Material Safety Data Sheet

Section 1. Chemical Identification

Catalog #: 198048
Name: Trimethylaluminum, 2.0M solution in toluene

Section 2. Composition/Information on Ingredients

CAS #: 75-24-1
MF: C3H9Al
EC No: 200-853-0

Hazardous Ingredients:
Contains toluene, chemical abstracts registry number 108-88-3.

Additional Information:
Contains toluene, chemical abstracts registry number 108-88-3.

Synonyms:
Trimethylalane * Trimethylaluminium * Trimethylaluminum *

Section 3. Hazards Identification

Label Precautionary Statements

Pyrophoric (Usa definition)
Highly flammable (European definition)
Corrosive
Reacts violently with water liberating extremely flammable gases.
Spontaneously flammable in air.
Harmful by inhalation.
Causes burns.
Calif. Prop. 65 reproductive hazard.
Target Organ(s): Brain
Liver
Reacts violently with water.

Keep away from sources of ignition - no smoking.
In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Take precautionary measures against static discharges.
Wear suitable protective clothing, gloves and eye/face protection.
In case of fire, use dry powder. Never use water.
In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Section 4. First-Aid Measures

If swallowed, wash out mouth with water provided person is conscious. Call a physician immediately.
Do not induce vomiting.
If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.
In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Call a physician.
IN CASE OF CONTACT WITH EYES, FLUSH WITH COPIOUS AMOUNTS OF WATER FOR AT LEAST 15 MINUTES. ASSURE ADEQUATE FLUSHING BY SEPARATING THE EYELIDS WITH FINGERS. CALL A PHYSICIAN.

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

EXTINGUISHING MEDIA
DO NOT USE WATER.
CARBON DIOXIDE, DRY CHEMICAL POWDER OR APPROPRIATE FOAM.

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

UNUSUAL FIRE AND EXPLOSIONS HAZARDS
REACTS WITH WATER TO LIBERATE FLAMMABLE AND/OR EXPLOSIVE GAS.
CATCHES FIRE IF EXPOSED TO AIR.
FLAMMABLE LIQUID.
EMITS TOXIC FUMES UNDER FIRE CONDITIONS.
VAPOR MAY TRAVEL CONSIDERABLE DISTANCE TO SOURCE OF IGNITION AND FLASH BACK.
CONTAINER EXPLOSION MAY OCCUR UNDER FIRE CONDITIONS.

SECTION 6. - - - - - - - - - ACCIDENTAL RELEASE MEASURES- - - - - - - - - -
WEAR SELF-CONTAINED BREATHING APPARATUS, RUBBER BOOTS AND HEAVY RUBBER GLOVES.
COVER WITH DRY-LIME, SAND, OR SODA ASH. PLACE IN COVERED CONTAINERS USING NON-SPARKING TOOLS AND TRANSPORT OUTDOORS.
VENTILATE AREA AND WASH SPILL SITE AFTER MATERIAL PICKUP IS COMPLETE.
EVACUATE AREA.
SHUT OFF ALL SOURCES OF IGNITION.
USE NONSPARKING TOOLS.

SECTION 7. - - - - - - - - - HANDLING AND STORAGE- - - - - - - - - -
REFER TO SECTION 8.

SECTION 8. - - - - - - EXPOSURE CONTROLS/PERSOANL PROTECTION- - - - - -
DO NOT ALLOW CONTACT WITH WATER.
AIR SENSITIVE
SAFETY SHOWER AND EYE BATH.
USE NONSPARKING TOOLS.
USE ONLY IN A CHEMICAL FUME HOOD.
WASH CONTAMINATED CLOTHING BEFORE REUSE.
DISCARD CONTAMINATED SHOES.
WASH THOROUGHLY AFTER HANDLING.
DO NOT BREATHE VAPOR.
DO NOT GET IN EYES, ON SKIN, ON CLOTHING.
AVOID PROLONGED OR REPEATED EXPOSURE.
NIOSH/MSHA-APPROVED RESPIRATOR.
COMPATIBLE CHEMICAL-RESISTANT GLOVES.
CHEMICAL SAFETY GOGGLES.
FACESHIELD (8-INCH MINIMUM).
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
FLASHPOINT                  40 F
SPECIFIC GRAVITY:     0.810

SECTION 10. - - - - - - - - - STABILITY AND REACTIVITY - - - - - - - - - -
STABILITY
STABLE.
INCOMPATIBILITIES
CATCHES FIRE IF EXPOSED TO AIR.
DO NOT ALLOW WATER TO ENTER CONTAINER BECAUSE OF VIOLENT REACTION.
STRONG OXIDIZING AGENTS
HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS
METHANE GAS
CARBON MONOXIDE, CARBON DIOXIDE
HAZARDOUS POLYMERIZATION
WILL NOT OCCUR.

SECTION 11. - - - - - - - - - TOXICOLOGICAL INFORMATION - - - - - - - -
ACUTE EFFECTS
MAY CAUSE NERVOUS SYSTEM DISTURBANCES.
CAUSES BURNS.
MAY BE HARMFUL IF ABSORBED THROUGH THE SKIN.
MATERIAL IS EXTREMELY DESTRUCTIVE TO THE TISSUE OF THE MUCOUS MEMBRANES
AND UPPER RESPIRATORY TRACT.
MAY BE HARMFUL IF INHALED.
MAY BE HARMFUL IF SWALLOWED.
MATERIAL IS EXTREMELY DESTRUCTIVE TO TISSUE OF THE MUCOUS MEMBRANES
AND UPPER RESPIRATORY TRACT, EYES AND SKIN.
INHALATION MAY RESULT IN SPASM, INFLAMMATION AND EDEMA OF THE
LARYNX AND BRONCHI, CHEMICAL PNEUMONITIS AND PULMONARY EDEMA.
SYMPTOMS OF EXPOSURE MAY INCLUDE BURNING SENSATION, COUGHING,
WHEEZING, LARYNGITIS, SHORTNESS OF BREATH, HEADACHE, NAUSEA AND
VOMITING.

CHRONIC EFFECTS
TARGET ORGAN(S):
BRAIN
LIVER
KIDNEYS
BLADDER
RTECS #: BD2204000
ALUMINUM, TRIMETHYL-
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 - - - - - - - -
CONTACT A LICENSED PROFESSIONAL WASTE DISPOSAL SERVICE TO DISPOSE OF
THIS MATERIAL.
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: 013-004-00-2
HIGHLY FLAMMABLE
CORROSIVE
R 11
HIGHLY FLAMMABLE.
R 14/15
REACTS VIOLENTLY WITH WATER LIBERATING EXTREMELY
FLAMMABLE GASES.
R 17
SPONTANEOUSLY FLAMMABLE IN AIR.
R 20
HARMFUL BY INHALATION.
R 34
CAUSES BURNS.
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 33
TAKE PRECAUTIONARY MEASURES AGAINST STATIC DISCHARGES.
S 36/37/39
WEAR SUITABLE PROTECTIVE CLOTHING, GLOVES AND EYE/FACE PROTECTION.
S 43
IN CASE OF FIRE, USE DRY POWDER. NEVER USE WATER.
S 45
IN CASE OF ACCIDENT OR IF YOU FEEL UNWELL, SEEK MEDICAL ADVICE IMMEDIATELY (SHOW THE LABEL WHERE POSSIBLE).

TLV AND SOURCE
FOR TOLUENE:
ACGIH TLV-TWA: 50 PPM (188 MG/M3).
OSHA PEL: 8H TWA 100 PPM (375 MG/M3); STEL: 150 PPM (560 MG/M3).

REVIEWS, STANDARDS, AND REGULATIONS
OEL=MAK
ACGIH TLV-TWA 2 MG(AL)/M3 DTLVS* TLV/BEI,1999
OEL-AUSTRALIA: TWA 2 MG(AL)/M3, JAN1993
OEL-BELGIUM: TWA 2 MG(AL)/M3, JAN1993
OEL-DENMARK: TWA 2 MG(AL)/M3, JAN1999
OEL-FRANCE: VME 2 MG(AL)/M3, JAN1999
OEL-NORWAY: TWA 2 MG(AL)/M3, JAN1999
OEL-RUSSIA: TWA 2 MG(AL)/M3, JAN1993
OEL-SWEDEN: NGV 2 MG(AL)/M3, JAN1999
OEL-SWITZERLAND: MAK-W 2 MG(AL)/M3, JAN1999
OEL-UNITED KINGDOM: TWA 2 MG/M3, SEP2000
OEL IN ARGENTINA, BULGARIA, COLOMBIA, JORDAN, KOREA CHECK ACGIH TLV;
OEL IN NEW ZEALAND, SINGAPORE, VIETNAM CHECK ACGIH TLV
EPA TSCA SECTION 8(B) CHEMICAL INVENTORY
U.S. INFORMATION
82.2% TOLUENE 108-88-3
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, ALDRICH, FLUKA 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 2001 SIGMA-ALDRICH CO.
LICENSE GRANTED TO MAKE UNLIMITED PAPER COPIES FOR INTERNAL USE ONLY