

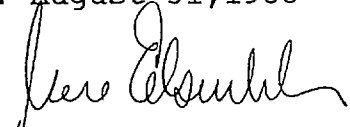
MATERIAL SAFETY DATA SHEET

Product Number:
Product Description:

030621
ICE ANION STANDARD

Dionex Corporation
1228 Titan Way
P.O. Box 3603
Sunnyvale, California
94088-3603

Emergency Phone: (408) 737-0700
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Date Prepared: August 31, 1988
Prepared By:


(Max Ebenhahn)

The following information is believed to be accurate and is currently the best information available to us. However, we make no warranties, express or implied, with respect to the information supplied and we assume no liability resulting from its use.

HAZARDOUS INGREDIENTS/IDENTITY INFORMATION (Section II)

HAZARDOUS COMPONENTS	APPROX. CONC.	CAS NO.
Deionized Water	99.9%	7732-18-5
Disodium Sulfate	10 ppm	7757-82-6
Formate (Formic Acid)	20 ppm	1633-56-3
Acetate (Acetic Acid)	20 ppm	64-19-7
Propionate (Propionic Acid)	20 ppm	79-09-4

PHYSICAL/CHEMICAL CHARACTERISTICS (Section III)

BOILING POINT: approximately 100 °C

SPECIFIC GRAVITY (H2O = 1): approximately 1

MELTING POINT: approximately 0°C

SOLUBILITY IN WATER: The solution is approximately 99.9% water

APPEARANCE AND ODOR: Clear odorless solution

FIRE AND EXPLOSION HAZARD DATA (Section IV)

FLASH POINT (METHOD USED): N/A
(Note that the solution is approximately 99.9% water)

FLAMMABLE LIMITS:
LEL: Undetermined
UEL: Undetermined

EXTINGUISHING MEDIA:
* Carbon Dioxide, Foam, Dry Chemical

SPECIAL FIRE FIGHTING PROCEDURES:
* As a general rule, firefighters subject to products of combustion should wear full-protective clothing including self-contained breathing apparatus.

UNUSUAL FIRE AND EXPLOSION HAZARDS:
* Because of the high water content, this solution poses no fire or explosion hazard.

REACTIVITY DATA (Section V)

STABILITY
UNSTABLE:
STABLE: X
CONDITIONS TO AVOID:

INCOMPATIBILITY (MATERIALS TO AVOID):
* Materials that react violently with water.

HAZARDOUS DECOMPOSITION OR BYPRODUCTS:
* The components other than water are stable carboxylic acids. Common reaction products are not hazardous.

HAZARDOUS POLYMERIZATION:
MAY OCCUR:
WILL NOT OCCUR: X
CONDITIONS TO AVOID:

HEALTH HAZARD DATA (Section VI)

HAZARD CLASS:

COMPONENT	NFPA RATINGS (SCALE 0-4)		
	Health	Fire	Reactivity
Disodium Sulfate (pure)	Irritant 0	0	0
Formic Acid (pure)	Irritant 3	2	0
Acetic Acid (pure)	Irritant 2	2	1
Propionic Acid (pure)	Irritant 2	2	0

ROUTES OF ENTRY

INHALATION?: X

SKIN?: X

INGESTION?: X

HEALTH HAZARDS (ACUTE AND CHRONIC):

- * Compounds other than water may cause eye and/or eye irritation.
- * Compounds other than water can be irritating to mucous membranes and upper respiratory tract.
- * Toxic Hazards

TOXICITY DATA (ref #1)

DISODIUM SULFATE

ORL-MUS LD50: 5989 MG/KG

IVN-MUS LDLO: 1220 MG/KG

IVN-RBT LDLO: 4470 MG/KG

FORMIC ACID

SKN-RBT610 MG OPEN MLD

EYE-RBT 122 MG SEV

MMO-ESC 70 PPM/3H

SLN-DMG-IHL 1000 PPM/24H

SLN-DMG-ORL 1000 PPM

ORL-RAT LD50: 1210 MG/KG

ORL-MUS LD50: 1100 MG/KG

IPR-MUS LD50: 940 MG/KG

IVN-MUS LD50: 145 MG/KG

ORL-DOG LD50: 4000 MG/KG

IVN-DOG LDLO: 3000 MG/KG

IVN-RBT LDLO: 239 MG/KG

ACETIC ACID

SKN-HMN 50 MG/24H MLD
SKN-RBT 525 MG OPEN SEV
SKN-RBT 50 MG/42H MLD
EYE-RBT 50 UG SEV
MMO-ESC 300 PPM/3H
SLN-DMG-IHL 1000 PPM/24H
SLN-DMG-ORL 1000 PPM
CYT-GRL-PAR 40 UMOL/L
ORL-HMN TDLO: 1470 UG/KG:GIT
IHL-HMN TCLO: 816 PPM/3M:IRR
UNK-MAN LDLO: 308 MG/KG
ORL-RAT LD50: 3310 MG/KG
IHL-RAT LCLO: 16000 PPM/4H
ORL-MUS LD50: 4960 MG/KG
IHL-MUS LC50: 5620 PPM/1H
IVN-MUS LD50: 525 MG/KG
ORL-RBT LDLO: 1200 MG/KG
SKN-RBT LD50: 1060 MG/KG
SCU-RBT LDLO: 1200 MG/KG
REC-RBT LDLO: 1200 MG/KG

PROPIONIC ACID

SKN-RBT 495 OPEN SEV
EYE-RBT 990 MG OPEN SEV
ORL-RAT LD50: 2500 MG/KG
IPR-RAT LD50: 200 MG/KG
IVN-MUS LD50: 625 MG/KG
SKN-RBT LD50: 500 MG/KG

reference #1 DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS
By Irving Sax
6th Edition
Van Nostrand Reinhold Company, Inc.

CARCINOGENICITY:

NTP?: Unknown

IARC MONOGRAPHS?: Unknown

OSHA REGULATED?: Unknown

SYMPTOMS AND SIGNS OF EXPOSURE:

- * Water in nonhazardous.
- * Sodium sulfate in dilute aqueous solutions is nonhazardous.
- * Formic acid in dilute aqueous solutions is a mild irritant.
- * Acetic acid in dilute aqueous solutions is a mild irritant.
- * Propionic acid in dilute aqueous solutions is a mild irritant.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:

- * Any rash or soreness of skin or eyes may be made worst by exposure to this solution.

EMERGENCY AND FIRST AID PROCEDURES:

- * In case of contact, wash skin with copious amounts of water.
- * Flush eyes with copious amounts of water for at least 15 minutes.
- * If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult give oxygen.
- * Submit to medical examination.

PRECAUTIONS FOR SAFE HANDLING AND USE (Section VII)

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

- * Wear appropriate protective clothing and eye protection.
- * Mop up and store in a suitable waste container.
- * Wash contaminated area with soap and water.

WASTE DISPOSAL METHOD:

- * Dispose of according to local, state and federal laws.
- * Because to the low concentrations of the carboxylic acids in the standard, no special precautions are necessary.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING:

- * Work in areas with adequate ventilation.

CONTROL MEASURES (Section VII)

RESPIRATORY PROTECTION (SPECIFY TYPE)

- * No special precautions are necessary.

VENTILATION

LOCAL EXHAUST: Good laboratory ventilation is acceptable.

MECHANICAL (GENERAL):

SPECIAL:

OTHER:

PROTECTIVE GLOVES: Disposable laboratory gloves are adequate.

EYE PROTECTION: Glasses or goggles should be worn as a general laboratory requirement.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Labcoats

WORK/HYGIENIC PRACTICES: Wipe up any spills wash hands after working in the laboratory.