

Issue Date 10-Aug-2022

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1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier

Product Name AC-40

Other means of identification

Product Code 1134

Recommended use of the chemical and restrictions on use

Recommended use Removes and dissolves lime, calcium, and scale.
Uses Advised Against For industrial and institutional use only.

Details of the supplier of the safety data sheet

Company Name Blue Cardinal Chemical, LLC
3670 Scarlet Oak Blvd
St. Louis, MO 63122
800-325-3312

Emergency telephone number

Emergency Telephone CHEMTEL 1-800-255-3924

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 5
Acute toxicity - Inhalation (Gases)	Category 4
Skin corrosion/irritation	Category 1 Sub-category A
Serious eye damage/eye irritation	Category 1

Label elements

Emergency Overview

DANGER

Hazard statements

May be harmful if swallowed. Harmful if inhaled. Causes severe skin burns and eye damage



Appearance: Clear

Physical state: Liquid

Odor: Acidic



Precautionary Statements - Prevention

Use only outdoors or in a well-ventilated area. Do not breathe dust/fume/gas/mist/vapors/spray. Wash face, hands and any exposed skin thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection.

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. Wash contaminated clothing before reuse. 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. Immediately call a POISON CENTER or doctor/physician. IF SWALLOWED: Rinse mouth. DO NOT induce vomiting

Precautionary Statements - Storage

Store locked up.

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant.

Hazards not otherwise classified (HNOC)

Other Information

- Harmful to aquatic life with long lasting effects
- Harmful to aquatic life

Unknown Acute Toxicity 0.03 % 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	5-10	*
Nonylphenol Polyethylene Glycol Ether	127087-87-0	1-5	*
Peg-15 Cocomonium Chloride	61791-10-4	0.1-1	*

*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	Immediate medical attention is required. 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	Do not rub affected area. Immediate medical attention is required. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes.
Inhalation	Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician or poison control center immediately.
Ingestion	Drink plenty of water. Immediate medical attention is required. Remove from exposure, lie down. Clean mouth with water and drink afterwards 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. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

Most important symptoms and effect, 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 sewer, on the ground or into any body of water. Should not be released into the environment. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.

Methods and material for containment and cleaning up**Methods for containment**

Prevent further leakage or spillage if safe to do so.

Methods for cleaning up

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

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling

Use only with adequate ventilation and in closed systems. 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. Avoid breathing vapors or mists. Always add acid to water.

Conditions for safe storage, including any incompatibilities

Storage Conditions

Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children. 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

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
2-Propanol 67-63-0	STEL: 400 ppm TWA: 200 ppm	TWA: 400 ppm TWA: 980 mg/m ³ (vacated) TWA: 400 ppm (vacated) TWA: 980 mg/m ³ (vacated) STEL: 500 ppm (vacated) STEL: 1225 mg/m ³	IDLH: 2000 ppm TWA: 400 ppm TWA: 980 mg/m ³ STEL: 500 ppm STEL: 1225 mg/m ³
Monoethanolamine 141-43-5	STEL: 6 ppm TWA: 3 ppm	TWA: 3 ppm TWA: 6 mg/m ³ (vacated) TWA: 3 ppm (vacated) TWA: 8 mg/m ³ (vacated) STEL: 6 ppm (vacated) STEL: 15 mg/m ³	IDLH: 30 ppm TWA: 3 ppm TWA: 8 mg/m ³ STEL: 6 ppm STEL: 15 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	Wash contaminated clothing before reuse. 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
Color	Green
Odor	Acidic
Odor threshold	No Information available

<u>Property</u>	<u>Values</u>
pH	<2
Specific Gravity	1.045
Viscosity	No Information available
Melting point/freezing point	No Information available
Flash point	No Information available
Boiling point / boiling range	No Information available
Evaporation rate	No Information available
Flammability (solid, gas)	No Information available
Flammability Limits in Air	
Upper flammability limit:	No Information available
Lower flammability limit:	No Information available
Vapor pressure	No Information available
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	8.72
VOC Content (%)	0.06

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. Hydrogen chloride. Chlorine gas. Thermal decomposition can lead to release of toxic/corrosive gases and vapors. Hydrogen.

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	Causes burns.
Eye contact	Corrosive to the eyes and may cause severe damage including blindness.
Skin Contact	The product causes burns of eyes, skin and mucous membranes.
Ingestion	Causes burns. May be harmful if swallowed.

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
Nonylphenol Polyethylene Glycol Ether 127087-87-0	= 1310 mg/kg (Rat) = 2590 mg/kg (Rat)	= 2 mL/kg (Rabbit) = 1780 µL/kg (Rabbit)	-
Peg-15 Cocomonium Chloride 61791-10-4	= 580 mg/kg (Rat)	-	-

Information on toxicological effects

Symptoms No Information available.

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

Sensitization No Information available.
Germ cell mutagenicity No Information available.
Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.
Corrosivity Causes burns. Extremely corrosive and destructive to tissue. Risk of serious damage to eyes.

CHEMICAL NAME	ACGIH	IARC	NTP	OSHA
Hydrochloric Acid 7647-01-0	-	Group 3	-	X

ACGIH (American Conference of Governmental Industrial Hygienists)

A3 - Animal Carcinogen

IARC (International Agency for Research on Cancer)

Group 2B - Possibly Carcinogenic to Humans

Group 3 -Not classifiable as a human carcinogen

NTP (National Toxicology Program)

Reasonably Anticipated - Reasonably Anticipated to be 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 **0.03 % 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)	2,732 mg/kg
ATEmix (dermal)	26,755 mg/kg
ATEmix (inhalation-gas)	6,727 mg/l
ATEmix (inhalation-dust/mist)	6 mg/l

12. ECOLOGICAL INFORMATION

Ecotoxicity

0.03% 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 Gambusia affinis mg/L	-
2-Propanol 67-63-0	1000: 72 h Desmodemus subspicatus mg/L EC50 1000: 96 h Desmodemus subspicatus mg/L EC50	11130: 96 h Pimephales promelas mg/L LC50 static 9640: 96 h Pimephales promelas mg/L LC50 flow-through 1400000: 96 h Lepomis macrochirus µg/L LC50	13299: 48 h Daphnia magna mg/L EC50
Monoethanolamine 141-43-5	15: 72 h Desmodemus subspicatus mg/L EC50	114 - 196: 96 h Oncorhynchus mykiss mg/L LC50 static 300 - 1000: 96 h Lepomis macrochirus mg/L LC50 static 227: 96 h Pimephales promelas mg/L LC50 flow-through 3684: 96 h Brachydanio rerio mg/L LC50 static 200: 96 h Oncorhynchus mykiss mg/L LC50 flow-through	65: 48 h Daphnia magna mg/L EC50
Propargyl Alcohol 107-19-7	-	1.49 - 1.56: 96 h Pimephales promelas 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	-	-	-

This product contains one or more substances that are listed with the State of California as a hazardous waste.

14. TRANSPORT INFORMATION

The basic description below is specific to the container size. This information is provided for at a glance DOT information. Please refer to the container and/or shipping papers for the appropriate shipping description before tendering this material for shipment. For additional information, please contact the distributor listed in section 1 of this SDS.

DOT

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

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
Nonylphenol Polyethylene Glycol Ether - 127087-87-0	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 QUANTITIES	CWA-TOXIC POLLUTANTS	CWA-PRIORITY POLLUTANTS	CWA-HAZARDOUS 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**

This product has been evaluated and does not require warning labeling under California Proposition 65.

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Hydrochloric Acid 7647-01-0	X	X	X
2-Propanol 67-63-0	X	X	X
Monoethanolamine 141-43-5	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 X

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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