous system, and optic nerve)  
 H373-May cause damage to organs through prolonged or repeated exposure (target organs: kidney, liver, spleen, blood, skin, nervous system)  
 H402-Harmful to aquatic life  
 H412-Harmful to aquatic life with long lasting effects

### Precautionary Statements:

P201-Obtain special instructions before use.  
 P202-Do not handle until all safety precautions have been read and understood.  
 P210-Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking.  
 P260-Do not breathe dust/fume/gas/mist/vapours/spray.  
 P264-Wash thoroughly after handling.  
 P270-Do not eat, drink, or smoke when using this product.  
 P273-Avoid release to the environment.  
 P280-Wear protective gloves/protective clothing/eye protection/face protection.  
 P302+P352-If on skin: Wash with plenty of soap and water.  
 P305+P351+P338-If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P308+P311-If exposed or concerned: Call a Poison Center/doctor.  
 P308+P313-If exposed or concerned: Get medical advice/attention.  
 P314-Get medical advice/attention if you feel unwell.  
 P332+P313-If skin irritation occurs: Get medical advice/attention.  
 P337+P313-If eye irritation persists: Get medical advice/attention.  
 P362+P364-Take off contaminated clothing and wash it before reuse.  
 P370+P378-In case of fire: Use dry chemical, carbon dioxide, dry sand, water spray, or alcohol-resistant foam to extinguish.  
 P403-Store in a well-ventilated place.  
 P405-Store locked up.  
 P501-Dispose of contents/container in accordance with local/regional/national/international regulations.

Section 3 – Composition, Information on Ingredients
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CAS#	Chemical Name	Percent
569-61-9	Basic Fuchsin	0.9 w/v
64-17-5	Ethyl Alcohol	8.3 v/v
67-56-1	Methyl Alcohol	0.4 v/v
108-95-2	Phenol	2.6 v/v
7732-18-5	Water	Balance

Section 4 - First Aid Measures
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**Eye Exposure:** In case of contact with eyes, flush with copious amounts of water for at

least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Get immediate medical attention.

**Dermal Exposure:** In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Seek medical attention.

**Oral Exposure:** If swallowed, seek immediate medical advice. Rinse mouth with water. Do NOT induce vomiting.

**Inhalation Exposure:** If inhaled, remove to fresh air. If breathing becomes difficult, call a physician.

## Section 5 - Fire Fighting Measures

**General Information:** As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating gases may be generated through thermal decomposition or combustion. Combustible liquid.

**Extinguishing Media:** Use dry chemical, carbon dioxide, water spray, or alcohol-resistant foam.

**Hazardous Combustion Products:** Carbon oxides, nitrogen oxides, formaldehyde, potentially hazardous fumes and gases.

**Flash Point:** 37.8°C - 61°C (100°F-141.8°F) Closed Cup

**Autoignition Temperature:** Not available

**Explosion Limits, Lower:** Not available

**Upper:** Not available

**NFPA Rating:** (estimated) Health: 2; Flammability: 2; Instability: 0

## Section 6 - Accidental Release Measures

### **Procedure(s) of Personal Precaution(s):**

Wear personal protective equipment. Do not ingest or inhale. Do not get on skin or clothing. Do not get in eyes. Ensure adequate ventilation. Keep away from heat. Eliminate all sources of ignition.

**Methods for Cleaning up:** Absorb with sand, earth, or vermiculite. Carefully sweep up and containerize for proper disposal. Use only non-sparking tools and explosion-proof equipment. Take precautionary measures against static discharge. Do not release to the environment. Do not release to drains.

## Section 7 - Handling and Storage

Use care when handling. Wear personal protective equipment. Wash thoroughly after handling. Ensure adequate ventilation. Do not ingest or inhale. Do not get on skin or

clothing. Do not get in eyes. Keep in a tightly closed container. Store in a cool, dry, and well-ventilated area. Protect from direct sunlight. Keep away from heat, flames, sparks, and hot surfaces. Use explosion-proof equipment and non-sparking tools. Take precautionary measures against static discharges. Keep away from incompatible materials.

Section 8 - Exposure Controls, Personal Protection
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**Engineering Controls:** Use explosion-proof ventilation equipment. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

**Personal Protective Equipment**

**Eyes:** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

**Skin:** Wear appropriate protective gloves to prevent skin exposure.

**Clothing:** Wear appropriate protective clothing to prevent skin exposure.

**Respirators:** A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant a respirator's use.

**Exposure Limits:**

Chemical Name	ACGIH -TLV	NIOSH - IDLH	OSHA - Final PELs
Basic Fuchsin CAS#569-61-9	Not listed	Not listed	Not listed
Ethyl Alcohol CAS#64-17-5	1000 ppm STEL	1000 ppm TWA 1900 mg/m <sup>3</sup> TWA 3300 ppm IDLH	1000 ppm TWA 1900 mg/m <sup>3</sup> TWA
Methyl Alcohol CAS#67-56-1	200 ppm TWA 250 ppm Skin STEL	200 ppm TWA 260 mg/m <sup>3</sup> TWA 250 ppm STEL 325 mg/m <sup>3</sup> STEL 6000 ppm IDLH	200 ppm TWA 260 mg/m <sup>3</sup> TWA
Phenol CAS#108-95-2	5 ppm Skin TWA	5 ppm TWA 19 mg/m <sup>3</sup> TWA 15.6 ppm Ceiling 60 mg/m <sup>3</sup> Ceiling 250 ppm IDLH	5 ppm TWA 19 mg/m <sup>3</sup> TWA

**OSHA Vacated PELs:** Ethyl Alcohol: 1000 ppm TWA; 1900 mg/m<sup>3</sup> TWA  
Methyl Alcohol: 200 ppm TWA; 260 mg/m<sup>3</sup> TWA; 250 ppm STEL;  
325 mg/m<sup>3</sup> Skin STEL  
Phenol: 5 ppm TWA; 19 mg/m<sup>3</sup> Skin TWA

Section 9 - Physical and Chemical Properties
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**Physical State:** Liquid  
**Appearance:** Dark purple-red

**Odor:** Pungent. Phenolic.  
**Vapor Pressure:** Not available  
**Odor Threshold:** Not available  
**Vapor Density:** Not available  
**pH:** Approx. 5.9  
**Relative Density:** Not available  
**Melting point/freezing point:** Not available  
**Solubility:** Soluble in water  
**Boiling Point:** Not available  
**Flash Point:** 37.8°C - 61°C (100°F-141.8°F) Closed Cup  
**Evaporation Rate:** Not available  
**Flammability (solid, gas):** Not available  
**Partition co-efficient: n-octanol/water:** Not applicable  
**Autoignition Temperature:** Not available  
**Decomposition Temperature:** Not available  
**Viscosity:** Not available  
**Specific Gravity/Density:** Not available

#### Section 10 - Stability and Reactivity

**Chemical Stability:** Stable under normal temperatures and pressures.  
**Conditions to Avoid:** Incompatible materials, ignition sources, and excess heat. Exposure to light.  
**Incompatibilities with Other Materials:** Strong oxidizing agents, bases, acids, strong reducing agents, alkali metals, ammonia, hydrazine, peroxides, sodium, acid anhydrides, calcium hypochlorite, chromyl chloride, nitrosyl perchlorate, bromine pentafluoride, perchloric acid, silver nitrate, mercuric nitrate, potassium-tert-butoxide, magnesium perchlorate, acid chlorides, platinum, uranium hexafluoride, silver oxide, iodine heptafluoride, acetyl bromide, disulfuryl difluoride, tetrachlorosilane + water, acetyl chloride, permanganic acid, ruthenium (VIII) oxide, uranyl perchlorate, potassium dioxide, halogens, lead, and metals.  
**Hazardous Decomposition Products:** Carbon oxides, nitrogen oxides, formaldehyde, potentially hazardous fumes and gases.

#### Section 11 - Toxicological Information

**CAS#569-61-9 Basic Fuchsin: RTECS#: CX9850100**

LD50 Oral: 5000 mg/kg (mouse)

LD50 Dermal: Not available

LC50 Inhalation: Not available

**Carcinogenicity:** Basic Fuchsin CAS#569-61-9 is not listed by ACGIH or OSHA. Basic Fuchsin is listed by IARC (Group 2B, Possibly Carcinogenic to Humans), NTP (RAHC, Reasonably anticipated to be a human carcinogen), and California Prop. 65 as a carcinogen. Tumorigenic-carcinogenic by RTECS criteria.

**Germ cell mutagenicity:** Mutagenic effects have occurred in experimental animals and in humans.

**CAS#64-17-5 Ethyl Alcohol: RTECS#: KQ6300000**

LD50 Oral: 10470 mg/kg (rat)

LD50 Dermal: Not available  
LC50 Inhalation: 124.7 mg/L 4h (rat)

Draize test, rabbit, eye: 500 mg/24H Mild Irritant.  
Skin: Repeated exposure may cause skin dryness or cracking.  
Ethyl Alcohol overexposure may lead to headache, dizziness, tiredness, nausea, and vomiting.

**Carcinogenicity:** Ethyl Alcohol CAS#64-17-5 is not listed by OSHA. Ethyl Alcohol is listed by IARC (Group 1, Carcinogenic to Humans), NTP (Known Carcinogen), and ACGIH (A3, Animal Carcinogen). Ethyl Alcohol is listed by California Prop. 65 as a developmental carcinogen (alcoholic beverages only).

**CAS#67-56-1 Methyl Alcohol: RTECS#: PC1400000**

LD50 Oral: 100.1 mg/kg (expert judgement)  
LD50 Dermal: 300.1 mg/kg (expert judgement)  
LC50 Inhalation: 3.1 m/L 4h vapor (expert judgement)

**Investigated as a mutagen, reproductive effector.**

Draize test, rabbit, eye: 100 mg/24h Moderate Irritant.  
Draize test, rabbit, skin: 20 mg/24h Moderate Irritant.

**Carcinogenicity:** Methyl Alcohol CAS#67-56-1 is not listed by IARC, NTP, ACGIH, or OSHA. Methyl Alcohol is listed by California Prop. 65 as a developmental carcinogen.

**CAS#108-95-2 Phenol:**

LD50 Oral: 340 mg/kg (rat)  
LD50 Dermal: 630 mg/kg (rabbit)  
LC50 Inhalation: 0.5667 mg/L 4h dust/mist (calculation method)

**Carcinogenicity:** Phenol CAS#108-95-2 is not listed by IARC, NTP, ACGIH, OSHA, or California Prop. 65.

**Germ cell mutagenicity:** Phenol is a mutagen and may cause genetic changes. Possible risk of irreversible effects. Chromosome aberration, hamster ovary cells.

**Reproductive effects:** Experiments have shown reproductive toxicity effects in laboratory animals.

**Information on the likely routes of exposure:** Routes of entry anticipated: oral, dermal, inhalation, and eye.

**Epidemiology:** Not available.

**Teratogenicity:** Not available.

**Reproductive Effects:** Reproductive toxicity effects have been found with a component substance (phenol).

**Developmental Effects:** Not available

**Neurotoxicity:** Not available.

**Mutagenicity:** Suspected of causing genetic defects.

**Specific Organ Toxicity, Single Exposure:** Respiratory system, central nervous system, and optic nerve.

**Specific Organ Toxicity, Repeated Exposure:** Kidney, liver, spleen, blood, skin, and nervous system.

**Symptoms associated with exposure:** Eye contact may cause irritation, pain, watering, redness, blurred vision. Skin contact may cause irritation, pain, redness, blistering, cracking, dermatitis. Ingestion may cause stomach pains and damage to the digestive

tract. Inhalation may cause mucosal irritation, cough, shortness of breath, and damage to the respiratory tract. May cause cancer. Suspected of causing genetic defects. May cause damage to organs.

**The toxicological properties of this material have not been thoroughly investigated.**

Section 12 - Ecological Information
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**Ecotoxicity:** Do not release to the environment. Do not release to drains. Harmful to aquatic life with long lasting effects.

**CAS#64-17-5 Ethyl Alcohol:**

LC50, freshwater fish: 14200 mg/L 96h (pimephales promelas)(fathead minnow)  
EC50, freshwater algae: 275 mg/L 72h (chlorella vulgaris)  
EC50, water flea: 9268 mg/L 48h  
EC50, water flea: 10800 mg/L 24h  
IC50, bacteria: >1000 mg/L 3h (activated sludge)  
EC50, microtox: 34634 mg/L 30min (photobacterium phosphoreum)  
EC50, microtox: 35470 mg/L 5min (photobacterium phosphoreum)

**CAS#67-56-1 Methyl Alcohol:**

LC50, freshwater fish: 15400 mg/L 96h flow-through (lepomis macrochirus)(bluegill)  
LC50, freshwater fish: 19000 mg/L 96h (oncorhynchus mykiss)(rainbow trout)  
EC50, water flea: 18260 mg/L 96h semi-static (daphnia magna)  
EC50, water flea: >10000mg/L 24h  
ErC50, algae: 22000 mg/L 96h (pseudokirchneriella subcapitata)(green algae)  
IC50, bacteria: >1000 mg/L 3h (activated sludge)

**CAS#108-95-2 Phenol:**

LC50, freshwater fish: 8.9 mg/L 96h flow-through (oncorhynchus mykiss)(rainbow trout)  
EC50, freshwater algae: 61.1 mg/L 96h static (pseudokirchneriella subcapitata)(green algae)  
EC50, water flea: 3.1 mg/L 48h static (ceriodaphnia dubia)

**Persistence and degradability:** Not available.

**Bio-accumulative potential:** Not available.

**Mobility:** Will likely be mobile in the environment due to its water solubility.

Section 13 - Disposal Considerations
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**DISPOSAL:** Dispose of in accordance with all federal, state, and local regulations.

## Section 14 - Transport Information

### **DOT**

Non-Regulated

## Section 15 - Regulatory Information

### **Canada Regulatory Information**

WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the SDS contains all the information required by the CPR.

## Section 16 - Additional Information

**SDS Creation Date:** 1/18/11

**Revision #1:** 10/10/13 MH

**Revision #2:** 3-28-17 RC

**Revision #3:** 6-29-18

**Revision #4:** 8-14-18

**Revision #5:** 7-15-22

**Revision #6:** 2-22-24

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