Safety Data Sheet

Schiff Reagent

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Schiff Reagent

Synonyms/Generic Names: Schiff aldehyde solution

SDS Number: 615.00

Product Use: For Educational Use Only

Manufacturer: Columbus Chemical Industries, Inc.
N4335 Temkin Rd.
Columbus, WI. 53925

For More Information Contact: Ward's Science
5100 West Henrietta Rd.
PO Box 92912-9012
Rochester, NY 14692
(800) 962-2660 (Monday-Friday 7:30-7:00 Eastern Time)

In Case of Emergency Call: CHEMTREC - 800-424-9300 or 703-527-3887 (24 Hours/Day, 7 Days/Week)

2. HAZARDS IDENTIFICATION

OSHA Hazards: Carcinogen, Target organ effect, Harmful by ingestion, Corrosive

Target Organs: Eyes, Skin

Signal Word: Danger

Pictograms:

GHS Classification:

Skin irritation	Category 2
Eye irritation	Category 2A
Carcinogenicity	Category 1B

GHS Label Elements, including precautionary statements:

Hazard Statements:

H315	Causes skin irritation.
H319	Causes serious eye irritation.
H350	May cause cancer.

Precautionary Statements:

P201	Obtain special instructions before use.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P305+P351+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.

Potential Health Effects

Eyes	Causes eye burns. Causes severe eye burns.
Inhalation	May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
Skin	Harmful if absorbed through skin. Causes skin burns.
Ingestion	Harmful if swallowed.

NFPA Ratings

Health	2
Flammability	0
Reactivity	0
Specific hazard	Not Available

HMIS Ratings

Health	2
Fire	0
Reactivity	0
Personal	E

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	Weight %	CAS #	EINECS# / ELINCS#	Formula	Molecular Weight
Basic Fuchsin	0.1	632-99-5	N/A	$C_{20}H_{19}N_3 \cdot HCl$	337.85 g/mol
Sodium Bisulfite	1.7	7631-90-5	231-673-0	$NaHSO_3$	104.07 g/mol
Hydrochloric Acid	2	7647-01-0	231-595-7	HCl	36.46 g/mol
Water	Balance	7732-18-5	231-791-2	H_2O	18.00 g/mol

4. FIRST-AID MEASURES

Eyes	Rinse with plenty of water for at least 15 minutes and seek medical attention.
Inhalation	Move casualty to fresh air and keep at rest. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention immediately.
Skin	Flush with plenty of water for at least 15 minutes while removing contaminated clothing and wash using soap. Get medical attention immediately.
Ingestion	**Do Not Induce Vomiting!** Never give anything by mouth to an unconscious person. If conscious, wash out mouth with water. Get medical attention immediately.

5. FIRE-FIGHTING MEASURES

Suitable (and unsuitable) extinguishing media	Product is not flammable. Use appropriate media for adjacent fire. Cool containers with water.
Special protective equipment and precautions for firefighters	Wear self-contained, approved breathing apparatus and full protective clothing, including eye protection and boots.
Specific hazards arising from the chemical	Emits toxic fumes (carbon oxides, hydrogen chloride gas, sodium oxides, sulfur oxides, nitrogen oxides) under fire conditions. (See also Stability and Reactivity section).

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	See section 8 for recommendations on the use of personal protective equipment.
Environmental precautions	Prevent spillage from entering drains. Any release to the environment may be subject to federal/national or local reporting requirements.
Methods and materials for containment and cleaning up	Absorb spill with noncombustible absorbent material, then place in a suitable container for disposal. Clean surfaces thoroughly with water to remove residual contamination. Dispose of all waste and cleanup materials in accordance with regulations.

7. HANDLING AND STORAGE

Precautions for safe handling
See section 8 for recommendations on the use of personal protective equipment. Use with adequate ventilation. Wash thoroughly after using. Keep container closed when not in use. Avoid formation of aerosols.

Conditions for safe storage, including any incompatibilities
Store in cool, dry well ventilated area. Keep away from incompatible materials (see section 10 for incompatibilities).

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational exposure controls:

Component	Exposure Limits	Basis	Entity
Sodium Bisulfite	5 mg/m^3	TLV	AGCIH
	5 mg/m^3	REL	NIOSH
Hydrogen Chloride	2 ppm 2.98 mg/m^3	CEIL	ACGIH
	5 ppm 7 mg/m^3	CEIL	OSHA
	5 ppm 7 mg/m^3	CEIL	NIOSH
	50 ppm	IDLH	OSHA

TWA: Time Weighted Average over 8 hours of work.
TLV: Threshold Limit Value over 8 hours of work.
REL: Recommended Exposure Limit
PEL: Permissible Exposure Limit
STEL: Short Term Exposure Limit during x minutes.
IDLH: Immediately Dangerous to Life or Health
WEEL: Workplace Environmental Exposure Levels
CEIL: Ceiling

Personal Protection

Eyes	Wear chemical safety glasses or goggles with face shield.
Inhalation	Provide local exhaust, preferably mechanical. If exposure levels are excessive, use an approved respirator.
Skin	Wear nitrile or rubber gloves, and complete body suit. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Other	Not Available

Other Recommendations
Provide eyewash stations, quick-drench showers and washing facilities accessible to areas of use and handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance (physical state, color, etc.)	Clear, colorless liquid.
Odor	Irritating odor.
Odor threshold	Not Available
pH	Not Available
Melting point/freezing point	Not Available
Initial boiling point and boiling range	Not Available
Flash point	Not Flammable
Evaporation rate	Not Available
Flammability (solid, gas)	Not Flammable
Upper/lower flammability or explosive limit	Not Explosive
Vapor pressure	Not Available
Vapor density	Not Available
Density	1.0104 g/cm^3 (water = 1)
Solubility (ies)	Not Available
Partition coefficient: n-octanol/water	Not Available
Auto-ignition temperature	Not Available
Decomposition temperature	Not Available

10. STABILITY AND REACTIVITY

Chemical Stability	Stable
Possibility of Hazardous Reactions	Will not occur.
Conditions to Avoid	Not Available
Incompatible Materials	Strong oxidizing agents.
Hazardous Decomposition Products	Carbon oxides, hydrogen chloride gas, sodium oxides, sulfur oxides, nitrogen oxides.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Skin	Not Available
Eyes	Not Available
Respiratory	Not Available
Ingestion	Not Available

Carcinogenicity

IARC	3-Group 3: Not classifiable as to its carcinogenicity to humans (basic fuchsin). 3-Group 3: Not classifiable as to its carcinogenicity to humans (sodium bisulfate). 3-Group 3: Not classifiable as to its carcinogenicity to humans (hydrochloric acid).
ACGIH	A4: Not classifiable as to its carcinogenicity to humans (sodium bisulfate). A4: Not classifiable as to its carcinogenicity to humans (hydrochloric acid).
NTP	No components 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 components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Signs & Symptoms of Exposure

Skin	Irritation, redness.
Eyes	Redness, tearing, itching, burning, conjunctivitis.
Respiratory	Irritation of mucous membranes, coughing, wheezing, shortness of breath.
Ingestion	Irritation and burning sensations of mouth and throat, nausea, vomiting, abdominal pain.

Chronic Toxicity	Not Available
Teratogenicity	Not Available
Mutagenicity	Not Available
Embryotoxicity	Not Available
Specific Target Organ Toxicity	Not Available
Reproductive Toxicity	Not Available
Respiratory/Skin Sensitization	Not Available

12. ECOLOGICAL INFORMATION

Ecotoxicity

Aquatic Vertebrate	Not Available
Aquatic Invertebrate	Not Available
Terrestrial	Not Available

Persistence and Degradability	Not Available
Bioaccumulative Potential	Not Available
Mobility in Soil	Not Available
PBT and vPvB Assessment	Not Available
Other Adverse Effects	Not Available

13. DISPOSAL CONSIDERATIONS

Waste Residues	Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product or residues.
Product Containers	Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product container.

The information offered in section 13 is for the product as shipped. Use and/or alterations to the product may significantly change the characteristics of the material and alter the waste classification and proper disposal methods.

14. TRANSPORTATION INFORMATION

US DOT	UN1760, Corrosive liquids, n.o.s., (hydrochloric acid), 8, pg II
TDG	UN1760, CORROSIVE LIQUIDS, N.O.S., (HYDROCHLORIC ACID), 8, PG II
IMDG	UN1760, CORROSIVE LIQUIDS, N.O.S., (HYDROCHLORIC ACID), 8, PG II
Marine Pollutant	No
IATA/ICAO	UN1760, Corrosive liquids, n.o.s., (hydrochloric acid), 8, pg II

15. REGULATORY INFORMATION

TSCA Inventory Status	All ingredients are listed on the TSCA inventory.
DSCL (EEC)	All ingredients are listed on the DSCL inventory.
California Proposition 65	Listed: Basic Fuchsin
SARA 302	Not Listed
SARA 304	Not Listed
SARA 311	Basic Fuchsin, Sodium Bisulfite, Hydrochloric Acid
SARA 312	Basic Fuchsin, Sodium Bisulfite, Hydrochloric Acid
SARA 313	Listed: Hydrochloric Acid
WHMIS Canada	Not Listed

16. OTHER INFORMATION

Revision	Date
Revision 1	01/14/2013
Revision 2	11/22/2013