

SAFETY DATA SHEET

RUSSELL'S MODIFIED-ZENKER SOLUTION

Section 1 - Chemical Product and Company Identification

SDS Name: Russell's Modified-Zenker Solution
Catalog Numbers: SO-742
Company Identification: ROWLEY BIOCHEMICAL
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

H301-Acute Oral Toxicity: 4
H311-Acute Dermal Toxicity: 4
H315-Skin Corrosion/Skin Irritation: 2
H319-Eye Damage/Irritation: 2A
H334-Respiratory Sensitization: 1
H317-Skin Sensitization: 1
H340-Germ Cell Mutagenicity: 1A
H350-Carcinogenicity: 1A
H360-Reproductive toxicity: 1A
H373-Specific Target Organ Toxicity RE: 2

PHYSICAL HAZARDS Category

H290-Corrosive to Metals: 1

ENVIRONMENTAL HAZARD

Not classified

Pictograms or Hazard symbols and Hazard statement.



Danger: Toxic if swallowed.
Toxic in contact with skin.



Warning: Causes skin irritation.
Causes serious eye irritation.
Warning: May cause an allergic skin reaction.



inhaled.

Danger: May cause allergy or asthma symptoms or breathing difficulties if
May cause genetic defects.
May cause cancer.
May damage fertility or the unborn child.
Warning: May cause damage to organs; kidneys, pancreas.



Warning: May be corrosive to metals.

Precautionary Statement

H301

P264 Wash thoroughly after handling.

P270 Do not eat, drink, or smoke when using this product.

P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor.

P330 **Rinse Mouth.**

P405 Store locked up.

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

H311

P280 Wear protective gloves, clothing, and eye and face protection.

P302 + P352 If on skin, wash with plenty of water. Remove contact lenses if present and easy to do so. Continue rinsing.

P312 Call a physician if you feel unwell

P361 + P363 Take off immediately all contaminated clothing and wash it before reuse.

P405 Store locked up.

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

H315

P280 Wear protective gloves, clothing, and eye and face protection.

P302 + P352 If on skin, wash with plenty of water. Remove contact lenses if present and easy to do so. Continue rinsing.

P332 + P313 If skin irritation occurs, get medical advice/attention.

P362 Take off contaminated clothing and wash before reuse.

H319

P305 + P351 + P338 If in eyes, rinse cautiously with water for several minutes.

P337 + P313 If eye irritation persists, get medical advice/attention.

P285 In case of inadequate ventilation, wear respiratory protection.

P304+P341 IF INHALED: if breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.

P342+P311 if experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.

H334

P261 Avoid breathing fumes/mist/vapors.

P285 In case of inadequate ventilation, wear respiratory protection.

P304+P341 IF INHALED: if breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.

P342+P311 if experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.

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

H317

P272 Contaminated work clothing should not be allowed out of the work place.

P333+P313 IF ON SKIN: Wash with plenty of soap and water.

P363 Wash contaminated clothing before reuse.

H340

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P281 Use personal protective equipment as required.

P308 + P313 If exposed or concerned: Get medical advice/attention.

P405 Store Locked up

P501 Dispose of contents/container to... in accordance with local/regional/national/international regulations (to be specified)

H350

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understand.

P281 Use personal protective equipment as required.

P308 + P313 If exposed or concerned: Get medical advice/attention.

P405 Store locked up

H360

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P281 Use personal protective equipment as required.

P308 + P313 IF exposed or concerned: Get medical advice/attention.

P405 Store locked up

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

H373

P260 Do not breathe fume/gas/mist/vapors.

P314 Get medical advice/attention if you feel unwell.

H272

P210 Keep away from heat, flames, and hot surfaces. No smoking.

P220 Store away from combustible materials. Incompatible with: reducing agents, easily oxidized materials, organic materials and metal powders.

P221 Take any precaution to avoid mixing with combustibles.

P370 + P378 In case of fire (see section 5)

H290

P234-Keep only in original container.

P390-Absorb spillage to prevent material damage.

P406-Store in corrosive resistant/container with a resistant inner liner

Section 3 – Composition, Information on Ingredients

CAS#	Chemical Name	Percent
7646-85-7	Zinc Chloride	4.76 w/v
7778-50-9	Potassium Dichromate	2.38 w/v
7757-82-6	Sodium Sulfate	0.95 w/v
64-19-7	Glacial Acetic Acid	4.76 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. 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.

Oral Exposure: If Swallowing seek immediate medical advice.

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

Section 5 - Fire Fighting Measures

Firefighters should wear proper protective clothing and self-contained breathing apparatus with full piece operated in positive pressure mode to prevent contact with skin and eyes.

Extinguishing Media: Use water spray, dry chemical powder, or appropriate foam.

Flash Point: N/A

NFPA Rating: (estimated) Health: 1; Flammability: 0; Instability: 0

Section 6 - Accidental Release Measures

Procedure(s) of Personal Precaution(s):

Wear protective gear.

Methods for Cleaning up: Absorb with sand, earth or vermiculite. Carefully sweep up and containerize for proper disposal.

Section 7 - Handling and Storage

Use care when handling. Wash thoroughly after handling. Store capped at room temperature. 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.

Section 9 - Physical and Chemical Properties

Physical State: Liquid

Appearance: Orange

Odor: N/A

pH: N/A

Vapor Pressure: N/A

Vapor Density: N/A

Evaporation Rate: N/A

Viscosity: N/A

Boiling Point: N/A

Solubility: N/A

Section 10 - Stability and Reactivity

Chemical Stability: Stable under ordinary conditions of use and storage. Heat and sunlight can contribute to instability.

Conditions to Avoid: Heat, freezing.

Incompatibilities with Other Materials: Chromic Acid, ethylene glycol, perchloric acid, phosphorous trichloride, oxidizers, sodium peroxide, strong caustics, most metals (except aluminum), carbonates, hydroxides, oxides, and phosphates.

Hazardous Decomposition Products: Carbon monoxide, irritating and toxic fumes.
Hazardous Polymerization: Will not occur.

Section 11 - Toxicological Information
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RTECS#:

LD50/LC50:

CAS# 7646-85-7:

Oral rat LD50: 350 mg/kg.

Oral mouse: rabbit LD50: 329 mg/kg

Carcinogenicity:

CAS# 7446-85-7: Classified possible for human.

LD50/LC50:

CAS# 7778-50-9:

Not Available

Carcinogenicity:

CAS# 7446-85-7: Classified A1 by ACGIH. (Confirmed human carcinogen.)

LD50/LC50:

CAS# 7757-82-6:

Oral mouse LD50: 5989 mg/kg.

Carcinogenicity:

CAS# 7757-82-6: Sulfate Classified possible for human.

LD50/LC50:

CAS# 64-19-7:

Oral rat LD50: 3310 mg/kg.

Skin: rabbit LD50: 1.06 g/kg

Inhalation mouse LC50: 5620 ppm/1-hr; investigated as a mutagen, reproductive effector.

Carcinogenicity:

CAS# 64-19-7: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Section 12 - Ecological Information

Ecotoxicity:

CAS# 64-19-7. This material is expected to be slightly toxic to aquatic life. The LC50/96-hour values for fish are between 10 and 100 mg/l.

Environmental: When released into the air, this material may be moderately degraded by reaction with photochemically produced hydroxyl radicals.

Physical: No information available.

Other: No information available.

Section 13 - Disposal Considerations

Appropriate method of disposal of substance or preparation:

Handled as hazardous waste and sent to an RCRA approved incinerator or disposed in an RCRA approved wasted facility.

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 MSDS contains all the information required by the CPR.

European/International Regulations

European Labeling in Accordance with EC Directives

Risk Phrases:

R22 Harmful by inhalation, in contact with skin and if swallowed
R36/38 Irritating to eyes and skin

Safety Phrases:

S20/21 When using do not eat, drink or smoke
S2 Keep out of the reach of children.
S 7 Keep container tightly closed.
S 9 Keep container in a well-ventilated place

Section 16 - Additional Information

MSDS Creation Date: 10/15/12

Revision #1. YM 8/11/14-Co-sign RC 12/2/14

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