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

H302-Acute toxicity, oral: 4
H312-Acute toxicity, dermal: 4
H315-Skin corrosion/irritation: 2
H317-Sensitisation, skin: 1
H318-Serious eye damage/ eye irritation: 1
H341-Germ cell mutagenicity: 2
H350-Carcinogenicity: 1A
H400-Hazardous to the aquatic environment, acute toxicity: 1
H410-Hazardous to the aquatic environment, chronic toxicity: 1

Pictograms or Hazard symbols and Hazard statement(s):

Signal word: Danger

Hazard Statements:

H302-Harmful if swallowed
H312-Harmful in contact with skin
H315-Causes skin irritation
H317-May cause an allergic skin reaction
H318-Causes serious eye damage
H341-Suspected of causing genetic defects
H350-May cause cancer
H400-Very toxic to aquatic life
H410-Very 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.
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.
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.
P281-Use personal protective equipment as required.
P301+P312-If swallowed: Call a Poison Center or doctor/physician if you feel unwell.
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+P313-If exposed or concerned: Get medical advice/attention.
P310-Immediately call a Poison Center or doctor/physician.
P312-Call a Poison Center or doctor/physician if you feel unwell.
P330-Rinse mouth.
P332+P313-If skin irritation occurs: Get medical advice/attention.
P333+P313-If skin irritation or rash occurs: Get medical advice/attention.
P362-Take off contaminated clothing and wash before reuse.
P363-Wash contaminated clothing before reuse.
P391-Collect spillage.
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
50-00-0	Formaldehyde, 37-40%	4 v/v
67-56-1	Methanol	<1 v/v
123-31-9	Hydroquinone	1 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. Call a physician.

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 advice.

Oral Exposure: If swallowed, seek immediate medical advice. Rinse mouth with water and drink plenty of water. Do not induce vomiting.

Inhalation Exposure: If inhaled, remove to fresh air. Get 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 water spray, carbon dioxide, dry sand, water spray, or alcohol-resistant foam.

Hazardous Combustion Products: Carbon oxides, hydrogen, formaldehyde, irritating 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 container at room temperature. Keep away from incompatible materials. Light sensitive.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: 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	NIOSH	OSHA - Final PELs
Formaldehyde, 37-40% CAS#50-00-0	0.1 ppm TWA 0.3 ppm STEL	0.016 ppm TWA 0.1 ppm Ceiling 20 ppm IDLH	0.75 ppm TWA 2 ppm STEL
Methyl Alcohol CAS#67-56-1	200 ppm TWA 250 ppm STEL	250 ppm STEL 325 mg/m3 STEL 200 ppm TWA 260 mg/m3 TWA 6000 ppm IDLH	200 ppm TWA 260 mg/m3 TWA
Hydroquinone CAS#123-31-9	1 mg/m3 TWA	2 mg/m3 Ceiling 50 mg/m3 IDLH	2 mg/m3 TWA

OSHA Vacated PELs: Formaldehyde, 37-40%: 3 ppm TWA; 5 ppm Ceiling; 10 ppm STEL
Methyl Alcohol: 200 ppm TWA; 260 mg/m3 TWA; 250 ppm STEL; 325 mg/m3 STEL
Hydroquinone: 2 mg/m3 TWA

Section 9 - Physical and Chemical Properties

Physical State: Liquid
Appearance: Clear
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
Auto-ignition 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, excess heat, and freezing. Light sensitive.
Incompatibilities with Other Materials: Strong oxidizing agents, strong bases, alkaline, nitriles, acids, isocyanates, acid anhydrides, metals, and acid chlorides.
Hazardous Decomposition Products: Carbon oxides, hydrogen, formaldehyde, irritating toxic fumes and gases.

Section 11 - Toxicological Information

CAS#50-00-0 Formaldehyde, 37-40%
LD50 Oral: 500 mg/kg (rat)
LD50 Dermal: 270 mg/kg (rabbit)
LC50 Inhalation: 0.578 mg/L (rat) 4 h

Carcinogenicity: Formaldehyde, 37-40% CAS#50-00-0 is listed by ACGIH (A1, Known Human Carcinogen), IARC (Group 1, Carcinogenic to humans), NTP and California Prop. 65 as a carcinogen.

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

LD50 Oral: >1187-2769 mg/kg (rat)
LD50 Dermal: 17100 mg/kg (rabbit)
LC50 Inhalation: 128.2 mg/L (rat) 4h

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#123-31-9 Hydroquinone: RTECS#: MX3500000
LD50 Oral: 298 mg/kg (rat)
LD50 Dermal: 74800 mg/kg (rabbit)
LC50 Inhalation: Not available

Carcinogenicity: Hydroquinone CAS#123-31-9 is not listed by IARC, NTP, or California

Prop 65. Hydroquinone is listed by the ACGIH (A3, Animal Carcinogen).

Epidemiology: Not available
Teratogenicity: Not available
Reproductive Effects: Experiments with Hydroquinone have shown reproductive toxicity effects on laboratory animals.
Developmental Effects: Component substance (Methyl Alcohol) is listed on California Prop 65 as a developmental hazard.
Mutagenicity: Mutagenic effects have occurred in humans.
Specific Target Organ Toxicity, Single Exposure: Not available
Specific Target Organ Toxicity, Repeated Exposure: Not available

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 to the environment.

CAS#50-00-0 Formaldehyde, 37-40%:
LC50, freshwater fish: 15 mg/L 96h (leuciscus idus)
EC50, water flea: 20 mg/L 96h
EC50, water flea: 2 mg/L 48h

CAS#67-56-1 Methyl Alcohol:
LC50, freshwater fish: >10000 mg/L 96h (pimephales promelas)(fathead minnow)
EC50, water flea: >10000 mg/L 24h
EC50, algae: 22000 mg/L 96h (pseudokirchneriella subcapitata)(green algae)
IC50, bacteria: >1000 mg/L 3h

CAS#123-31-9 Hydroquinone:
EC50, freshwater algae: 0.335 mg/L 72h (pseudokirchneriella subcapitata)
LC50, freshwater fish: 0.17 mg/L 96h (brachydanio rerio)
LC50, freshwater fish: 0.044 mg/L 96h flow-through (oncorhynchus mykiss)
LC50, freshwater fish: 0.044 mg/L 96h flow-through (pimephales promelas)(fathead minnow)
LC50, freshwater fish: 0.1-0.18 mg/L 96h static (pimephales promelas)(fathead minnow)
EC50, microtox: 0.038 mg/L 15min
EC50, microtox: 0.0382 mg/L 30min
EC50, microtox: 0.042 mg/L 5min
EC50, microtox: 23.75 mg/L 60min
EC50, water flea: 0.29 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
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

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