

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Date of issue: 08/16/1998

Revision date: 05/05/2014

Supersedes: 07/03/2013

Version: 1.1

### SECTION 1: Identification of the substance/mixture and of the company/undertaking **Product identifier** 1.1. Product form : Substance Substance name : Hydrochloric Acid, 37% w/w CAS No 7647-01-0 Product code : LC14950 Formula : HCI Synonyms Hydrochloric acid / hydrochloric acid, conc=37%, aqueous solution BIG no : 29443 Relevant identified uses of the substance or mixture and uses advised against 1.2. Use of the substance/mixture : Laboratory chemical 1.3. Details of the supplier of the safety data sheet LabChem Inc Jackson's Pointe Commerce Park Building 1000, 1010 Jackson's Pointe Court Zelienople, PA 16063 - USA T 412-826-5230 - F 724-473-0647 info@labchem.com - www.labchem.com 1.4. **Emergency telephone number** Emergency number : CHEMTREC: 1-800-424-9300 or 011-703-527-3887 **SECTION 2: Hazards identification** 2.1. Classification of the substance or mixture **GHS-US classification** Acute Tox. 4 (Oral) H302 Skin Corr. 1B H314 Eye Dam. 1 H318 STOT SE 3 H335 H402 Aquatic Acute 3 Label elements 2.2. **GHS-US** labelling Hazard pictograms (GHS-US) GHS05 GHS07 Signal word (GHS-US) : Danger Hazard statements (GHS-US) : H302 - Harmful if swallowed H314 - Causes severe skin burns and eye damage H335 - May cause respiratory irritation H402 - Harmful to aquatic life Precautionary statements (GHS-US) : P260 - Do not breathe mist, spray, vapours P264 - Wash exposed 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 P273 - Avoid release to the environment P280 - Wear eye protection, face protection, protective clothing, protective gloves P301+P330+P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated

clothing. Rinse skin with water/shower

P304+P340 - IF INHALED: remove victim to fresh air and keep at rest in a position comfortable for breathing

P305+P351+P338 - If in eyes: Rinse cautiously 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

P363 - Wash contaminated clothing before reuse

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- P403+P233 Store in a well-ventilated place. Keep container tightly closed
- P405 Store locked up
- P501 Dispose of contents/container to Comply with applicable regulations

#### 2.3. **Other hazards** Other hazards not contributing to the : None under normal conditions. classification 2.4. Unknown acute toxicity (GHS-US) No data available **SECTION 3: Composition/information on ingredients** 3.1. Substance : Multi-constituent Substance type Name : Hydrochloric Acid, 37% w/w CAS No : 7647-01-0 **Product identifier GHS-US** classification Name % Water (CAS No) 7732-18-5 63 Not classified Compressed gas, H280 Acute Tox. 3 (Inhalation), H331 Hydrogen Chloride (CAS No) 7647-01-0 37 Skin Corr. 1A, H314 Full text of H-phrases: see section 16

3.2.	Mixture	
Not applicable		

arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious laboured breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomitin prevent asphysical/aspiration pneumonia. Prevent cooling by covering the victim (no warming). Keep watching the victim's condition: doctor/hospital.         First-aid measures after inhalation       : Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.         First-aid measures after skin contact       : Wash immediately with PE-glycol 400. Wash immediately with lots of water (15 minutes)/show Remove clothing while washing. Do not remove clothing if it sticks to the skin. Cover wounds with sterile bandage. Consult a doctor/medical service. If burned surface > 10%: take victim to hospital.         First-aid measures after eye contact       : Rinse immediately with plenty of water for 15 minutes. Do not apply neutralizing agents. Take victim to an ophthalmologist.         First-aid measures after ingestion       : Rinse mouth with water. Immediately after ingestion: give lots of water to drink. Do not induce vomiting. Immediately consult a doctor/medical service. Call Poison Information Centre (www.big.be/antigf.htm). Take the container/vomit to the doctor/hospital. Do not give chemica antidote. Ingestion of large quantities: immediately to hospital.         4.2.       Most important symptoms and effects, both acute and delayed         Symptoms/injuries after skin contact       : Dry/sore throat. Coughing. Irritation of the respiratory tract. Irritation of the nasal mucous membranes. EXPOSUBE TO HIGH CONCENTRATIONS: Respiratory difficulties. Possible laryngeal spasm/oedema. Corrosion of the uperespiratory difficulties. Possible laryngeal spasm/oed	4.1. Description of first aid measures	
First-aid measures after skin contact       : Wash immediately with PE-glycol 400. Wash immediately with lots of water (15 minutes)/show Remove clothing while washing. Do not remove clothing if it sticks to the skin. Cover wounds with sterile bandage. Consult a doctor/medical service. If burned surface > 10%: take victim to hospital.         First-aid measures after eye contact       : Rinse immediately with plenty of water for 15 minutes. Do not apply neutralizing agents. Take victim to an ophthalmologist.         First-aid measures after ingestion       : Rinse mouth with water. Immediately after ingestion: give lots of water to drink. Do not induce vomiting. Immediately consult a doctor/medical service. Call Poison Information Centre (www.big.be/antigif.htm). Take the container/vomit to the doctor/hospital. Do not give chemica antidote. Ingestion of large quantities: immediately to hospital.         4.2.       Most important symptoms and effects, both acute and delayed         Symptoms/injuries after inhalation       : Dry/sore throat. Coughing. Irritation of the respiratory tract. Irritation of the nasal mucous membranes. EXPOSURE TO HIGH CONCENTRATIONS: Respiratory difficulties. Possible laryngeal spasm/oedema. Corrosion of the upper respiratory tract. FOLLOWING SYMPTOMS MAY APPEAR LATER: Risk of pneumonia. Risk of lung oedema.         Symptoms/injuries after eye contact       : Caustic burns/corrosion of the skin.         Symptoms/injuries after eye contact       : Corrosion of the eye tissue. Permanent eye damage.	First-aid measures general	Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with laboured breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital.
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vomiting. Immediately consult a doctor/medical service. Call Poison Information Centre (www.big.be/antigif.htm). Take the container/vomit to the doctor/hospital. Do not give chemical antidote. Ingestion of large quantities: immediately to hospital.         4.2.       Most important symptoms and effects, both acute and delayed         Symptoms/injuries after inhalation       : Dry/sore throat. Coughing. Irritation of the respiratory tract. Irritation of the nasal mucous membranes. EXPOSURE TO HIGH CONCENTRATIONS: Respiratory difficulties. Possible laryngeal spasm/oedema. Corrosion of the upper respiratory tract. FOLLOWING SYMPTOMS MAY APPEAR LATER: Risk of pneumonia. Risk of lung oedema.         Symptoms/injuries after skin contact       : Caustic burns/corrosion of the skin.         Symptoms/injuries after eye contact       : Corrosion of the eye tissue. Permanent eye damage.	First-aid measures after eye contact	
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	Symptoms/injuries after skin contact	Caustic burns/corrosion of the skin.
	Symptoms/injuries after eye contact	Corrosion of the eye tissue. Permanent eye damage.
Symptoms/injuries after ingestion : Burns to the gastric/intestinal mucosa. Blood in vomit. Possible esophageal perforation. Shoc	Symptoms/injuries after ingestion	Burns to the gastric/intestinal mucosa. Blood in vomit. Possible esophageal perforation. Shock.

SECTION	ON 5: Firefighting measures	
5.1.	Extinguishing media	
Suitable	extinguishing media	: EXTINGUISHING MEDIA FOR SURROUNDING FIRES: All extinguishing media allowed.
Unsuitab	le extinguishing media	: No unsuitable extinguishing media known.

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5.2. Special hazards arising from the	e substance or mixture
Fire hazard	: DIRECT FIRE HAZARD. Non combustible. INDIRECT FIRE HAZARD. Reactions involving a fire
	hazard: see "Reactivity Hazard".
Explosion hazard	: INDIRECT EXPLOSION HAZARD. Reactions with explosion hazards: see "Reactivity Hazard".
Reactivity	Decomposes on exposure to temperature rise: release of (highly) toxic gases/vapours (chlorine). On exposure to air: release of corrosive mist. Reacts violently with (some) bases. Reacts exothermically with many compounds. Reacts with (strong) oxidizers: release of (highly) toxic gases/vapours (chlorine). Reacts with (some) metals: release of highly flammable gases/vapours (hydrogen).
5.3. Advice for firefighters	
Precautionary measures fire	: Exposure to fire/heat: keep upwind. Exposure to fire/heat: consider evacuation. Exposure to fire/heat: seal off low-lying areas. Exposure to fire/heat: have neighbourhood close doors and windows.
Firefighting instructions	: Dilute toxic gases with water spray. Take account of toxic fire-fighting water. Use water moderately and if possible collect or contain it.
Protection during firefighting	: Heat/fire exposure: compressed air/oxygen apparatus.
SECTION 6: Accidental release n	neasures
6.1. Personal precautions, protectiv	e equipment and emergency procedures
6.1.1. For non-emergency personnel	
Protective equipment	<ul> <li>Gloves. Face-shield. Corrosion-proof suit. Large spills/in enclosed spaces: compressed air apparatus. Large spills/in enclosed spaces: gas-tight suit. Reactivity hazard: compressed air/oxygen apparatus. Reactivity hazard: gas-tight suit.</li> </ul>
Emergency procedures	: Mark the danger area. No naked flames. In case of hazardous reactions: keep upwind. In case or reactivity hazard: consider evacuation. Large spills/in confined spaces: consider evacuation. Wash contaminated clothes.
6.1.2. For emergency responders	
Protective equipment	: Equip cleanup crew with proper protection.
Emergency procedures	: Stop leak if safe to do so. Ventilate area.
6.2. Environmental precautions	
Prevent soil and water pollution. Prevent sp	с С
6.3. Methods and material for conta	
For containment	<ul> <li>Contain released substance, pump into suitable containers. Consult "Material-handling" to select material of containers. Plug the leak, cut off the supply. Dam up the liquid spill. Hazardous reaction: measure explosive gas-air mixture. If reacting: dilute combustible/toxic gases/vapours. Take account of toxic/corrosive precipitation water. Heat exposure: dilute toxic gas/vapour with water spray.</li> </ul>
Methods for cleaning up	: Liquid spill: neutralize with soda (sodium carbonate). Neutralized substance: take up in absorbent material. Scoop absorbed substance into closing containers. Damaged/cooled tanks must be emptied. Carefully collect the spill/leftovers. Take collected spill to manufacturer/competent authority. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling.
6.4. Reference to other sections	
No additional information available	
SECTION 7. Handling and storad	
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7.1. Precautions for safe handling	
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7.1. Precautions for safe handling Precautions for safe handling Hygiene measures	<ul> <li>Comply with the legal requirements. Remove contaminated clothing immediately. Clean contaminated clothing. Thoroughly clean/dry the installation before use. Do not discharge the waste into the drain. Keep away from naked flames/heat. Observe strict hygiene. Keep container tightly closed. Measure the concentration in the air regularly. Carry operations in the open/under local exhaust/ventilation or with respiratory protection.</li> <li>Do not eat, drink or smoke when using this product. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Wash contaminated clothing before reuse.</li> </ul>
<ul> <li>7.1. Precautions for safe handling</li> <li>Precautions for safe handling</li> <li>Hygiene measures</li> <li>7.2. Conditions for safe storage, inc.</li> </ul>	<ul> <li>Comply with the legal requirements. Remove contaminated clothing immediately. Clean contaminated clothing. Thoroughly clean/dry the installation before use. Do not discharge the waste into the drain. Keep away from naked flames/heat. Observe strict hygiene. Keep container tightly closed. Measure the concentration in the air regularly. Carry operations in the open/under local exhaust/ventilation or with respiratory protection.</li> <li>Do not eat, drink or smoke when using this product. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Wash contaminated clothing before reuse.</li> <li>cluding any incompatibilities</li> <li>Strong bases. metals. cyanides.</li> </ul>
Precautions for safe handling Hygiene measures	<ul> <li>Comply with the legal requirements. Remove contaminated clothing immediately. Clean contaminated clothing. Thoroughly clean/dry the installation before use. Do not discharge the waste into the drain. Keep away from naked flames/heat. Observe strict hygiene. Keep container tightly closed. Measure the concentration in the air regularly. Carry operations in the open/under local exhaust/ventilation or with respiratory protection.</li> <li>Do not eat, drink or smoke when using this product. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Wash contaminated clothing before reuse.</li> </ul>

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Heat and ignition sources	: KEEP SUBSTANCE AWAY FROM: heat sources.
Prohibitions on mixed storage	: KEEP SUBSTANCE AWAY FROM: oxidizing agents. (strong) bases. metals. amines.
Storage area	: Ventilation at floor level. Keep locked up. Provide for a tub to collect spills. Meet the legal requirements.
Special rules on packaging	<ul> <li>SPECIAL REQUIREMENTS: closing. corrosion-proof. clean. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers.</li> </ul>
Packaging materials	: MATERIAL TO AVOID: steel. metal.
7.3. Specific end use(s)	

No additional information available

### SECTION 8: Exposure controls/personal protection

8.1. Control parameters			
Hydrochloric Acid, 37% w/w (7647-01-0)			
USA ACGIH	ACGIH Ceiling (mg/m <sup>3</sup> )	2.98 mg/m <sup>3</sup>	
USA ACGIH	ACGIH Ceiling (ppm)	2 ppm	
USA OSHA	OSHA PEL (Ceiling) (mg/m <sup>3</sup> )	7 mg/m³	
USA OSHA	OSHA PEL (Ceiling) (ppm)	5 ppm	
Hydrogen Chloride (7647-01-0)			
USA ACGIH	ACGIH Ceiling (mg/m <sup>3</sup> )	2.98 mg/m <sup>3</sup>	
USA ACGIH	ACGIH Ceiling (ppm)	2 ppm	
USA OSHA	OSHA PEL (Ceiling) (mg/m <sup>3</sup> )	7 mg/m³	
USA OSHA	OSHA PEL (Ceiling) (ppm)	5 ppm	

### 8.2. Exposure controls

Appropriate engineering controls	: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.
Materials for protective clothing	: GIVE GOOD RESISTANCE: natural rubber. nitrile rubber.
Hand protection	: Gloves.
Eye protection	: Face shield.
Skin and body protection	: Corrosion-proof clothing.
Respiratory protection	: Gas mask with filter type B. Gas mask with filter type E. High vapour/gas concentration: self- contained respirator.

SECTION 9: Physical and chemical properties			
9.1. Information on basic physical and ch	emical properties		
Physical state	: Liquid		
Appearance	: Liquid.		
Molecular mass	: 36.46 g/mol		
Colour	: Colourless.		
Odour	: Irritating/pungent odour.		
Odour threshold	: No data available		
рН	: <1		
Relative evaporation rate (butylacetate=1)	: No data available		
Melting point	: No data available		
Freezing point	: -30 °C		
Boiling point	: No data available		
Flash point	: Not applicable		
Self ignition temperature	: Not applicable		
Decomposition temperature	: No data available		
Flammability (solid, gas)	: No data available		
Vapour pressure	: No data available		
Relative vapour density at 20 °C	: No data available		
Relative density	: 1.2		

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Density	: 1190 kg/m³
Solubility	: Soluble in water. Water: Complete
Log Pow	: 0.25 (QSAR)
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: 0.0023 Pa.s (15 °C)
Explosive properties	: Not applicable.
Oxidising properties	: None.
Explosive limits	: No data available
9.2. Other information	
Minimum ignition energy	: Not applicable
VOC content	: Not applicable
Other properties	: Gas/vapour heavier than air at 20°C. Producing fumes/mist. Substance has acid reaction.

SECTION 10: Stability and reactivity		
10.1.	Reactivity	

Decomposes on exposure to temperature rise: release of (highly) toxic gases/vapours (chlorine). On exposure to air: release of corrosive mist. Reacts violently with (some) bases. Reacts exothermically with many compounds. Reacts with (strong) oxidizers: release of (highly) toxic gases/vapours (chlorine). Reacts with (some) metals: release of highly flammable gases/vapours (hydrogen).

### 10.2. **Chemical stability** No data available. 10.3. Possibility of hazardous reactions Reacts violently with (some) bases: release of heat. **Conditions to avoid** 10.4. Incompatible materials. 10.5. Incompatible materials Strong bases. metals. cyanides. silver nitrate. Hazardous decomposition products 10.6. Hydrogen chloride. **SECTION 11: Toxicological information** Information on toxicological effects 11.1.

Acute toxicity	: Harmful if swallowed.		
Hydrochloric Acid, 37% w/w ( \f )7647-01-0	Hydrochloric Acid, 37% w/w ( \f )7647-01-0		
LD50 oral rat	700 mg/kg		
LD50 dermal rabbit	5010 mg/kg		
Hydrogen Chloride (7647-01-0)			
ATE (gases)	700.000 ppmV/4h		
Water (7732-18-5)			
LD50 oral rat	≥ 90000 mg/kg		
Skin corrosion/irritation	: Causes severe skin burns and eye damage.		
	pH: < 1		
Serious eye damage/irritation	: Causes serious eye damage.		
	pH: < 1		
Respiratory or skin sensitisation	: Not classified		
Germ cell mutagenicity	: Not classified		
Carcinogenicity	: Not classified		
Hydrochloric Acid, 37% w/w (7647-01-0)			
IARC group	3 - Not classifiable		
Reproductive toxicity	: Not classified		
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Specific target organ toxicity (single exposure)	: May cause respiratory irritation.	
Specific target organ toxicity (repeated exposure)	: Not classified	
Aspiration hazard	: Not classified	
Symptoms/injuries after inhalation	: Dry/sore throat. Coughing. Irritation of the respiratory tract. Irritation of the nasal mucous membranes. EXPOSURE TO HIGH CONCENTRATIONS: Respiratory difficulties. Possible laryngeal spasm/oedema. Corrosion of the upper respiratory tract. FOLLOWING SYMPTOMS MAY APPEAR LATER: Risk of pneumonia. Risk of lung oedema.	
Symptoms/injuries after skin contact	: Caustic burns/corrosion of the skin.	
Symptoms/injuries after eye contact	: Corrosion of the eye tissue. Permanent eye damage.	
Symptoms/injuries after ingestion	: Burns to the gastric/intestinal mucosa. Blood in vomit. Possible esophageal perforation. Shock.	

<b>SECTION 12: Ecological informatic</b>	n
12.1. Toxicity	
Ecology - water	: Mild water pollutant (surface water). Ground water pollutant. Maximum concentration in drinking water: 250 mg/l (chloride) (Directive 98/83/EC). Slightly harmful to fishes. Toxic to plankton. pH shift. Insufficient data available on ecotoxicity.
Hydrochloric Acid 27% w/w (7647.01.0)	

Hydrochioric Acid, 37% W/W (7647-01-0)	
LC50 fishes 1	282 mg/l (96 h; Gambusia affinis; Pure substance)
EC50 Daphnia 1	< 56 mg/l (72 h; Daphnia magna; Pure substance)
LC50 fish 2	862 mg/l (Leuciscus idus; Pure substance)
TLM fish 1	282 ppm (96 h; Gambusia affinis; Pure substance)

### 12.2. Persistence and degradability

Hydrochloric Acid, 37% w/w (7647-01-0)	
Persistence and degradability	Biodegradability: not applicable. No (test)data on mobility of the components of the mixture available.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable
Water (7722 19 5)	
Water (7732-18-5)	

Not established.

### 12.3 Bioaccumulative potential

Persistence and degradability

12.3. Bioaccumulative potential	
Hydrochloric Acid, 37% w/w (7647-01-0)	
Log Pow	0.25 (QSAR)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).
Water (7732-18-5)	
Bioaccumulative potential	Not established.
12.4. Mobility in soil	
Hydrochloric Acid, 37% w/w (7647-01-0)	
Ecology - soil	May be harmful to plant growth, blooming and fruit formation.

### 12.5. Other adverse effects

### No additional information available

# SECTION 13: Disposal considerations 13.1. Waste treatment methods Waste disposal recommendations : Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Recycle by distillation. Dehydrate/make insoluble. Immobilize the toxic or harmful components. Remove to an authorized dump (Class I). Treat using the best available techniques before discharge into drains or the aquatic environment.

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Additional information

: LWCA (the Netherlands): KGA category 01. Hazardous waste according to Directive 2008/98/EC.

SECTION 14: Transport information	
In accordance with DOT	
Transport document description	: UN1789 Hydrochloric acid, 8, II
UN-No.(DOT)	: 1789
DOT NA no.	: UN1789
DOT Proper Shipping Name	: Hydrochloric acid
Department of Transportation (DOT) Hazard Classes	: 8 - Class 8 - Corrosive material 49 CFR 173.136
Hazard labels (DOT)	: 8 - Corrosive
	8
Packing group (DOT)	: II - Medium Danger
DOT Special Provisions (49 CFR 172.102)	<ul> <li>in a Michael Dangel</li> <li>A3 - For combination packagings, if glass inner packagings (including ampoules) are used, they must be packed with absorbent material in tightly closed metal receptacles before packing in outer packagings.</li> <li>A6 - For combination packagings, if plastic inner packagings are used, they must be packed in tightly closed metal receptacles before packing in outer packagings.</li> <li>B3 - MC 300, MC 301, MC 302, MC 303, MC 305, and MC 306 and DOT 406 cargo tanks and DOT 57 portable tanks are not authorized.</li> <li>B15 - Packagings must be protected with non-metallic linings impervious to the lading or have a suitable corrosion allowance.</li> <li>IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized.</li> <li>N41 - Metal construction materials are not authorized for any part of a packaging which is normally in contact with the hazardous material.</li> <li>T8 - 4 178.274(d)(2) Normal Prohibited</li> <li>TP2 - a. The maximum degree of filling must not exceed the degree of filling determined by the following: (image) Where: tr is the maximum mean bulk temperature during filling (ff) and the maximum mean bulk temperature of the liquid during filling (ff) and the maximum mean bulk temperature of the liquid during filling (ff) and the maximum mean bulk temperature during filling (ff) and the maximum mean bulk temperature during filling (ff) and the maximum mean bulk temperature during filling (ff) and the maximum mean bulk temperature during filling (ff) and the maximum mean bulk temperature during filling (ff) and the maximum mean bulk temperature during filling (ff) and the maximum mean bulk temperature during filling (ff) and the maximum mean bulk temperature during filling (ff) and the figuid stransported under ambient conditions may be calculated using</li></ul>
DOT Packaging Exceptions (49 CFR 173.xxx)	: 154
DOT Packaging Non Bulk (49 CFR 173.xxx)	: 202
DOT Packaging Bulk (49 CFR 173.xxx)	: 242
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	: 30 L
DOT Vessel Stowage Location	: C - The material must be stowed "on deck only" on a cargo vessel and on a passenger vessel.
Additional information	
Other information	: No supplementary information available.
State during transport (ADR-RID)	: as liquid.
ADR	
Transport document description	: UN 1789 Hydrochloric acid, 8, II, (E)
Packing group (ADR)	
Class (ADR)	: 8 - Corrosive substances
Hazard identification number (Kemler No.)	: 80
	: C1
Classification code (ADR)	. 01

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Danger labels (ADR)	: 8 - Corrosive substances
	8
Orange plates	<b>80</b> 1789
Tunnel restriction code	: E
Transport by sea	
UN-No. (IMDG)	: 1789
Class (IMDG)	: 8 - Corrosive substances
EmS-No. (1)	: F-A
EmS-No. (2)	: S-B
Air transport	
UN-No.(IATA)	: 1789
Class (IATA)	: 8 - Corrosives
Packing group (IATA)	: II - Medium Danger

### **SECTION 15: Regulatory information**

15.1. US Federal regulations	
Hydrochloric Acid, 37% w/w (7647-01-0)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
RQ (Reportable quantity, section 304 of EPA's List of Lists) :	5000 lb
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard
Water (7732-18-5)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	

### 15.2. International regulations

### CANADA

Hydrochloric Acid, 37% w/w (7647-01-0)	
Listed on the Canadian DSL (Domestic Sustances List) inventory.	
WHMIS Classification	Class E - Corrosive Material
Water (7732-18-5)	
Listed on the Canadian DSL (Domestic Sustances List) inventory.	
WHMIS Classification	Uncontrolled product according to WHMIS classification criteria

### **EU-Regulations**

No additional information available

### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Skin Corr. 1B H314 STOT SE 3 H335 Full text of H-phrases: see section 16

### Classification according to Directive 67/548/EEC or 1999/45/EC

C; R34 Xi; R37 Full text of R-phrases: see section 16

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according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

15.2.2.	National regulations
Hydro	chloric Acid, 37% w/w (7647-01-0)
Listed on the Canadian Ingredient Disclosure List	
Water	(7732-18-5)
Not list	ed on the Canadian Ingredient Disclosure List

### 15.3. US State regulations

No additional information available

### SECTION 16: Other information

Full text of H-phrases: see section 16:

Acute toxicity (inhal.), Category 3
Acute toxicity (oral), Category 4
Hazardous to the aquatic environment — AcuteHazard, Category 3
Gases under pressure Compressed gas
Serious eye damage/eye irritation, Category 1
Skin corrosion/irritation, Category 1A
Skin corrosion/irritation, Category 1B
Specific target organ toxicity — Single exposure, Category 3,
Respiratory tract irritation
Contains gas under pressure; may explode if heated
Harmful if swallowed
Causes severe skin burns and eye damage
Causes serious eye damage
Toxic if inhaled
May cause respiratory irritation
Harmful to aquatic life

NFPA health hazard	: 3 - Short exposure could cause serious temporary or residual injury even though prompt medical attention was given.
NFPA fire hazard	: 0 - Materials that will not burn.
NFPA reactivity	: 1 - Normally stable, but can become unstable at elevated temperatures and pressures or may react with water with some release of energy, but not violently.
HMIS III Rating	
Health	: 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given
Flammability	: 0 Minimal Hazard
Physical	: 1 Slight Hazard
Personal Protection	: H

SDS US (GHS HazCom 2012)

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