

SECTION 1) CHEMICAL PRODUCT AND SUPPLIER'S IDENTIFICATION

CAS Number: 112-69-6
Product Name: ADMA 16
Revision Date: Aug 25, 2021 **Date Printed:** Sep 23, 2021
Version: 1.0 **Supersedes Date:** N.A.
Manufacturer's Name: Thames River Chemical Corp.
Address: 5230 Harvester Road Burlington, ON, CA, L7L 4X4
Emergency Phone: CHEMTREC (800) 424-9300
Information Phone Number: 905-681-5353
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Product/Recommended Uses: For laboratory or industrial use only.

SECTION 2) HAZARDS IDENTIFICATION**Classification**

Acute aquatic toxicity - Category 1
Acute toxicity Oral - Category 4
Chronic aquatic toxicity - Category 1
Serious Eye Damage - Category 1
Skin Corrosion - Category 1B

Pictograms**Signal Word**

Danger

Hazard Statements - Health

H302 - Harmful if swallowed
H314 - Causes severe skin burns and eye damage

Hazard Statements - Environmental

H410 - Very toxic to aquatic life with long lasting effects

Precautionary Statements - General

P101 - If medical advice is needed, have product container or label at hand.
P102 - Keep out of reach of children.
P103 - Read label before use.

Precautionary Statements - Prevention

P273 - Avoid release to the environment.
P264 - Wash/Wash hands thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.

P280 - Wear protective gloves/protective clothing/eye protection/face protection.

P260 - Do not breathe dust/fume/gas/mist/vapors/spray.

Precautionary Statements - Response

P391 - Collect spillage.

P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor, if you feel unwell.

P330 - Rinse mouth.

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 - Immediately call a POISON CENTER or doctor.

P301 + P330 + P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.

P363 - Wash contaminated clothing before reuse.

P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P321 - Specific treatment (see first-aid on the SDS).

Precautionary Statements - Storage

P405 - Store locked up.

Precautionary Statements - Disposal

P501 - Dispose of contents/container in accordance with local/national/international regulation. Waste management should be in full compliance with national, regional and local laws.

Acute toxicity of 4% of the mixture is unknown

SECTION 3) COMPOSITION/INFORMATION ON INGREDIENTS

CAS	Chemical Name	% By Weight
0000112-69-6	1-HEXADECANAMINE,N,N'-DIMETHYL	95% - 95%
0000112-75-4	1-TETRADECANAMINE, N,N-DIMETHYL-	5% - 6%
0000124-28-7	N,N-DIMETHYL OCTADECYLAMINE	1% - 1%

Specific chemical identity and/or exact percentage (concentration) of the composition has been withheld to protect confidentiality or to reflect batch to batch variation.

SECTION 4) FIRST-AID MEASURES

Inhalation

Immediately call a POISON CENTER or doctor. Remove source of exposure or move person to fresh air and keep comfortable for breathing.

Eye Contact

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.

Skin Contact

Remove contaminated clothing and shoes. Wash affected areas with plenty of running water, preferably under a shower. Seek prompt medical attention.

Ingestion

Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth. Do not induce vomiting.

Most Important Symptoms and Effects, Both Acute and Delayed

Harmful if swallowed. Causes severe skin burns and eye damage. Very toxic to aquatic life with long lasting effects.

Indication of Any Immediate Medical Attention and Special Treatment Needed

Treat symptomatically

SECTION 5) FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Carbon dioxide, dry chemical, foam, water spray, fog.

Unsuitable Extinguishing Media

No data available.

Specific Hazards in Case of Fire

Combustion/explosion hazards In case of fire and/or explosion do not breathe fumes.
Hazardous Combustion Products: Oxides of carbon and nitrogen.

Special Protective Actions

Wear self-contained breathing apparatus and full protective clothing.

SECTION 6) ACCIDENTAL RELEASE MEASURES

Personal Precautions

Do not breathe fumes/vapors. Ensure adequate ventilation. Do not eat, drink or smoke when using this product Wash thoroughly after handling. Use personal protective equipment. Contaminated clothing cannot be washed clean and should not be re-used for any purpose.

Environmental Precautions

Contain any spill with dikes or absorbents to prevent migration and entry into sewers or streams.

Methods and Materials for Containment and Cleaning up

Methods for Containment: Prevent further leakage or spillage if safe to do so.
Methods for Cleaning up: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Take up small spills with dry chemical absorbent. Large spills may be taken up with pump or vacuum and finished off with dry chemical absorbent. May require excavation of contaminated soil.

SECTION 7) HANDLING AND STORAGE

7.1 Precautions for safe handling

Handling : Avoid contact with skin and eyes. Wash face, hands and any exposed skin thoroughly after handling Do not eat, drink or smoke when using this product Do not breathe dust/fume/gas/mist/vapors/spray Wear personal protective equipment. Contaminated clothing cannot be washed clean and should not be re-used for any purpose. Avoid release to the environment.

7.2 Conditions for safe storage, including any incompatibilities

Storage Mechanical ventilation is recommended. Local exhaust is needed at source of vapours. Store in original container or in stainless steel or glass-lined storage vessels. Store locked up. Incompatible Materials : Copper. Copper alloys.

SECTION 8) EXPOSURE CONTROLS/PERSONAL PROTECTION

Eye protection

Wear safety glasses with side shields

Skin Protection

Wear suitable protective clothing. Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory Protection

Approved organic vapor respirator when exposed to vapors from heated material.

Appropriate Engineering Controls

Showers, Eyewash stations, ventilation systems.

None of the chemicals in Section 3 are regulated under "ACGIH_carcinogen", "ACGIH_Notations", "ACGIH_TLV_Basis", "ACGIHsmg", "ACGIHsppm", "ACGIHtmg", "ACGIHtpm", "CAN_AL_Carcinogen", "CAN_AL_Notation", "CAN_ALsmg", "CAN_ALsppm", "CAN_ALtmg", "CAN_ALtpm", "CAN_ONsmg", "CAN_ONsppm", "CAN_ONtmg", "CAN_ONtpm", "CAN_QCVECDmg - CANADA_QUEBEC VALEUR D'EXPOSITION DE COURTE DURÉE_mg", "CAN_QCVECDppm - CANADA_QUEBEC VALEUR D'EXPOSITION DE COURTE DURÉE_ppm", "CAN_QCVEMPmg - CANADA_QUEBEC VALEUR D'EXPOSITION MOYENNE PONDÉRÉE_mg", "CAN_QCVEMPppm - CANADA_QUEBEC VALEUR D'EXPOSITION MOYENNE PONDÉRÉE_ppm", "CANsmg", "CANsppm", "CANtmg", "CANtpm", "OSHA_SkinDesignation", "OSHA_Tables_Z1_Z2_Z3", "OSHACarcinogen - OSHA Carcinogen", "OSHAsmg", "OSHAsppm", "OSHAtmg", "OSHAtpm"

SECTION 9) PHYSICAL AND CHEMICAL PROPERTIES

Density	0.8 (25°C) g/ml
Specific Gravity	0.80
Appearance	Clear Liquid
Coefficient Water/Oil	log Kow = 4.6
Evaporation Rate	No Data available
Flash Point	142.00
High Boiling Point	N/A
Low Boiling Point	331.00
Lower Explosion Level	N/A
Melting/Freezing Point	8.00
Odor Description	Fatty amines
Odor Threshold	No data available
pH	No Data available
Upper Explosion Level	N/A
Vapor Density	No data available
Vapor Pressure	0.01 Pa (25°C)
Viscosity	No data available
Water Solubility	Slightly soluble

SECTION 10) STABILITY AND REACTIVITY

Reactivity

No data available.

Stability

This product is stable under normal handling and storing conditions.

Conditions to Avoid

Avoid heat, sparks, open flames and other ignition sources.

Hazardous Reactions/Polymerization

No hazardous reaction/ polymerization is expected under normal handling and storage conditions.

Incompatible Materials

Copper Copper alloys.

Hazardous Decomposition Products

Carbon monoxide, Carbon dioxide & Nitrogen oxides.

SECTION 11) TOXICOLOGICAL INFORMATION

Acute Toxicity

ATEmix (oral) 300-2000 mg/kg
ATEmix (dermal) > 2000 mg/kg
Component Information:
1-Hexadecanamine, N,N-dimethyl- 112-69-6: Rat Oral LD50:1015 mg/kg
Rabbit dermal LD50: > 2000mg/kg.
1-Tetradecanamine, N,N-dimethyl- 112-75-4:Rat Oral LD50:1320 mg/kg
Rabbit dermal LD50: > 2000mg/kg.
Octadecyldimethylamine 124-28-7: Rat Oral LD50:1230 mg/kg
Rabbit dermal LD50: > 5000mg/kg.

The Acute Toxicity Estimate (ATE) for an oral exposure to this mixture is 2474.74 mg/kg body weight

The Acute Toxicity Estimate (ATE) for a dermal exposure to this mixture is >5000 mg/kg body weight

The Acute Toxicity Estimate (ATE) for an inhalation (vapour) exposure to this mixture is >20 mg/l

Carcinogenicity

Animal testing did not show any carcinogenic effects. There are no known carcinogenic chemicals in this product.

Germ Cell Mutagenicity

Not genotoxic in bacteria and mammalian cell systems. Did not show mutagenic effects in animal experiments.

Reproductive Toxicity

No indication of effects on fertility or embryonic development in the absence of severe systemic toxicity.

Respiratory/Skin Sensitization

No data available.

Serious Eye Damage/Irritation

Causes eye irritation

Skin Corrosion/Irritation

Causes severe skin burns and eye damage

Specific Target Organ Toxicity - Repeated Exposure

Not expected to cause organ damage from prolonged or repeated exposure

Specific Target Organ Toxicity - Single Exposure

No data available.

Likely Routes of Exposure

Inhalation : Not an expected route of exposure.

Eye contact : Causes burns.

Skin contact: Causes burns. Symptoms may be delayed. Such burns will be predominately thermal and should be treated medically as such. Immediate application of cold water has been found to reduce the severity of burns.

Ingestion : Harmful if swallowed.

SECTION 12) ECOLOGICAL INFORMATION

Bioaccumulative Potential

Low potential for bioaccumulation.

Toxicity

Very toxic to aquatic life with long lasting effects.
Component: 1-Hexadecanamine, N,N-dimethyl- (CAS #: 112-69-6)
Freshwater Algae EC50/72h : 9.9 µg/l
Freshwater Fish LC50/96h : 0.256 mg/l
Water Flea EC50/48h : 66.5 µg/l
Component: 1-Tetradecanamine, N,N-dimethyl- (CAS #: 112-75-4)
Freshwater Algae EC50/72h : < 100 µg/l
Freshwater Fish LC50/96h : < 1 mg/l
Water Flea EC50/48h : < 1 mg/l
Component: Octadecyldimethylamine (CAS #: 124-28-7)
Freshwater Algae EC50/72h : 14.1 µg/l
Freshwater Fish LC50/96h : < 1 mg/l
Water Flea EC50/48h : < 1 mg/l

Mobility in Soil

Expected to be essentially immobile in soil.

Persistence and Degradability

Material is readily biodegradable.
Passes OECD Test(s) for ready biodegradability.
Biodegradation reached in CO2 Evolution Test (Modified Sturm Test, OECD Test No. 301 B) after 28 days: 97%.
Biodegradation reached in Modified OECD Screening Test (OECD Test No. 301 E) after 28 days: 94%.
Biodegradation reached in Manometric Respirometry Test (OECD Test No. 301 F) after 28 days: >70%.
Biodegradation under aerobic static laboratory conditions is high (BOD20 or BOD28/ThOD >40%).
20-Day biochemical oxygen demand (BOD20) is 1.50 p/p.
Theoretical oxygen demand (ThOD) is calculated to be 2.36 p/p.
Inhibitory concentration (IC50) in OECD Activated Sludge Respiration Inhibition Test (OECD Test No. 209) is >1000 mg/L.

SECTION 13) DISPOSAL CONSIDERATIONS

13.1 Waste Treatment Methods

Empty containers retain residue and may be dangerous.

Waste Disposal

Waste management should be in full compliance with national, state and local laws.

SECTION 14) TRANSPORT INFORMATION

	Transport Canada Information	U.S. DOT Information	IMDG Information	IATA Information
UN number:	UN2735	UN2735	UN2735	UN2735
Proper shipping name:	Amines, liquid, corrosive, n.o.s	Amines, liquid, corrosive, n.o.s	Amines, liquid, corrosive, n.o.s	Amines, liquid, corrosive, n.o.s
Hazard class:	8			
Hazard class:		8	8	8
Packaging group:	II	II	II	II
Hazardous substance (RQ):	No Data Available	No Data Available		
Marine Pollutant:	No Data Available	No Data Available	No Data Available	
Note / Special Provision:	No Data Available	No Data Available	No Data Available	No Data Available
Toxic-Inhalation Hazard:	No Data Available	No Data Available		

SECTION 15) REGULATORY INFORMATION

CAS	Chemical Name	% By Weight	Regulation List
0000112-69-6	1-HEXADECANAMINE,N,N'-DIMETHYL	95% - 95%	DSL,TSCA,AICS,CN_IECSC - Inventory of Existing Chemical Substances Produced or Imported in China,EU_EINECS - European_EC_Inventory_EINECS,E U_EC_Inventory - European_EC_Inventory,PH_PICCS - Philippines, The Philippine Inventory of Chemicals and Chemical Substances,KR_KECI - Korean Existing Chemicals Inventory
0000112-75-4	1-TETRADECANAMINE, N,N-DIMETHYL-	5% - 6%	DSL,TSCA,AICS,CN_IECSC - Inventory of Existing Chemical Substances Produced or Imported in China,EU_EINECS - European_EC_Inventory_EINECS,E U_EC_Inventory - European_EC_Inventory,PH_PICCS - Philippines, The Philippine Inventory of Chemicals and Chemical Substances,KR_KECI - Korean Existing Chemicals Inventory
0000124-28-7	N,N-DIMETHYL OCTADECYLAMINE	1% - 1%	DSL,TSCA,AICS,CN_IECSC - Inventory of Existing Chemical Substances Produced or Imported in China,EU_EINECS - European_EC_Inventory_EINECS,E U_EC_Inventory - European_EC_Inventory,PH_PICCS - Philippines, The Philippine Inventory of Chemicals and Chemical Substances,KR_KECI - Korean Existing Chemicals Inventory

SECTION 16) OTHER INFORMATION

Glossary

ACGIH - American Conference of Governmental Industrial Hygienists; CAS - Chemical Abstracts Service ; Chemtrec - Chemical Transportation Emergency Center; DSL - Domestic Substances List; ESL- Effects screening levels; GHS - "Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations; HMIS - Hazardous Material Information Service; IATA - Dangerous Goods Regulations (DGR) for the air transport (IATA); IMDG - International Maritime Dangerous Goods Code; LC - Lethal Concentration; LD - Lethal Dose; NFPA - National Fire Protection Association; OEL - Occupational Exposure Limits; OSHA - Occupational Safety and Health Administration, US Department of Labor; PEL - Permissible Exposure Limit; SARA 313 - Superfund Amendments and Reauthorization Act, Section 313; SCBA - Self Contained Breathing Apparatus; ppm - parts per million; STEL - Short-term exposure limit; TLV - Threshold Limit Value; TSCA - Toxic Substances Control Act Public Law 94-469; TWA - Time-weighted average; US DOT- US Department of Transportation.

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