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THE WORLD'S FOREMOST MANUFACTURER OF RESEARCH
BIOCHEMICALS AND DIAGNOSTIC REAGENTS

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UNIVERSITY OF WISCONSIN
WHITEWATER
ACCOUNTS PAYABLE
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WHITEWATER WI 53190-0296

EMERGENCY PHONE 1-314-771-5765

DATE 06/04/96
CUST#: 2-097-94804
PO#: UNF-64248

MATERIAL SAFETY DATA SHEET PAGE 1

THIS MSDS IS FOR A COMPONENT OF CATALOG #: 665-5

SECTION 1. CHEMICAL IDENTIFICATION

CATALOG #: 665-8
NAME: TRICHLOROACETIC ACID SOLUTION 0.49 N

SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

CAS #: 76-03-9
EC NO: 200-927-2

SYNONYMS

ACETO-CAUSTIN * ACIDE TRICHLORACETIQUE (FRENCH) * ACIDO
TRICHLOROACETICO (ITALIAN) * AMCHEM GRASS KILLER * DOW SODIUM TCA
INIBITED * DOW SODIUM TCA SOLUTION * KONESTA * KYSELINA
TRICHLOROCTOVA (CZECH) * NA TA * SODIUM TCA SOLUTION *
TRICHLOROAZIJNZUUR (DUTCH) * TRICHLOROACETIC ACID (IUPAC) *
TRICHLOROSSIGSAEURE (GERMAN) * TRICHLOROACETIC ACID (ACGIH) *
TRICHLOROACETIC ACID (UN1839) (DOT) * TRICHLOROACETIC ACID, SOLUTION
(UN2564) (DOT) * TRICHLOROETHANOIC ACID * TRICHLOROMETHANECARBOXYLIC
ACID * UN1839 (DOT) * UN2564 (DOT) * VARITOX *

SECTION 3. HAZARDS IDENTIFICATION

LABEL PRECAUTIONARY STATEMENTS

CORROSIVE
CAUSES BURNS.
VESICANT.
TARGET ORGAN(S):
CENTRAL NERVOUS SYSTEM
IN CASE OF CONTACT WITH EYES, RINSE IMMEDIATELY WITH PLENTY OF
WATER AND SEEK MEDICAL ADVICE.
TAKE OFF IMMEDIATELY ALL CONTAMINATED CLOTHING.
WEAR SUITABLE PROTECTIVE CLOTHING, GLOVES AND EYE/FACE
PROTECTION.
DO NOT BREATHE VAPOR.

SECTION 4. FIRST-AID MEASURES

IF SWALLOWED, WASH OUT MOUTH WITH WATER PROVIDED PERSON IS CONSCIOUS.
CALL A PHYSICIAN.
IN CASE OF SKIN CONTACT, FLUSH WITH COPIOUS AMOUNTS OF WATER
FOR AT LEAST 15 MINUTES. REMOVE CONTAMINATED CLOTHING AND
SHOES. CALL A PHYSICIAN.
IF INHALED, REMOVE TO FRESH AIR. IF BREATHING BECOMES DIFFICULT,
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.

CONTINUED ON NEXT PAGE

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MATERIAL SAFETY DATA SHEET PAGE 2

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SECTION 5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA
NONCOMBUSTIBLE.
USE EXTINGUISHING MEDIA APPROPRIATE TO SURROUNDING FIRE CONDITIONS.

SPECIAL FIREFIGHTING PROCEDURES
WEAR SELF-CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING TO
PREVENT CONTACT WITH SKIN AND EYES.

UNUSUAL FIRE AND EXPLOSIONS HAZARDS
EMITS TOXIC FUMES UNDER FIRE CONDITIONS.

SECTION 6. ACCIDENTAL RELEASE MEASURES

EVACUATE AREA.
WEAR SELF-CONTAINED BREATHING APPARATUS, RUBBER BOOTS AND HEAVY
RUBBER GLOVES.
COVER WITH DRY LIME OR SODA ASH, PICK UP, KEEP IN A CLOSED CONTAINER
AND HOLD FOR WASTE DISPOSAL.
VENTILATE AREA AND WASH SPILL SITE AFTER MATERIAL PICKUP IS COMPLETE.

SECTION 7. HANDLING AND STORAGE

REFER TO SECTION 8.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

WEAR APPROPRIATE NIOSH/MSHA-APPROVED RESPIRATOR, CHEMICAL-RESISTANT
GLOVES, SAFETY GOGGLES, OTHER PROTECTIVE CLOTHING.
SAFETY SHOWER AND EYE BATH.
USE ONLY IN A CHEMICAL FUME HOOD.
FACESHIELD (8-INCH MINIMUM).

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR
LIQUID.

PHYSICAL PROPERTIES
SOLUBILITY:
WATER -SOLUBLE

SECTION 10. STABILITY AND REACTIVITY

STABILITY
STABLE.

HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS
TOXIC FUMES OF:
CARBON MONOXIDE, CARBON DIOXIDE

CONTINUED ON NEXT PAGE

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Table listing branch offices for SIGMA-ALDRICH in various countries including Germany, Spain, Czech Republic, Switzerland, Mexico, India, and South Korea.



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MATERIAL SAFETY DATA SHEET PAGE 3

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NAME: TRICHLOROACETIC ACID SOLUTION 0.49 N

HYDROGEN CHLORIDE GAS

HAZARDOUS POLYMERIZATION
WILL NOT OCCUR.

SECTION 11. TOXICOLOGICAL INFORMATION

ACUTE EFFECTS

HARMFUL IF SWALLOWED, INHALED, OR ABSORBED THROUGH SKIN.
CAUSES BURNS.
MATERIAL IS EXTREMELY DESTRUCTIVE TO TISSUE OF THE MUCOUS MEMBRANES
AND UPPER RESPIRATORY TRACT, EYES AND SKIN.
INHALATION MAY BE FATAL AS A RESULT OF 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.
CAUSES BLISTERS ON CONTACT WITH SKIN.
CAN CAUSE CNS DEPRESSION.

CHRONIC EFFECTS

GASTROINTESTINAL DISTURBANCES
THE TOXICOLOGICAL PROPERTIES HAVE NOT BEEN THOROUGHLY
INVESTIGATED.

RTECS #: AJ7875000
ACETIC ACID, TRICHLORO-

IRRITATION DATA

SKN-RBT 210 UG MLD
EYE-RBT 3500 UG/5S SEV

XEURAO MDDC-1715
XEURAO MDDC-1715

TOXICITY DATA

SCU-MUS LD50:270 MG/KG

NIIRDN 6,879,82

TARGET ORGAN DATA

PATERNAL EFFECTS (SPERMATOGENESIS)
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.
OBSERVE ALL FEDERAL, STATE AND LOCAL ENVIRONMENTAL REGULATIONS.

SECTION 14. TRANSPORT INFORMATION

CONTINUED ON NEXT PAGE

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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 P A G E 4

THIS MSDS IS FOR A COMPONENT OF CATALOG #: 665-5

CATALOG #: 665-8
NAME: TRICHLOROACETIC ACID SOLUTION 0.49 N

CONTACT SIGMA CHEMICAL COMPANY FOR TRANSPORTATION INFORMATION.

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

EUROPEAN INFORMATION

EC INDEX NO: 607-004-00-7

CORROSIVE

R 34

CAUSES BURNS.

S 24/25

AVOID CONTACT WITH SKIN AND EYES.

S 26

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

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

ACGIH TLV-TWA 1 PPM

IARC CANCER REVIEW: ANIMAL LIMITED EVIDENCE

IARC CANCER REVIEW: HUMAN INADEQUATE EVIDENCE

IARC CANCER REVIEW: GROUP 3

EPA FIFRA 1988 PESTICIDE SUBJECT TO REGISTRATION OR RE-REGISTRATION

FEREAC 54,7740,89

OEL-AUSTRALIA: TWA 1 PPM (7 MG/M3) JAN93

OEL-BELGIUM: TWA 1 PPM (6.7 MG/M3) JAN93

OEL-DENMARK: TWA 1 MG/M3 JAN93

OEL-FRANCE: TWA 1 PPM (5 MG/M3) JAN93

OEL-THE NETHERLANDS: TWA 1 MG/M3 JAN93

OEL-RUSSIA: STEL 5 MG/M3; SKIN JAN93

OEL-SWITZERLAND: TWA 1 PPM (7 MG/M3) JAN93

OEL-UNITED KINGDOM: TWA 1 PPM (5 MG/M3) JAN93

OEL IN BULGARIA, COLOMBIA, JORDAN, KOREA CHECK ACGIH TLV

OEL IN NEW ZEALAND, SINGAPORE, VIETNAM CHECK ACGIH TLV

NIOSH REL TO TRICHLOROACETIC ACID-AIR: 10H TWA 1 PPM

NIOSH* DHHS #92-100,92

NOHS 1974: HZD 81560; NIS 8; TNE 1353; NOS 13; TNE 13946

NOES 1983: HZD 81560; NIS 9; TNE 1562; NOS 21; TNE 35124; TFE 16821

EPA GENETOX PROGRAM 1988, INCONCLUSIVE: HISTIDINE REVERSION-AMES TEST

EPA TSCA SECTION 8(B) CHEMICAL INVENTORY

ON EPA IRIS DATABASE

EPA TSCA TEST SUBMISSION (TSCATS) DATA BASE, OCTOBER 1995

85IN8 6,1602,91
IMEMDT 63,291,95
IMEMDT 63,291,95
IMEMDT 63,291,95

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

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SIGMA CHIMIE L'ISLE D'Abauv Chesnes B.P. 701 38297 St. Quentin Fallavier Cedex	SIGMA-ALDRICH S.r.l. Via Gallarate 154 20151 Milano Italia	SIGMA-ALDRICH PTY., LIMITED Unit 2, 10 Anella Ave. Castle Hill NSW 2154 Australia	SIGMA-ALDRICH CHEMICAL REPRESENTAÇÕES LTDA Rua Sabará, 568 - Conj. 53 01239-010 São Paulo, SP Brasil	SIGMA CHEMICAL CO. LTD. Fancy Road, Poole Dorset BH17 7NH England	SIGMA-ALDRICH KH Teréz krt. 39 1067 Budapest Hungary	SIGMA-ALDRICH 206 Samhan Campus Building 17-3 Yoido-dong Yungdeungpo-ku Seoul South Korea



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MATERIAL SAFETY DATA SHEET PAGE 5

THIS MSDS IS FOR A COMPONENT OF CATALOG #: 665-5

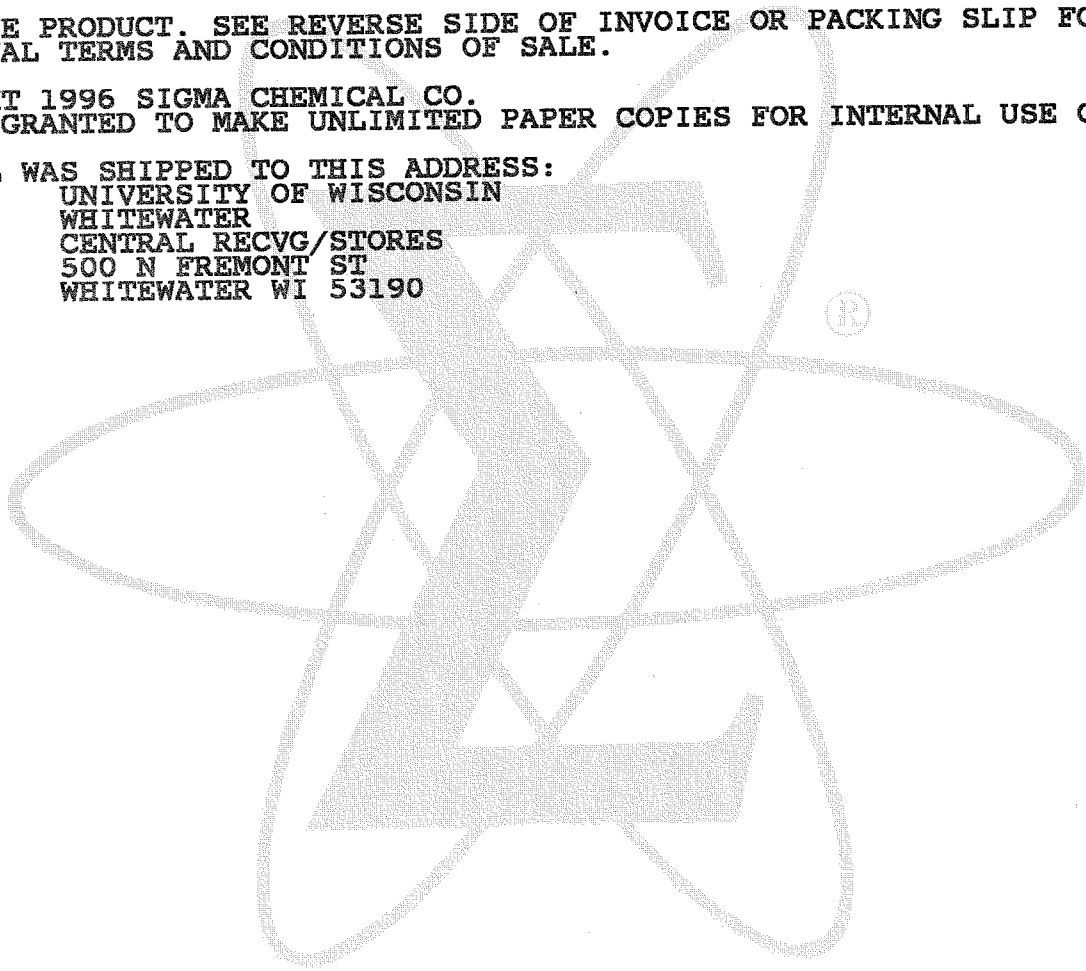
CATALOG #: 665-8
NAME: TRICHLOROACETIC ACID SOLUTION 0.49 N

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