

Valid 05/2003 - 07/2003

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M A T E R I A L S A F E T Y D A T A S H E E T

SECTION 1. - - - - - CHEMICAL IDENTIFICATION- - - - -

CATALOG #: 309079
NAME: NITRIC ACID, RED, FUMING (90%)

SECTION 2. - - - - - COMPOSITION/INFORMATION ON INGREDIENTS - - - - -

CAS #: 7697-37-2
MF: HNO3
EC NO: 231-714-2

SYNONYMS

NITROUS FUMES * RED FUMING NITRIC ACID * RFNA *

SECTION 3. - - - - - HAZARDS IDENTIFICATION - - - - -

LABEL PRECAUTIONARY STATEMENTS

OXIDIZING
CORROSIVE
CONTACT WITH COMBUSTIBLE MATERIAL MAY CAUSE FIRE.
TOXIC IF SWALLOWED.
VERY TOXIC BY INHALATION.
CAUSES SEVERE BURNS.
TARGET ORGAN(S):
LUNGS
TEETH
DO NOT BREATHE VAPOR.

IN CASE OF CONTACT WITH EYES, RINSE IMMEDIATELY WITH PLENTY OF
WATER AND SEEK MEDICAL ADVICE.
WEAR SUITABLE PROTECTIVE CLOTHING.
IN CASE OF ACCIDENT OR IF YOU FEEL UNWELL, SEEK MEDICAL ADVICE
IMMEDIATELY (SHOW THE LABEL WHERE POSSIBLE).

SECTION 4. - - - - - FIRST-AID MEASURES- - - - -

IF SWALLOWED, WASH OUT MOUTH WITH WATER PROVIDED PERSON IS CONSCIOUS.
CALL A PHYSICIAN IMMEDIATELY.
DO NOT INDUCE VOMITING.
IF INHALED, REMOVE TO FRESH AIR. IF NOT BREATHING GIVE ARTIFICIAL
RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN.
IN CASE OF SKIN CONTACT, FLUSH WITH COPIOUS AMOUNTS OF WATER
FOR AT LEAST 15 MINUTES. REMOVE CONTAMINATED CLOTHING AND
SHOES. CALL A PHYSICIAN.
IN CASE OF CONTACT WITH EYES, FLUSH WITH COPIOUS AMOUNTS OF WATER
FOR AT LEAST 15 MINUTES. ASSURE ADEQUATE FLUSHING BY SEPARATING
THE EYELIDS WITH FINGERS. CALL A PHYSICIAN.

SECTION 5. - - - - - FIRE FIGHTING MEASURES - - - - -

EXTINGUISHING MEDIA

USE EXTINGUISHING MEDIA APPROPRIATE TO SURROUNDING FIRE CONDITIONS.
QUENCH WITH LARGE QUANTITIES OF WATER.
USE WATER SPRAY TO COOL FIRE-EXPOSED CONTAINERS.

SPECIAL FIREFIGHTING PROCEDURES

WEAR SELF-CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING TO
PREVENT CONTACT WITH SKIN AND EYES.
DO NOT DIRECT A SOLID STREAM OF WATER OR FOAM INTO BURNING MOLTEN
MATERIAL; THIS MAY CAUSE SPATTERING AND SPREAD THE FIRE.

UNUSUAL FIRE AND EXPLOSIONS HAZARDS

EMITS TOXIC FUMES UNDER FIRE CONDITIONS.

SECTION 6. - - - - - ACCIDENTAL RELEASE MEASURES- - - - -
 WEAR SELF-CONTAINED BREATHING APPARATUS, RUBBER BOOTS AND HEAVY
 RUBBER GLOVES.
 ABSORB ON SAND OR VERMICULITE AND PLACE IN CLOSED CONTAINERS FOR
 DISPOSAL.
 VENTILATE AREA AND WASH SPILL SITE AFTER MATERIAL PICKUP IS COMPLETE.
 EVACUATE AREA.

SECTION 7. - - - - - HANDLING AND STORAGE- - - - -
 REFER TO SECTION 8.

SECTION 8. - - - - - EXPOSURE CONTROLS/PERSONAL PROTECTION- - - - -
 SAFETY SHOWER AND EYE BATH.
 USE ONLY IN A CHEMICAL FUME HOOD.
 CORROSIVE.
 TOXIC.
 NITROGEN OXIDES
 MAY REACT WITH METALS, RELEASING FLAMMABLE HYDROGEN GAS.
 WASH THOROUGHLY AFTER HANDLING.
 DISCARD CONTAMINATED CLOTHING AND SHOES.
 DO NOT BREATHE VAPOR.
 DO NOT GET IN EYES, ON SKIN, ON CLOTHING.
 AVOID PROLONGED OR REPEATED EXPOSURE.
 NIOSH/MSHA-APPROVED RESPIRATOR.
 WEAR HEAVY RUBBER GLOVES.
 CHEMICAL SAFETY GOGGLES.
 RUBBER APRON.
 KEEP TIGHTLY CLOSED.
 STORE IN A COOL DRY PLACE.

SECTION 9. - - - - - PHYSICAL AND CHEMICAL PROPERTIES - - - - -
 APPEARANCE AND ODOR
 RED FUMING LIQUID
 PHYSICAL PROPERTIES
 FLASHPOINT NONE
 VAPOR PRESSURE: 8MM 20 C
 SPECIFIC GRAVITY: 1.574
 SWISS POISON CLASS: 2

SECTION 10. - - - - - STABILITY AND REACTIVITY - - - - -
 STABILITY
 STABLE.
 CONDITIONS TO AVOID
 MAY DISCOLOR ON EXPOSURE TO LIGHT.
 HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS
 NITROGEN OXIDES
 HAZARDOUS POLYMERIZATION
 WILL NOT OCCUR.

SECTION 11. - - - - - TOXICOLOGICAL INFORMATION - - - - -
 ACUTE EFFECTS
 CAUSES SEVERE BURNS.
 MAY BE HARMFUL IF ABSORBED THROUGH THE SKIN.
 MATERIAL IS EXTREMELY DESTRUCTIVE TO THE TISSUE OF THE MUCOUS MEMBRANES
 AND UPPER RESPIRATORY TRACT.
 HIGHLY TOXIC-INHALATION.
 TOXIC IF SWALLOWED.
 MATERIAL IS EXTREMELY DESTRUCTIVE TO TISSUE OF THE MUCOUS MEMBRANES
 AND UPPER RESPIRATORY TRACT, EYES AND SKIN.
 INHALATION MAY RESULT IN SPASM, INFLAMMATION AND EDEMA OF THE
 LARYNX AND BRONCHI, CHEMICAL PNEUMONITIS AND PULMONARY EDEMA.
 SYMPTOMS OF EXPOSURE MAY INCLUDE BURNING SENSATION, COUGHING,
 WHEEZING, LARYNGITIS, SHORTNESS OF BREATH, HEADACHE, NAUSEA AND
 VOMITING.
 LARGE DOSES MAY CAUSE:
 CONVERSION OF HEMOGLOBIN TO METHEMOGLOBIN, PRODUCING CYANOSIS;
 MARKED FALL IN BLOOD PRESSURE, LEADING TO COLLAPSE, COMA, AND

POSSIBLY DEATH.

CHRONIC EFFECTS

TARGET ORGAN(S):

LUNGS

TEETH

G.I. SYSTEM

CARDIOVASCULAR SYSTEM

RTECS #: QU5900000

NITRIC ACID (RED FUMING)

TOXICITY DATA

IHL-RAT LC50:67 PPM(NO2)/4H

AMIHBC 10,418,1954

ONLY SELECTED REGISTRY OF TOXIC EFFECTS OF CHEMICAL SUBSTANCES
(RTECS) DATA IS PRESENTED HERE. SEE ACTUAL ENTRY IN RTECS FOR
COMPLETE INFORMATION.

SECTION 12. - - - - - ECOLOGICAL INFORMATION - - - - -
DATA NOT YET AVAILABLE.

SECTION 13. - - - - - DISPOSAL CONSIDERATIONS - - - - -
DISSOLVE OR MIX THE MATERIAL WITH A COMBUSTIBLE SOLVENT AND BURN IN A
CHEMICAL INCINERATOR EQUIPPED WITH AN AFTERBURNER AND SCRUBBER.
CONTACT A LICENSED PROFESSIONAL WASTE DISPOSAL SERVICE TO DISPOSE OF
THIS MATERIAL.

OBSERVE ALL FEDERAL, STATE AND LOCAL ENVIRONMENTAL REGULATIONS.

SECTION 14. - - - - - TRANSPORT INFORMATION - - - - -
CONTACT ALDRICH CHEMICAL COMPANY FOR TRANSPORTATION INFORMATION.

SECTION 15. - - - - - REGULATORY INFORMATION - - - - -

EUROPEAN INFORMATION

EC INDEX NO: 007-004-00-1

OXIDIZING

CORROSIVE

R 8

CONTACT WITH COMBUSTIBLE MATERIAL MAY CAUSE FIRE.

R 35

CAUSES SEVERE BURNS.

S 23

DO NOT BREATHE VAPOR.

S 26

IN CASE OF CONTACT WITH EYES, RINSE IMMEDIATELY WITH PLENTY OF
WATER AND SEEK MEDICAL ADVICE.

S 36

WEAR SUITABLE PROTECTIVE CLOTHING.

S 45

IN CASE OF ACCIDENT OR IF YOU FEEL UNWELL, SEEK MEDICAL ADVICE
IMMEDIATELY (SHOW THE LABEL WHERE POSSIBLE).

REVIEWS, STANDARDS, AND REGULATIONS

OEL=MAK

OEL-ARAB REPUBLIC OF EGYPT: TWA 2 PPM (5 MG/M3), JAN1993

OEL-AUSTRALIA: TWA 2 PPM (5 MG/M3), STEL 4 PPM, JAN1993

OEL-BELGIUM: TWA 2 PPM (5.2 MG/M3), STEL 4 PPM (10 MG/M3), JAN1993

OEL-DENMARK: TWA 2 PPM (5 MG/M3), JAN1999

OEL-FINLAND: TWA 2 PPM (5 MG/M3), STEL 5 PPM (13 MG/M3), SKIN, JAN1999

OEL-FRANCE: VME 2 PPM (5 MG/M3), STEL 4 PPM (10 MG/M3), JAN1993

OEL-GERMANY: MAK 10 PPM (25 MG/M3), JAN1999

OEL-HUNGARY: STEL 5 MG/M3, JAN1993

OEL-JAPAN: OEL 2 PPM (5.2 MG/M3), JAN1993

OEL-NORWAY: TWA 2 PPM (5 MG/M3), JAN1999

OEL-THE PHILIPPINES: TWA 2 PPM (5 MG/M3), JAN1993

OEL-POLAND: MAC(TWA) 10 MG/M3, JAN1993

OEL-RUSSIA: TWA 2 PPM, STEL 2 MG/M3, SKIN, JAN1993

OEL-SWEDEN: NGV 2 PPM (5 MG/M3), KTV 5 PPM (13 MG/M3), JAN1999

OEL-SWITZERLAND: MAK-W 2 PPM (5 MG/M3), STEL 4 PPM (10 MG/M3), JAN1999

OEL-THAILAND: TWA 2 PPM (5 MG/M3), JAN1993

OEL-TURKEY: TWA 2 PPM (5 MG/M3), JAN1993

OEL-UNITED KINGDOM: TWA 2 PPM (5.2 MG/M3), STEL 4 PPM (10 MG/M3),

SEP2000

NOHS 1974: HZD 50742; NIS 197; TNF 18088; NOS 101; TNE 132401

NOES 1983: HZD 50742; NIS 201; TNF 18239; NOS 120; TNE 297627; TFE
76316

EPA TSCA SECTION 8(B) CHEMICAL INVENTORY

EPA TSCA SECTION 8(D) UNPUBLISHED HEALTH/SAFETY STUDIES

EPA TSCA TEST SUBMISSION (TSCATS) DATA BASE, JANUARY 2001

NIOSH ANALYTICAL METHOD, 1996: ACIDS, INORGANIC, 7903

U.S. INFORMATION

90.0% NITRIC ACID 7697-37-2

THIS PRODUCT IS SUBJECT TO SARA SECTION 313 REPORTING REQUIREMENTS.

SECTION 16. - - - - - OTHER INFORMATION- - - - -

THE ABOVE INFORMATION IS BELIEVED TO BE CORRECT BUT DOES NOT PURPORT TO
BE ALL INCLUSIVE AND SHALL BE USED ONLY AS A GUIDE. SIGMA, ALDRICH,
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