

# Safety Data Sheet

## Hydroquinone Reducing Solution

### Section 1 - Chemical Product and Company Identification

**SDS Name:** Hydroquinone Reducing Solution

**Catalog Numbers:** SO-728, C-201-4, K-693-5

**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

H315-Skin corrosion/irritation: 2

H317-Sensitisation, skin: 1

H318-Serious eye damage/eye irritation: 1

H332-Acute toxicity, inhalation: 4

H335-Specific target organ toxicity, single exposure; Respiratory tract irritation: 3

H341-Germ cell mutagenicity: 2

H350-Carcinogenicity: 1A

H370-Specific target organ toxicity, single exposure: 1

H372-Specific target organ toxicity, repeated exposure: 1

H401-Hazardous to the aquatic environment, acute hazard: 2

H411-Hazardous to the aquatic environment, long-term hazard: 2

1% of the mixture consists of ingredients of unknown acute inhalation toxicity.

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



Signal Word: Danger

## **Hazard Statements:**

H315-Causes skin irritation  
H317-May cause an allergic skin reaction  
H318-Causes serious eye damage  
H332-Harmful if inhaled  
H335-May cause respiratory irritation  
H341-Suspected of causing genetic defects  
H350-May cause cancer  
H370-Causes damage to organs (target organs: respiratory system, central nervous system, and optic nerve)  
H372-Causes damage to organs through prolonged or repeated exposure (target organs: kidney, liver, heart, spleen, and blood)  
H401-Toxic to aquatic life  
H411-Toxic 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.  
P260-Do not breathe dust/fume/gas/mist/vapours/spray.  
P261-Avoid breathing dust/fume/gas/mist/vapours/spray.  
P264-Wash thoroughly after handling.  
P270-Do not eat, drink, or smoke when using this product.  
P271-Use only outdoors or in a well-ventilated area.  
P272-Contaminated work clothing should not be allowed out of the workplace.  
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.  
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.  
P308+P311-If exposed or concerned: Call a Poison Center/doctor.  
P308+P313-If exposed or concerned: Get medical advice/attention.  
P310-Immediately call a Poison Center/doctor.  
P312-Call a Poison Center/doctor if you feel unwell.  
P314-Get medical advice/attention if you feel unwell.  
P332+P313-If skin irritation occurs: Get medical advice/attention.  
P333+P313-If skin irritation or rash occurs: Get medical advice/attention.  
P362+P364-Take off contaminated clothing and wash it before reuse.  
P391-Collect spillage.  
P403+P233-Store in a well-ventilated place. Keep container tightly closed.  
P405-Store locked up.  
P501-Dispose of contents/container in accordance with local/regional/national/international regulations.

### Section 3 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent
123-31-9	Hydroquinone	1 w/v
50-00-0	Formaldehyde, 37-40%	4 v/v
67-56-1	Methanol	<1 v/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. 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. Get medical attention.

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

**Inhalation Exposure:** If inhaled, remove to fresh air. Get immediate medical attention.

### 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, hydrogen, formaldehyde, 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. Wash thoroughly after handling. Use with 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. Light sensitive. 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
Hydroquinone CAS#123-31-9	1 mg/m <sup>3</sup> TWA	2 mg/m <sup>3</sup> Ceiling 50 mg/m <sup>3</sup> IDLH	2 mg/m <sup>3</sup> TWA
Formaldehyde CAS#50-00-0	0.1 ppm TWA 0.3 ppm STEL	0.1 ppm Ceiling 0.016 ppm TWA 20 ppm IDLH	0.75 ppm TWA 2 ppm STEL
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	200 ppm TWA 260 mg/m <sup>3</sup> TWA

		6000 ppm IDLH	
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**OSHA Vacated PELs:** Hydroquinone: 2 mg/m<sup>3</sup> TWA  
Formaldehyde: 5 ppm Ceiling; 3 ppm TWA; 10 ppm STEL  
Methyl Alcohol: 200 ppm TWA; 260 mg/mg TWA; 250 ppm STEL;  
325 mg/m<sup>3</sup> Skin STEL

Section 9 - Physical and Chemical Properties
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**Physical State:** Liquid  
**Appearance:** Clear, colorless  
**Odor:** Formaldehyde  
**Vapor Pressure:** Not available  
**Odor Threshold:** Not available  
**Vapor Density:** Not available  
**pH:** Approx. 3.6-3.9  
**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
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**Chemical Stability:** Stable under normal temperatures and pressures.  
**Conditions to Avoid:** Incompatible materials, excess heat. Avoid exposure to light.  
**Incompatible Materials:** Strong oxidizing agents, strong bases, acids, reducing agents, aniline, alkaline, phenol, isocyanates, acid anhydrides, amines, peroxides, acid chlorides, alkali metals, nitriles, and metals.  
**Hazardous Decomposition Products:** Carbon oxides, hydrogen, formaldehyde, irritating and toxic fumes and gases.

Section 11 - Toxicological Information
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**CAS#123-31-19 Hydroquinone: RTECS#: MX3500000**  
LD50 Oral: 302 mg/kg (rat)  
LD50 Dermal: 74800 mg/kg (rat)  
LC50 Inhalation: Not available

**Carcinogenicity:** Hydroquinone CAS123-31-19 is not listed by IARC, NTP, OSHA, or California Prop. 65. Hydroquinone is listed by ACGIH (A3, Animal Carcinogen).

**CAS#50-00-0 Formaldehyde:**

LD50 Oral: 500 mg/kg (rat)

LD50 Dermal: 270 mg/kg (rabbit)

LC50 Inhalation: 0.578 mg/L 4h (rat)

**Carcinogenicity:** Formaldehyde CAS#50-00-0 is not listed by OSHA. Formaldehyde is listed by IARC (Group 1, Carcinogenic to Humans), NTP (Known Carcinogen), ACGIH (A1, Known Human Carcinogen), and California Prop. 65 as a carcinogen.

**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 mg/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.

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

**Epidemiology:** Not available.

**Teratogenicity:** Teratogenic effects have occurred in experimental animals (Formaldehyde).

**Reproductive Effects:** Experiments have shown reproductive toxicity effects on laboratory animals (Formaldehyde, Hydroquinone).

**Developmental Effects:** Developmental effects have occurred in experimental animals (Formaldehyde).

**Neurotoxicity:** Not available.

**Mutagenicity:** Mutagenic effects have occurred in humans (Formaldehyde). Suspected of causing genetic defects (Hydroquinone).

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

**Specific Target Organ Toxicity, Repeated Exposure:** Kidney, liver, heart, spleen, and blood.

**Symptoms associated with exposure:** Skin contact may cause sensitization. Skin contact may cause dermatitis and/or depigmentation. May cause an allergic skin reaction. Symptoms of an allergic reaction may include rash, irritation, redness, itching, hives, swelling, burning sensation, trouble breathing, tingling of the hands/feet, dizziness, chest pain, muscle pain. Eye contact may cause serious eye damage, redness, tearing. Risk of blindness. Ingestion may cause nausea, vomiting, diarrhea, liver irregularities. Inhalation may cause respiratory irritation. May cause cancer. Suspected of causing genetic defects. Absorption into the body may cause kidney and liver damage. Onset may be delayed. Causes damage to organs.

**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. Toxic to aquatic life. May cause long-term adverse effects in the aquatic environment.

**CAS#123-31-9 Hydroquinone:**

LC50, freshwater fish: 0.638 mg/L 96h flow-through (oncorhynchus mykiss)(rainbow trout)  
EC50, water flea: 0.134 mg/L 48h semi-static (daphnia magna)  
ErC50, algae: 0.33 mg/L 72h static (pseudokirchneriella subcapitata)(green algae)

**CAS#50-00-0 Formaldehyde:**

LC50, freshwater fish: 15 mg/L 96h (leuciscus idus)(golden orfe)  
EC50, water flea: 20 mg/L 96h  
EC50, water flea: 2 mg/L 48h

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

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

**Persistence and degradability:** Persistence is unlikely based on available information.

**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**

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:** 12-21-18

**Revision #1:** 4-4-22

**Revision #2:** 6-14-24

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