



HI-VALLEY CHEMICAL

LABORATORY PRODUCTS

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SAFETY DATA SHEET

Hi Valley Chemical

Formic Acid

1 PRODUCT AND COMPANY IDENTIFICATION

Supplier Details: High Valley Products, Inc.
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2 HAZARDS IDENTIFICATION

Classification of the Substance or Mixture

GHS Classification in Accordance with 29 CFR 1910 (OSHA HCS):

Health, Serious Eye Damage/Eye Irritation, 1
Health, Skin corrosion/irritation, 1 A
Health, Acute toxicity, 3 Inhalation
Environmental, Hazards to the aquatic environment - Acute, 3
Physical, Flammable Liquids, 3
Health, Acute toxicity, 4 Oral

GHS Label Elements, Including Precautionary Statements

GHS Signal Word: **DANGER**

GHS Hazard Pictograms:



GHS Hazard Statements:

H318 - Causes serious eye damage
H314 - Causes severe skin burns and eye damage
H331 - Toxic if inhaled
H402 - Harmful to aquatic life
H226 - Flammable liquid and vapor
H302 - Harmful if swallowed

GHS Precautionary Statements:

P210 - Keep away from heat/sparks/open flames/hot surfaces. No smoking
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P233 - Keep container tightly closed.
P240 - Ground/bond container and receiving equipment.
P241 - Use explosion-proof electrical/ventilating/light/equipment.
P242 - Use only non-sparking tools.
P243 - Take precautionary measures against static discharge.
P261 - Avoid breathing dust/fume/gas/mist/vapors/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.
P273 - Avoid release to the environment.

P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P301+330+331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+361+353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+351+338 - IF IN EYES: Rinse continuously 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.
P321 - Specific treatment (see _ on this label).
P363 - Wash contaminated clothing before reuse.
P370+378 - In case of fire: Use _ for extinction.
P403+233 - Store in a well ventilated place. Keep container tightly closed.
P403+235 - Store in a well ventilated place. Keep cool.
P405 - Store locked up.
P501 - Dispose of contents/container to _

3 COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients:

Cas#	%	Chemical Name
64-18-6		Formic acid

4 FIRST AID MEASURES

Inhalation: If inhaled, move person to fresh air. If not breathing, give artificial respiration. Consult a physician.
Skin Contact: Remove contaminated clothing and shoes immediately. Wash with soap and water. Take victim immediately to hospital. Consult a physician.
Eye Contact: Immediately flush eyes with large amounts of water for at least 15 minutes, lifting eyelids occasionally to facilitate irrigation.
Get immediate medical attention.
Ingestion: Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5 FIRE FIGHTING MEASURES

Flammability: Flammable
Flash Point: 69C (156F)
Autoignition Temp: 601C (1114F)
LEL: 18
UEL: 57

Extinguishing media
Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special hazards arising from the substance or mixture
Carbon oxides

Advice for firefighters
Wear self-contained breathing apparatus for firefighting if necessary.

Further information
Use water spray to cool unopened containers.

6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:
Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

Environmental precautions:
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be

avoided.

Methods and materials for containment and cleaning up:

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations. Keep in suitable, closed containers for disposal.

7 HANDLING AND STORAGE

Handling Precautions: Precautions for safe handling:
Avoid contact with eyes, skin, or clothing. Avoid breathing vapors or mist. Keep away from sources of ignition. No smoking.
See section 8 for recommendations on the use of personal protective equipment.
Storage Requirements: Keep container tightly closed. Store in cool/dry, well ventilated area.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls: Appropriate engineering controls:
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal Protective Equipment: Formic acid (64-18-6) []

Personal protective equipment

Eye/face protection: Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching gloves outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Full contact: Material: Nature latex/chloroprene Minimum layer thickness: 0.6 mm Break through time: > 480 min Material tested:Lapren (KCL 706 / Aldrich Z677558, Size M) data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374 If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Body Protection: Complete suit protecting against chemicals, Flame retardant antistatic protective clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection: Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi- purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure: Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Formic acid (64-18-6) []

Components with workplace control parameters

TWA 5 ppm USA. ACGIH Threshold Limit Values (TLV)

Eye, skin, & Upper Respiratory Tract irritation

STEL 10 ppm USA. ACGIH Threshold Limit Values

(TLV)

Eye, skin, & Upper Respiratory Tract irritation

TWA 5 ppm USA. NIOSH Recommended
9 mg/m³ Exposure Limits

TWA 5 ppm USA. Occupational Exposure Limits
9 mg/m³ (OSHA) - Table Z-1 Limits for Air
Contaminants

The value in mg/m³ is approximate.

TWA 5 ppm USA. OSHA - TABLE Z-1 Limits for
9 mg/m³ Air Contaminants - 1910.1000

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PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Colorless liquid.	Odor:	Pungent
Physical State:	Liquid	Molecular Formula:	HCOOH
Odor Threshold:	No data available	Solubility:	Infinitely soluble
Spec Grav./Density:	1.2	Freezing/Melting Pt.:	ca. 8C (ca. 46F)
Viscosity:	No data available	Flash Point:	No data available
Boiling Point:	101C (214F)	Vapor Density:	1.6 @ 19C (66F)
Flammability:	Flammable	Auto-Ignition Temp:	No data available
Partition Coefficient:	No data available	UFL/LFL:	No data available
Vapor Pressure:	40 mm Hg @ 24C (75F)		
pH:	No data available		
Evap. Rate:	No data available		
Molecular weight:	46.03		
Decomp Temp:	No data available		

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STABILITY AND REACTIVITY

Reactivity:	No data available
Chemical Stability:	Stable under recommended storage conditions.
Conditions to Avoid:	Heat, flames and sparks.
Materials to Avoid:	Strong Oxidizing Agents, Strong Bases, Powdered Metals
Hazardous Decomposition:	In the event of fire, see section 5

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TOXICOLOGICAL INFORMATION

Formic acid (64-18-6) []

Information on toxicological effects

Acute toxicity:

LD50 Oral - rat - 730 mg/kg (OECD Test Guideline 401)

LC50 Inhalation - rat - 4 h - 7.4 mg/l

Dermal: no data available

Skin corrosion/irritation: Skin - rabbit Result: Severe skin irritation (Draize Test)

Serious eye damage/eye irritation: Eyes - rabbit Result: Severe eye irritation

Respiratory or skin sensitisation: Prolonged or repeated exposure may cause allergic reactions in certain sensitive individuals.

Germ cell mutagenicity: no data available

Carcinogenicity:

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by

ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity: no data available

Specific target organ toxicity - single exposure: no data available

Specific target organ toxicity - repeated exposure: no data available

Aspiration hazard: no data available

Additional Information:

RTECS: LQ4900000

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Headache, Nausea, Vomiting
Kidney - Irregularities - Based on Human Evidence

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ECOLOGICAL INFORMATION

Formic acid (64-18-6) []

Information on ecological effects

Toxicity:

Toxicity to fish LC50 - *Leuciscus idus* (Golden orfe) - 46 - 100 mg/l - 96 h.

Toxicity to daphnia and EC50 - *Daphnia magna* (Water flea) - 34.2 mg/l - 48 h.

other aquatic invertebrates

Toxicity to bacteria - *Pseudomonas putida* - 46.7 mg/l - 17 h.

Persistence and degradability: Biodegradability Result: > 90 % - Readily biodegradable.

Biochemical Oxygen 86 mg/g Demand (BOD)

Chemical Oxygen 348 mg/g Demand (COD)

Ratio BOD/ThBOD 8.60 %

Bioaccumulative potential: Bioaccumulation is unlikely.

Mobility in soil: no data available

Results of PBT and vPvB assessment PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Harmful to aquatic life.

Additional ecological no data available information

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DISPOSAL CONSIDERATIONS

Formic acid (64-18-6) []

Waste treatment methods

Product: Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging: Dispose of as unused product.

14 TRANSPORT INFORMATION

UN1779, Formic acid with more than 85% acid by mass, 8,(3), PGII, (Formic Acid)

15 REGULATORY INFORMATION

Component (CAS#) [%] - CODES

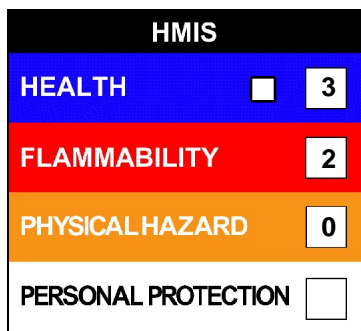
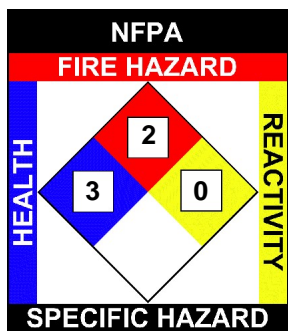
RQ(5000LBS), Formic acid (64-18-6) [n/a%] CERCLA, CSWHS, HAP, MASS, NJHS, OSHAWAC, PA, SARA313, TOXICRCRA, TSCA, TXAIR, TXHWL

Regulatory CODE Descriptions

- RQ = Reportable Quantity
- CERCLA = Superfund clean up substance
- CSWHS = Clean water Act Hazardous substances
- HAP = Hazardous Air Pollutants
- MASS = MA Massachusetts Hazardous Substances List
- NJHS = NJ Right-to-Know Hazardous Substances
- OSHA = OSHA workplace Air Contaminants
- PA = PA Right-To-Know List of Hazardous Substances
- SARA313 = SARA 313 Title III Toxic Chemicals
- TOXICRCRA = RCRA Toxic Hazardous Wastes (U-List)
- TSCA = Toxic Substances Control Act
- TXAIR = TX Air Contaminants with Health Effects Screening Level
- TXHWL = TX Hazardous Waste List

16 OTHER INFORMATION

NFPA: Health = 3, Fire = 2, Reactivity = 0, Specific Hazard = n/a
HMIS III: Health = 3, Fire = 2, Physical Hazard = 0



Disclaimer:

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