

# Safety Data Sheet

## Aniline Blue Solution with Phosphomolybdic Acid

### Section 1 - Chemical Product and Company Identification

**SDS Name:** Aniline Blue Solution with Phosphomolybdic Acid

**Catalog Numbers:** SO-898, K-693-4

**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

H290-Corrosive to metals: 1

H314-Skin corrosion/irritation: 1B

H318-Serious eye damage/eye irritation: 1

1.6% of the mixture consists of ingredients of unknown acute dermal toxicity.

1.6% of the mixture consists of ingredients of unknown acute inhalation toxicity.

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



Signal Word: Danger

#### Hazard Statements:

H290-May be corrosive to metals

H314-Causes severe skin burns and eye damage

H318-Causes serious eye damage

## Precautionary Statements:

P234-Keep only in original packaging.

P260-Do not breathe dusts or mists.

P264-Wash thoroughly after handling.

P280-Wear protective gloves/protective clothing/eye protection/face protection.

P301+P330+P331-If swallowed: Rinse mouth. Do NOT induce vomiting.

P303+P361+P353-If on skin (or hair): Take off immediately all contaminated clothing.

Rinse skin with water/shower.

P304+P340-If inhaled: Remove person to fresh air and keep comfortable for breathing.

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/doctor.

P363-Wash contaminated clothing before reuse.

P390-Absorb spillage to prevent material damage.

P405-Store locked up.

P406-Store in a corrosion resistant container with a resistant inner liner.

P501-Dispose of contents/container in accordance with local/regional/national/international regulations.

### Section 3 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent
28983-56-4	Aniline Blue	0.03 w/v
6153-56-6	Oxalic Acid Dihydrate	0.9 w/v
51429-74-4	Phosphomolybdic Acid Hydrate	0.7 w/v
7732-18-5	Water	Balance

### Section 4 - First Aid Measures

**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. Seek medical attention immediately.

**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. May cause severe and permanent damage to the digestive tract. Causes gastrointestinal burns and perforation of the digestive tract. Do not induce vomiting. Wash mouth with water and drink small quantities of water (stop if the exposed person feels sick as vomiting may be dangerous).

**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 by thermal decomposition or combustion.

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

**Hazardous Combustion Products:** Carbon oxides, nitrogen oxides, sulfur oxides, sodium oxides, phosphorous oxides, molybdenum oxides, nitrogen, ammonia, irritating and toxic fumes and gases.

**Flash Point:** Not available

**Autoignition Temperature:** Not available

**Explosion Limits, Lower:** Not available

**Upper:** Not available

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

**Methods for Cleaning up:** Absorb with sand, earth, or vermiculite. Carefully sweep up and containerize for proper disposal. Do not release to the environment. Do not release to drains.

## Section 7 - Handling and Storage

Use care when handling. Wear personal protective equipment. Ensure adequate ventilation. Wash thoroughly after handling. Do not ingest or inhale. Do not get on skin or clothing. Do not get in eyes. Store in a tightly closed non-metal container in a cool, dry, and well-ventilated area. Protect from direct sunlight. Keep away from heat and sources of ignition. Keep away from incompatible materials.

## Section 8 - Exposure Controls, Personal Protection

**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
Aniline Blue CAS#28983-56-4	10 ppm TWA 15 ppm STEL	10 ppm TWA 15 ppm STEL	10 ppm TWA
Oxalic Acid Dihydrate CAS#6153-56-6	1 mg/m <sup>3</sup> TWA 2 mg/m <sup>3</sup> STEL	1 mg/m <sup>3</sup> TWA 2 mg/m <sup>3</sup> STEL	1 mg/m <sup>3</sup> TWA
Phosphomolybdic Acid Hydrate CAS#51429-74-4	0.5 mg/m <sup>3</sup> TWA	1000 mg/m <sup>3</sup> IDLH	5 mg/m <sup>3</sup> TWA (vacated)

**OSHA Vacated PELs:** Phosphomolybdic acid hydrate: 5 mg/m<sup>3</sup> TWA

Section 9 - Physical and Chemical Properties

**Physical State:** Liquid

**Appearance:** Dark Blue

**Odor:** Odorless

**Vapor Pressure:** Not available

**Odor Threshold:** Not available

**Vapor Density:** Not available

**pH:** Approx. 1.3

**Relative Density:** Not available

**Melting point/freezing point:** Not available

**Solubility:** Soluble in water

**Boiling Point:** Not available

**Flash Point:** Not available

**Evaporation Rate:** Not available

**Flammability (solid, gas):** Not available

**Partition coefficient: n-octanol water:** Not available

**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 products, ignition sources, excess heat, freezing, and combustible material. Avoid direct sunlight.

**Incompatibilities with Other Materials:** Strong oxidizing agents, strong reducing agents, bases, organic materials, powdered metals, metals, alkalis, combustible material, and acid chlorides.

**Hazardous Decomposition Products:** Carbon oxides, nitrogen oxides, sulfur oxides, sodium oxides, phosphorous oxides, molybdenum oxides, nitrogen, ammonia, irritating and toxic fumes and gases.

Note: May attack metal forming flammable hydrogen gas which can form explosive mixtures with air.

Section 11 - Toxicological Information
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**CAS#28631-66-5 Aniline Blue: RTECS#: DB4958000**

LD50 Oral: Not available

LD50 Dermal: Not available

LC50 Inhalation: Not available

**Carcinogenicity:** Aniline Blue CAS#28631-66-5 is not listed by IARC, NTP, ACGIH, OSHA, or California Prop 65.

**CAS#6153-56-6 Oxalic Acid Dihydrate:**

LD50 Oral: 375 mg/kg (rat)

LD50 Dermal: 1100.1 mg/kg (expert judgement)

LC50 Inhalation: Not available

**Carcinogenicity:** Oxalic Acid CAS#6153-56-6 is not listed by IARC, NTP, ACGIH, OSHA, or California Prop 65.

**CAS#51429-74-4 Phosphomolybdic Acid Hydrate:**

LD50 Oral: Not available

LD50 Dermal: Not available

LC50 Inhalation: Not available

**Carcinogenicity:** Phosphomolybdic Acid Hydrate CAS#51429-74-4 is not listed by IARC, NTP, OSHA, or California Prop 65. Phosphomolybdic Acid Hydrate is listed by ACGIH (A3, Animal Carcinogen).

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

**Epidemiology:** Not available.

**Teratogenicity:** Not available.

**Reproductive Effects:** Not available.

**Developmental Effects:** Not available.

**Neurotoxicity:** Not available.

**Mutagenicity:** Not available.

**Specific Target Organ Toxicity, Single Exposure:** Not available.

**Specific Target Organ Toxicity, Repeated Exposure:** Not available.

**Symptoms associated with exposure:** Corrosive material. Causes severe skin burns and eye damage. Ingestion may cause stomach pains, nausea, vomiting, diarrhea, anemia, fatigue, swelling, gastrointestinal burns, damage to the delicate tissue, and danger of perforation of the esophagus and stomach. Strong caustic effect of skin and mucous membranes. Skin contact adverse symptoms may include pain/irritation, redness, blistering. Eye contact adverse symptoms may include pain, redness, watering. Inhalation may cause cough or shortness of breath. May damage liver and kidneys. May cause cardiovascular effects.

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

## Section 12 - Ecological Information

**Ecotoxicity:** Do not release to the environment. Do not release to drains.

**CAS#144-62-7 Oxalic Acid (anhydrous):**

LC50, freshwater fish: 160 mg/L 48h (leuciscus idus)(golden orfe)

EC50, water flea: 162.2 mg/L 48h (daphnia magna)

**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

**DISPOSAL:** Dispose of in accordance with all federal, state, and local regulations.

## Section 14 - Transport Information

**DOT**

Proper shipping name: Corrosive Liquid, Acidic, Organic, N.O.S. (Oxalic Acid Dihydrate, Phosphomolybdic Acid Hydrate)

UN3265

PG III

Hazard Class 8

## 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
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**SDS Creation Date:** 10/15/12

**Revision #1.** 9-28-15

**Revision #2.** 1-18-23

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