

Safety Data Sheet

FORMIC DECAL SOLUTION

Section 1 - Chemical Product and Company Identification

SDS Name: Formic Decal Solution

Catalog Numbers: SO-693, F-90

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

H303-Acute toxicity, oral: 5

H314-Skin corrosion/irritation: 1B

H318-Serious eye damage/eye irritation: 1

H332-Acute toxicity, inhalation: 4

Pictograms or Hazard symbols and Hazard statement(s):



Signal Word: Danger

Hazard Statements:

H290-May be corrosive to metals

H303-May be harmful if swallowed

H314-Causes severe skin burns and eye damage

H318-Causes serious eye damage

H332-Harmful if inhaled

Precautionary Statements:

P234-Keep only in original container.
P260-Do not breathe dusts or mists.
P261-Avoid breathing dust/fume/gas/mist/vapours/spray.
P264-Wash thoroughly after handling.
P271-Use only outdoors or in a well-ventilated area.
P280-Wear eye protection/face protection.
P301+P312-If swallowed: Call a Poison Center or doctor/physician if you feel unwell.
P301+P330+P331-If swallowed: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353-If on skin (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340-If inhaled: Remove victim to fresh air and keep at rest in a position 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 or doctor/physician.
P312-Call a Poison Center/doctor if you feel unwell.
P363-Wash contaminated clothing before reuse.
P390-Absorb spillage to prevent material damage.
P405-Store locked up.
P406-Store in corrosive 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
141-53-7	Sodium Formate	5 w/v
64-18-6	Formic Acid	25 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. Seek 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. Seek medical attention.

Oral Exposure: If swallowed, seek immediate medical advice. Do NOT induce vomiting.

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, sodium oxides, hydrogen, irritating fumes and gases.

Flash Point: Not available

Auto ignition Temperature: Not available

Explosion Limits, Lower: Not Available

Upper: Not available

NFPA Rating: (estimated) Health: 2; Flammability: 1; Instability: 1

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. Remove all sources of ignition. Take precautionary measures against static discharges. Ensure adequate ventilation.

Methods for Cleaning up: Absorb with sand, earth, or vermiculite. Carefully sweep up and containerize for proper disposal. Use spark-proof tools and explosion-proof equipment. 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 only under a chemical fume hood. Avoid contact with skin, eyes, and clothing. Store in a tightly closed container in a cool, dry, and well-ventilated area. Keep away from heat, sparks, flame. Avoid incompatible materials. Protect from direct sunlight.

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
Sodium Formate CAS#141-53-7	Not listed	Not listed	Not listed
Formic Acid CAS#64-18-6	5 ppm TWA 10 ppm STEL	30 ppm IDLH 5 ppm TWA 9 mg/m ³ TWA	5 ppm TWA 9 mg/m ³ TWA

OSHA Vacated PELs: Formic Acid: 5 ppm TWA; 9 mg/m³ TWA

Section 9 - Physical and Chemical Properties

Physical State: Liquid

Appearance: Clear

Odor: Not available

Vapor Pressure: Not available

Odor Threshold: Not available

Vapor Density: Not available

pH: 2.20-2.40

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, direct sunlight.

Incompatibilities with Other Materials: Strong oxidizing agents, strong acids, strong bases, metals, finely powdered metals, and metals.

Hazardous Decomposition Products: Carbon oxides, sodium oxides, hydrogen, irritating fumes and gases.

Section 11 - Toxicological Information

CAS#141-53-7 Sodium Formate: RTECS#: LR0350000

LD50 Oral: 11200 mg/kg (rat)
LD50 Dermal: >2000 mg/kg (rat)
LC50 Inhalation: >0.67 mg/L 4h (rat)

Carcinogenicity: Sodium Formate CAS#141-53-7 is not listed by IARC, NTP, ACGIH, OSHA, or California Prop 65.

CAS#64-18-6 Formic Acid:

LD50 Oral: 730 mg/kg (rat)
LD50 Dermal: >2000 mg/kg
LC50 Inhalation: 15 g/m³ 15min (rat)

Carcinogenicity: Formic Acid CAS#64-18-6 is not listed by IARC, NTP, ACGIH, OSHA, or California Prop 65.

Information on the likely routes of exposure: Routes of entry anticipated: oral, dermal, inhalation, 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: headache, dizziness, tiredness, nausea, vomiting, diarrhea. May cause adverse kidney effects. Corrosive material. Ingestion may cause severe swelling, severe damage to tissue and danger of perforation.

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#141-53-7 Sodium Formate:

LC50, freshwater fish: 1000 mg/L 96h flow-through (oncorhynchus mykiss)(rainbow trout)
EC50, water flea: >1000 mg/L 48h flow-through (daphnia magna)
EC50, algae: 570 mg/L 72h static (pseudokirchneriella subcapitata)

CAS#64-18-6 Formic Acid:

LC50, freshwater fish: 46-100 mg/L 96h (leuciscus idus)

EC50, freshwater algae: 25 mg/L 96h

EC50, water flea: 34 mg/L 48h

EC50, microtox: 46.7 mg/L 17h

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: Formic Acid Solution (Corrosive)

UN3412

PG II

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

SDS Creation Date: January 22, 2004

Revision #1. RC 11/13/15

Revision #2. 9-6-22

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Rowley Biochemical, Inc. be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages, howsoever arising, even if Rowley Biochemical, Inc. has been advised of the possibility of such damages.