

Common Name	HYDRIC ACID
Manufactured by	APPLIED PETROCHEMICAL RESEARCH
CAS Number	
Revised	07/23/1987
Source of MSDS	Dolphin (DOL\$270453)

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MATERIAL SAFETY DATA SHEET

MAY BE USED TO COMPLY WITH OSHA'S HAZARD COMMUNICATION STANDARD, 29 CFR 1910.1200. STANDARD MUST BE CONSULTED FOR SPECIFIC REQUIREMENTS.

U.S. DEPARTMENT OF LABOR
 OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
 (NON-MANDATORY FORM)
 FORM APPROVED
 OMB NO. 1218-0072

IDENTITY (AS USED ON LABEL AND LIST):

PRODUCT NAME: HYDRIC ACID

CHEMICAL FAMILY: ORGANIC HYDROXIDE

COMMON SYNONYMS: HYDRONIUM HYDROXIDE, DIHYDROGEN MONOXIDE (DHMO),
 HYDROXYL
 ACID, HYDROGEN HYDROXIDE

INDUSTRIAL USES: SOLVENT, NUCLEAR POWER PLANT COOLANT,
 PHARMACEUTICALS,

PESTICIDES, BIOLOGICAL AND CHEMICAL WEAPONS.

FORMULA: H3O(+) (OH) - KW =1.01 X 10-14 AT 25 DEG. C

NOTE:

BLANK SPACES ARE NOT PERMITTED. IF ANY ITEM IS NOT APPLICABLE, OR NO INFORMATION IS AVAILABLE, THE SPACE MUST BE MARKED TO INDICATE THAT.

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-----SECTION I -----

MANUFACTURERS NAME:

APPLIED PETROCHEMICAL RESEARCH

ADDRESS (NUMBER, STREET, CITY, STATE, AND ZIP CODE):

3749 INDUSTRIAL WAY

LOS ANGELES, CALIFORNIA

90049

EMERGENCY TELEPHONE NUMBER:

800-464-6461

TELEPHONE NUMBER FOR INFORMATION:

301-274-9652

DATE PREPARED:

7/23/87

SIGNATURE OF PREPARER (OPTIONAL):

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-----SECTION II - HAZARD INGREDIENTS/IDENTITY INFORMATION -----

*** WARNING STATEMENT ***

CONTAINS DHMO. PROLONGED EXPOSURE TO SOLID DHMO CAUSES SEVERE TISSUE DAMAGE.

GASEOUS DHMO CAN CAUSE SEVERE BURNS. ACCIDENTAL INHALATION OF DHMO EVEN IN SMALL QUANTITIES CAN CAUSE DEATH.

HAZARDOUS COMPONENTS

(SPECIFIC CHEMICAL IDENTITY; COMMON NAMES INGREDIENTS	OSHA PEL CAS NUMBER	ACGIH TLV	OTHER LIMITS RECOMMENDED (OPTIONAL) %WEIGHT	%
HYDRIC ACID	07732-18-5		>90%	

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-----SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS -----

BOILING POINT:

212 F

SPECIFIC GRAVITY:

1

VAPOR PRESSURE (MM HG.):

17.5

MELTING POINT:

32 F AT 1 ATM.

VAPOR DENSITY (AIR=1) G/CC:

<1

EVAPORATION RATE (BUTYL ACETATE = 1):

VARIES

SOLUBILITY IN WATER:

100% SOLUBLE

APPEARANCE AND ODOR:

COLORLESS ODORLESS LIQUID

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-----SECTION IV - FIRE AND EXPLOSION HAZARD DATA -----

FLASH POINT (METHOD USED):
N/A

FLAMMABLE LIMITS:
LEL: N/A
UEL: N/A

EXTINGUISHING MEDIA:

SPECIAL FIRE FIGHTING PROCEDURES:

UNUSUAL FIRE AND EXPLOSION HAZARDS:
REACTION WITH SOME SPECIFIC MATERIAL CAUSES COMBUSTION.

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-----SECTION V - REACTIVITY DATA -----

STABILITY	UNSTABLE	CONDITIONS TO AVOID
SPECIFIC	STABLE X	MAY REACT VIGOROUSLY WITH SOME
ALL		MATERIALS. AVOID CONTACT WITH
SHOWS		MATERIALS UNTIL INVESTIGATION
		SUBSTANCE IS COMPATIBLE.

INCOMPATIBILITY (MATERIALS TO AVOID):
LEADS TO OR ACCELERATES THE CORROSION OF MANY METALS

HAZARDOUS DECOMPOSITION OR BYPRODUCTS:
BY HIGH HEAT AND FIRE: DHMO VAPORS OR AEROSOLS

HAZARDOUS POLYMERIZATION: MAY OCCUR ()
WILL NOT OCCUR (X)

CONDITIONS TO AVOID:
MAY REACT VIGOROUSLY WITH SOME SPECIFIC MATERIALS. AVOID CONTACT
WITH ALL
MATERIALS UNTIL INVESTIGATION SHOWS SUBSTANCE IS COMPATIBLE.

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-----SECTION VI - HEALTH HAZARD DATA -----

ROUTE(S) OF ENTRY:

INHALATION? (X)

SKIN? (X)

INGESTION? (X)

HEALTH HAZARDS (ACUTE AND CHRONIC):

ACCIDENTAL INHALATION EVEN IN SMALL QUANTITIES MAY CAUSE DEATH.

CARCINOGENICITY:

DHMO HAS BEEN FOUND IN BIOPSIES OF PRE-CANCEROUS TUMORS AND LESIONS.

DHMO HAS

ALSO BEEN FOUND IN THE TUMORS OF SOME TERMINAL CANCER PATIENTS

NTP? N/A

IARC MONOGRAPHS? N/A

OSHA REGULATED?

SIGNS AND SYMPTOMS OF EXPOSURE:

SIGNS OF DHMO OVERDOSE INCLUDE BUT ARE NOT LIMITED TO EXCESSIVE
SWEATING,

EXCESSIVE URINATION, NAUSEA, VOMITING, ELECTROLYTE IMBALANCE,
HYPONATREMIA

(SERUM HYPOTONICITY), DANGEROUSLY IMBALANCED LEVELS OF ECF AND ICF IN
THE BLOOD

AND DEGENERATION OF SODIUM HOMEOSTASIS.

N/A

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:
OVERDOSE OF DHMO CAN RESULT IN CONGESTIVE HEART FAILURE, PULMONARY
EDEMA AND
HYPERTENSION IN KIDNEY DIALYSIS PATIENTS.

N/A

EMERGENCY AND FIRST AID PROCEDURES:
APPLIED PETROCHEMICAL RESEARCH'S METHOD OF HAZARD COMMUNICATION IS
COMPRISED OF
PRODUCT LABELS AND MATERIAL SAFETY DATA SHEETS.

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-----SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE -----

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:
SPILLS - ABSORB THE SLURRY WITH SAWDUST OR OTHER ABSORBENT. DISPOSE
OF THE
PRODUCT AS SOLID WASTE IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL
REGULATIONS.

WASTE DISPOSAL METHOD:
WASTE MUST BE DISPOSED OF IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL
ENVIRONMENTAL CONTROL REGULATIONS.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING:
LIQUID CHEMICAL GOGGLES SHOULD BE WORN. KEEP CONTAINER TIGHTLY
CLOSED. PROTECT
FROM FREEZING. WHEN DHMO FREEZES IONIC BONDS CAN FORM BETWEEN
HYDRONIUM AND
HYDROXIDE IONS FORMING AT LEAST ONE OF TEN KNOWN CRYSTAL STRUCTURES
AND
RESULTING IN AN INCREASE IN VOLUME POSSIBLY RUPTURING CONTAINERS
CAUSING A
SPILL.

STORAGE TEMPERATURE (MIN/MAX) -----40 DEG. F / 100 DEG. F

OTHER PRECAUTIONS:

SPECIAL SENSITIVITY - NONE

REGULATORY INFORMATION:

TSCA: LISTED ON THE TSCA CHEMICAL SUBSTANCE INVENTORY.

SARA: THIS MATERIAL DOES NOT CONTAIN ANY SUBSTANCES ON THE LIST OF TOXIC CHEMICALS SUBJECT TO SECTION 313 OF THE SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (SARA TITLE III)

RCRA: NOT A HAZARDOUS WASTE

TRANSPORTATION:

DOT (DOMESTIC SURFACE) --- NON REGULATED.

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-----SECTION VIII - CONTROL MEASURES -----

RESPIRATORY PROTECTION (SPECIFY TYPE):

OBSERVE OSHA REGULATIONS FOR RESPIRATOR USE (CFR 1910.134)

VENTILATION: ACGIH INDUSTRIAL VENTILATION SHOULD BE CONSULTED FOR GUIDANCE ABOUT ADEQUATE VENTILATION

LOCAL EXHAUST: N/A

MECHANICAL (GENERAL): N/A

SPECIAL: N/A

OTHER: N/A

PROTECTIVE GLOVES:

BUTYL RUBBER, NITRILE RUBBER, PVA OR LATEX

EYE PROTECTION:

SAFETY GLASSES SHOULD BE WORN.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT:

COVER EXPOSED SKIN WITH APPROPRIATE CLOTHING (LAB COAT)

WORK/HYGIENIC PRACTICES:

THIS INFORMATION IS FURNISHED WITHOUT WARRANTY, EXPRESSED OR IMPLIED,
EXCEPT

THAT IT IS ACCURATE TO THE BEST KNOWLEDGE OF APPLIED PETROCHEMICAL
RESEARCH.

THE DATA ON THIS RELATES ONLY TO THE SPECIFIC MATERIAL DESIGNATED
HEREIN.

APPLIED PETROCHEMICAL RESEARCH ASSUMES NO LEGAL RESPONSIBILITY FOR USE
OR
RELIANCE UPON THESE DATA.

(REPRODUCE LOCALLY)

OSHA 174, SEPT. 1985