



SIGMA-ALDRICH

SIGMA CHEMICAL COMPANY
POST OFFICE BOX 14508
SAINT LOUIS, MISSOURI 63178, USA

ATTN: SAFETY DIRECTOR
UNIV OF WISCONSIN - WHITEWATER
PURCHASING OFFICE
800 W MAIN ST
WHITEWATER WI 53190-1705

EMERGENCY PHONE 1-314-771-5765

DATE 01/21/99
CUST#: 0-495-04629
PO#: 1235

M A T E R I A L S A F E T Y D A T A S H E E T PAGE 1

THIS MSDS IS FOR A COMPONENT OF CATALOG #: P2069

SECTION 1. CHEMICAL IDENTIFICATION

CATALOG #: 10640 *Alcohol, Isoamyl ACS Reagent*
NAME: ISOAMYL ALCOHOL ACS REAGENT

SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

CAS #: 123-51-3
MF: C5H12O
EC NO: 204-633-5

SYNONYMS

ALCOOL AMILICO (ITALIAN) * ALCOOL ISOAMYLIOUE (FRENCH) * AMYLOWY
ALCOHOL (POLISH) * FERMENTATION AMYL ALCOHOL * ISOAMYL ALCOHOL (ACGIH)
* ISOAMYL ALCOHOL, PRIMARY (OSHA) * ISOAMYL ALKOHOL (CZECH) * ISO-
AMYLALKOHOL (GERMAN) * ISOAMYLLOL * ISOBUTYL CARBINOL * ISOPENTANOL *
ISOPENTYL ALCOHOL * 2-METHYL-4-BUTANOL * 3-METHYL BUTANOL * 3-
METHYLBUTAN-1-OL * 3-METHYL-1-BUTANOL * 3-METIL-BUTANOLO (ITALIAN) *

SECTION 3. HAZARDS IDENTIFICATION

LABEL PRECAUTIONARY STATEMENTS

COMBUSTIBLE (USA)
FLAMMABLE (EU)
HARMFUL
HARMFUL IF SWALLOWED.
RISK OF SERIOUS DAMAGE TO EYES.
IRRITATING TO RESPIRATORY SYSTEM AND SKIN.
UNPLEASANT ODOR.
READILY ABSORBED THROUGH SKIN.
TARGET ORGAN(S):
CENTRAL NERVOUS SYSTEM
LIVER
KEEP AWAY FROM SOURCES OF IGNITION - NO SMOKING.
IN CASE OF CONTACT WITH EYES, RINSE IMMEDIATELY WITH PLENTY OF
WATER AND SEEK MEDICAL ADVICE.
WEAR SUITABLE PROTECTIVE CLOTHING, GLOVES AND EYE/FACE
PROTECTION.
DO NOT BREATHE VAPOR.

SECTION 4. FIRST-AID MEASURES

IN CASE OF CONTACT, IMMEDIATELY FLUSH EYES OR SKIN WITH COPIOUS
AMOUNTS OF WATER FOR AT LEAST 15 MINUTES WHILE REMOVING CONTAMINATED
CLOTHING AND SHOES.
ASSURE ADEQUATE FLUSHING OF THE EYES BY SEPARATING THE EYELIDS
WITH FINGERS.
IF INHALED, REMOVE TO FRESH AIR. IF NOT BREATHING GIVE ARTIFICIAL

CONTINUED ON NEXT PAGE

5080

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THIS MSDS IS FOR A COMPONENT OF CATALOG #: P2069

CATALOG #: I0640
NAME: ISOAMYL ALCOHOL ACS REAGENT

RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN.
IF SWALLOWED, WASH OUT MOUTH WITH WATER PROVIDED PERSON IS CONSCIOUS.
CALL A PHYSICIAN.
WASH CONTAMINATED CLOTHING BEFORE REUSE.

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

EXTINGUISHING MEDIA
CARBON DIOXIDE, DRY CHEMICAL POWDER OR APPROPRIATE FOAM.
WATER SPRAY.

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

UNUSUAL FIRE AND EXPLOSIONS HAZARDS
EMITS TOXIC FUMES UNDER FIRE CONDITIONS.
VAPOR MAY TRAVEL CONSIDERABLE DISTANCE TO SOURCE OF IGNITION AND
FLASH BACK.

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.
MECHANICAL EXHAUST REQUIRED.
DO NOT BREATHE VAPOR.
DO NOT GET IN EYES, ON SKIN, ON CLOTHING.
AVOID PROLONGED OR REPEATED EXPOSURE.
WASH THOROUGHLY AFTER HANDLING.
KEEP TIGHTLY CLOSED.
KEEP AWAY FROM HEAT AND OPEN FLAME.
STORE IN A COOL DRY PLACE.

SECTION 9. - - - - - PHYSICAL AND CHEMICAL PROPERTIES - - - - -

APPEARANCE AND ODOR
COLORLESS LIQUID

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5081



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THIS MSDS IS FOR A COMPONENT OF CATALOG #: P2069

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NAME: ISOAMYL ALCOHOL ACS REAGENT

PHYSICAL PROPERTIES

BOILING POINT: 130 C
MELTING POINT: -117 C
FLASHPOINT: 114F
45.55C

EXPLOSION LIMITS IN AIR:
UPPER 9%
LOWER 1.2%

AUTOIGNITION TEMPERATURE: 644 F 339C
VAPOR PRESSURE: 2MM 20 C
SPECIFIC GRAVITY: 0.809
VAPOR DENSITY: 3

ADDITIONAL INFORMATION
UNPLEASANT ODOR.

SECTION 10. -----STABILITY AND REACTIVITY-----

STABILITY
STABLE.

INCOMPATIBILITIES
STRONG OXIDIZING AGENTS
ACID CHLORIDES
ACID ANHYDRIDES

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

HAZARDOUS POLYMERIZATION
WILL NOT OCCUR.

SECTION 11. -----TOXICOLOGICAL INFORMATION-----

ACUTE EFFECTS

HARMFUL IF SWALLOWED.
MAY BE HARMFUL IF INHALED.
MAY BE HARMFUL IF ABSORBED THROUGH THE SKIN.
CAUSES SEVERE EYE IRRITATION.
CAUSES SKIN IRRITATION.
MATERIAL IS IRRITATING TO MUCOUS MEMBRANES AND UPPER
RESPIRATORY TRACT.
READILY ABSORBED THROUGH SKIN.
PROLONGED CONTACT CAN CAUSE:
DIZZINESS
NARCOTIC EFFECT
NAUSEA, HEADACHE AND VOMITING
COUGHING, CHEST PAINS, DIFFICULTY IN BREATHING.
TARGET ORGAN(S):
CENTRAL NERVOUS SYSTEM
LIVER

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5082

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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

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KIDNEYS
TO THE BEST OF OUR KNOWLEDGE, THE CHEMICAL, PHYSICAL, AND
TOXICOLOGICAL PROPERTIES HAVE NOT BEEN THOROUGHLY INVESTIGATED.

RTECS #: EL5425000
1-BUTANOL, 3-METHYL-

IRRITATION DATA

EYE-HMN 150 PPM	JIHTAB 25,282,1943
SKN-RBT 20 MG/24H MOD	85JCAE -,196,1986
EYE-RBT 20 MG/24H MOD	85JCAE -,196,1986

TOXICITY DATA

ORL-RAT LD50:1300 MG/KG	SAMJAF 43,795,1969
IVN-MUS LD50:234 MG/KG	AIPTAK 135,330,1962
ORL-RBT LD50:3438 MG/KG	IMSUAI 41,31,1972
SKN-RBT LD50:3970 UL/KG	AIHAAP 30,470,1969

TARGET ORGAN DATA

SENSE ORGANS AND SPECIAL SENSES (OTHER OLFACTION EFFECTS)
SENSE ORGANS AND SPECIAL SENSES (CONJUNCTIVA IRRITATION)
BEHAVIORAL (ANTIPSYCHOTIC)
LUNGS, THORAX OR RESPIRATION (OTHER CHANGES)
LIVER (FATTY LIVER DEGENERATION)
KIDNEY URETER, BLADDER (OTHER CHANGES)
BLOOD (OTHER CHANGES)
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 - - - - -

THIS COMBUSTIBLE MATERIAL MAY BE BURNED IN A CHEMICAL INCINERATOR
EQUIPPED WITH AN AFTERBURNER AND SCRUBBER.
OBSERVE ALL FEDERAL, STATE AND LOCAL ENVIRONMENTAL REGULATIONS.

SECTION 14. - - - - - TRANSPORT INFORMATION - - - - -

CONTACT SIGMA CHEMICAL COMPANY FOR TRANSPORTATION INFORMATION.

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

EUROPEAN INFORMATION

EC INDEX NO: 603-006-00-7
FLAMMABLE
HARMFUL
R 22
HARMFUL IF SWALLOWED.

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5083



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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 PAGE 5

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CATALOG #: I0640
NAME: ISOAMYL ALCOHOL ACS REAGENT

R 41
RISK OF SERIOUS DAMAGE TO EYES.
R 37/38
IRRITATING TO RESPIRATORY SYSTEM AND SKIN.
FLAMMABLE
S 16
KEEP AWAY FROM SOURCES OF IGNITION - NO SMOKING.
S 26
IN CASE OF CONTACT WITH EYES, RINSE IMMEDIATELY WITH PLENTY OF WATER AND SEEK MEDICAL ADVICE.
S 36/37/39
WEAR SUITABLE PROTECTIVE CLOTHING, GLOVES AND EYE/FACE PROTECTION.
S 23
DO NOT BREATHE VAPOR.

REVIEWS, STANDARDS, AND REGULATIONS

OEL=MAK
ACGIH TLV-STEL 452 MG/M3 (125 PPM) DTLVS* TLV/BEI,1997
ACGIH TLV-TWA 361 MG/M3 (100 PPM) DTLVS* TLV/BEI,1997
MSHA STANDARD-AIR:TWA 100 PPM (360 MG/M3)
DTLVS* 3,139,1971
OSHA PEL (GEN INDU):8H TWA 100 PPM (360 MG/M3)
CFRGBR 29,1910.1000,1994
OSHA PEL (CONSTRUC):8H TWA 100 PPM (360 MG/M3)
CFRGBR 29,1926.55,1994
OSHA PEL (SHIPYARD):8H TWA 100 PPM (360 MG/M3)
CFRGBR 29,1915.1000,1993
OSHA PEL (FED CONT):8H TWA 100 PPM (360 MG/M3)
CFRGBR 41,50-204.50,1994
OEL-AUSTRALIA:TWA 100 PPM (360 MG/M3);STEL 125 PPM (450 MG/M3) JAN 1993
OEL-AUSTRIA:TWA 100 PPM (360 MG/M3) JAN 1993
OEL-BELGIUM:TWA 100 PPM (361 MG/M3);STEL 125 PPM (452 MG/M3) JAN 1993
OEL-DENMARK:TWA 100 PPM (360 MG/M3) JAN 1993
OEL-FRANCE:TWA 100 PPM (360 MG/M3) JAN 1993
OEL-GERMANY:TWA 100 PPM (360 MG/M3) JAN 1993
OEL-JAPAN:TWA 100 PPM (360 MG/M3) JAN 1993
OEL-THE NETHERLANDS:TWA 100 PPM (360 MG/M3) JAN 1993
OEL-THE PHILIPPINES:TWA 100 PPM (360 MG/M3) JAN 1993
OEL-RUSSIA:TWA 100 PPM;STEL 5 MG/M3 JAN 1993
OEL-SWITZERLAND:TWA 100 PPM (360 MG/M3);STEL 200 PPM (720 MG/M3) JAN 1993
OEL-TURKEY:TWA 100 PPM (360 MG/M3) JAN 1993
OEL-UNITED KINGDOM:TWA 100 PPM (360 MG/M3);STEL 125 PPM JAN 1993
OEL IN BULGARIA, COLOMBIA, JORDAN, KOREA CHECK ACGIH TLV
OEL IN NEW ZEALAND, SINGAPORE, VIETNAM CHECK ACGIH TLV
NIOSH REL TO ISOAMYL ALCOHOL, PRIMARY-AIR:TWA 100 PPM;STEL 125 PPM
NIOSH* DHHS #92-100,1992
NOHS 1974: HZD 40380; NIS 16; TNF 2530; NOS 18; TNE 24606
NOES 1983: HZD 40380; NIS 43; TNF 3803; NOS 49; TNE 65499; TFE 22006
EPA TSCA SECTION 8(B) CHEMICAL INVENTORY

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5084

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THIS MSDS IS FOR A COMPONENT OF CATALOG #: P2069

CATALOG #: I0640
NAME: ISOAMYL ALCOHOL ACS REAGENT

EPA TSCA TEST SUBMISSION (TSCATS) DATA BASE, JUNE 1998
NIOSH ANALYTICAL METHOD, 1994: ALCOHOLS III, 1402

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

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