

1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier**Product Name** Calci-Solve**Other means of identification****Product Code** 4134-01, 4134-08, 4134-24**Synonyms** None**Details of the supplier of the safety data sheet****Company Name** Nu-Calgon
2611 Schuetz Road
St. Louis, MO 63043
(800) 554-5449
<http://www.nucalgon.com/>**Emergency telephone number****Emergency Telephone** Chemtrec 1-800-424-9300

2. HAZARDS IDENTIFICATION

Classification**OSHA Regulatory Status**

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Oral	Category 4
Acute toxicity - Dermal	Not classified
Acute toxicity - Inhalation (Gases)	Category 3
Acute toxicity - Inhalation (Dusts/Mists)	Category 4
Skin corrosion/irritation	Category 1 Sub-category A
Serious eye damage/eye irritation	Category 1
Specific target organ toxicity (single exposure)	Category 3

Label elements**Emergency Overview**

Danger

Hazard statements

Harmful if swallowed

Toxic if inhaled

Causes severe skin burns and eye damage

May cause respiratory irritation. May cause drowsiness or dizziness



Appearance Clear Light Red/Orange**Physical state** Liquid**Odor** Acidic**Precautionary Statements - Prevention**

Use only in a well-ventilated area

Wear protective gloves/protective clothing/eye protection/face protection

Do not breathe dust/fume/gas/mist/vapors/spray

Wash face, hands and any exposed skin thoroughly after handling

Do not eat, drink or smoke when using this product

Wash face, hands and any exposed skin thoroughly after handling

Precautionary Statements - Response

Specific Treatment (See Section 4 on the SDS)

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

Immediately call a POISON CENTER or doctor/physician

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower

If irritation persists or burns occur, get medical attention

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

Call a POISON CENTER or doctor/physician if you feel unwell

IF SWALLOWED: Rinse mouth. DO NOT induce vomiting

Drink plenty of water

Immediately call a POISON CENTER or doctor/physician

Precautionary Statements - Storage

Store in a well-ventilated place. Keep container tightly closed

Store locked up

Precautionary Statements - Disposal

Disposal should be in accordance with applicable regional, national and local laws and regulations

Hazards not otherwise classified (HNOC)**Other Information**

Unknown Acute Toxicity

0% of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Weight-%	Trade Secret
Hydrochloric Acid	7647-01-0	15-40	*

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST AID MEASURES**First aid measures****General advice**

Immediate medical attention is required.

Skin Contact

Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. For minor skin contact, avoid spreading material on unaffected skin. For severe burns, immediate medical attention is required.

Eye contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Remove contact lenses, if present and easy to do. Continue rinsing. Do not rub affected area.

Inhalation

Remove to fresh air. Get medical attention for any breathing difficulty.

Ingestion

Rinse mouth. Drink plenty of water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

Self-protection of the first aider

Use personal protective equipment as required. Avoid contact with skin, eyes or clothing.

Most important symptoms and effects, both acute and delayed

Symptoms Any additional important symptoms and effects are described in Section 11: Toxicology Information.

Indication of any immediate medical attention and special treatment needed

Note to physicians Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media Caution: Use of water spray when fighting fire may be inefficient.

Specific hazards arising from the chemical

The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating and toxic gases and vapors. In the event of fire and/or explosion do not breathe fumes.

Explosion data

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge None.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Avoid contact with skin, eyes or clothing. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Use personal protective equipment as required.

Environmental precautions

Environmental precautions Do not allow into any storm sewer drains, lakes, streams, ponds, estuaries, oceans or other surface water bodies. Should not be released into the environment. Dispose of according to all local city, state and federal rules and regulations.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so. Dike far ahead of liquid spill for later disposal. Soak up condensate with inert absorbent material and collect in ventilated waste container for disposal.

Methods for cleaning up Dike far ahead of liquid spill for later disposal. Soak up with inert absorbent material. Take up mechanically, placing in appropriate containers for disposal. Clean contaminated surface thoroughly. Prevent product from entering drains. After cleaning, flush away traces with water.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Use personal protective equipment as required. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation, especially in confined areas. In case of insufficient ventilation, wear suitable respiratory equipment. Use only with adequate ventilation and in closed systems.

Conditions for safe storage, including any incompatibilities

Storage Conditions	Keep containers tightly closed in a dry, cool and well-ventilated place. Keep in properly labeled containers. Keep/store only in original container. Do not reuse container.
Incompatible materials	Incompatible with strong acids and bases. Incompatible with oxidizing agents. Strong bases. Ammonia. Chlorinated compounds. Contact with metals may evolve flammable hydrogen gas. Metals.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Control parameters****Exposure Guidelines**

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Hydrochloric Acid 7647-01-0	Ceiling: 2 ppm	(vacated) Ceiling: 5 ppm (vacated) Ceiling: 7 mg/m ³ Ceiling: 5 ppm Ceiling: 7 mg/m ³	IDLH: 50 ppm Ceiling: 5 ppm Ceiling: 7 mg/m ³
Propargyl Alcohol 107-19-7	TWA: 1 ppm S*	(vacated) TWA: 1 ppm (vacated) TWA: 2 mg/m ³ (vacated) S*	TWA: 1 ppm TWA: 2 mg/m ³

NIOSH IDLH *Immediately Dangerous to Life or Health*

Other Information Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Appropriate engineering controls

Engineering Controls Showers, Eyewash stations & Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection	Tight sealing safety goggles. Face protection shield.
Skin and body protection	Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.
Respiratory protection	If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

General Hygiene Keep away from food, drink and animal feeding stuffs. When using do not eat, drink or smoke. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Avoid contact with skin, eyes or clothing. Take off all contaminated clothing and wash it before reuse. Wear suitable gloves and eye/face protection.

9. PHYSICAL AND CHEMICAL PROPERTIES**Information on basic physical and chemical properties**

Physical state	Liquid
Appearance	Clear Light Red/Orange
Color	Light Red/Orange
Odor	Acidic
Odor threshold	No Information available

Property	Values	Remarks • Method
pH	<1	
Specific Gravity	1.16	
Viscosity	< 25 cP @ 25°C	

Melting point/freezing point	No Information available
Flash point	None
Boiling point / boiling range	Est 180 °F
Evaporation rate	No Information available
Flammability (solid, gas)	No data available
Flammability Limits in Air	
Upper flammability limit:	No Information available
Lower flammability limit:	No Information available
Vapor pressure	39 mm Hg
Vapor density	No Information available
Water solubility	Complete
Partition coefficient	No Information available
Autoignition temperature	No Information available
Decomposition temperature	No Information available

Other Information

Density Lbs/Gal	9.66
VOC Content (%)	< 0.1%

10. STABILITY AND REACTIVITY**Reactivity**

No data available

Chemical stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

Conditions to avoid

Exposure to air or moisture over prolonged periods.

Incompatible materials

Incompatible with strong acids and bases. Incompatible with oxidizing agents. Strong bases. Ammonia. Chlorinated compounds. Contact with metals may evolve flammable hydrogen gas. Metals.

Hazardous Decomposition Products

Thermal decomposition can lead to release of irritating and toxic gases and vapors.

11. TOXICOLOGICAL INFORMATION**Information on likely routes of exposure**

Product Information	The primary effects and toxicity of this material are due to its corrosive nature.
Inhalation	Toxic by inhalation. Breathing of vapor can cause respiratory irritation and inflammation. Breathing of mist or liquid can cause burns to the respiratory tract. May cause drowsiness or dizziness.
Eye contact	Avoid contact with eyes. Corrosive to the eyes and may cause severe damage including blindness.
Skin Contact	Avoid contact with skin. Corrosive. Contact with skin may cause severe irritation and burns. May cause sensitization by skin contact.
Ingestion	Harmful if swallowed. Ingestion causes acute irritation and burns to the mucous membranes of the mouth, trachea, esophagus and stomach.

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Hydrochloric Acid 7647-01-0	= 700 mg/kg (Rat)	> 5010 mg/kg (Rabbit)	= 1.68 mg/L (Rat) 1 h

Information on toxicological effects

Symptoms No Information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Corrosivity Causes burns. Extremely corrosive and destructive to tissue. Risk of serious damage to eyes.

Sensitization May cause sensitization by skin contact.

Germ cell mutagenicity No Information available.

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Hydrochloric Acid 7647-01-0	-	Group 3	-	X

IARC (International Agency for Research on Cancer)

Group 3 - *Not classifiable as a human carcinogen*

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

X - Present

Reproductive toxicity No Information available.

STOT - single exposure No Information available.

STOT - repeated exposure No Information available.

Chronic toxicity Chronic exposure to corrosive fumes/gases may cause erosion of the teeth followed by jaw necrosis. Bronchial irritation with chronic cough and frequent attacks of pneumonia are common. Gastrointestinal disturbances may also be seen. Avoid repeated exposure. Possible risk of irreversible effects.

Target organ effects EYES, Respiratory system, Skin.

Aspiration hazard No Information available.

Numerical measures of toxicity - Product Information

Unknown Acute Toxicity 0% of the mixture consists of ingredient(s) of unknown toxicity

The following values are calculated based on chapter 3.1 of the GHS document .

ATEmix (oral)	765.70
ATEmix (dermal)	16,135.30
ATEmix (inhalation-gas)	1,812.3654
ATEmix (inhalation-dust/mist)	1.612

12. ECOLOGICAL INFORMATION**Ecotoxicity**

0% of the mixture consists of components(s) of unknown hazards to the aquatic environment

Chemical Name	Algae/aquatic plants	Fish	Crustacea
Hydrochloric Acid 7647-01-0	-	282:96 h <i>Gambusia affinis</i> mg/L	-
Propargyl Alcohol 107-19-7	-	1.49 - 1.56: 96 h <i>Pimephales promelas</i> mg/L LC50 flow-through	-

Persistence and degradability

No Information available.

Bioaccumulation

No Information available.

Other adverse effects

No Information available

13. DISPOSAL CONSIDERATIONS**Waste treatment methods**

Disposal of wastes Disposal should be in accordance with applicable regional, national and local laws and

regulations.

Contaminated packaging Do not reuse container.

Chemical Name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Propargyl Alcohol 107-19-7	P102	-	-	-

14. TRANSPORT INFORMATION

Per CFR 173.154 (b)(1), for corrosive materials in Packaging Group II, this product can ship as Limited Quantity if packaged not over 1.0 L (0.3 gallon) net capacity each for liquids or not over 1.0 kg (2.2 lbs) net capacity each for solids, packed in a strong outer packaging. Must not exceed 30 kg (66 pounds) gross weight.

DOT

UN/ID No. UN 1789
Proper shipping name Hydrochloric acid solution
Hazard Class 8
Packing Group II
Special Provisions A3, A6, B3, B15, I B2, N41, T8, TP1
Description UN1789, Hydrochloric acid solution, 8, II
Emergency Response Guide Number 157

TDG

UN/ID No. UN1789
Proper shipping name Hydrochloric acid solution
Hazard Class 8
Packing Group II
Description UN1789, Hydrochloric acid solution, 8, II

15. REGULATORY INFORMATION

International Inventories

TSCA Complies
DSL/NDSL Complies

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

US Federal Regulations**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	SARA 313 - Threshold Values %
Hydrochloric Acid - 7647-01-0	1.0

SARA 311/312 Hazard Categories

Acute health hazard Yes
Chronic Health Hazard Yes
Fire hazard No
Sudden release of pressure hazard No
Reactive Hazard No

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CWA - Reportable	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous
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	Quantities			Substances
Hydrochloric Acid 7647-01-0	5000 lb	-	-	X

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Hydrochloric Acid 7647-01-0	5000 lb	5000 lb	RQ 5000 lb final RQ RQ 2270 kg final RQ

US State Regulations**California Proposition 65**

WARNING: This product can expose you to chemicals including Methanol, which is known to the state of California to cause birth defects or other reproductive harm. For More Information go to www.P65Warnings.ca.gov.

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Hydrochloric Acid 7647-01-0	X	X	X
Propargyl Alcohol 107-19-7	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not Applicable

16. OTHER INFORMATION

NFPA	Health hazards 3	Flammability 0	Instability 0	Physical and Chemical Properties -
HMIS	Health hazards 3	Flammability 0	Physical hazards 0	Personal protection D

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Revision Note

No Information available

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet