



SIGMA-ALDRICH

ALDRICH CHEMICAL COMPANY, INC.
P.O. BOX 355
MILWAUKEE, WISCONSIN 53201, USA

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DATE 09/24/99
CUST#: 523216
PO#: CC/ONSRUD/92399

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 #: 27051-2
NAME: HEPTANE, 99+%, HPLC GRADE

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

CAS #: 142-82-5
MF: C7H16
EC NO: 205-563-8

SYNONYMS
DIPROPYL METHANE * EPTANI (ITALIAN) * GETTYSOLVE-C * HEPTAN (POLISH) *
N-HEPTANE * HEPTANE (ACGIH:OSHA) * HEPTANEN (DUTCH) * N-HEPTANE
(OSHA) * HEPTYL HYDRIDE *

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

LABEL PRECAUTIONARY STATEMENTS

FLAMMABLE (USA)
HIGHLY FLAMMABLE (EU)
HARMFUL
HARMFUL BY INHALATION AND IF SWALLOWED.
IRRITATING TO EYES AND RESPIRATORY SYSTEM.
KEEP AWAY FROM SOURCES OF IGNITION - NO SMOKING.
TAKE PRECAUTIONARY MEASURES AGAINST STATIC DISCHARGES.
IN CASE OF CONTACT WITH EYES, RINSE IMMEDIATELY WITH PLENTY OF
WATER AND SEEK MEDICAL ADVICE.
WEAR SUITABLE PROTECTIVE CLOTHING.
KEEP CONTAINER TIGHTLY CLOSED IN A COOL WELL-VENTILATED PLACE.

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.

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

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

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

UNUSUAL FIRE AND EXPLOSIONS HAZARDS

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FLAMMABLE LIQUID.
VAPOR MAY TRAVEL CONSIDERABLE DISTANCE TO SOURCE OF IGNITION AND
FLASH BACK.
CONTAINER EXPLOSION MAY OCCUR UNDER FIRE CONDITIONS.
FORMS EXPLOSIVE MIXTURES IN AIR.

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

EVACUATE AREA.
SHUT OFF ALL SOURCES OF IGNITION.
WEAR SELF-CONTAINED BREATHING APPARATUS, RUBBER BOOTS AND HEAVY
RUBBER GLOVES.

SECTION 7. - - - - - HANDLING AND STORAGE - - - - -

REFER TO SECTION 8.

SECTION 8. - - - - - EXPOSURE CONTROLS/PERSONAL PROTECTION - - - - -

RUBBER GLOVES.
CHEMICAL SAFETY GOGGLES.
USE NONSPARKING TOOLS.
DO NOT BREATHE VAPOR.
AVOID CONTACT WITH EYES, SKIN AND CLOTHING.
AVOID PROLONGED OR REPEATED EXPOSURE.
KEEP TIGHTLY CLOSED.
KEEP AWAY FROM HEAT, SPARKS, AND OPEN FLAME.
STORE IN A COOL DRY PLACE.
WASH THOROUGHLY AFTER HANDLING.
REMOVE AND WASH CONTAMINATED CLOTHING PROMPTLY.
HARMFUL LIQUID.
IRRITANT.

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

PHYSICAL PROPERTIES

BOILING POINT: 98 C
MELTING POINT: -91 C
FLASHPOINT 30 F
 -1 C

EXPLOSION LIMITS IN AIR:

UPPER 7 %
LOWER 1.1 %

VAPOR PRESSURE: 83 MMHG

SPECIFIC GRAVITY: 0.684

VAPOR DENSITY: 3.5 G/L

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

INCOMPATIBILITIES
OXIDIZING AGENTS

HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS

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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

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CARBON MONOXIDE, CARBON DIOXIDE

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

ACUTE EFFECTS

MAY BE HARMFUL IF ABSORBED THROUGH THE SKIN.
HARMFUL IF INHALED OR SWALLOWED.
VAPOR OR MIST IS IRRITATING TO THE EYES, MUCOUS MEMBRANES AND UPPER
RESPIRATORY TRACT.
PROLONGED OR REPEATED EXPOSURE TO SKIN CAUSES DEFATTING AND
DERMATITIS.
EXPOSURE TO LARGE AMOUNTS CAN CAUSE:
NARCOTIC EFFECT

RTECS #: MI7700000
HEPTANE

TOXICITY DATA

IHL-RAT LC50:103 GM/M3/4H GTPZAB 32(10),23,1988
IVN-MUS LD50:222 MG/KG JPMSAE 67,566,1978

TARGET ORGAN DATA

BEHAVIORAL (HALLUCINATIONS, DISTORTED PERCEPTIONS)
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 ALDRICH CHEMICAL COMPANY FOR TRANSPORTATION INFORMATION.

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

EUROPEAN INFORMATION

EC INDEX NO: 601-008-00-2

HIGHLY FLAMMABLE

HARMFUL

R 11

HIGHLY FLAMMABLE.

S 9

KEEP CONTAINER IN A WELL-VENTILATED PLACE.

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CATALOG #: 27051-2
NAME: HEPTANE, 99+%, HPLC GRADE

S 16
KEEP AWAY FROM SOURCES OF IGNITION - NO SMOKING.
S 23
DO NOT BREATHE VAPOR.
S 29
DO NOT EMPTY INTO DRAINS.
S 33
TAKE PRECAUTIONARY MEASURES AGAINST STATIC DISCHARGES.

REVIEWS, STANDARDS, AND REGULATIONS

OEL=MAK
ACGIH TLV-STEL 2050 MG/M3 (500 PPM) DTLVS* TLV/BEI,1997
ACGIH TLV-TWA 1640 MG/M3 (400 PPM) DTLVS* TLV/BEI,1997
MSHA STANDARD-AIR:TWA 500 PPM (2000 MG/M3)
DTLVS* 3,124,1971
OSHA PEL (GEN'INDU):8H TWA 500 PPM (2000 MG/M3)
CFRGBR 29,1910.1000,1994
OSHA PEL (CONSTRUC):8H TWA 500 PPM (2000 MG/M3)
CFRGBR 29,1926.55,1994
OSHA PEL (SHIPYARD):8H TWA 500 PPM (2000 MG/M3)
CFRGBR 29,1915.1000,1993
OSHA PEL (FED CONT):8H TWA 500 PPM (2000 MG/M3)
CFRGBR 41,50-204.50,1994
OEL-AUSTRALIA:TWA 400 PPM (1600 MG/M3);STEL 500 PPM (2000 MG/M3) JAN 1993
OEL-AUSTRIA: MAK 500 PPM (2000 MG/M3), JAN1999
OEL-BELGIUM:TWA 400 PPM (1640 MG/M3);STEL 500 PPM (2050 MG/M3) JAN 1993
OEL-DENMARK: TWA 200 PPM (820 MG/M3); JAN1999
OEL-FINLAND:TWA 300 PPM (1200 MG/M3);STEL 500 PPM (2000 MG/M3) JAN 1993
OEL-GERMANY:TWA 500 PPM (2000 MG/M3) JAN 1993
OEL-JAPAN: OEL 200 PPM (820 MG/M3), JAN1999
OEL-JAPAN:TWA 200 PPM (820 MG/M3) JAN 1993
OEL-THE NETHERLANDS:TWA 400 PPM (1600 MG/M3) JAN 1993
OEL-THE PHILIPPINES:TWA 500 PPM (2000 MG/M3) JAN 1993
OEL-POLAND: MAC(TWA) 1200 MG/M3, MAC(STEL) 2000 MG/M3, JAN1999
OEL-RUSSIA:TWA 200 PPM JAN 1993
OEL-SWEDEN:TWA 200 PPM (800 MG/M3);STEL 300 PPM (1250 MG/M3) JAN 1993
OEL-SWITZERLAND:TWA 400 PPM (1600 MG/M3);STEL 800 PPM JAN 1993
OEL-TURKEY:TWA 500 PPM (2000 MG/M3) JAN 1993
OEL-UNITED KINGDOM:TWA 400 PPM (1600 MG/M3);STEL 500 PPM JAN 1993
OEL IN BULGARIA, COLOMBIA, JORDAN, KOREA CHECK ACGIH TLV
OEL IN NEW ZEALAND, SINGAPORE, VIETNAM CHECK ACGIH TLV
NIOSH REL TO HEPTANE-AIR:10H TWA 85 PPM;CL 440 PPM/15M
NIOSH* DHHS #92-100,1992
NOHS 1974: HZD 36060; NIS 153; TNF 20154; NOS 110; TNE 221101
NOES 1983: HZD 36060; NIS 191; TNF 37852; NOS 134; TNE 449487; TFE 44550
EPA TSCA SECTION 8(B) CHEMICAL INVENTORY
EPA TSCA SECTION 8(D) UNPUBLISHED HEALTH/SAFETY STUDIES
ON EPA IRIS DATABASE
EPA TSCA TEST SUBMISSION (TSCATS) DATA BASE, JUNE 1999

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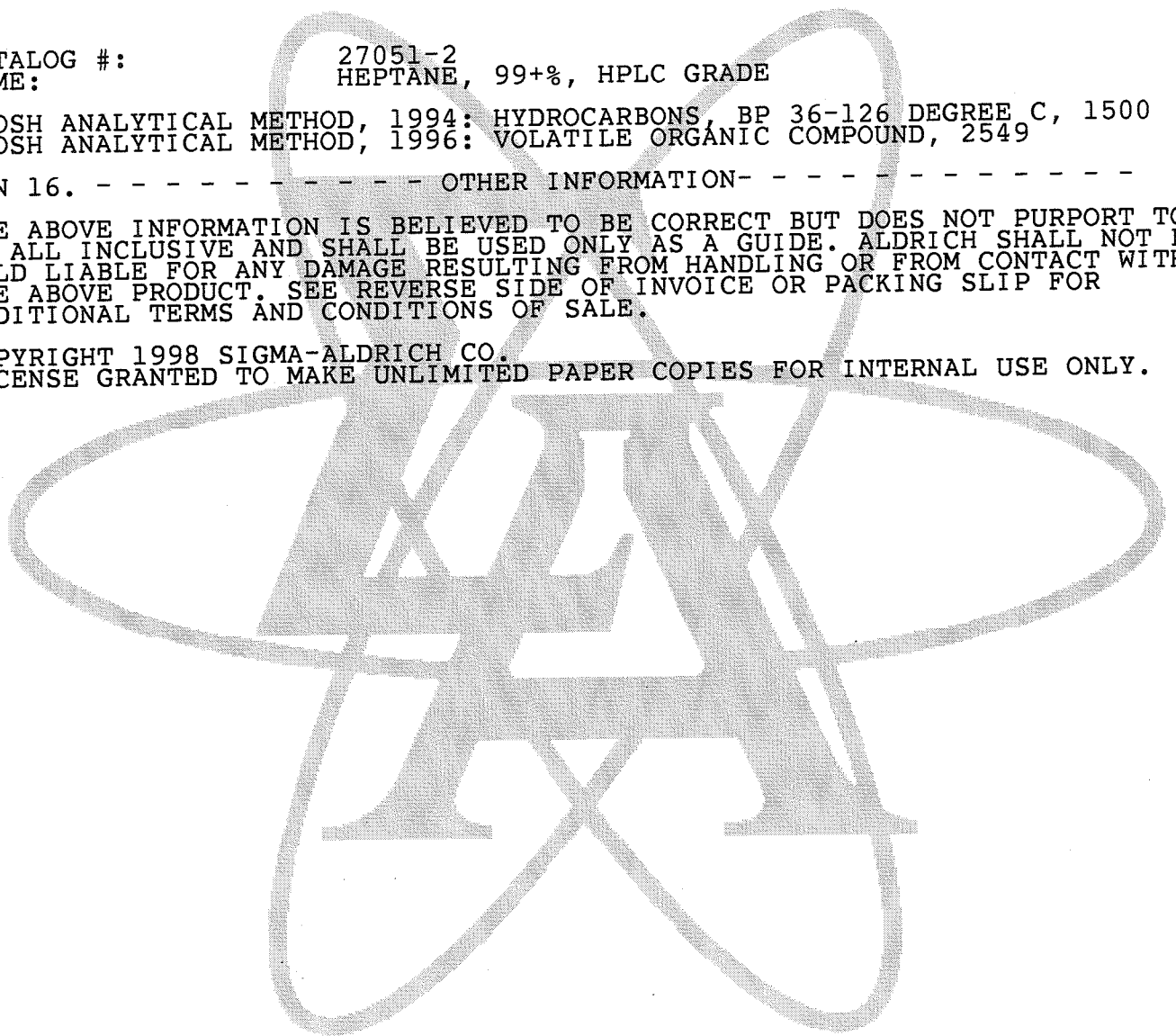
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NIOSH ANALYTICAL METHOD, 1994: HYDROCARBONS, BP 36-126 DEGREE C, 1500
NIOSH ANALYTICAL METHOD, 1996: VOLATILE ORGANIC COMPOUND, 2549

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

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