SAFETY DATA SHEET

1. Identification

Product identifier **Aqua Guard Muriatic Acid**

Other means of identification

SDS number AUC-002

Synonyms Hydrochloric acid * Muratic acid

Recommended use Water Treatment; Swimming Pool Chemical; Masonry Surface and Grout Cleaner

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name Allied Universal Corporation

Address 3901 N.W. 115th Avenue
Miami, FL 33178
United States

Telephone General: 1-305-888-2623
24-Hour alert: 1-786-522-0207

Website www.allieduniversal.com

E-mail Not available.

Contact person Operations Department

Emergency phone number CHEMTREC 1-800-424-9300 (US/Canada)
+01 703-527-3887 (International)

Supplier Refer to Manufacturer

2. Hazard(s) identification

Physical hazards	Corrosive to metals	Category 1
Health hazards	Acute toxicity, oral	Category 4
	Acute toxicity, inhalation	Category 4
	Skin corrosion/irritation	Category 1
	Serious eye damage/eye irritation	Category 1
	Specific target organ toxicity, single exposure	Category 3 respiratory tract irritation

Environmental hazards This mixture does not meet the classification criteria according to OSHA HazCom 2012.

OSHA defined hazards This mixture does not meet the classification criteria according to OSHA HazCom 2012.

Label elements

Signal word Danger

Hazard statement Harmful if swallowed. May be corrosive to metals. Causes severe skin burns and eye damage. Harmful if inhaled. May cause respiratory irritation.

Precautionary statement

Prevention Keep only in original container. Do not breathe mist. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Wear protective gloves/clothing and eye/face protection.

Response IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. 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. Specific treatment (see this label). Wash contaminated clothing before reuse. Absorb spillage to prevent material damage.

Storage	Store locked up. Store in a well-ventilated place. Keep container tightly closed. Store in corrosive resistant container with a resistant inner liner.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified (HNOC)	No OSHA defined hazard classes. Other hazards which do not result in classification: Contact with most metals will generate flammable hydrogen gas. Contact with water will generate considerable heat. In extreme cases, tooth erosion could result. Chronic skin contact with low concentrations may cause dermatitis.
Supplemental information	Not applicable.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Water	Dihydrogen oxide	7732-18-5	60 - 70
Hydrochloric Acid	Muractic Acid Hydrogen Chloride	7647-01-0	30-40

4. First-aid measures

Inhalation	IF INHALED: Remove person to fresh air and keep comfortable for breathing. If breathing is difficult, trained personnel should give oxygen. If breathing stops, provide artificial respiration. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Call a physician or poison control center immediately.
Skin contact	Take off immediately all contaminated clothing. Immediately flush skin with running water for at least 20 minutes. Cover wound with sterile dressing. Do not rub area of contact. Wash contaminated clothing before reuse. Leather and shoes that have been contaminated with the solution may need to be destroyed. Call a physician or poison control center immediately.
Eye contact	Immediately flush eyes with plenty of water for at least 20 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Take care not to rinse contaminated water into the unaffected eye or onto the face. Get medical attention immediately.
Ingestion	If swallowed: Rinse mouth. Do NOT induce vomiting. Never give anything by mouth to a victim who is unconscious or is having convulsions. Call a physician or poison control center immediately.
Most important symptoms/effects, acute and delayed	May be harmful if inhaled. Can cause severe respiratory irritation. Symptoms may include coughing, choking and wheezing. Inhalation could result in pulmonary edema (fluid accumulation). Symptoms of pulmonary edema (chest pain, shortness of breath) may be delayed. Direct skin contact may cause corrosive skin burns, deep ulcerations and possibly permanent scarring. Corrosive to the eyes and may cause severe damage including blindness. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Harmful if swallowed. May cause severe irritation and corrosive damage in the mouth, throat and stomach. Symptoms may include abdominal pain, vomiting, burns, perforations, bleeding and eventually death.
Indication of immediate medical attention and special treatment needed	Immediate medical attention is required. Causes chemical burns. May be fatal if inhaled or swallowed. Provide general supportive measures and treat symptomatically. Symptoms may be delayed.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media	Use media suitable to the surrounding fire such as water fog or fine spray, alcohol foams, carbon dioxide and dry chemical. Use water with caution. Contact with water will generate considerable heat.
Unsuitable extinguishing media	Use chemical extinguishing agents with caution. Some chemical extinguishing agents may react with this material.
Specific hazards arising from the chemical	Not considered flammable. Vapors are heavier than air and may spread along floors. Contact with most metals will generate flammable hydrogen gas. Contact with water will generate considerable heat. Reacts violently with a wide variety of organic and inorganic chemicals including alcohol, carbides, chlorates, picrates, nitrates and metals. Toxic fumes, gases or vapors may evolve on burning.
Special protective equipment and precautions for firefighters	Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode. A full-body chemical resistant suit should be worn.
Fire fighting equipment/instructions	Fight fire with normal precautions from a reasonable distance. Evacuate the area promptly. Move containers from fire area if you can do so without risk. Use water spray to cool unopened containers. Do not allow run-off from fire fighting to enter drains or water courses. Dike for water control.

Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
Hazardous combustion products	Hydrogen and chlorine gas. Other irritating fumes and smoke.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Immediately evacuate personnel to safe areas. Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Ventilate the area. Remove sources of ignition. Stop leak if you can do so without risk. Absorb spillage to prevent material damage. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Use water spray to reduce vapors or divert vapor cloud drift. Small Spills: Contain and absorb spilled liquid with non-combustible, inert absorbent material (e.g. sand). Dilute acid with water and neutralize with Sodium Carbonate (soda ash) or lime. Use caution when neutralizing. Neutralization may release Carbon dioxide. Large Spills: Prevent entry into waterways, sewer, basements or confined areas. If not recoverable, dilute with water or flush to holding area and neutralize. Remove with vacuum trucks or pump to storage/salvage vessels. Contact the proper local authorities. Never return spills to original containers for re-use. Contaminated absorbent material may pose the same hazards as the spilled product. For waste disposal, see Section 13.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground. Contact local authorities in case of spillage to drain/aquatic environment.

7. Handling and storage

Precautions for safe handling	Use only outdoors or in a well-ventilated area. Wear chemically resistant protective equipment during handling. Wear protective gloves/clothing and eye/face protection. Do not breathe mist. Do not taste or swallow. Avoid contact with eyes, skin and clothing. Keep away from heat. Keep away from metals and other incompatibles. When preparing or diluting solution, always add to water, slowly and with stirring. Never add water to the product. Label containers appropriately. Wash thoroughly after handling. When using, do not eat, drink or smoke. Avoid release to the environment.
Conditions for safe storage, including any incompatibilities	Store in a cool, dry place out of direct sunlight. Store in a well-ventilated place. Store locked up. Storage area should be clearly identified, clear of obstruction and accessible only to trained and authorized personnel. Inspect periodically for damage or leaks. Store away from incompatible materials (see Section 10 of the SDS). Store in original tightly closed container. Store in corrosive resistant container with a resistant inner liner. Suitable container and packaging materials for safe storage: Rubber lined steel. Polyvinyl chloride (PVC). Polyethylene. Polypropylene. Teflon. FRP.

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Hydrochloric Acid (CAS 7647-01-0)	Ceiling	7 mg/m3
		5 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
Hydrochloric Acid (CAS 7647-01-0)	Ceiling	2 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Hydrochloric Acid (CAS 7647-01-0)	Ceiling	7 mg/m3
		5 ppm

Biological limit values	No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls	Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

Eye/face protection	Chemical goggles and face shield are recommended.
Skin protection	
Hand protection	Wear appropriate chemical resistant gloves. Advice should be sought from glove suppliers.
Other	Where contact is likely, wear chemical-resistant gloves, a chemical suit, rubber boots, and chemical safety goggles plus a face shield.
Respiratory protection	In case of insufficient ventilation, wear suitable respiratory equipment. A NIOSH/MSHA approved air-purifying respirator with the appropriate chemical cartridges or a positive-pressure, air-supplied respirator may be used to reduce exposure. Use a positive-pressure air-supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air-purifying respirators may not provide adequate protection. Respirators should be selected based on the form and concentration of contaminants in air, and in accordance with OSHA (29 CFR 1910.134). Advice should be sought from respiratory protection specialists.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	Do not breathe mist. Avoid contact with eyes, skin and clothing. When using, do not eat, drink or smoke. Upon completion of work, wash hands before eating, drinking, smoking or use of toilet facilities. Remove soiled clothing and wash it thoroughly before reuse. Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Appearance	Colorless or slightly yellow, fuming liquid.
Physical state	Liquid.
Form	Fuming Liquid
Color	Colorless to light yellow.
Odor	Pungent.
Odor threshold	1 - 5 ppm (detectable)
pH	0.1 - 1
Melting point/freezing point	-31 °F (-35 °C)
Initial boiling point and boiling range	143.6 °F (62 °C)
Flash point	Not Applicable. Does not burn.
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.

Upper/lower flammability or explosive limits

Flammability limit - lower (%)	Not Applicable
Flammability limit - upper (%)	Not Applicable
Explosive limit - lower (%)	Not Applicable
Explosive limit - upper (%)	Not Applicable
Vapor pressure	84 mm Hg
Vapor pressure temp.	68 °F (20 °C)
Vapor density	1.268
Vapor density temp.	68 °F (20 °C)
Relative density	1.18 g/cm³

Solubility(ies)

Solubility (water)	Soluble
Solubility (other)	Very soluble in ethanol, methanol, dioxane and tetrahydrofuran. Insoluble in hydrocarbons (e.g. n-Hexane).
Partition coefficient (n-octanol/water)	Not available.

Auto-ignition temperature	Not Applicable
Decomposition temperature	Not available.
Viscosity	2 cP (approximately)
Viscosity temperature	68 °F (20 °C)
Other information	
Specific gravity	1.18

10. Stability and reactivity

Reactivity	Contact with most metals will generate flammable hydrogen gas. Contact with water will generate considerable heat. May be corrosive to metals. May be corrosive to: Aluminum, stainless steel, carbon steel, copper, bronze.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	Reacts violently with a wide variety of organic and inorganic chemicals including alcohol, carbides, chlorates, picrates, nitrates and metals. Aldehydes and epoxides in the presence of hydrochloric acid cause violent polymerization. Alcohol and glycols in the presence of hydrochloric acid lead to dehydration reactions.
Conditions to avoid	Avoid high temperatures. Avoid contact with incompatible materials. Do not use in areas without adequate ventilation.
Incompatible materials	Metals. Bases. Strong oxidizing agents. Strong reducing agents. Aldehydes. Epoxides. Carbides. Picrates. Nitrates. Alcohols. Fluorine. Water, moisture. Strong acids. Acetylides. Borides.
Hazardous decomposition products	None known. In the event of fire the following can be released: Chlorine. Hydrogen. Hydrogen chloride gas.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Harmful if inhaled.
Skin contact	Causes severe skin burns. Not expected to be absorbed through the skin.
Eye contact	Causes serious eye damage.
Ingestion	Harmful if swallowed. Causes digestive tract burns.
Most important symptoms/effects, acute and delayed	May be harmful if inhaled. Can cause severe respiratory irritation. Symptoms may include coughing, choking and wheezing. Inhalation could result in pulmonary edema (fluid accumulation). Symptoms of pulmonary edema (chest pain, shortness of breath) may be delayed. Direct skin contact may cause corrosive skin burns, deep ulcerations and possibly permanent scarring. Corrosive to the eyes and may cause severe damage including blindness. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Harmful if swallowed. May cause severe irritation and corrosive damage in the mouth, throat and stomach. Symptoms may include abdominal pain, vomiting, burns, perforations, bleeding and eventually death.

Information on toxicological effects

Acute toxicity

Harmful if inhaled. Harmful if swallowed.
The below product data is the calculated ATE values for this mixture. Individual ingredient component data appears below the product mixture ATE values.

Product	Species	Test Results
Aqua Guard Muriatic Acid (CAS Mixture)		
Acute		
Inhalation		
LC50	Rat	3 mg/l, 4 hours (mist)
Oral		
LD50	Rat	680 mg/kg

Components	Species	Test Results
Hydrochloric Acid (CAS 7647-01-0)		
Acute		
Dermal		
LD50	Rabbit	> 5010 mg/kg
Inhalation		
LC50	Rat	1.05 - 1.175 mg/l, 4 Hours (mist)

Components	Species	Test Results
Oral		
LD50	Rat	238 - 277 mg/kg
Water (CAS 7732-18-5)		
Acute		
Dermal		
LD50	Rabbit	Not available.
Inhalation		
LC50	Rat	Not available.
Oral		
LD50	Rat	> 89840 mg/kg

Skin corrosion/irritation Hazardous by OSHA criteria.
Skin corrosion/irritation - Category 1. Causes severe skin burns.

Serious eye damage/eye irritation Hazardous by OSHA criteria.
Serious eye damage/eye irritation - Category 1. Causes serious eye damage.

Respiratory or skin sensitization

Respiratory sensitization Not expected to be a respiratory sensitizer.

Skin sensitizer Causes severe skin burns.

Germ cell mutagenicity Not expected to be mutagenic.

Carcinogenicity This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure Hazardous by OSHA criteria.
Specific Target Organ Toxicity (STOT), Single Exposure, Category 3. May cause respiratory irritation.

Specific target organ toxicity - repeated exposure Not classified as a specific target organ toxicity -repeated exposure.

Aspiration toxicity Not expected to be an aspiration hazard.

Chronic effects Chronic skin contact with low concentrations may cause dermatitis. In extreme cases, tooth erosion could result.

12. Ecological information

Ecotoxicity Because of the low pH of this product, it would be expected to produce significant ecotoxicity upon exposure to aquatic organisms and aquatic systems. However, Hydrochloric acid dissociates in water and will be neutralized by naturally occurring alkalinity. The acid will permeate soil, dissolving some soil material and will be somewhat neutralized. The ingredient ecotoxicity data appearing below is expected to be primarily associated with pH.

Components		Species	Test Results
Hydrochloric Acid (CAS 7647-01-0)			
Aquatic			
Acute			
Algae	EC50	Green algae (Selenastrum capricornutum)	0.492 mg/l, 72 hours
Crustacea	EC50	Water flea (Daphnia magna)	0.492 mg/l, 48 hours
Fish	LC50	Carp (Cyprinus carpio communis)	4.92 mg/l, 96 hours
Chronic			
Algae	NOEC	Green algae (Selenastrum capricornutum)	0.097 mg/l, 72 hours

Persistence and degradability No data is available on the degradability of this product. Biodegradation is not applicable to inorganic substances.

Bioaccumulative potential No accumulation in living organisms is expected due to high solubility and dissociation properties.

Mobility in soil High water solubility indicates a high mobility in soil.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT

UN number	UN1789
UN proper shipping name	Hydrochloric acid
Transport hazard class(es)	
Class	8
Subsidiary risk	-
Label(s)	8
Packing group	II
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling. US CERCLA Reportable Quantity (RQ): 5000 lbs / 2270 kg
Special provisions	A3, A6, B3, B15, IB2, N41, T8, TP2, TP12
Packaging exceptions	154
Packaging non bulk	202
Packaging bulk	242

IATA

UN number	UN1789
UN proper shipping name	Hydrochloric acid
Transport hazard class(es)	
Class	8
Subsidiary risk	-
Packing group	II
Environmental hazards	No.
ERG Code	8L
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Other information	
Passenger and cargo aircraft	Allowed.
Cargo aircraft only	Allowed.

IMDG

UN number	UN1789
UN proper shipping name	HYDROCHLORIC ACID
Transport hazard class(es)	
Class	8
Subsidiary risk	-
Packing group	II
Environmental hazards	
Marine pollutant	No.
EmS	F-A, S-B
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code This substance/mixture is not intended to be transported in bulk.

DOT

IATA; IMDG

General information None.

15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
All components are on the U.S. EPA TSCA Inventory List.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Hydrochloric Acid (CAS 7647-01-0) Listed.

SARA 304 Emergency release notification

Hydrochloric Acid (CAS 7647-01-0) 5000 LBS

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - Yes
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Chemical name	CAS number	Reportable quantity	Threshold planning quantity	Threshold planning quantity, lower value	Threshold planning quantity, upper value
Hydrochloric Acid	7647-01-0	5000	500 lbs		

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
Hydrochloric Acid	7647-01-0	30-40

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Hydrochloric Acid (CAS 7647-01-0)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Hydrochloric Acid (CAS 7647-01-0)

Safe Drinking Water Act (SDWA) Not regulated.

Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number

Hydrochloric Acid (CAS 7647-01-0) 6545

Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))

Hydrochloric Acid (CAS 7647-01-0) 20 %WV

DEA Exempt Chemical Mixtures Code Number

Hydrochloric Acid (CAS 7647-01-0) 6545

US state regulations

US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)

Not listed.

US. Massachusetts RTK - Substance List

Hydrochloric Acid (CAS 7647-01-0)

US. New Jersey Worker and Community Right-to-Know Act

Hydrochloric Acid (CAS 7647-01-0)

US. Pennsylvania Worker and Community Right-to-Know Law

Hydrochloric Acid (CAS 7647-01-0)

US. Rhode Island RTK

Hydrochloric Acid (CAS 7647-01-0)

US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date	12-19-2014
Version #	01
HMIS	H= 3, F= 0, R= 1
NFPA	H= 3, F= 0, R= 1

List of abbreviations

ACGIH: American Conference of Governmental Industrial Hygienists
CAS: Chemical Abstract Services
CERCLA: Comprehensive Environmental Response, Compensation and Liability Act of 1980
CFR: Code of Federal Regulations
DOT: Department of Transportation
DSL: Domestic Substance List
EC: European Community
EINECS: European Inventory of Existing Commercial chemical Substances
EPA: Environmental Protection Agency
EPCRA: Emergency Planning and Community Right-to-Know Act
HSDB® - Hazardous Substances Data Bank
IARC: International Agency for Research on Cancer
IATA: International Air Transport Association
IBC: Intermediate Bulk Container
IMDG: International Maritime Dangerous Goods
LC: Lethal Concentration
LD: Lethal Dose
NOEC: No observable effect concentration
NTP: National Toxicology Program
OECD: Organisation for Economic Cooperation and Development
OSHA: Occupational Safety and Health Administration
PPE: Personal Protective Equipment
RCRA: Resource Conservation and Recovery Act
RTECS: Registry of Toxic Effects of Chemical Substances
SARA: Superfund Amendments and Reauthorization Act
SDS: Safety Data Sheet
STEL: Short Term Exposure Limit
TLV: Threshold Limit Values
TWA: Time Weighted Average

Disclaimer

Prepared by: ICC The Compliance Center Inc. 1-888-442-9628
http://www.thecompliancecenter.com

Disclaimer
This Safety Data Sheet was prepared by ICC The Compliance Center Inc. using information provided by / obtained from Allied Universal Corporation and CCOHS' Web Information Service. The information in the Safety Data Sheet is offered for your consideration and guidance when exposed to this product. ICC The Compliance Center Inc. and Allied Universal Corporation expressly disclaim all expressed or implied warranties and assume no responsibilities for the accuracy or completeness of the data contained herein. The data in this SDS does not apply to use with any other product or in any other process.

This Safety Data Sheet may not be changed, or altered in any way without the expressed knowledge and permission of ICC The Compliance Center Inc. and Allied Universal Corporation The information in the sheet was written based on the best knowledge and experience currently available.

Bibliography

ACGIH Documentation of the Threshold Limit Values and Biological Exposure Indices (2014)
International Agency for Research on Cancer Monographs (2014)
Canadian Centre for Occupational Health and Safety, CCInfoWeb Databases, 2014 (Chempendium, RTECs, HSDB, INCHEM)
Material Safety Data Sheet from manufacturer.

OECD - The Global Portal to Information on Chemical Substances - eChemPortal, 2014.