



HI 4005-00
ISA for Carbon Dioxide
Safety Data Sheet

According to Regulation (EC) No. 1907/2006
OSHA Regulation 29 CFR 1910.1200
Canadian Regulation SOR/88-66

Revision Date: 2013-01-15
Reason for Revision: Regulation (EC) No. 1272/2008 Compliance

SECTION 1: IDENTIFICATION OF THE PRODUCT AND COMPANY

Product Name: HI 4005-00 ISA for Carbon Dioxide
Application: Carbon Dioxide ISA Buffer Solution
Company Information (USA): Hanna Instruments, Inc.
584 Park East Dr, Woonsocket, Rhode Island, USA 02895
Technical Service Contact Information: 1-800-426-6287 (8:30AM - 5:00PM ET)
+1-401-766-4260 (8:30AM - 5:00PM ET)
USA Emergency Contact Information: 1-800-424-9300 (Chemtrec 24Hr. Emergency)
International Emergency Contact Information: +1-703-527-3887 (Chemtrec 24Hr. Emergency)
E-mail Address: tech@hannainst.com

SECTION 2: HAZARD IDENTIFICATION

Non-hazardous product as specified in Directives 67/548/EEC and 1999/45/EC.
Non-hazardous product as specified in OSHA Regulation 29 CFR 1910.1200.
Non-hazardous product as specified in Canadian Regulation SOR/88-66.
Non-hazardous product as specified in Regulation (EC) 1272/2008.

SECTION 3: COMPOSITION AND COMPONENT INFORMATION

Component:	EC No:	CAS No:	Hazard Class:	Phrases:	Concentration:
Hydrochloric acid	231-595-7	-	Skin Corr. 1B STOT SE 3 C, Xi	H314, H335 R: 34-37	> 1% - < 10%

SECTION 4: FIRST AID MEASURES

After Inhalation: Remove to fresh air. Call a physician if breathing becomes difficult.
After Skin Contact: Wash affected area with water and soap.
After Eye Contact: Rinse out with plenty of water for at least 15 minutes. If pain persists, summon medical advice.
After Swallowing: Immediately make victim drink plenty of water. Summon doctor if pain persists.
General Information: Not available

SECTION 5: FIRE-FIGHTING MEASURES

Suitable Extinguishing Media:
Water Spray, Foam, Dry Powder, Carbon Dioxide
Special Risks:
Non-combustible. Development of hazardous combustion gases or vapors possible in the event of fire. The following may develop in the event of fire: Hydrochloric Acid
Special Protective Equipment:
Do not stay in dangerous zone without suitable chemical protection clothing and self-contained breathing apparatus.
Additional Information:
Contain escaping vapors with water.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions:

Do not inhale vapors/aerosols.

Environmental Precautions:

NA

Additional Notes:

Render harmless: neutralize with diluted sodium hydroxide solution or by throwing on lime, lime sand, or sodium carbonate. Procedures for cleaning / absorption: Take up with liquid-absorbent material. Forward for disposal. Clean up affected area.

SECTION 7: HANDLING AND STORAGE

Handling:

Cannot be stored indefinitely.

Storage:

Tightly closed. In a well-ventilated place. At +15°C to +25°C.

SECTION 8: EXPOSURE CONTROL/PERSONAL PROTECTION

Type	Value	Source	Type	Value	Source
Hydrochloric Acid					
TWA (8hr)	8 mg/m ³	Belgium	Ceiling	2 ppm	Canada (Ontario)
Ceiling	5 ppm	Canada (Quebec)	TWA (15min)	7.6 mg/m ³	France
TWA (8hr)	3 mg/m ³	Germany	TWA (8hr)	7 mg/m ³	Greece
TWA (8hr)	8 mg/m ³	Hungary	TWA (8hr)	8 mg/m ³	Italy
TWA (8hr)	8 mg/m ³	Netherlands	TWA (8hr)	5 mg/m ³	Poland
Ceiling	2 ppm	Portugal	TWA (8hr)	8 mg/m ³	Romania
TWA (8hr)	7.6 mg/m ³	Spain	TWA (8hr)	2 mg/m ³	UK
Ceiling	2 ppm	USA (ACGIH)	Ceiling	5 ppm	USA (OSHA)

Engineering:

Maintain general industrial hygiene practice.

Personal Protective Equipment:

As appropriate to quantity handled.

Respiratory Protection:

Required when vapors/aerosols are generated.

Protective Gloves:

Rubber or plastic

Eye Protection:

Goggles or face mask

Industrial Hygiene:

Change contaminated clothing. Wash hands after working with substance.

SECTION 9: PHYSICAL/CHEMICAL PROPERTIES

Appearance:	Colorless liquid	Odor:	Odorless	Density at 20°C:	1.15 g/cm ³
Melting Point:	NA	Boiling Point:	> 100 °C	Solubility:	Soluble
pH at 20°C:	~ 4.5	Explosion Limit:	NA	Flash Point:	NA
Thermal Decomp.:	NA				

SECTION 10: STABILITY AND REACTIVITY

Conditions to be Avoided:

Heating

Hazardous Polymerization:

Will not occur.

Further Information:

Not available

Hazardous Decomposition Products:

In the event of fire: See section 5.

Substances to be Avoided:

Metals

SECTION 11: TOXICOLOGICAL INFORMATION

Product Toxicity

Quantitative data on the toxicity of this product is not available.

Potential Health Effects:

Skin Contact: Slight irritations.

Eye Contact: Slight irritations.

Further Data: The product should be handled with the usual care when dealing with chemicals.

Component Toxicity

Acute Toxicity:

Hydrochloric Acid

LC50: Inhalation - Rat - 1562 ppm

LD50: Oral - Rabbit - 900 mg/kg

Additional Data:

APPLICABLE TO PARTIAL COMPONENT:

The following applies to Hydrochloric acid, as the pure substance
Subacute to chronic toxicity

Applicable to the toxicologically determinant component:

An embryotoxic effect need not be feared when the threshold limit value is observed.

Chronic Toxicity:

Not Available

SECTION 12: ECOLOGICAL INFORMATION

Quantitative data on the ecotoxicity of this product is not available.

APPLICABLE TO PARTIAL COMPONENT:

The following applies to Hydrochloric acid – as the pure substance

Ecotoxic effects:

Quantitative data on the ecological effect of this product are not available.

Further ecologic data:

The following applies to HCl in general: Harmful effect on aquatic organisms. Harmful effect due to pH shift. Biological effects: hydrochloric acid (including such due to reaction): lethal for fish as from 25 mg/L; *Leuciscus idus* LC50: 862 mg/L (1N-solution). Harmful effects begin at: plants 6 mg/L. Does not cause biological oxygen deficit.

No ecological problems are to be expected when the product is handled and used with due care and attention.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal: Chemical residues are generally classified as special waste and thus covered by local regulations. Contact local authorities or disposal companies for advice. Handle contaminated packaging in the same way as the substance itself.

SECTION 14: TRANSPORTATION INFORMATION**Land:**

Not subject to transport regulations

Sea:

Not subject to transport regulations

Air:

Not subject to transport regulations

SECTION 15: REGULATORY INFORMATION

Complies with European Regulations (EC) No. 1907/2006 and No. 1272/2008.
Complies with European Council Directives 67/548/EEC and 1999/45/EC.
Complies with OSHA Regulation 29 CFR 1910.1200.
Complies with Canadian Regulation SOR/88-66

SECTION 16: OTHER INFORMATION***Text of phrases under Section 3***

R34: Causes burns
R37: Irritating to respiratory system
H314: Causes severe skin burns and eye damage.
H335: May cause respiratory irritation.

Revision Information

Revision Date: 2013-01-15
Supersedes edition of: 2012-06-01
Reason for revision: Regulation (EC) No. 1272/2008
Compliance

Legend

NA: Not Applicable
ND: Not Determined

THE INFORMATION CONTAINED HEREIN IS BASED ON THE PRESENT STATE OF OUR KNOWLEDGE. IT CHARACTERIZES THE PRODUCT WITH REGARD TO THE APPROPRIATE SAFETY PRECAUTIONS. IT DOES NOT REPRESENT A GUARANTEE OF THE PROPERTIES OF THE PRODUCT.