

Safety Data Sheet SID3605.0 Date of issue: 11/24/2014 Version: 1.0

SECTION 1: Identification of the substance/mixture and of the company/undertaking

Product identifier

Product form : Substance Physical state : Liquid

Substance name : (N,N-DIMETHYLAMINO)TRIMETHYLSILANE

Product code SID3605.0 Formula : C5H15NS

: TMSDMA; PENTAMETHYLSILANAMINE; TRIMETHYLSILYLDIMETHYLAMINE Synonyms

: ORGANOAMINOSILANE Chemical family

Relevant identified uses of the substance or mixture and uses advised against

: Chemical intermediate Use of the substance/mixture

For research and industrial use only

Details of the supplier of the safety data sheet

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SECTION 2: Hazards identification

Classification of the substance or mixture

Classification (GHS-US)

Flam. Liq. 2 H225 Skin Corr. 1B H314 Eye Dam. 1 H318

Full text of H-phrases: see section 16

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US)





GHS02

GHS05

Signal word (GHS-US)

H225 - Highly flammable liquid and vapor Hazard statements (GHS-US)

H314 - Causes severe skin burns and eye damage

H318 - Causes serious eye damage

Precautionary statements (GHS-US) : P280 - Wear protective gloves/protective clothing/eye protection/face protection

P260 - Do not breathe vapors

P264 - Wash hands thoroughly after handling

P210 - Keep away from heat, open flames, sparks. - No smoking

P233 - Keep container tightly closed

P240 - Ground/bond container and receiving equipment P241 - Use explosion-proof electrical equipment

P242 - Use only non-sparking tools

P243 - Take precautionary measures against static discharge

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/shower

P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing 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 doctor

P363 - Wash contaminated clothing before reuse

P370+P378 - In case of fire: Use water spray, foam, carbon dioxide, dry chemical to extinguish

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P403+P235 - Keep in a cool place

P405 - Store locked up

P501 - Dispose of contents/container to licensed waste disposal facility.

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS-US)

No data available

SECTION 3: Composition/information on ingredients

3.1. Substance

Substance type : Mono-constituent

Name : (N,N-DIMETHYLAMINO)TRIMETHYLSILANE

CAS No : 2083-91-2 EC no : 218-222-3

Name	Product identifier	%	Classification (GHS-US)
(N,N-dimethylamino)trimethylsilane	(CAS No) 2083-91-2	> 95	Flam. Liq. 2, H225 Skin Corr. 1B, H314 Eye Dam. 1, H318
Dimethylamine	(CAS No) 124-40-3		Flam. Gas 1, H220 Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335

3.2. Mixture

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Remove contaminated clothing and shoes. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). If possible show this sheet; if not

available show packaging or label.

First-aid measures after inhalation : Remove to fresh air and keep at rest in a position comfortable for breathing. Get medical

advice/attention.

First-aid measures after skin contact : Wash with plenty of soap and water. Get immediate medical advice/attention.

First-aid measures after eye contact : Immediately flush eyes thoroughly with water for at least 15 minutes. Remove contact lenses, if

present and easy to do. Continue rinsing. Get immediate medical advice/attention.

First-aid measures after ingestion : Never give anything by mouth to an unconscious person. Get medical advice/attention.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries : Causes severe skin burns and eye damage.

Symptoms/injuries after inhalation : May cause irritation to the respiratory tract. Overexposure may cause: Coughing. Headache.

Nausea.

Symptoms/injuries after skin contact : Causes (severe) skin burns.

Symptoms/injuries after eye contact : Causes serious eye damage.

Symptoms/injuries after ingestion : May be harmful if swallowed.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray. Foam. Carbon dioxide. Dry chemical.

Unsuitable extinguishing media : Water.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Highly flammable liquid and vapor. Irritating fumes of dimethylamine and organic acid vapors

may develop when material is exposed to water or open flame.

Explosion hazard : May form flammable/explosive vapor-air mixture.

5.3. Advice for firefighters

Firefighting instructions : Use water spray to cool exposed surfaces. Exercise caution when fighting any chemical fire.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

Avoid all eye and skin contact and do not breathe vapor and mist.

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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Remove ignition sources. Use special care to avoid static electric charges.

6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Clean up any spills as soon as possible, using an absorbent material to collect it. Sweep or

shovel spills into appropriate container for disposal. Use only non-sparking tools.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : Handle empty containers with care because residual vapors are flammable.

Precautions for safe handling : Avoid all eye and skin contact and do not breathe vapor and mist. Provide good ventilation in process area to prevent accumulation of vapors. Containers must be properly grounded before

process area to prevent accumulation of vapors. Containers must be properly grounded befor beginning transfer. Take precautionary measures against static discharge. Use only non-sparking tools

Hygiene measures : Wash hands and other exposed areas with mild soap and water before eating, drinking or

smoking and when leaving work. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Ground/bond container and receiving equipment. Use explosion-proof electrical equipment.

Storage conditions : Keep container tightly closed.

Incompatible materials : Acids. Alcohols. Oxidizing agent.

Storage area : Store in a well-ventilated place. Store away from heat.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Dimethylamine (124-40-3)		
USA ACGIH	ACGIH TWA (ppm)	5 ppm
USA ACGIH	ACGIH STEL (ppm)	15 ppm
USA NIOSH	NIOSH REL (TWA) (mg/m³)	18 mg/m³
USA NIOSH	NIOSH REL (TWA) (ppm)	10 ppm
USA OSHA	OSHA PEL (TWA) (mg/m³)	18 mg/m³
USA OSHA	OSHA PEL (TWA) (ppm)	10 ppm
USA IDLH	US IDLH (ppm)	500 ppm
0.0 = 4.1		

8.2. Exposure controls

Appropriate engineering controls : Provide local exhaust or general room ventilation.

Personal protective equipment : Avoid all unnecessary exposure. Emergency eye wash fountains and safety showers should be

available in the immediate vicinity of any potential exposure.

Hand protection : Neoprene or nitrile rubber gloves.

Eye protection : Chemical goggles or face shield. Contact lenses should not be worn.

Skin and body protection : Wear suitable protective clothing.

Respiratory protection : NIOSH-certified combination organic vapor - amine gas (brown cartridge) respirator.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid
Appearance : Clear liquid.

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Molecular mass : 117.27 g/mol
Color : Straw.
Odor : Acrid. Amine.
Odor threshold : No data available

Refractive index : 1.3970

pH : No data available

Relative evaporation rate (butyl acetate=1) : > 1

Melting point : No data available

Freezing point : < 0 °C Boiling point : 85 - 86 °C Flash point : -19 °C

Auto-ignition temperature : No data available Decomposition temperature : No data available

Flammability (solid, gas) : Highly flammable liquid and vapor

Vapor pressure : No data available

Relative vapor density at 20 °C : > 1
Relative density : 0.741
VOC content : 100 %

Solubility : Reacts with water. Log Pow : No data available : No data available Log Kow Viscosity, kinematic No data available No data available Viscosity, dynamic No data available Explosive properties No data available Oxidizing properties **Explosive limits** No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Stable in sealed containers stored under a dry inert atmosphere.

10.3. Possibility of hazardous reactions

Reacts with water and moisture in air, liberating dimethylamine.

10.4. Conditions to avoid

Heat. Open flame. Sparks.

10.5. Incompatible materials

Acids. Alcohols. Oxidizing agent.

10.6. Hazardous decomposition products

Dimethylamine. Organic acid vapors.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

Dimethylamine (124-40-3)		
LD50 oral rat	698 mg/kg	
LD50 dermal rat	3900 mg/kg	
LC50 inhalation rat (ppm)	4540 ppm (Exposure time: 6 h)	
ATE US (oral)	698.000 mg/kg body weight	
ATE US (dermal)	3900.000 mg/kg body weight	
ATE US (gases)	4500.000 ppmV/4h	
ATE US (vapors)	11.000 mg/l/4h	
ATE US (dust, mist)	1.500 mg/l/4h	
Skin corrosion/irritation	: Causes severe skin burns and eye damage.	

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Dimethylamine (124-40-3)

Serious eye damage/irritation : Causes serious eye damage.

Respiratory or skin sensitization : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified
Reproductive toxicity : Not classified
Specific target organ toxicity (single exposure) : Not classified

Specific target organ toxicity (repeated

exposure)

: Not classified

Aspiration hazard : Not classified

Symptoms/injuries after inhalation : May cause irritation to the respiratory tract. Overexposure may cause: Coughing. Headache.

Nausea.

Symptoms/injuries after skin contact : Causes (severe) skin burns.

Symptoms/injuries after eye contact : Causes serious eye damage.

Symptoms/injuries after ingestion : May be harmful if swallowed.

Reason for classification : Expert judgment

SECTION 12: Ecological information

12.1. Toxicity

Dimethylamine (124-40-3)	
LC50 fish 1	111 - 125 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss)
EC50 Daphnia 1	88.7 mg/l (Exposure time: 48 h - Species: Daphnia magna Straus)
LC50 fish 2	120 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static])

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

Dimethylamine (124-40-3)		
Log Pow	-0.274 (at 25 °C)	

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Other adverse effects : This substance may be hazardous to the environment.

Effect on ozone layer : No additional information available

Effect on the global warming : No known ecological damage caused by this product.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : May be incinerated. Dispose in a safe manner in accordance with local/national regulations.

Dispose of contents/container to licensed waste disposal facility.

Additional information : Handle empty containers with care because residual vapors are flammable.

Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

14.1. UN number

UN-No.(DOT) : 2733 DOT NA no. UN2733

14.2. UN proper shipping name

Proper Shipping Name (DOT) : Amines, flammable, corrosive, n.o.s.

((N,N-DIMETHYLAMINO)TRIMETHYLSILANE)

Department of Transportation (DOT) Hazard

Classes

: 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120

Hazard labels (DOT) : 3 - Flammable liquid

8 - Corrosive



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DOT Symbols : G - Identifies PSN requiring a technical name

Packing group (DOT) : II - Medium Danger

DOT Packaging Exceptions (49 CFR 173.xxx) : 150 DOT Packaging Non Bulk (49 CFR 173.xxx) : 202 DOT Packaging Bulk (49 CFR 173.xxx) : 243

14.3. Additional information

Other information : No supplementary information available.

Transport by sea

DOT Vessel Stowage Location

DOT Vessel Stowage Other

: B - (i) The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) "On deck only" on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this

: 40 - Stow "clear of living quarters",52 - Stow "separated from" acids

Air transport

DOT Quantity Limitations Passenger aircraft/rail : 1 L

(49 CFR 173.27)

DOT Quantity Limitations Cargo aircraft only (49 : 5 L

CFR 175.75)

SECTION 15: Regulatory information

15.1. US Federal regulations

(N,N-dimethylamino)trimethylsilane (2083-91-2)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Dimethylamine (124-40-3)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Listed on United States SARA Section 313

SARA Section 313 - Emission Reporting 1.0 %

15.2. International regulations

(N,N-dimethylamino)trimethylsilane (2083-91-2)

Listed on the Canadian NDSL (Non-Domestic Substances List)

Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

Listed on the Japanese ISHL (Industrial Safety and Health Law)

Listed on NZIoC (New Zealand Inventory of Chemicals)

Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

Dimethylamine (124-40-3)

Listed on the AICS (Australian Inventory of Chemical Substances)

Listed on the Canadian DSL (Domestic Sustances List)

Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances) Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory

Listed on the Korean ECL (Existing Chemicals List)

Listed on NZIoC (New Zealand Inventory of Chemicals)

Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

Japanese Poisonous and Deleterious Substances Control Law

Japanese Pollutant Release and Transfer Register Law (PRTR Law)

Listed on the Canadian IDL (Ingredient Disclosure List)

15.3. US State regulations

(N,N-DIMETHYLAMINO)TRIMETHYLSILANE(2083-91-2)		
U.S California - Proposition 65 - Carcinogens List	No	
U.S California - Proposition 65 - Developmental Toxicity	No	
U.S California - Proposition 65 - Reproductive Toxicity - Female	No	
U.S California - Proposition 65 - Reproductive Toxicity - Male	No	

(N,N-aimethylamino)trimethylsilane (2083-91-2)				
U.S California -	U.S California -	U.S California -	U.S California -	No significance risk level
Proposition 65 -	Proposition 65 -	Proposition 65 -	Proposition 65 -	(NSRL)
Carcinogens List	Developmental Toxicity	Reproductive Toxicity -	Reproductive Toxicity -	

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(N,N-dimethylamino)trimethylsilane (2083-91-2)				
		Female	Male	
No	No	No	No	
Dimethylamine (124-40-3)				
U.S California - Proposition 65 - Carcinogens List	U.S California - Proposition 65 - Developmental Toxicity	U.S California - Proposition 65 - Reproductive Toxicity - Female	U.S California - Proposition 65 - Reproductive Toxicity - Male	No significance risk level (NSRL)
No	No	No	No	

Dimethylamine (124-40-3)

- U.S. Colorado Hazardous Wastes Discarded Chemical Products, Off-Specification Species, Container and Spill Residues
- U.S. Connecticut Hazardous Air Pollutants HLVs (30 min)
- U.S. Connecticut Hazardous Air Pollutants HLVs (8 hr)
- U.S. Delaware Accidental Release Prevention Regulations Sufficient Quantities
- U.S. Delaware Accidental Release Prevention Regulations Threshold Quantities
- U.S. Delaware Pollutant Discharge Requirements Reportable Quantities
- U.S. Idaho Non-Carcinogenic Toxic Air Pollutants Acceptable Ambient Concentrations
- U.S. Idaho Non-Carcinogenic Toxic Air Pollutants Emission Levels (ELs)
- U.S. Idaho Occupational Exposure Limits TWAs
- U.S. Louisiana Reportable Quantity List for Pollutants
- U.S. Massachusetts Oil & Hazardous Material List Groundwater Reportable Concentration Reporting Category 1 U.S. Massachusetts Oil & Hazardous Material List Groundwater Reportable Concentration Reporting Category 2
- U.S. Massachusetts Oil & Hazardous Material List Reportable Quantity
- U.S. Massachusetts Oil & Hazardous Material List Soil Reportable Concentration Reporting Category 1
- U.S. Massachusetts Oil & Hazardous Material List Soil Reportable Concentration Reporting Category 2
- U.S. Massachusetts Right To Know List
- U.S. Massachusetts Toxics Use Reduction Act
- U.S. Michigan Occupational Exposure Limits TWAs
- U.S. Michigan Polluting Materials List
- U.S. Michigan Process Safety Management Highly Hazardous Chemicals
- U.S. Minnesota Chemicals of High Concern
- U.S. Minnesota Hazardous Substance List
- U.S. Minnesota Permissible Exposure Limits TWAs
- U.S. New Hampshire Regulated Toxic Air Pollutants Ambient Air Levels (AALs) 24-Hour
- U.S. New Hampshire Regulated Toxic Air Pollutants Ambient Air Levels (AALs) Annual
- U.S. New Jersey Discharge Prevention List of Hazardous Substances
- U.S. New Jersey Environmental Hazardous Substances List
- U.S. New Jersey Right to Know Hazardous Substance List U.S. - New Jersey - Special Health Hazards Substances List
- U.S. New Jersey TCPA Extraordinarily Hazardous Substances (EHS)
- U.S. New York Occupational Exposure Limits TWAs
- U.S. New York Reporting of Releases Part 597 List of Hazardous Substances
- U.S. North Dakota Air Pollutants Guideline Concentrations 1-Hour U.S. North Dakota Air Pollutants Guideline Concentrations 8-Hour
- U.S. North Dakota Hazardous Wastes Discarded Chemical Products, Off-Specification Species, Container and Spill Residues
- U.S. Ohio Accidental Release Prevention Threshold Quantities
- U.S. Oregon Permissible Exposure Limits TWAs
- U.S. Pennsylvania RTK (Right to Know) Environmental Hazard List
- U.S. Pennsylvania RTK (Right to Know) List
- U.S. Tennessee Occupational Exposure Limits TWAs
- U.S. Texas Effects Screening Levels Long Term U.S. - Texas - Effects Screening Levels - Short Term
- U.S. Vermont Permissible Exposure Limits TWAs
- U.S. Washington Dangerous Waste Discarded Chemical Products List
- U.S. Washington Permissible Exposure Limits STELs
- U.S. Washington Permissible Exposure Limits TWAs
- U.S. Wisconsin Hazardous Air Contaminants All Sources Emissions From Stack Heights 25 Feet to Less Than 40 Feet
- U.S. Wisconsin Hazardous Air Contaminants All Sources Emissions From Stack Heights 40 Feet to Less Than 75 Feet
- U.S. Wisconsin Hazardous Air Contaminants All Sources Emissions From Stack Heights 75 Feet or Greater
- U.S. Wisconsin Hazardous Air Contaminants All Sources Emissions From Stack Heights Less Than 25 Feet
- U.S. Wyoming Process Safety Management Highly Hazardous Chemicals

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SECTION 16: Other information

Abbreviations and acronyms

: Abbreviations: ND: Not Determined, No Data; NA: Not Applicable; LD: Lethal Dose; LC: Lethal Concentration; ATE: Acute Toxicity Estimates; H: hour; °: °C unless otherwise stated; mm: millimeters Hg, torr; PEL: permissible exposure level; TWA: time weighted average; TLV: threshold limit value; TG: Test Guideline; NIOSH: National Institute for Occupational Safety and Health; IARC: International Agency for Research on Cancer; NTP: National Toxicology Program; HMIS: Hazardous Material Information System; CAS No.: Chemcial Abstract Service Registration Number; EC No.: European Commission Registration Number; EC Index No.: European Commission Index Number; OECD: The Organisation for Economic Co-operation and Development.

Full text of H-phrases::

Acute Tox. 4 (Inhalation)	Acu	te toxicity (inhalation) Category 4
Eye Dam. 1	Seri	ious eye damage/eye irritation Category 1
Flam. Gas 1	Flar	mmable gases Category 1
Flam. Liq. 2		mmable liquids Category 2
Skin Corr. 1B	Skir	n corrosion/irritation Category 1B
Skin Irrit. 2	Skir	n corrosion/irritation Category 2
STOT SE 3	Spe	ecific target organ toxicity (single exposure) Category 3
H220		remely flammable gas
H225	Higl	hly flammable liquid and vapor
H314	Cau	ises severe skin burns and eye damage
H315	Cau	uses skin irritation
H318	Cau	ises serious eye damage
H332	Har	mful if inhaled
H335	May	cause respiratory irritation

HMIS III Rating

Health : 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is

given

Flammability : 4 Severe Hazard Physical : 1 Slight Hazard

Prepared by safety and environmental affairs.

SDS US (GHS HazCom 2012) - Custom

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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