



SIGMA-ALDRICH

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

ATTN: SAFETY DIRECTOR
MARY ONSRUD
UNIVERSITY OF WISCONSIN WHITEWATER
P O BOX 296
WHITEWATER WI 53190

EMERGENCY PHONE 1-414-273-3850

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 #: 29698-8
NAME: OCTANE, ANHYDROUS, 99+%

SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

CAS #: 111-65-9
MF: C8H18
EC NO: 203-892-1

SYNONYMS
N-OCTANE * OCTANE (ACGIH:OSHA) * OKTAN (POLISH) * OKTANEN (DUTCH) *
OTTANI (ITALIAN) *

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.
TARGET ORGAN(S):
CENTRAL NERVOUS SYSTEM
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.

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
FLAMMABLE LIQUID.

CONTINUED ON NEXT PAGE

3133

We are Committed to the Success of our Customers through Science, Technology and Service.



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

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 2

CATALOG #: 29698-8
NAME: OCTANE, ANHYDROUS, 99+%

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.
SAFETY SHOWER AND EYE BATH.
DO NOT BREATHE VAPOR.
AVOID CONTACT WITH EYES, SKIN AND CLOTHING.
WASH THOROUGHLY AFTER HANDLING.
REMOVE AND WASH CONTAMINATED CLOTHING PROMPTLY.
IRRITANT.
HARMFUL LIQUID AND FUMES.
KEEP TIGHTLY CLOSED.
KEEP AWAY FROM HEAT, SPARKS, AND OPEN FLAME.
STORE IN A COOL DRY PLACE.

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

PHYSICAL PROPERTIES

BOILING POINT: 125 C TO 127 C
MELTING POINT: -57 C
FLASHPOINT: 60 F
15C
EXPLOSION LIMITS IN AIR:
UPPER 6.5%
LOWER 0.96%
AUTOIGNITION TEMPERATURE: 428 F 219C
VAPOR PRESSURE: 11MM 20 C
SPECIFIC GRAVITY: 0.703
VAPOR DENSITY: 3.9

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

INCOMPATIBILITIES
OXIDIZING AGENTS

HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS

CONTINUED ON NEXT PAGE



SIGMA-ALDRICH

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

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 3

CATALOG #: 29698-8
NAME: OCTANE, ANHYDROUS, 99+%

CARBON MONOXIDE, CARBON DIOXIDE

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

ACUTE EFFECTS

CAUSES EYE IRRITATION.
MATERIAL IS IRRITATING TO MUCOUS MEMBRANES AND UPPER
RESPIRATORY TRACT.
HARMFUL IF INHALED OR SWALLOWED.
SYMPTOMS OF EXPOSURE MAY INCLUDE BURNING SENSATION, COUGHING,
WHEEZING, LARYNGITIS, SHORTNESS OF BREATH, HEADACHE, NAUSEA AND
VOMITING.

CHRONIC EFFECTS

TARGET ORGAN(S):
CENTRAL NERVOUS SYSTEM

RTECS #: RG8400000
OCTANE

TOXICITY DATA
IHL-RAT LC50:118 GM/M3/4H

GTPZAB 32(10),23,1988

TARGET ORGAN DATA

BEHAVIORAL (ALTERED SLEEP TIME)
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: 601-009-00-8
HIGHLY FLAMMABLE
HARMFUL
R 11
HIGHLY FLAMMABLE.

CONTINUED ON NEXT PAGE

3135

We are Committed to the Success of our Customers through Science, Technology and Service.



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

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 4

CATALOG #: 29698-8
NAME: OCTANE, ANHYDROUS, 99+%

S 9
KEEP CONTAINER IN A WELL-VENTILATED PLACE.
S 16
KEEP AWAY FROM SOURCES OF IGNITION - NO SMOKING.
S 29
DO NOT EMPTY INTO DRAINS.
S 33
TAKE PRECAUTIONARY MEASURES AGAINST STATIC DISCHARGES.

REVIEWS, STANDARDS, AND REGULATIONS

OEL=MAK
ACGIH TLV-STEL 1750 MG/M3 (375 PPM) DTLVS* TLV/BEI,1997
ACGIH TLV-TWA 1400 MG/M3 (300 PPM) DTLVS* TLV/BEI,1997
MSHA STANDARD-AIR:TWA 400 PPM (1900 MG/M3)
DTLVS* 3,191,1971
OSHA PEL (GEN INDU):8H TWA 500 PPM (2350 MG/M3)
CFRGBR 29,1910.1000,1994
OSHA PEL (CONSTRUC):8H TWA 400 PPM (1900 MG/M3)
CFRGBR 29,1926.55,1994
OSHA PEL (SHIPYARD):8H TWA 400 PPM (1900 MG/M3)
CFRGBR 29,1915.1000,1993
OSHA PEL (FED CONT):8H TWA 500 PPM (2350 MG/M3)
CFRGBR 41,50-204.50,1994
OEL-AUSTRALIA:TWA 300 PPM (1450 MG/M3);STEL 375 PPM (1800 MG/M3) JAN 1993
OEL-AUSTRIA: MAK 300 PPM (1400 MG/M3), JAN1999
OEL-BELGIUM:TWA 300 PPM (1400 MG/M3);STEL 375 PPM (1750 MG/M3) JAN 1993
OEL-DENMARK: TWA 200 PPM (935 MG/M3), JAN1999
OEL-FINLAND:TWA 300 PPM (1400 MG/M3);STEL 375 PPM (1750 MG/M3) JAN 1993
OEL-GERMANY:TWA 500 PPM (2350 MG/M3) JAN 1993
OEL-HUNGARY:TWA 500 MG/M3;STEL 1500 MG/M3 JAN 1993
OEL-JAPAN:TWA 300 PPM (1400 MG/M3) JAN 1993
OEL-THE NETHERLANDS:TWA 300 PPM (1450 MG/M3) JAN 1993
OEL-POLAND: MAC(TWA) 1000 MG/M3, MAC(STEL) 1800 MG/M3, JAN1999
OEL-THE PHILIPPINES:TWA 500 PPM (2350 MG/M3) JAN 1993
OEL-RUSSIA:TWA 300 PPM JAN 1993
OEL-SWEDEN:TWA 200 PPM (900 MG/M3);STEL 300 PPM (1400 MG/M3) JAN 1993
OEL-SWITZERLAND:TWA 300 PPM (1400 MG/M3);STEL 600 PPM JAN 1993
OEL-TURKEY:TWA 400 PPM (1900 MG/M3) JAN 1993
OEL-UNITED KINGDOM:TWA 300 PPM (1450 MG/M3);STEL 375 PPM JAN 1993
OEL IN BULGARIA, COLOMBIA, JORDAN, KOREA CHECK ACGIH TLV
OEL IN NEW ZEALAND, SINGAPORE, VIETNAM CHECK ACGIH TLV
NIOSH REL TO OCTANE-AIR:10H TWA 75 PPM;CL 385 PPM/15M
NIOSH* DHHS #92-100,1992
NOHS 1974: HZD 51705; NIS 5; TNF 95; NOS 8; TNE 940
NOES 1983: HZD 51705; NIS 22; TNF 1172; NOS 18; TNE 9186; TFE 612
EPA TSCA SECTION 8(B) CHEMICAL INVENTORY
EPA TSCA SECTION 8(D) UNPUBLISHED HEALTH/SAFETY STUDIES
EPA TSCA TEST SUBMISSION (TSCATS) DATA BASE, JUNE 1999
NIOSH ANALYTICAL METHOD, 1994: HYDROCARBONS, BP 36-126 DEGREE C, 1500
NIOSH ANALYTICAL METHOD, 1996: VOLATILE ORGANIC COMPOUND, 2549

CONTINUED ON NEXT PAGE



SIGMA-ALDRICH

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

CUST#: 523216
PO#: CC/ONSRUD/92399

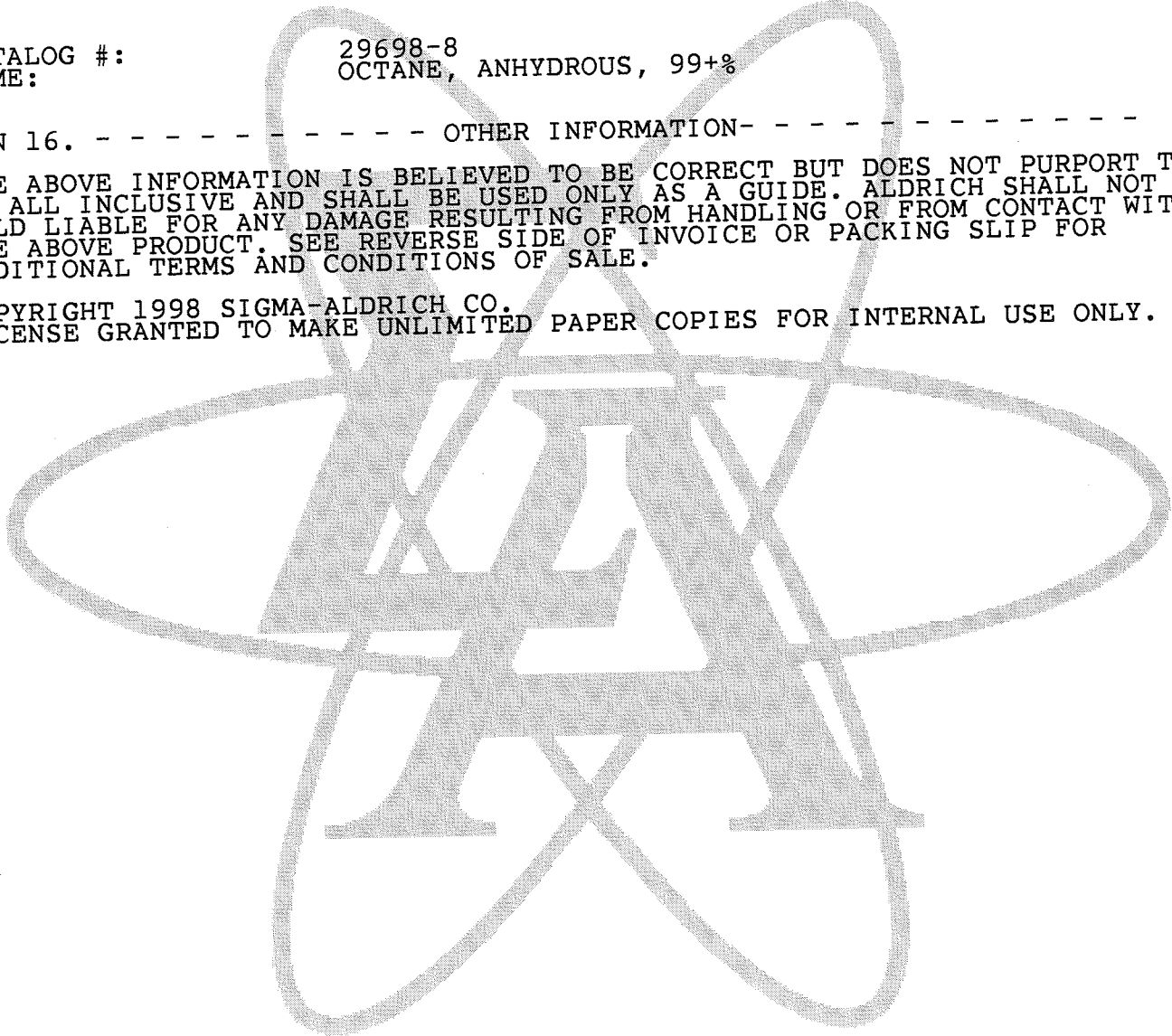
M A T E R I A L S A F E T Y D A T A S H E E T PAGE 5

CATALOG #: 29698-8
NAME: OCTANE, ANHYDROUS, 99+%

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. ALDRICH 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.

COPYRIGHT 1998 SIGMA-ALDRICH CO.
LICENSE GRANTED TO MAKE UNLIMITED PAPER COPIES FOR INTERNAL USE ONLY.



3137

We are Committed to the Success of our Customers through Science, Technology and Service.