HI-VALLEY CHEMICAL
LABORATORY PRODUCTS
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Toluene

1 PRODUCT AND COMPANY IDENTIFICATION

Product Identifier:	Toluene
SDS Number:	R-025
Product Code:	518340-PT, 518340-QT, 518340-1, 518340-5, 518340-30, 518340-55
Revision Date:	6/4/2018
Version:	1
Supplier Details:	High Valley Products, Inc. 1134 West 850 North Centerville, Utah 84014
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2 HAZARDS IDENTIFICATION

Classification of Substance

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

Physical, Flammable Liquids, 2
Health, Aspiration hazard, 1
Health, Skin corrosion/irritation, 2
Health, Specific target organ toxicity - Single exposure, 3
Health, Reproductive toxicity, 2
Health, Specific target organ toxicity - Repeated exposure, 2
Environmental, Hazards to the aquatic environment - Acute, 2

GHS Label Elements, Including Precautionary Statements

GHS Signal Word: DANGER

GHS Hazard Pictograms:

GHS Hazard Statements:

H225 - Highly flammable liquid and vapor
H304 - May be fatal if swallowed and enters airways
H315 - Causes skin irritation
H336 - May cause drowsiness or dizziness
H361 - Suspected of damaging fertility or the unborn child
H373 - May cause damage to organs through prolonged or repeated exposure
H401 - Toxic to aquatic life

GHS Precautionary Statements:

P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P210 - Keep away from heat/sparks/open flames/hot surfaces. No smoking
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.

P260 - Do not breathe dust/fume/gas/mist/vapors/spray.
P264 - Wash _ thoroughly after handling.
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+310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
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.
P308+313 - IF exposed or concerned: Get medical advice/attention.
P321 - Specific treatment (see _ on this label).
P331 - Do NOT induce vomiting.
P332+313 - If skin irritation occurs: Get medical advice/attention.
P362 - Take off contaminated clothing and wash 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

Chemical Ingredients

CAS#	%	Chemical Name
108-88-3	100%	Toluene

4 FIRST AID MEASURES

Inhalation: If inhaled, move person to fresh air. If not breathing, give artificial respiration. Consult a physician.

Skin Contact: Wash with soap and water. Consult a physician.

Eye Contact: Immediately flush eyes with large amounts of water for at least 15 minutes, lifting eyelids occasionally to facilitate irrigation.

5 FIRE FIGHTING MEASURES

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. Evacuate personnel to safe areas.
Environmental precautions:
Do not let product enter drains.
Methods and materials for containment and cleaning up:
Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

7 HANDLING AND STORAGE

Handling Precautions: Avoid contact with eyes, skin, or clothing. Avoid breathing vapors or mist.
Use explosion-proof equipment.Keep away from sources of ignition - No smoking.Take measures to

prevent the build up of electrostatic charge.

Storage Requirements: Keep container tightly closed. Keep away from heat, sparks, and flames.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Personal Protective Equipment:

Toluene (108-88-3) [100%]

Personal protective equipment

Eye/face protection: Face shield and safety glasses 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: Fluorinated rubber Minimum layer thickness: 0.7 mm Break through time: 480 min Material tested:Vitoject (KCL 890 / Aldrich Z677698, Size M)

Splash contact: Material: Fluorinated rubber Minimum layer thickness: 0.7 mm Break through time: 480 min Material tested:Vitoject (KCL 890 / Aldrich Z677698, 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.

Toluene (108-88-3) [100%]

Components with workplace control parameters

TWA	100 ppm 375 mg/m3	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
STEL	150 ppm 560 mg/m3	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
TWA	200 ppm	USA. Occupational Exposure Limits (OSHA) - Table Z2
Z37.12- 1967		
CEIL	300 ppm	USA. Occupational Exposure Limits (OSHA) - Table Z2
Z37.12- 1967		
Peak	500 ppm	USA. Occupational Exposure Limits (OSHA) - Table Z2
Z37.12- 1967		
TWA	20 ppm	USA. ACGIH Threshold Limit Values

(TLV)
Visual impairment
Female reproductive
Pregnancy loss
2010 Adoption
Substances for which there is a Biological Exposure Index or Indices (see BEI section)
Not classifiable as a human carcinogen

TWA	100 ppm 375 mg/m3	USA. NIOSH Recommended Exposure Limits
ST	150 ppm 560 mg/m3	USA. NIOSH Recommended Exposure Limits

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Colorless liquid.
Physical State:	Liquid
Odor:	aromatic
Specific Gravity or Density:	0.865
Boiling Point:	110 - 111 °C (230 - 232 °F)
Freezing or Melting Point:	Melting point/range: -93 °C (-135 °F)
Flash Point:	4.0 °C (39.2 °F) - closed cup
Vapor Pressure:	29.1 hPa (21.8 mmHg) at 20.0 °C (68.0 °F)
Autoignition Temperature:	535.0 °C (995.0 °F)
Upper Flammability Limit and Lower Flammability Limit:	Upper explosion limit: 7 %(V) Lower explosion limit: 1.2 %(V)

10 STABILITY AND REACTIVITY

Reactivity:	No data available
Chemical Stability:	Stable under recommended storage conditions.
Conditions to Avoidentification:	Heat, flames and sparks.
Materials to Avoidentification:	Strong Oxidizing Agents.
Hazardous Decomposition:	No data available

11 TOXICOLOGICAL INFORMATION

Toluene (108-88-3) [100%]

Information on toxicological effects

Acute toxicity:
LD50 Oral - rat - > 5,580 mg/kg
LC50 Inhalation - rat - 4 h - 12,500 - 28,800 mg/m3
LD50 Dermal - rabbit - 12,196 mg/kg
no data available

Skin corrosion/irritation: Skin - rabbit Result: Skin irritation - 24 h

Serious eye damage/eye irritation: no data available

Respiratory or skin sensitisation: no data available

Germ cell mutagenicity: rat Liver DNA damage

Carcinogenicity:
IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans (Toluene)
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: Damage to fetus possible Suspected human reproductive toxicant

Reproductive toxicity - rat - Inhalation:
Paternal Effects: Spermatogenesis (including genetic material, sperm morphology,motility, and count).
Experiments have shown reproductive toxicity effects in male and female laboratory animals.

Developmental Toxicity - rat - Oral:
Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus).

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: XS5250000

Lung irritation, chest pain, pulmonary edema, Inhalation studies on toluene have demonstrated the development of inflammatory and ulcerous lesions of the penis, prepuce, and scrotum in animals.
Stomach - Irregularities - Based on Human Evidence

12 ECOLOGICAL INFORMATION

Toluene (108-88-3) [100%]

Information on ecological effects

Toxicity:
Toxicity to fish LC50 - Oncorhynchus mykiss (rainbow trout) - 7.63 mg/l - 96 h.
NOEC - Pimephales promelas (fathead minnow) - 5.44 mg/l - 7 d
Toxicity to daphnia and EC50 - Daphnia magna (Water flea) - 8.00 mg/l - 24 h.
other aquatic invertebrates
Immobilization EC50 - Daphnia magna (Water flea) - 6 mg/l - 48 h
Toxicity to algae EC50 - Chlorella vulgaris (Fresh water algae) - 245.00 mg/l - 24 h.
EC50 - Pseudokirchneriella subcapitata (green algae) - 10.00 mg/l - 24 h

Persistence and degradability: Biodegradability Result: - Readily biodegradable.

Bioaccumulative potential: no data available

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.
Toxic to aquatic life.

13 DISPOSAL CONSIDERATIONS

Toluene (108-88-3) [100%]

Waste treatment methods

Product: Contact a licensed professional waste disposal service to dispose of this material.

14 TRANSPORT INFORMATION

UN1294, Toluene, 3, PGII

15 REGULATORY INFORMATION

Component (CAS#) [%] - CODES

RQ(1000LBS), Toluene (108-88-3) [100%] CERCLA, CSWHS, EPCRAWPC, HAP, MASS, NJHS, OSHAWAC, PA, PRIPOL, PROP65, SARA313, TOXICPOL, TOXICRCRA, TSCA, TXAIR, TXHWL

WARNING

This product can expose you to chemicals including , which @VERB@ known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

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Regulatory CODE Descriptions
-----------------------------------------------------------------
RQ = Reportable Quantity
CERCLA = Superfund clean up substance
CSWHS = Clean Water Act Hazardous substances
EPCRAWPC = EPCRA Water Priority Chemicals
HAP = Hazardous Air Pollutants
MASS = MA Massachusetts Hazardous Substances List
NJHS = NJ Right-to-Know Hazardous Substances
OSHAWAC = OSHA Workplace Air Contaminants
PA = PA Right-To-Know List of Hazardous Substances
PRIPOL = Clean Water Act Priority Pollutants
PROP65 = CA Prop 65
SARA313 = SARA 313 Title III Toxic Chemicals
TOXICPOL = Clean Water Act Toxic Pollutants
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
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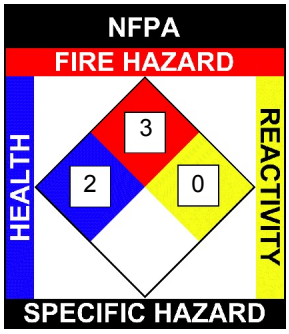
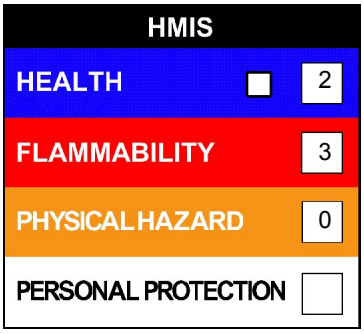
16 OTHER INFORMATION

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





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