

ASHLAND
SAFETY DATA SHEETHYDROCHLORIC ACID 22 DEG BE
206176Page: 1
Revision Date: 04/21/2010
Print Date: 2/1/2011
MSDS Number: R0004462
Version: 1.3**1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**

Ashland	Regulatory Information Number	1-800-325-3751
P.O. Box 2219	Telephone	614-790-3333
Columbus, OH 43216	Emergency telephone	1-800-ASHLAND (1-800-274-5263)

Product name HYDROCHLORIC ACID 22 DEG BE

Product code 206176

Product Use Description No data

2. HAZARDS IDENTIFICATION**Emergency Overview**

Appearance: liquid, light yellow

DANGER! MAY BE HARMFUL. MAY CAUSE SEVERE BURNS OF RESPIRATORY AND DIGESTIVE TRACTS. CAUSES SEVERE BURNS OF THE EYES AND SKIN.**Potential Health Effects****Exposure routes**

Inhalation, Skin absorption, Skin contact, Eye Contact, Ingestion

Eye contact

Can cause permanent eye injury. Symptoms include stinging, tearing, redness, and swelling of eyes. Can injure the cornea and cause blindness.

Skin contact

Can cause permanent skin damage. Symptoms may include redness, burning, and swelling of skin, burns, and other skin damage.

Ingestion

Swallowing this material may be harmful or fatal. Symptoms may include severe stomach and intestinal irritation (nausea, vomiting, diarrhea), abdominal pain, and vomiting of blood. Swallowing

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this material may cause burns and destroy tissue in the mouth, throat, and digestive tract. Low blood pressure and shock may occur as a result of severe tissue injury.

Inhalation

Breathing of vapor or mist is possible. Breathing this material may be harmful or fatal. Symptoms may include severe irritation and burns to the nose, throat, and respiratory tract. Symptoms are not expected at air concentrations below the recommended exposure limits, if applicable (see Section 8.).

Aggravated Medical Condition

Preexisting disorders of the following organs (or organ systems) may be aggravated by exposure to this material: skin, lung (for example, asthma-like conditions)

Symptoms

Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include: stomach or intestinal upset (nausea, vomiting, diarrhea), irritation (nose, throat, airways), Nose bleeding, choking, chest pain, lung edema (fluid buildup in the lung tissue)

Target Organs

Overexposure to this material (or its components) has been suggested as a cause of the following effects in humans: damage to tooth enamel

Carcinogenicity

This material is not listed as a carcinogen by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP), or the Occupational Safety and Health Administration (OSHA).

Reproductive hazard

There are no data available for assessing risk to the fetus from maternal exposure to this material.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Components	CAS-No.	Concentration
HYDROCHLORIC ACID	7647-01-0	>=30-<40%

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If material gets into the eyes, immediately flush eyes gently with water for at least 15 minutes while holding eyelids apart. If symptoms develop as a result of vapor exposure, immediately move individual away from exposure and into fresh air before flushing as recommended above. Seek immediate medical attention.

Skin

Immediately flush skin with water for at least 15 minutes while removing contaminated clothing and shoes. Seek immediate medical attention. Wash clothing before reuse and discard contaminated shoes.

Ingestion

Seek medical attention. If individual is drowsy or unconscious, do not give anything by mouth; place individual on the left side with the head down. Contact a physician, medical facility, or poison control center for advice about whether to induce vomiting. If possible, do not leave individual unattended.

Inhalation

If symptoms develop, move individual away from exposure and into fresh air. If symptoms persist, seek medical attention. If breathing is difficult, administer oxygen. Keep person warm and quiet; seek immediate medical attention.

Notes to physician

Hazards: No information available.

Treatment: No information available.

5. FIRE-FIGHTING MEASURES**Suitable extinguishing media**

Dry chemical, Carbon dioxide (CO₂), Water spray

Hazardous combustion products

acid vapors, Chlorine, Hydrogen, Hydrogen chloride gas, hydrogen sulfide, Phosgene, toxic fumes

Precautions for fire-fighting

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Wear full firefighting turn-out gear (full Bunker gear), and respiratory protection (SCBA). Use water spray to cool fire exposed containers and structures until fire is out if it can be done with minimal risk. Avoid spreading burning material with water used for cooling purposes.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

For personal protection see section 8. Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.

Environmental precautions

Prevent spreading over a wide area (e.g. by containment or oil barriers). Do not let product enter drains. Do not flush into surface water or sanitary sewer system.

Methods for cleaning up

Keep in suitable, closed containers for disposal. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).

Other information

Comply with all applicable federal, state, and local regulations.

7. HANDLING AND STORAGE

Handling

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed.

Storage

Store in a cool, dry, ventilated area.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

HYDROCHLORIC ACID		7647-01-0
ACGIH	Ceiling Limit Value:	2 ppm
NIOSH	Ceiling Limit Value and	5 ppm

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NIOSH	Time Period (if specified): Ceiling Limit Value and Time Period (if specified):	7 mg/m3
OSHA Z1	Ceiling Limit Value:	5 ppm
OSHA Z1	Ceiling Limit Value:	7 mg/m3

General advice

These recommendations provide general guidance for handling this product. Personal protective equipment should be selected for individual applications and should consider factors which affect exposure potential, such as handling practices, chemical concentrations and ventilation. It is ultimately the responsibility of the employer to follow regulatory guidelines established by local authorities.

Exposure controls

Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below TLV(s). Store and handle in well-ventilated area. If mechanical ventilation is used, components must be acid-resistant.

Eye protection

Wear chemical splash goggles and face shield when there is potential for exposure of the eyes or face to liquid, vapor or mist. Maintain eye wash station in immediate work area.

Skin and body protection

Wear resistant gloves such as:

Neoprene
Nitrile rubber
polyvinyl chloride
butyl-rubber

Wear appropriate chemical impervious clothing and boots whenever there is potential for skin contact with product. Launder clothing before reuse. Maintain safety shower at all locations where skin contact could occur. Contact your local safety equipment supplier to assist the facility in determining proper selection of personal protective equipment for the applications/operations present at your facility. Discard gloves that show tears, pinholes, or signs of wear.

Respiratory protection

A NIOSH-approved air-purifying respirator with an appropriate cartridge and/or filter may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits (if applicable) or if overexposure has otherwise been determined. Protection provided by air-purifying respirators is limited. Use a positive pressure, air-supplied respirator if there is any potential for uncontrolled release, exposure levels are not known or any other circumstances where an air-purifying respirator may not provide adequate protection.

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9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	liquid
Form	no data available
Colour	light yellow
Odour	Sharp pungent odor
Boiling point/boiling range	230 °F / 110 °C @ 760.00 mmHg
Melting point/range	-62 - -11 °F / -52 - -24 °C
Sublimation point	no data available
pH	no data available
Flash point	not applicable
Ignition temperature	no data available
Evaporation rate	10 n-Butyl Acetate
Lower explosion limit/Upper explosion limit	no data available
Particle size	no data available
Vapour pressure	84.000 mmHg @ 68.00 °F / 20.00 °C
Relative vapour density	1.25 AIR=1
Density	1.18 g/cm ³ @ 60.00 °F / 15.56 °C
Bulk density	9.84 lb/gal @ 60.00 °F / 15.56 °C
Water solubility	completely miscible
Solubility	no data available
Partition coefficient: n-octanol/water	no data available
log Pow	no data available
Autoignition temperature	no data available
Viscosity, dynamic	no data available
Viscosity, kinematic	no data available
Solids in Solution	no data available
Decomposition temperature	no data available
Burning number	no data available
Dust explosion constant	no data available
Minimum ignition energy	no data available

10. STABILITY AND REACTIVITY

Stability

Stable.

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excessive heat, Exposure to sunlight.

Incompatible productsAlkaline earth metals, Amines, Bases, carbonates, Cyanides, Fluorine, Metals, metallic oxides,
Strong oxidizing agents, sulphites, water**Hazardous decomposition products**acid vapors, Chlorine, Hydrogen, Hydrogen chloride gas, hydrogen sulfide, Phosgene, toxic
fumes**Hazardous reactions**Product will not undergo hazardous polymerization., Acid reacts with most metals to release
hydrogen gas which can form explosive mixtures with air., Hydrochloric acid reacts with formaldehyde
to form the carcinogen, bis(chloromethyl)ether.**Thermal decomposition**

No data

11. TOXICOLOGICAL INFORMATION

Acute oral toxicity : LD 50 Rabbit : 900 mg/kg

Acute inhalation toxicity : LC 50 Rat

Acute dermal toxicity

HYDROCHLORIC ACID : no data available

12. ECOLOGICAL INFORMATION**Biodegradability**

HYDROCHLORIC ACID : no data available

Bioaccumulation

HYDROCHLORIC ACID : no data available

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HYDROCHLORIC ACID : no data available

Toxicity to daphnia and other aquatic invertebrates.

HYDROCHLORIC ACID : no data available

Toxicity to algae

HYDROCHLORIC ACID : no data available

Toxicity to bacteria

HYDROCHLORIC ACID : no data available

Biochemical Oxygen Demand (BOD)

HYDROCHLORIC ACID : no data available

Chemical Oxygen Demand (COD)

HYDROCHLORIC ACID : no data available

Additional ecological information

HYDROCHLORIC ACID : no data available

13. DISPOSAL CONSIDERATIONS**Waste disposal methods**

Collect and add slowly to large volume of agitated solution of soda ash and slaked lime. Add neutralized solution to excess running water in accordance with applicable regulations. For assistance with your waste management needs - including disposal, recycling and waste stream reduction, contact Ashland Distribution's Environmental Services Group at 800-637-7922. For assistance with your waste management needs - including disposal, recycling and waste stream reduction, contact Ashland Distribution's Environmental Services Group at 800-637-7922.

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14. TRANSPORT INFORMATION

REGULATION

ID NUMBER	PROPER SHIPPING NAME	*HAZARD CLASS	SUBSIDIARY HAZARDS	PACKING GROUP	MARINE POLLUTANT /LTD. QTY.
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MEXICAN REGULATION FOR THE LAND TRANSPORT OF HAZARDOUS MATERIALS AND WASTES

UN 1789	ACIDO CLORHIDRICO	8		II	
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INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER

UN 1789	Hydrochloric acid	8		II	
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INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO

UN 1789	Hydrochloric acid	8		II	
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INTERNATIONAL MARITIME DANGEROUS GOODS

UN 1789	HYDROCHLORIC ACID	8		II	
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TRANSPORT CANADA - INLAND WATERWAYS

UN 1789	HYDROCHLORIC ACID	8		II	
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TRANSPORT CANADA - RAIL

UN 1789	HYDROCHLORIC ACID	8		II	
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TRANSPORT CANADA - ROAD

UN 1789	HYDROCHLORIC ACID	8		II	
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U.S. DOT - INLAND WATERWAYS

UN 1789	Hydrochloric acid	8		II	
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U.S. DOT - RAIL

UN 1789	Hydrochloric acid	8		II	
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U.S. DOT - ROAD

UN 1789	Hydrochloric acid	8		II	
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*ORM = ORM-D, CBL = COMBUSTIBLE LIQUID

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Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

15. REGULATORY INFORMATION

California Prop. 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.	
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SARA Hazard Classification

Acute Health Hazard

SARA 313 Component(s)

HYDROCHLORIC ACID	35.20 %
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New Jersey RTK Label Information

WATER	7732-18-5
HYDROCHLORIC ACID	7647-01-0

Pennsylvania RTK Label Information

WATER	7732-18-5
HYDROCHLORIC ACID	7647-01-0

Notification status

EU. EINECS	y (positive listing)
US. Toxic Substances Control Act	y (positive listing)
Australia. Industrial Chemical (Notification and Assessment) Act	y (positive listing)
Canada. Canadian Environmental Protection Act (CEPA).	y (positive listing)
Domestic Substances List (DSL). (Can. Gaz. Part II, Vol. 133)	
Japan. Kashin-Hou Law List	y (positive listing)
Korea. Toxic Chemical Control Law (TCCL) List	y (positive listing)
Philippines. The Toxic Substances and Hazardous and Nuclear Waste Control Act	y (positive listing)
China. Inventory of Existing Chemical Substances	y (positive listing)

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Reportable quantity - Product

US. EPA CERCLA Hazardous Substances (40 CFR 302)

14204 lbs

Reportable quantity-Components

HYDROCHLORIC ACID

7647-01-0

5000 lbs

	HMIS	NFPA
Health	3	3
Flammability	0	0
Physical hazards	1	
Instability		1
Specific Hazard	--	--

16. OTHER INFORMATION

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This MSDS has been prepared by Ashland's Environmental Health and Safety Department (1-800-325-3751).