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S A F E T Y D A T A S H E E T

SECTION 1. CHEMICAL IDENTIFICATION

CATALOG #:	47676
NAME:	Methanol [for HPLC Solvent]
SYNONYMS:	Methyl alcohol
24 HOUR EMERGENCY TELEPHONE:	(800) 535-5053(USA) 352-323-3500 (INTERNATIONAL)
TO REQUEST AN MSDS:	(800) 869-9290
CUSTOMER SERVICE:	(630) 766-2112

SECTION 2. HAZARDS IDENTIFICATION

CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

GHS CLASSIFICATION IN ACCORDANCE WITH 29 CFR 1910 (OSHA HCS)

FLAMMABLE LIQUIDS (CATEGORY 2), H225

ACUTE TOXICITY, ORAL (CATEGORY 3), H301

ACUTE TOXICITY, INHALATION (CATEGORY 3), H331

ACUTE TOXICITY, DERMAL (CATEGORY 3), H311

SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (CATEGORY 1), EYES,
CENTRAL NERVOUS SYSTEM, H370

FOR THE FULL TEXT OF THE H-STATEMENTS MENTIONED IN THIS SECTION, SEE
SECTION 16.

GHS LABEL ELEMENTS, INCLUDING PRECAUTIONARY STATEMENTS
PICTOGRAM



SIGNAL WORD DANGER

HAZARD STATEMENT(S)

H225 HIGHLY FLAMMABLE LIQUID AND VAPOUR.
H301 + H311 + H331 TOXIC IF SWALLOWED, IN CONTACT WITH SKIN OR IF INHALED.
H370 CAUSES DAMAGE TO ORGANS (EYES, CENTRAL NERVOUS SYSTEM).

PRECAUTIONARY STATEMENT(S)

P210 KEEP AWAY FROM HEAT/SPARKS/OPEN FLAMES/HOT SURFACES. NO SMOKING.
P233 KEEP CONTAINER TIGHTLY CLOSED.
P240 GROUND/BOND CONTAINER AND RECEIVING EQUIPMENT.
P241 USE EXPLOSION-PROOF ELECTRICAL/ VENTILATING/ LIGHTING/ EQUIPMENT.
P242 USE ONLY NON-SPARKING TOOLS.
P243 TAKE PRECAUTIONARY MEASURES AGAINST STATIC DISCHARGE.
P260 DO NOT BREATHE DUST/ FUME/ GAS/ MIST/ VAPOURS/ SPRAY.
P264 WASH SKIN THOROUGHLY AFTER HANDLING.
P270 DO NOT EAT, DRINK OR SMOKE WHEN USING THIS PRODUCT.
P271 USE ONLY OUTDOORS OR IN A WELL-VENTILATED AREA.
P280 WEAR PROTECTIVE GLOVES/ PROTECTIVE CLOTHING/ EYE PROTECTION/ FACE PROTECTION.
P301 + P310 + P330 IF SWALLOWED: IMMEDIATELY CALL A POISON CENTER/ DOCTOR. RINSE MOUTH.
P303 + P361 + P353 IF ON SKIN (OR HAIR): REMOVE/ TAKE OFF IMMEDIATELY ALL CONTAMINATED CLOTHING. RINSE SKIN WITH WATER/ SHOWER.
P304 + P340 + P311 IF INHALED: REMOVE PERSON TO FRESH AIR AND KEEP COMFORTABLE FOR BREATHING. CALL A POISON CENTER/ DOCTOR.
P307 + P311 IF EXPOSED: CALL A POISON CENTER OR DOCTOR/ PHYSICIAN.
P362 TAKE OFF CONTAMINATED CLOTHING AND WASH BEFORE REUSE.
P370 + P378 IN CASE OF FIRE: USE DRY SAND, DRY CHEMICAL OR ALCOHOL-RESISTANT FOAM FOR EXTINCTION.
P403 + P233 STORE IN A WELL-VENTILATED PLACE. KEEP CONTAINER TIGHTLY CLOSED.
P403 + P235 STORE IN A WELL-VENTILATED PLACE. KEEP COOL.
P405 STORE LOCKED UP.
P501 DISPOSE OF CONTENTS/ CONTAINER TO AN APPROVED WASTE DISPOSAL PLANT.

HAZARDS NOT OTHERWISE CLASSIFIED NONE

(HNOC) OR NOT
COVERED BY GHS

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

MF: CH₃OH

MW: 32.04

CAS-NO. 67-56-1

PURITY: ≥ 99.8% (GC)

HAZARDOUS COMPONENTS

COMPONENT	CLASSIFICATION	CONCENTRATION
METHANOL [FOR HPLC SOLVENT]		
	FLAM. LIQ. 2; ACUTE TOX. 3; STOT SE 1; H225, H301, H331, H311, H370	<= 100 %
	CONCENTRATION LIMITS: >= 10 %: STOT SE 1, H370; 3 - < 10 %: STOT SE 2, H371	

FOR THE FULL TEXT OF THE H-STATEMENTS MENTIONED IN THIS SECTION, SEE
SECTION 16.

SECTION 4. FIRST-AID MEASURES

DESCRIPTION OF FIRST AID MEASURES

GENERAL ADVICE	FIRST AIDER NEEDS TO PROTECT HIMSELF. SHOW THIS MATERIAL SAFETY DATA SHEET TO THE DOCTOR IN ATTENDANCE.
IF INHALED	AFTER INHALATION: FRESH AIR. IMMEDIATELY CALL IN PHYSICIAN. IF BREATHING STOPS: IMMEDIATELY APPLY ARTIFICIAL RESPIRATION, IF NECESSARY ALSO OXYGEN.
IN CASE OF SKIN CONTACT	IN CASE OF SKIN CONTACT: TAKE OFF IMMEDIATELY ALL CONTAMINATED CLOTHING. RINSE SKIN WITH WATER/ SHOWER. CALL A PHYSICIAN IMMEDIATELY.
IN CASE OF EYE CONTACT	AFTER EYE CONTACT: RINSE OUT WITH PLENTY OF WATER. CALL IN OPHTHALMOLOGIST. REMOVE CONTACT LENSES.

IF SWALLOWED	AFTER SWALLOWING: FRESH AIR. MAKE VICTIM DRINK ETHANOL (E.G. 1 DRINKING GLASS OF A 40% ALCOHOLIC BEVERAGE). CALL A DOCTOR IMMEDIATELY (MENTION METHANOL INGESTION). ONLY IN EXCEPTIONAL CASES, IF NO MEDICAL CARE IS AVAILABLE WITHIN ONE HOUR, INDUCE VOMITING (ONLY IN FULLY CONSCIOUS PERSONS) AND MAKE VICTIM DRINK ETHANOL AGAIN (APPROX. 0.3 ML OF A 40% ALCOHOLIC BEVERAGE/KG BODY WEIGHT/HOUR).
MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED	THE MOST IMPORTANT KNOWN SYMPTOMS AND EFFECTS ARE DESCRIBED IN THE LABELLING (SEE SECTION 2.2) AND/OR IN SECTION 11.
INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED	NO DATA AVAILABLE

SECTION 5. FIRE AND EXPLOSION DATA

EXTINGUISHING MEDIA

SUITABLE EXTINGUISHING MEDIA	SUITABLE EXTINGUISHING MEDIA WATER FOAM CARBON DIOXIDE (CO ₂) DRY POWDER
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UNSUITABLE EXTINGUISHING MEDIA
FOR THIS SUBSTANCE/MIXTURE NO LIMITATIONS OF EXTINGUISHING AGENTS ARE GIVEN.

SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE

CARBON OXIDES
COMBUSTIBLE.
PAY ATTENTION TO FLASHBACK.
VAPORS ARE HEAVIER THAN AIR AND MAY SPREAD ALONG FLOORS.
DEVELOPMENT OF HAZARDOUS COMBUSTION GASES OR VAPOURS POSSIBLE IN THE EVENT OF FIRE.
FORMS EXPLOSIVE MIXTURES WITH AIR AT AMBIENT TEMPERATURES.

ADVICE FOR FIREFIGHTERS

STAY IN DANGER AREA ONLY WITH SELF-CONTAINED BREATHING APPARATUS. PREVENT SKIN CONTACT BY KEEPING A SAFE DISTANCE OR BY WEARING SUITABLE PROTECTIVE CLOTHING.

FURTHER INFORMATION

REMOVE CONTAINER FROM DANGER ZONE AND COOL WITH WATER. PREVENT FIRE EXTINGUISHING WATER FROM CONTAMINATING SURFACE WATER OR THE GROUND WATER SYSTEM.

SECTION 6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

ADVICE FOR NON-EMERGENCY PERSONNEL: DO NOT BREATHE VAPORS, AEROSOLS. AVOID SUBSTANCE CONTACT. ENSURE ADEQUATE VENTILATION. KEEP AWAY FROM HEAT AND SOURCES OF IGNITION. EVACUATE THE DANGER AREA, OBSERVE EMERGENCY PROCEDURES, CONSULT AN EXPERT.

FOR PERSONAL PROTECTION SEE SECTION 8.

ENVIRONMENTAL PRECAUTIONS

DO NOT LET PRODUCT ENTER DRAINS. RISK OF EXPLOSION.

METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP

COVER DRAINS. COLLECT, BIND, AND PUMP OFF SPILLS. OBSERVE POSSIBLE MATERIAL RESTRICTIONS (SEE SECTIONS 7 AND 10). DISPOSE OF PROPERLY. CLEAN UP AFFECTED AREA.

REFERENCE TO OTHER SECTIONS

FOR DISPOSAL SEE SECTION 13.

SECTION 7. HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING

WORK UNDER HOOD. DO NOT INHALE SUBSTANCE/MIXTURE. AVOID GENERATION OF VAPOURS/AEROSOLS. KEEP AWAY FROM OPEN FLAMES, HOT SURFACES AND SOURCES OF IGNITION. TAKE PRECAUTIONARY MEASURES AGAINST STATIC DISCHARGE. IMMEDIATELY CHANGE CONTAMINATED CLOTHING. APPLY PREVENTIVE SKIN PROTECTION. WASH HANDS AND FACE AFTER WORKING WITH SUBSTANCE. FOR PRECAUTIONS SEE SECTION 2.2.

CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

KEEP CONTAINER TIGHTLY CLOSED IN A DRY AND WELL-VENTILATED PLACE. KEEP AWAY FROM HEAT AND SOURCES OF IGNITION. KEEP LOCKED UP OR IN AN AREA ACCESSIBLE ONLY TO QUALIFIED OR AUTHORIZED PERSONS.

STORAGE CLASS (TRGS 510): 3: FLAMMABLE LIQUIDS

STORE AT RT

SPECIFIC END USE(S)

APART FROM THE USES MENTIONED IN SECTION 1.2 NO OTHER SPECIFIC USES ARE STIPULATED.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

CONTROL PARAMETERS**COMPONENTS WITH WORKPLACE CONTROL PARAMETERS**

COMPONENT	CAS-NO.	VALUE	CONTROL PARAMETERS	BASIS
METHANOL [FOR HPLC SOLVENT]	67-56-1	TWA	200 PPM	USA. ACGIH THRESHOLD LIMIT VALUES (TLV)
	REMARKS	DANGER OF CUTANEOUS ABSORPTION		
		STEL	250 PPM	USA. ACGIH THRESHOLD LIMIT VALUES (TLV)
		DANGER OF CUTANEOUS ABSORPTION		
		ST	250 PPM 325 MG/M3	USA. NIOSH RECOMMENDED EXPOSURE LIMITS
		POTENTIAL FOR DERMAL ABSORPTION		
		TWA	200 PPM 260 MG/M3	USA. NIOSH RECOMMENDED EXPOSURE LIMITS
		POTENTIAL FOR DERMAL ABSORPTION		
		TWA	200 PPM 260 MG/M3	USA. OCCUPATIONAL EXPOSURE LIMITS (OSHA) - TABLE Z-1 LIMITS FOR AIR CONTAMINANTS
		PEL	200 PPM 260 MG/M3	CALIFORNIA PERMISSIBLE EXPOSURE LIMITS FOR CHEMICAL CONTAMINANTS
		SKIN		
		C	1,000 PPM	CALIFORNIA PERMISSIBLE EXPOSURE LIMITS FOR CHEMICAL CONTAMINANTS
		SKIN		
		STEL	250 PPM 325 MG/M3	CALIFORNIA PERMISSIBLE EXPOSURE LIMITS FOR CHEMICAL CONTAMINANTS
		SKIN		

BIOLOGICAL OCCUPATIONAL EXPOSURE LIMITS

COMPONENT	CAS-NO.	PARAMETERS	VALUE	BIOLOGICAL SPECIMEN	BASIS
METHANOL [FOR HPLC SOLVENT]	67-56-1	METHANOL	15 MG/L	URINE	ACGIH - BIOLOGICAL EXPOSURE INDICES (BEI)
	REMARKS	END OF SHIFT (AS SOON AS POSSIBLE AFTER EXPOSURE CEASES)			

DERIVED NO EFFECT LEVEL (DNEL)

APPLICATION AREA	ROUTES OF EXPOSURE	HEALTH EFFECT	VALUE
WORKERS	SKIN CONTACT	LONG-TERM SYSTEMIC EFFECTS	40MG/KG BW/D
CONSUMERS	SKIN CONTACT	LONG-TERM SYSTEMIC EFFECTS	8MG/KG BW/D
CONSUMERS	INGESTION	LONG-TERM SYSTEMIC EFFECTS	8MG/KG BW/D

WORKERS	SKIN CONTACT	ACUTE SYSTEMIC EFFECTS	40MG/KG BW/D
CONSUMERS	SKIN CONTACT	ACUTE SYSTEMIC EFFECTS	8MG/KG BW/D
CONSUMERS	INGESTION	ACUTE SYSTEMIC EFFECTS	8MG/KG BW/D
WORKERS	INHALATION	ACUTE SYSTEMIC EFFECTS	260 MG/M3
WORKERS	INHALATION	ACUTE LOCAL EFFECTS	260 MG/M3
WORKERS	INHALATION	LONG-TERM SYSTEMIC EFFECTS	260 MG/M3
WORKERS	INHALATION	LONG-TERM LOCAL EFFECTS	260 MG/M3
CONSUMERS	INHALATION	ACUTE SYSTEMIC EFFECTS	50 MG/M3
CONSUMERS	INHALATION	ACUTE LOCAL EFFECTS	50 MG/M3
CONSUMERS	INHALATION	LONG-TERM SYSTEMIC EFFECTS	50 MG/M3
CONSUMERS	INHALATION	LONG-TERM LOCAL EFFECTS	50 MG/M3

PREDICTED NO EFFECT CONCENTRATION (PNEC)

COMPARTMENT	VALUE
SOIL	23.5 MG/KG
SEA WATER	15.4 MG/L
FRESH WATER	154 MG/L
FRESH WATER SEDIMENT	570.4 MG/KG
ONSITE SEWAGE TREATMENT PLANT	100 MG/KG

EXPOSURE CONTROLS

APPROPRIATE ENGINEERING CONTROLS IMMEDIATELY CHANGE CONTAMINATED CLOTHING. APPLY PREVENTIVE SKIN PROTECTION. WASH HANDS AND FACE AFTER WORKING WITH SUBSTANCE.

PERSONAL PROTECTIVE EQUIPMENT

EYE/FACE PROTECTION USE EQUIPMENT FOR EYE PROTECTION TESTED AND APPROVED UNDER APPROPRIATE GOVERNMENT STANDARDS SUCH AS NIOSH (US) OR EN 166(EU). SAFETY GLASSES

SKIN PROTECTION HANDLE WITH GLOVES. GLOVES MUST BE INSPECTED PRIOR TO USE. USE PROPER GLOVE REMOVAL TECHNIQUE (WITHOUT TOUCHING GLOVE'S OUTER SURFACE) TO AVOID SKIN CONTACT WITH THIS PRODUCT. DISPOSE OF CONTAMINATED GLOVES AFTER USE IN ACCORDANCE WITH APPLICABLE LAWS AND GOOD LABORATORY PRACTICES. WASH AND DRY HANDS.

BODY PROTECTION FLAME RETARDANT ANTISTATIC PROTECTIVE CLOTHING.

RESPIRATORY PROTECTION REQUIRED WHEN VAPOURS/AEROSOLS ARE GENERATED. OUR RECOMMENDATIONS ON FILTERING RESPIRATORY PROTECTION ARE BASED ON THE FOLLOWING STANDARDS: DIN EN 143, DIN 14387 AND OTHER ACCOMPANYING STANDARDS RELATING TO THE USED RESPIRATORY PROTECTION SYSTEM.

CONTROL OF
ENVIRONMENTAL
EXPOSURE

DO NOT LET PRODUCT ENTER DRAINS. RISK OF
EXPLOSION.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE	CLEAR COLORLESS LIQUID
ODOUR	CHARACTERISTIC
ODOUR THRESHOLD	10 PPM
PH	NO DATA AVAILABLE
MELTING	-98 °C (LIT.)
POINT/FREEZING POINT	
INITIAL BOILING POINT AND BOILING RANGE	64 °C (LIT.)
FLASH POINT	NO DATA AVAILABLE
EVAPOURATION RATE	6.3 - DIETHYL ETHER 1.9 - N-BUTYL ACETATE
FLAMMABILITY (SOLID, GAS)	NO DATA AVAILABLE
UPPER/LOWER FLAMMABILITY OR EXPLOSIVE LIMITS	UPPER EXPLOSION LIMIT: 44 %(V) LOWER EXPLOSION LIMIT: 5.5 %(V)
VAPOUR PRESSURE	169.27 HPA AT 25 °C
VAPOUR DENSITY	1.11
RELATIVE DENSITY	0.790 G/ML
WATER SOLUBILITY	1,000 G/L AT 20 °C - COMPLETELY MISCIBLE
PARTITION COEFFICIENT: N- OCTANOL/WATER	LOG POW: -0.77 AT 25 °C - (HSDB), BIOACCUMULATION IS NOT EXPECTED.
AUTO-IGNITION TEMPERATURE	455.0 °C AT 1,013 HPA - DIN 51794
DECOMPOSITION TEMPERATURE	DISTILLABLE IN AN UNDECOMPOSED STATE AT NORMAL PRESSURE.
VISCOSITY	0.54 - 0.59 MM ² /S AT 20 °C
EXPLOSIVE PROPERTIES	NO DATA AVAILABLE
OXIDIZING PROPERTIES	NO DATA AVAILABLE

OTHER SAFETY INFORMATION

MINIMUM IGNITION ENERGY	0.14 MJ
CONDUCTIVITY	< 1 MS/CM
RELATIVE VAPOR DENSITY	1.11

SECTION 10. STABILITY AND REACTIVITY

REACTIVITY

VAPORS MAY FORM EXPLOSIVE MIXTURE WITH AIR.

CHEMICAL STABILITY	THE PRODUCT IS CHEMICALLY STABLE UNDER STANDARD AMBIENT CONDITIONS.
POSSIBILITY OF HAZARDOUS REACTIONS	RISK OF EXPLOSION WITH: OXIDIZING AGENTS PERCHLORIC ACID PERCHLORATES SALTS OF OXYHALOGENIC ACIDS CHROMIUM(VI) OXIDE HALOGEN OXIDES NITROGEN OXIDES NONMETALLIC OXIDES CHROMOSULFURIC ACID CHLORATES HYDRIDES ZINC DIETHYL HALOGENS POWDERED MAGNESIUM HYDROGEN PEROXIDE NITRIC ACID SULFURIC ACID PERMANGANIC ACID SODIUM HYPOCHLORITE EXOTHERMIC REACTION WITH: ACID HALIDES ACID ANHYDRIDES REDUCING AGENTS ACIDS BROMINE CHLORINE CHLOROFORM MAGNESIUM TETRACHLOROMETHANE RISK OF IGNITION OR FORMATION OF INFLAMMABLE GASES OR VAPOURS WITH: FLUORINE OXIDES OF PHOSPHORUS RANEY-NICKEL GENERATES DANGEROUS GASES OR FUMES IN CONTACT WITH: ALKALINE EARTH METALS ALKALI METALS
CONDITIONS TO AVOID	WARMING.
INCOMPATIBLE MATERIALS	NO DATA AVAILABLE
HAZARDOUS DECOMPOSITION PRODUCTS	IN THE EVENT OF FIRE: SEE SECTION 5

SECTION 11. TOXICOLOGICAL INFORMATION

INFORMATION ON TOXICOLOGICAL EFFECTS

ACUTE TOXICITY

ACUTE TOXICITY ESTIMATE ORAL - 100.1 MG/KG
(EXPERT JUDGMENT)
REMARKS: CLASSIFIED ACCORDING TO REGULATION
(EU) 1272/2008, ANNEX VI (TABLE 3.1/3.2)
SYMPTOMS: NAUSEA, VOMITING

ACUTE TOXICITY ESTIMATE INHALATION - 4 H - 3.1
MG/L - VAPOR
(EXPERT JUDGMENT)
REMARKS: CLASSIFIED ACCORDING TO REGULATION
(EU) 1272/2008, ANNEX VI (TABLE 3.1/3.2)
SYMPTOMS: IRRITATION SYMPTOMS IN THE
RESPIRATORY TRACT.

ACUTE TOXICITY ESTIMATE DERMAL - 300.1 MG/KG
(EXPERT JUDGMENT)
REMARKS: CLASSIFIED ACCORDING TO REGULATION
(EU) 1272/2008, ANNEX VI (TABLE 3.1/3.2)

NO DATA AVAILABLE

SKIN CORROSION/IRRITATION

SKIN - RABBIT
RESULT: NO SKIN IRRITATION
REMARKS: (ECHA)
REMARKS: DRYING-OUT EFFECT RESULTING IN ROUGH
AND CHAPPED SKIN.

SERIOUS EYE DAMAGE/EYE IRRITATION

EYES - RABBIT
RESULT: NO EYE IRRITATION
REMARKS: (ECHA)

RESPIRATORY OR SKIN SENSITISATION

SENSITISATION TEST: - GUINEA PIG
RESULT: NEGATIVE
(OECD TEST GUIDELINE 406)

**GERM CELL
MUTAGENICITY**

BASED ON AVAILABLE DATA THE CLASSIFICATION
CRITERIA ARE NOT MET.

TEST TYPE: AMES TEST

TEST SYSTEM: SALMONELLA TYPHIMURIUM

METABOLIC ACTIVATION: WITH AND WITHOUT
METABOLIC ACTIVATION

METHOD: OECD TEST GUIDELINE 471

RESULT: NEGATIVE

TEST TYPE: IN VITRO MAMMALIAN CELL GENE
MUTATION TEST

TEST SYSTEM: CHINESE HAMSTER LUNG CELLS

METABOLIC ACTIVATION: WITH AND WITHOUT
METABOLIC ACTIVATION

METHOD: OECD TEST GUIDELINE 476

RESULT: NEGATIVE

TEST TYPE: MICRONUCLEUS TEST

SPECIES: MOUSE

CELL TYPE: BONE MARROW

APPLICATION ROUTE: INTRAPERITONEAL INJECTION

METHOD: OECD TEST GUIDELINE 474

RESULT: NEGATIVE

CARCINOGENICITY

DID NOT SHOW CARCINOGENIC EFFECTS IN ANIMAL EXPERIMENTS.

IARC:

NO COMPONENT OF THIS PRODUCT PRESENT AT
LEVELS GREATER THAN OR EQUAL TO 0.1% IS
IDENTIFIED AS PROBABLE, POSSIBLE OR CONFIRMED
HUMAN CARCINOGEN BY IARC.

NTP:

NO COMPONENT OF THIS PRODUCT PRESENT AT
LEVELS GREATER THAN OR EQUAL TO 0.1% IS
IDENTIFIED AS A KNOWN OR ANTICIPATED
CARCINOGEN BY NTP.

OSHA:

NO COMPONENT OF THIS PRODUCT PRESENT AT
LEVELS GREATER THAN OR EQUAL TO 0.1% IS ON
OSHA'S LIST OF REGULATED CARCINOGENS.

**REPRODUCTIVE
TOXICITY**

BASED ON AVAILABLE DATA THE CLASSIFICATION
CRITERIA ARE NOT MET.

**SPECIFIC TARGET
ORGAN TOXICITY -
SINGLE EXPOSURE**

CAUSES DAMAGE TO ORGANS. - EYES, CENTRAL
NERVOUS SYSTEM

REMARKS: CLASSIFIED ACCORDING TO REGULATION
(EU) 1272/2008, ANNEX VI (TABLE 3.1/3.2)

**SPECIFIC TARGET
ORGAN TOXICITY -
REPEATED EXPOSURE**

NO DATA AVAILABLE

ASPIRATION HAZARD

NO DATA AVAILABLE

**ADDITIONAL
INFORMATION**

RTECS: PC1400000

ACUTE EFFECTS: HEADACHE, DIZZINESS,
DROWSINESS, NARCOSIS, BLINDNESS, IMPAIRMENT OF
VISION, IRRITANT EFFECTS, NAUSEA, VOMITING,
AGITATION, SPASMS, INEBRIATION, COMA
DRYING-OUT EFFECT RESULTING IN ROUGH AND
CHAPPED SKIN.
TO THE BEST OF OUR KNOWLEDGE, THE CHEMICAL,
PHYSICAL, AND TOXICOLOGICAL PROPERTIES HAVE
NOT BEEN THOROUGHLY INVESTIGATED.

SYSTEMIC EFFECTS:

ACIDOSIS
DROP IN BLOOD PRESSURE
AGITATION, SPASMS
INEBRIATION
DIZZINESS
DROWSINESS
HEADACHE
IMPAIRMENT OF VISION
BLINDNESS
NARCOSIS
COMA

SYMPTOMS MAY BE DELAYED.

DAMAGE TO:

LIVER
KIDNEY
CARDIAC
IRREVERSIBLE DAMAGE OF THE OPTICAL NERVE.

OTHER DANGEROUS PROPERTIES CAN NOT BE
EXCLUDED.

THIS SUBSTANCE SHOULD BE HANDLED WITH
PARTICULAR CARE.

STOMACH - IRREGULARITIES - BASED ON HUMAN
EVIDENCE

SECTION 12. ECOLOGICAL INFORMATION

TOXICITY
TOXICITY TO FISH

FLOW-THROUGH TEST LC50 - LEPOMIS MACROCHIRUS
(BLUEGILL) - 15,400.0 MG/L - 96 H
(US-EPA)

TOXICITY TO DAPHNIA AND OTHER AQUATIC INVERTEBRATES	SEMI-STATIC TEST EC50 - DAPHNIA MAGNA (WATER FLEA) - 18,260 MG/L - 96 H (OECD TEST GUIDELINE 202)
TOXICITY TO ALGAE	STATIC TEST ERC50 - PSEUDOKIRCHNERIELLA SUBCAPITATA (GREEN ALGAE) - CA. 22,000.0 MG/L - 96 H (OECD TEST GUIDELINE 201)
TOXICITY TO BACTERIA	STATIC TEST IC50 - ACTIVATED SLUDGE - > 1,000 MG/L - 3 H (OECD TEST GUIDELINE 209)
TOXICITY TO FISH (CHRONIC TOXICITY)	NOEC - ORYZIAS LATIPES (ORANGE-RED KILLIFISH) - 7,900 MG/L - 200 H REMARKS: (EXTERNAL MSDS)

PERSISTENCE AND DEGRADABILITY

BIODEGRADABILITY RESULT: 99 % - READILY BIODEGRADABLE.

BIOCHEMICAL OXYGEN
DEMAND (BOD) (OECD TEST GUIDELINE 301D)
600 - 1,120 MG/G

CHEMICAL OXYGEN
DEMAND (COD) REMARKS: (IUCLID)
1,420 MG/G

THEORETICAL OXYGEN
DEMAND REMARKS: (IUCLID)
1,500 MG/G

RATIO BOD/THBOD REMARKS: (LIT.)
76 %

REMARKS: CLOSED BOTTLE TEST(IUCLID)

BIOACCUMULATIVE POTENTIAL

BIOACCUMULATION CYPRINUS CARPIO (CARP) - 72 D

AT 20 °C - 5 MG/L(METHANOL)

BIOCONCENTRATION FACTOR (BCF): 1.0

MOBILITY IN SOIL WILL NOT ADSORB ON SOIL.

**RESULTS OF PBT AND
VPVB ASSESSMENT** PBT/VPVB ASSESSMENT NOT AVAILABLE AS
CHEMICAL SAFETY ASSESSMENT NOT REQUIRED/NOT
CONDUCTED.

OTHER ADVERSE EFFECTS

ADDITIONAL
ECOLOGICAL
INFORMATION AVOID RELEASE TO THE ENVIRONMENT.

STABILITY IN WATER

AT 19 °C83 - 91 % - 72 H

REMARKS: HYDROLYZES ON CONTACT WITH
WATER.HYDROLYZES READILY. - 2.2 YR

REMARKS: REACTION WITH HYDROXYL
RADICALS(IUCLID)

SECTION 13. DISPOSAL CONSIDERATIONS

WASTE TREATMENT METHODS

PRODUCT

WASTE MATERIAL MUST BE DISPOSED OF IN
ACCORDANCE WITH THE NATIONAL AND LOCAL
REGULATIONS.
LEAVE CHEMICALS IN ORIGINAL CONTAINERS. NO
MIXING WITH OTHER WASTE.

CONTAMINATED PACKAGING

DISPOSE OF AS UNUSED PRODUCT.

SECTION 14. TRANSPORT INFORMATION

DOT (US)

PROPER SHIPPING NAME: METHANOL
UN NUMBER: 1230
CLASS: 3
PACKING GROUP: II
REPORTABLE QUANTITY
(RQ): 5000 LBS
POISON INHALATION HAZARD: NO

IMDG

PROPER SHIPPING NAME: METHANOL
UN NUMBER: 1230
CLASS: 3 (6.1)
PACKING GROUP: II
EMS-NO: F-E, S-D

IATA

PROPER SHIPPING NAME: METHANOL
UN NUMBER: 1230
CLASS: 3 (6.1)
PACKING GROUP: II

SECTION 15. REGULATORY INFORMATION

SARA 302 COMPONENTS THIS MATERIAL DOES NOT CONTAIN ANY COMPONENTS WITH A SECTION 302 EHS TPQ.

SARA 313 COMPONENTS

THE FOLLOWING COMPONENTS ARE SUBJECT TO REPORTING LEVELS ESTABLISHED BY SARA TITLE III, SECTION 313:

	CAS-NO.	REVISION DATE
METHANOL [FOR HPLC SOLVENT]	67-56-1	07-01-2007

MASSACHUSETTS RIGHT TO KNOW COMPONENTS

	CAS-NO.	REVISION DATE
METHANOL [FOR HPLC SOLVENT]	67-56-1	07-01-2007

PENNSYLVANIA RIGHT TO KNOW COMPONENTS

	CAS-NO.	REVISION DATE
METHANOL [FOR HPLC SOLVENT]	67-56-1	07-01-2007

CALIFORNIA PROP. 65 COMPONENTS

WHICH IS/ARE KNOWN TO THE STATE OF CALIFORNIA TO CAUSE BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM.

	CAS-NO.	REVISION DATE
METHANOL [FOR HPLC SOLVENT]	67-56-1	03-16-2012

SECTION 16. OTHER INFORMATION

FULL TEXT OF H-STATEMENTS REFERRED TO UNDER SECTIONS 2 AND 3.

H225	HIGHLY FLAMMABLE LIQUID AND VAPOUR.
H301 + H311 + H331	TOXIC IF SWALLOWED, IN CONTACT WITH SKIN OR IF INHALED.
H370	CAUSES DAMAGE TO ORGANS (EYES, CENTRAL NERVOUS SYSTEM).

MSDS LEGEND

MW:	MOLECULAR WEIGHT
MF:	MOLECULAR FORMULA
VOC:	VOLATILE ORGANIC COMPOUNDS
ACGIH:	AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGINISTS
CAS:	CHEMICAL ABSTRACTS SERVICE REGISTRY NUMBER
OSHA:	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION

PEL: PERMISSIBLE EXPOSURE LIMIT (OSHA)

TLV: THRESHOLD LIMIT VALUE (ACGIH)

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