



SIGMA-ALDRICH

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

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LIVONIA MI 48152-3932

DATE 12/03/96
CUST#: 2-043-15940
PO#: 83749

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

SECTION 1. CHEMICAL IDENTIFICATION

CATALOG #: 27050-4
NAME: HEXANE HPLC GRADE

SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

CAS #: 110-54-3
MF: C₆H₁₄
EC NO: 203-777-6

SYNONYMS

ESANI (ITALIAN) * GETTYSOLVE-B * HEKSAN (POLISH) * HEXANE (DOT) * N-
HEXANE (ACGIH:OSHA) * HEXANEN (DUTCH) * HEXYL HYDRIDE * NCI-C60571 *
UN1208 (DOT) *

SECTION 3. HAZARDS IDENTIFICATION

● BEL PRECAUTIONARY STATEMENTS

FLAMMABLE (USA)
HIGHLY FLAMMABLE (EU)
HARMFUL
HARMFUL BY INHALATION, IN CONTACT WITH SKIN AND IF SWALLOWED.
IRRITATING TO EYES, RESPIRATORY SYSTEM AND SKIN.
DANGER OF SERIOUS DAMAGE TO HEALTH BY PROLONGED EXPOSURE.
TARGET ORGAN(S):
NERVES
KEEP AWAY FROM SOURCES OF IGNITION - NO SMOKING.
IN CASE OF ACCIDENT OR IF YOU FEEL UNWELL, SEEK MEDICAL ADVICE
IMMEDIATELY (SHOW THE LABEL WHERE POSSIBLE).
IN CASE OF CONTACT WITH EYES, RINSE IMMEDIATELY WITH PLENTY OF
WATER AND SEEK MEDICAL ADVICE.
WEAR SUITABLE PROTECTIVE CLOTHING.

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.
IF INHALED, REMOVE TO FRESH AIR. IF NOT BREATHING GIVE ARTIFICIAL
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.
SPECIAL FIREFIGHTING PROCEDURES

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CATALOG #: 27050-4
NAME: HEXANE HPLC GRADE

WEAR SELF-CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING TO PREVENT CONTACT WITH SKIN AND EYES.
USE WATER SPRAY TO COOL FIRE-EXPOSED CONTAINERS.
FLAMMABLE LIQUID.

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

SECTION 6. - - - - - ACCIDENTAL RELEASE MEASURES- - - - -

EVACUATE AREA.
SHUT OFF ALL SOURCES OF IGNITION.
WEAR SELF-CONTAINED BREATHING APPARATUS, RUBBER BOOTS AND HEAVY RUBBER GLOVES.
COVER WITH AN ACTIVATED CARBON ADSORBENT, TAKE UP AND PLACE IN CLOSED CONTAINERS. TRANSPORT OUTDOORS.
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.
DO NOT BREATHE VAPOR.
AVOID CONTACT WITH EYES, SKIN AND CLOTHING.
AVOID PROLONGED OR REPEATED EXPOSURE.
WASH THOROUGHLY AFTER HANDLING.
IRRITANT.
HARMFUL VAPOR.
KEEP TIGHTLY CLOSED.
KEEP AWAY FROM HEAT, SPARKS, AND OPEN FLAME.
STORE IN A COOL DRY PLACE.

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

APPEARANCE AND ODOR
LIQUID.

PHYSICAL PROPERTIES

BOILING POINT: 69 C
MELTING POINT: -95 C
FLASHPOINT -10 F
12C

EXPLOSION LIMITS IN AIR:

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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 3

CATALOG #: 27050-4
NAME: HEXANE HPLC GRADE

UPPER 7.7%
LOWER 1.2%
AUTOIGNITION TEMPERATURE: 482 F 249C
VAPOR PRESSURE: 132MM 20 C 256MM 37.7 C
SPECIFIC GRAVITY: 0.659
VAPOR DENSITY: 3

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

STABILITY
STABLE.

INCOMPATIBILITIES
OXIDIZING AGENTS
INCOMPATIBLE WITH: CHLORINE, FLUORINE, MAGNESIUM PERCHLORATE.

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, INHALED, OR ABSORBED THROUGH SKIN.
VAPOR OR MIST IS IRRITATING TO THE EYES, MUCOUS MEMBRANES AND UPPER
RESPIRATORY TRACT.
CAUSES SKIN IRRITATION.
MAY CAUSE NERVOUS SYSTEM DISTURBANCES.
EXPOSURE CAN CAUSE:
COUGHING, CHEST PAINS, DIFFICULTY IN BREATHING.
LUNG IRRITATION, CHEST PAIN AND EDEMA WHICH MAY BE FATAL.
GASTROINTESTINAL DISTURBANCES
NAUSEA, HEADACHE AND VOMITING
TARGET ORGAN(S):
NERVES
TO THE BEST OF OUR KNOWLEDGE, THE CHEMICAL, PHYSICAL, AND
TOXICOLOGICAL PROPERTIES HAVE NOT BEEN THOROUGHLY INVESTIGATED.

ADDITIONAL INFORMATION
WARNING: CONTAINS N-HEXANE (CAS NO.110-54-3) A SUSPECTED NEUROTOXIN.

RTECS #: MN9275000
HEXANE

IRRITATION DATA
EYE-RBT 10 MG MLD TXAPA9 55,501,80

TOXICITY DATA
ORL-RAT LD50:28710 MG/KG TXAPA9 19,699,71

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CATALOG #: 27050-4
NAME: HEXANE HPLC GRADE

IHL-RAT LC50:48000 PPM/4H ARPTDI 22,145,82

TARGET ORGAN DATA
PERIPHERAL NERVE AND SENSATION (STRUCTURAL CHANGE IN NERVE OR SHEATH)
BEHAVIORAL (ALTERED SLEEP TIME)
EFFECTS ON NEWBORN (GROWTH STATISTICS)
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 - - - - -
BURN IN A CHEMICAL INCINERATOR EQUIPPED WITH AN AFTERBURNER AND
SCRUBBER BUT EXERT EXTRA CARE IN IGNITING AS THIS MATERIAL IS HIGHLY
FLAMMABLE.
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: 601-037-00-0
HIGHLY FLAMMABLE
HARMFUL
R 11
HIGHLY FLAMMABLE.
R 48/20
HARMFUL: DANGER OF SERIOUS DAMAGE TO HEALTH BY PROLONGED
EXPOSURE THROUGH INHALATION.
S 9
KEEP CONTAINER IN A WELL-VENTILATED PLACE.
S 16
KEEP AWAY FROM SOURCES OF IGNITION - NO SMOKING.
S 24/25
AVOID CONTACT WITH SKIN AND EYES.
S 29
DO NOT EMPTY INTO DRAINS.
S 51
USE ONLY IN WELL VENTILATED AREAS.

REVIEWS, STANDARDS, AND REGULATIONS

OEL=MAK
ACGIH TLV-TWA 50 PPM 85INA8 6,753,91
MSHA STANDARD-AIR:TWA 500 PPM (1800 MG/M3)

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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 5

CATALOG #: 27050-4
NAME: HEXANE HPLC GRADE

DTLVS* 3,126,71
 OSHA PEL (GEN'INDU): 8H TWA 500 PPM (1800 MG/M3)
 CFRGBR 29,1910.1000,94
 OSHA PEL (CONSTRUC): 8H TWA 500 PPM (1800 MG/M3)
 CFRGBR 29,1926.55,94
 OSHA PEL (SHIPYARD): 8H TWA 500 PPM (1800 MG/M3)
 CFRGBR 29,1915.1000,93
 OSHA PEL (FED CONT): 8H TWA 500 PPM (1800 MG/M3)
 CFRGBR 41,50-204.50,94
 OEL-AUSTRALIA:TWA 50 PPM (180 MG/M3) JAN93
 OEL-BELGIUM:TWA 50 PPM (176 MG/M3) JAN93
 OEL-DENMARK:TWA 50 PPM (180 MG/M3) JAN93
 OEL-FINLAND:TWA 50 PPM (180 MG/M3); STEL 150 PPM (530 MG/M3) JAN93
 OEL-FRANCE:TWA 50 PPM (170 MG/M3) JAN93
 OEL-GERMANY:TWA 50 PPM (180 MG/M3) JAN93
 OEL-HUNGARY:TWA 100 MG/M3; STEL 200 MG/M3; SKIN JAN93
 OEL-JAPAN:TWA 40 PPM (140 MG/M3); SKIN JAN93
 OEL-THE NETHERLANDS:TWA 100 PPM (360 MG/M3) JAN93
 OEL-THE PHILIPPINES:TWA 500 PPM (1800 MG/M3) JAN93
 OEL-POLAND:TWA 400 MG/M3 JAN93
 OEL-RUSSIA:TWA 40 PPM; STEL 300 MG/M3 JAN93
 OEL-SWEDEN:TWA 25 PPM (90 MG/M3); STEL 50 PPM (180 MG/M3) JAN93
 OEL-SWITZERLAND:TWA 50 PPM (180 MG/M3); STEL 100 PPM (360 MG/M3) JAN93
 OEL-TURKEY:TWA 500 PPM (1800 MG/M3) JAN93
 OEL-UNITED KINGDOM:TWA 100 PPM (360 MG/M3); STEL 125 PPM JAN93
 OEL IN BULGARIA, COLOMBIA, JORDAN, KOREA CHECK ACGIH TLV
 OEL IN NEW ZEALAND, SINGAPORE, VIETNAM CHECK ACGIH TLV
 NIOSH REL TO HEXANE-AIR:10H TWA 50 PPM
 NIOSH* DHHS #92-100,92
 NOHS 1974: HZD 36955; NIS 281; TNF 72257; NOS 168; TNE 763261
 NOES 1983: HZD 36955; NIS 221; TNF 40256; NOS 161; TNE 643101; TFE 138726
 EPA TSCA SECTION 8(B) CHEMICAL INVENTORY
 EPA TSCA SECTION 8(D) UNPUBLISHED HEALTH/SAFETY STUDIES
 EPA TSCA SECTION 8(E) RISK NOTIFICATION, 8EHQ-1292-8628; 8EHQ-0893-8628
 ON EPA IRIS DATABASE
 EPA TSCA TEST SUBMISSION (TSCATS) DATA BASE, JULY 1996
 NIOSH ANALYTICAL METHOD, 1994: HYDROCARBONS, BP 36-126 DEGREE C, 1500
 NTP TOXICITY STUDIES, RPT# TOX-02, MAY 1996

U.S. INFORMATION

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 SHALL NOT BE HELD LIABLE FOR ANY DAMAGE RESULTING FROM HANDLING OR FROM CONTACT WITH THE ABOVE PRODUCT. SEE REVERSE SIDE OF INVOICE OR PACKING SLIP FOR ADDITIONAL TERMS AND CONDITIONS OF SALE.

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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 6

CATALOG #: 27050-4
NAME: HEXANE HPLC GRADE

P.O. BOX 355
MILWAUKEE, WISCONSIN 53201, USA

MATERIAL WAS SHIPPED TO THIS ADDRESS:

SCHOOLCRAFT COLLEGE
ATTN JOEL WATKINS
18600 HAGGERTY ROAD
LIVONIA MI 48152-3932

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