1 PRODUCT AND COMPANY IDENTIFICATION

Manufacturer

Aqua Science, Inc.
1877 East 17th Avenue
Columbus, Ohio 43219

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Product Name: IAC
Revision Date: 8/25/2015
Version: 1
SDS Number: IAC
Product Use: Cleaner

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 B
Physical, Corrosive to Metals, 1
Health, Specific target organ toxicity - Single exposure, 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
H290 - May be corrosive to metals
H336 - May cause drowsiness or dizziness
H302 - Harmful if swallowed

GHS Precautionary Statements:

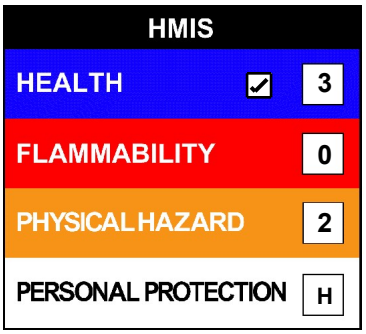
P234 - Keep only in original container.
P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.
P264 - Wash skin thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P271 - Use only outdoors or in a well-ventilated area.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.

P301+312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
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.
P330 - Rinse mouth.
P363 - Wash contaminated clothing before reuse.
P390 - Absorb spillage to prevent material damage.
P403+233 - Store in a well ventilated place. Keep container tightly closed.
P405 - Store locked up.
P406 - Store in a corrosive resistant container with a resistant inner liner.
P501 - Dispose of contents/container to the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.

Hazards not Otherwise Classified (HNOC) or not Covered by GHS

Route of Entry: Eyes; Ingestion; Skin and Inhalation.
Target Organs: Throat; Stomach; Gastrointestinal tract; Eyes; Gum tissue; Mucous membranes and Skin.
Inhalation: May cause severe irritation to upper respiratory tract and lung tissue.
Skin Contact: Causes serious/severe skin damage.
Eye Contact: Causes severe/serious eye damage.

HMIS III: Health = 3(Chronic), Fire = 0, Physical Hazard = 2
HMIS PPE: H - Splash Goggles, Gloves, Apron, Vapor Respirator



3 COMPOSITION/INFORMATION OF INGREDIENTS

Ingredients:

Cas#	%	Chemical Name
7647-01-0	>25%	Hydrochloric acid
68603-67-8	>1%	Amines, polyethylenepoly-, reaction products with benzyl chloride
111-46-6	>2%	Diethylene glycol

The exact percentage by weight of the ingredients in this formula is proprietary.

4 FIRST AID MEASURES

Inhalation: If symptoms develop as a result of inhalation, immediately move affected person away from exposure and into fresh air. If symptoms persist, seek medical attention immediately.
Skin Contact: In case of contact, flush affected area with copious amounts of water for at least 15 minutes. Remove contaiminated clothing and shoes. Seek medical attention immediately. Launder clothing before reuse.
Eye Contact: In case of contact, flush eyes with copious amounts of water for at least 15 minutes while holding eyelids apart. Remove any contaiminated clothing. Seek medical attention immediately. Launder clothing before reuse.

Ingestion: If this product is swallowed, seek medical attention immediately. DO NOT induce vomiting unless instructed to do so by a physician. If affected person is conscious and alert, immediately wash mouth with water and give water or milk to drink. If possible, do not leave affected person unattended.

5 FIRE FIGHTING MEASURES

Flammability: N/A
Flash Point: None
Burning Rate: Not Applicable
LEL: N/A
UEL: N/A

In case of fire, use carbon dioxide or dry chemical to extinguish small fires. Use foam or water spray to extinguish large fires. Full protective equipment (bunker gear) and self-contained breathing apparatus (SCBA) should be used for all in door fires and any significant outdoor fires. If possible, firefighters should control run-off water to prevent environmental contamination.

This product reacts with most metals to release hydrogen gas, which may form explosive mixtures with air.

6 ACCIDENTAL RELEASE MEASURES

In the event of a small spill, (liquid) absorb spilled product into inert material or (solid) sweep up into suitalble container scoop into a container for proper disposal. Avoid run-off into storm sewers and ditches. Large spills need to be contained - do not discharge into drains; report in accordance with applicable regulations; and pick up for proper disposal. Ventilate area. Avoid contact with eyes. Watch out for slippery conditions when spillage.

7 HANDLING AND STORAGE

Handling Precautions: ALWAYS ADD ACID, SLOWLY AND IN SMALL QUANITIES, TO A MUCH LARGER VOLUME OF WATER.

Avoid breathing vapors or mist. Avoid contact with eyes, skin, or clothing. Handle with care and avoid spillage on the floor (slippage). Keep material out of reach of children. Launder contaminated clothing. Wash clothing before reuse and decontaminate or discard contaminated shoes. Wash thoroughly after handling.

Storage Requirements: Store in cool/dry area and ensure there is adequate ventilation. Keep container sealed tightly when not in use. Do not allow to freeze.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls: All ventilation should be designed in accordance with OSHA standard (29 CFR 1910.94). Use mechanical (general) ventilation for storage areas.
Safety shower and eye bath.

Personal Protective Equipment: HMIS PP, H | Splash Goggles, Gloves, Apron, Vapor Respirator
Hydrochloric acid (7647-01-0) [>25%]

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: Nitrile rubber Minimum layer thickness: 0.4 mm Break through time: 480 min

Material tested:Camatril (KCL 730 / Aldrich Z677442, Size M)

Splash contact: Material: Nitrile rubber Minimum layer thickness: 0.11 mm Break through time: 120 min Material tested:Dermatril (KCL 740 / Aldrich Z677272, 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, 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: Do not let product enter drains.

Diethylene glycol (111-46-6) [>2%]

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: 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.

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Control of environmental exposure: Do not let product enter drains.

Hydrochloric acid (7647-01-0) [>25%]

Components with workplace control parameters

C	2 ppm	USA. ACGIH Threshold Limit Values (TLV)

Upper Respiratory Tract irritation

Not classifiable as a human carcinogen

C	5 ppm 7 mg/m3	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants

The value in mg/m3 is approximate.
Ceiling limit is to be determined from breathing-zone air samples.

C	5 ppm 7 mg/m3	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000

C	5 ppm 7 mg/m3	USA. NIOSH Recommended Exposure Limits

Often used in an aqueous solution.

Diethylene glycol (111-46-6) [>2%]

Components with workplace control parameters

TWA	10 mg/m3	USA. Workplace Environmental Exposure Levels (WEEL)

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Dark-brown to amber -colored liquid.		
Physical State:	Liquid	**Odor:**	Pungent.
Spec Grav./Density:	1.2 typical.	**Solubility:**	Completely soluble in water.
Boiling Point:	230-245 Degrees F	**Percent Volatile:**	> 50%
Flammability:	Non-combustible	**Freezing/Melting Pt.:**	< 32 Degrees F
Vapor Pressure:	28 mm Hg @ 68 degrees F.	**Flash Point:**	None
pH:	<1.0	**Vapor Density:**	No data
Evap. Rate:	2 - (water=1)	**UFL/LFL:**	No data/No data

10 STABILITY AND REACTIVITY

Reactivity:	No specific test data related to reactivity available for this product.
Chemical Stability:	Product is stable under normal conditions.
Conditions to Avoid:	Mechanical shock, incompatible materials, metals, excess heat, exposure to moist air or water, bases.
Materials to Avoid:	Avoid contact between this product and strong oxidizing materials; Strong acids; Strong reducing agents and reactive metals.
Hazardous Decomposition:	Hydrogen chloride, chlorine, carbon monoxide, carbon dioxide, hydrogen gas.
Hazardous Polymerization:	Will not occur.

11 TOXICOLOGICAL INFORMATION

Hydrochloric acid (7647-01-0) [>25%]

Information on toxicological effects

Acute toxicity:
no data available (Hydrochloric acid)
Inhalation: no data available (Hydrochloric acid)

Dermal: no data available (Hydrochloric acid)

Skin corrosion/irritation: Skin - rabbit Result: Causes burns.

Serious eye damage/eye irritation: Eyes - rabbit (Hydrochloric acid) Result: Corrosive to eyes

Respiratory or skin sensitisation: no data available (Hydrochloric acid)

Germ cell mutagenicity: no data available (Hydrochloric acid)

Carcinogenicity:
This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification. (Hydrochloric acid)
IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans (Hydrochloric acid)
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 (Hydrochloric acid)

Specific target organ toxicity - single exposure: The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory tract irritation. (Hydrochloric acid)

Specific target organ toxicity - repeated exposure: no data available

Aspiration hazard: no data available (Hydrochloric acid)

Additional Information:

RTECS: MW4025000

burning sensation, Cough, wheezing, laryngitis, Shortness of breath, spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin. (Hydrochloric acid)

Diethylene glycol (111-46-6) [>2%]

Information on toxicological effects

Acute toxicity:
LD50 Oral - rat - 12,565 mg/kg
Inhalation: no data available

LD50 Dermal - rabbit - 11,890 mg/kg

Skin corrosion/irritation: Skin - rabbit Result: Mild skin irritation

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

Respiratory or skin sensitisation: no data available

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: ID5950000

Confusion., Dizziness, Kidney injury may occur., Unconsciousness, Convulsions, Pulmonary edema. Effects may be delayed., Nausea, Headache, Vomiting
Liver - Irregularities - Based on Human Evidence

12 ECOLOGICAL INFORMATION

Hydrochloric acid (7647-01-0) [>25%]

Information on ecological effects

Toxicity:
Toxicity to fish LC50 - Gambusia affinis (Mosquito fish) - 282 mg/l - 96 h (Hydrochloric acid):

Persistence and degradability: no data available

Bioaccumulative potential: no data available

Mobility in soil: no data available (Hydrochloric acid)

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

Other adverse effects: no data available

Diethylene glycol (111-46-6) [>2%]

Information on ecological effects

Toxicity:
Toxicity to fish LC50 - Pimephales promelas (fathead minnow) - 75,200 mg/l - 96 h.
LC50 - Carassius auratus (goldfish) - 5,000 mg/l - 24 h
Toxicity to daphnia and EC50 - Daphnia magna (Water flea) - > 10,000 mg/l - 24 h.
other aquatic invertebrates

Persistence and degradability: no data available

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: no data available

13 DISPOSAL CONSIDERATIONS

Disposal methods:
The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal

contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Hydrochloric acid (7647-01-0) [>25%]

Waste treatment methods

Product: Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging: Dispose of as unused product.

Diethylene glycol (111-46-6) [>2%]

Waste treatment methods

Product: Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging: Dispose of as unused product.

14 TRANSPORT INFORMATION

UN3264, Corrosive liquid, acidic, inorganic, n.o.s., 8, PGII, (Contains Hydrogen Chloride)

15 REGULATORY INFORMATION

Component (CAS#) [%] - CODES

RQ(5000LBS), Hydrochloric acid (7647-01-0) [>25%] CERCLA, CSWHS, EHS302, EPCRAWPC, HAP, MASS, NJEHS, NJHS, OSHAPSM, OSHAWAC, PA, SARA313, TSCA, TXAIR

Amines, polyethylenepoly-, reaction products with benzyl chloride (68603-67-8) [>1%] TSCA

Diethylene glycol (111-46-6) [>2%] HAP, PA, TSCA

Regulatory CODE Descriptions

RQ = Reportable Quantity
CERCLA = Superfund clean up substance
CSWHS = Clean Water Act Hazardous substances
EHS302 = Extremely Hazardous Substance
EPCRAWPC = EPCRA Water Priority Chemicals
HAP = Hazardous Air Pollutants
MASS = MA Massachusetts Hazardous Substances List
NJEHS = NJ Extraordinarily Hazardous Substances
NJHS = NJ Right-to-Know Hazardous Substances
OSHAPSM = OSHA Chemicals Requiring process safety management
OSHAWAC = OSHA Workplace Air Contaminants
PA = PA Right-To-Know List of Hazardous Substances
SARA313 = SARA 313 Title III Toxic Chemicals
TSCA = Toxic Substances Control Act

TXAIR = TX Air Contaminants with Health Effects Screening Level

16 OTHER INFORMATION

Notice to Reader:
To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier nor any of its subsidiaries, assumes any laibility whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibilty of the user. All materials present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Aqua Science, Inc. warrants that this product conforms to its chemical description and is reasonably fit for the purpose referred to in the directions for use when used in accordance with the directions under normal conditions. Buyer assumes the risk of any use outside of such directions.

Seller makes no other warranty or representation of any kind, express or implied, concerning the product, including NO IMPLIED WARRANTY OF MERCHANTABILITY OR FITTNESS OF THE GOODS FOR ANY OTHER PARTICULAR PURPOSE. No such warranties shall be implied by law and no agent of the seller is authorized to alter this warranty in any way except in writing with a specific reference to this warranty.
The exclusive remedy against seller shall be in a claim for damages not to exceed the purchase price of the product, without regard to whether such a claim is based upon a breach of warranty or tort.

Any controversy or claim arising out or relating to this contract, or breach thereof, shall be settled by arbitration in accordance with the commercial arbitration rules of the American Arbitration Association, and judgement upon rendered by the Arbitrator(s) may be entered in any court having jurisdiction thereof.