

Safety Data Sheet SIA0591.1 Date of issue: 01/07/2015 Version: Version: 1.0

SECTION 1: Identification of the	ubstance/mixture and of the company/undertaking	
1.1. Product identifier		
Product form	: Substance	
Physical state	: Liquid	
Substance name	: N-(2-AMINOETHYL)-3-AMINOPROPYLTRIMETHOXYSILA	NE, 98%
Product code	: SIA0591.1	
Formula	: C8H22N2O3Si	
Synonyms	: DAMO; N-(3-(TRIMETHOXYSILYL)PROPYL)ETHYLENEDI	AMINE; 3-(2-
	AMINOETHYLAMINO)PROPYLTRIMETHOXYSILANE	
Chemical family	: ORGANOMETHOXYSILANE	
1.2. Relevant identified uses of the	ubstance or mixture and uses advised against	
Use of the substance/mixture	: Chemical intermediate	
	For research and industrial use only	
1.3. Details of the supplier of the sa	ety data sheet	
GELEST, INC.		
11 East Steel Road		
Morrisville, PA 19067 USA		
T 215-547-1015 - F 215-547-2484 - (M-F): 8	00 AM - 5:30 PM EST	
info@gelest.com - www.gelest.com		
1.4. Emergency telephone number		
Emergency number	: CHEMTREC: 1-800-424-9300 (USA); +1 703-527-3887 (Inte	ernational)
SECTION 2: Hazards identification		
2.1. Classification of the substance	or mixture	
Classification (GHS-US)		
Acute Tox. 3 (Inhalation:vapour) H331 Skin Irrit. 2 H315 Eye Dam. 1 H318 Skin Sens. 1 H317 STOT SE 3 H335 Aquatic Acute 2 H401		
Full text of H-phrases: see section 16		
2.2. Label elements		
GHS-US labeling		
Hazard pictograms (GHS-US)	: GHS05 GHS06 GHS07	
Signal word (GHS-US)	: Danger	
Hazard statements (GHS-US)	: H315 - Causes skin irritation	
	H317 - May cause an allergic skin reaction H318 - Causes serious eye damage H331 - Toxic if inhaled H335 - May cause respiratory irritation	
Precautionary statements (GHS-US)	 H401 - Toxic to aquatic life P280 - Wear protective gloves/protective clothing/eye protect P261 - Avoid breathing mist, vapors P264 - Wash hands thoroughly after handling P271 - Use only outdoors or in a well-ventilated area P272 - Contaminated work clothing must not be allowed out P273 - Avoid release to the environment P333+P313 - If skin irritation or rash occurs: Get medical ad P302+P352 - If on skin: Wash with plenty of water P304+P340 - If inhaled: Remove person to fresh air and kee P305+P351+P338 - IF IN EYES: Rinse cautiously with wate contact lenses, if present and easy to do. Continue rinsing 	of the workplace vice/attention ep comfortable for breathing
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	P36 P40 P40	 10 - Immediately call a doctor 52 - Take off contaminated clothing a 53 - Store in a well-ventilated p 55 - Store locked up 51 - Dispose of contents/container to 	lace. Keep container	tightly closed
2.3. Other hazards				
No additional information available				
2.4. Unknown acute toxicity	(GHS-US)			
No data available				
SECTION 3: Composition/	information on i	ngredients		
3.1. Substance				
Substance type	: Mu	: Multi-constituent		
Name	: N-(2-AMINOETHYL)-3-AMINOPROPYL	TRIMETHOXYSILAN	E, 98%
CAS No	: 176	: 1760-24-3		
EC no	: 217	'-164-6		
Name		Product identifier	%	Classification (GHS-US)
N-(2-Aminoethyl)-3-aminopropyltrimet	noxysilane	(CAS No) 1760-24-3	> 98	Acute Tox. 3 (Inhalation:vapour), H331 Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1B, H317 STOT SE 3, H335 Aquatic Acute 2, H401
N,N'-Bis[(3-trimethoxysilyl)propyl]ethyl	enediamine	(CAS No) 68845-16-9	<2	Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1B, H317 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 victim to fresh air and keep at rest in a position comfortable for breathing. If you feel unwell, seek medical advice.
First-aid measures after skin contact	: Wash with plenty of soap and water. If skin irritation or rash occurs: Get 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 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 ef	fects, both acute and delayed
Symptoms/injuries after inhalation	: Toxic if inhaled. May cause respiratory irritation. Overexposure may cause: Coughing. Headache. Nausea.
Symptoms/injuries after skin contact	: Causes skin irritation. May cause an allergic skin reaction.
Symptoms/injuries after eye contact	: Causes serious eye damage.
Symptoms/injuries after ingestion	: May be harmful if swallowed.
Chronic symptoms	: On contact with water this compound liberates methanol which is known to have a chronic effect on the central nervous system. Methanol may effect the central nervous system resulting in persistent or recurring headaches or impaired vision.

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

NOTE TO PHYSICIAN: This product reacts with water in the acid contents of the stomach to form methanol. The combination of visual disturbances, metabolic acidosis and formic acid in urine is evidence of methanol poisoning. The therapeutic intravenous administration of ethanol (10 mls/hour) allows methanol to be preferentially oxidized and reduces production of methanol metabolites. Acidosis must be treated with intravenous administration of sodium bicarbonate and methanol elimination may be increased by hemodialysis, as indicated. Treatment should be based on blood methanol levels and acid-base balance.

SECT	ION 5: Firefighting measures	
5.1.	Extinguishing media	
Suitable	extinguishing media	: Water spray. Foam. Carbon dioxide. Dry chemical.

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5.2. Special hazards arising from the	
Fire hazard	: Irritating fumes and organic acid vapors may develop when material is exposed to elevated temperatures or open flame.
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.
SECTION 6: Accidental release me	
	equipment and emergency procedures
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	
-	otify authorities if liquid enters sewers or public waters. Avoid release to the environment.
6.3. Methods and material for contain	
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.
6.4. Reference to other sections	nal protection
See Heading 8. Exposure controls and person	
SECTION 7: Handling and storage	
7.1. Precautions for safe handling	
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. Use only in well ventilated areas.
Hygiene measures	Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse.
7.2. Conditions for safe storage, inclu	uding any incompatibilities
Storage conditions	: Keep container tightly closed.
Incompatible materials	: Acids. Alcohols. Moisture. Oxidizing agent. Peroxides. Water.
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/pe	arsonal protection
8.1. Control parameters	
No additional information available	
8.2. Exposure controls	. Dravide local subsurt or second room untilation
Appropriate engineering controls Personal protective equipment	: Provide local exhaust or general room ventilation.
reisonal protective equipment	: Avoid all unnecessary exposure. Emergency eye wash fountains and safety showers should l available in the immediate vicinity of any potential exposure.
Hand protection	: Neoprene or nitrile rubber gloves.
Eye protection	: Chemical goggles. 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 chemica	al properties
9.1. Information on basic physical an	
Physical state	: Liquid
Appearance	: Clear liquid.
Molecular mass	: 222.36 g/mol
Color	: Straw.
Odor	: Mild. Amine. Ammonia-like.
Odor threshold	: No data available
Refractive index	: 1.450
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pH	: No data available		
Relative evaporation rate (butyl acetate=1)	: <1		
Melting point	: No data available		
Freezing point	: <-20 °C		
Boiling point	: 140 °C @ 15 mm Hg		
Flash point	: 150 °C		
Auto-ignition temperature	: 300 °C		
Decomposition temperature	: No data available		
Flammability (solid, gas)	: No data available		
Vapor pressure	: <1 mm Hg @ 25° C		
Relative vapor density at 20 °C	: >1		
	: 1.019		
,			
	: <5%		
Solubility	Reacts with water. Dissolves.		
Log Pow	: No data available		
Log Kow	: No data available		
Viscosity, kinematic	: 6.5 cSt		
Viscosity, dynamic	: No data available		
Explosive properties	: No data available		
Oxidizing properties	: No data available		
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.			
10.3. Possibility of hazardous reactions			
Reacts with water and moisture in air, liberating m	ethanol		
10.4. Conditions to avoid			
Heat. Open flame. Sparks.			
10.5. Incompatible materials			
Acids. Alcohols. Moisture. Oxidizing agent. Peroxi	des. Water.		
10.6. Hazardous decomposition products			
Methanol. Organic acid vapors.			
SECTION 11: Toxicological information	n		
11.1. Information on toxicological effects	, hak alati sa sana ang Tani a Mishala d		
	: Inhalation:vapour: Toxic if inhaled.		
N-(2-Aminoethyl)-3-aminopropyltrimethoxysi	ane (1760-24-3)		
LD50 oral rat	2413 mg/kg		
LD50 dermal rat	> 2009 mg/kg		
LD50 dermal rabbit	16 ml/kg		
LD50 intravenous mouse	180 mg/kg		
LC50 inhalation rat (mg/l)	1.49 - 2.44		
ATE US (oral)	2413.000 mg/kg body weight		
ATE US (vapors)	1.490 mg/l/4h		
ATE US (dust, mist)	1.490 mg/l/4h		
Skin corrosion/irritation	: Causes skin irritation.		
Serious eye damage/irritation	: Causes serious eye damage.		
Respiratory or skin sensitization	: May cause an allergic skin reaction.		
Germ cell mutagenicity	: Not classified		
Carcinogenicity	rcinogenicity : Not classified		
Reproductive toxicity	: Not classified		

N-(2-AMINOETHYL)-3-AMINOPROPYLTRIMETHOXYSILANE, 98% Safety Data Sheet

Specific target organ toxicity (repeated processing) : Not classified Symptoms/injuries after inhalation : Toxic if inhalad. May cause respiratory irritation. Overexposure may cause. Coughing. Headche. Nausea. Symptoms/injuries after inhalation : Could classified Symptoms/injuries after inhalation : Exercited classified Symptoms/injuries after inhalation : Could classified Steperiod after after inhalation : Exercited classified Steperind after inhalating : Barnful t	2 1 1 1 1 1 1 1 1 1 1	
September 2 And the second of the second	Specific target organ toxicity (single exposure)	: May cause respiratory irritation.
Symptoms/injuries after inhalation : Toxic II inhead. May cause respiratory irritation. Overexposure may cause: Coupling. Machadre, Nausea. Symptoms/injuries after aix nontact : Causes skin irritation. May cause an allergic akin reaction. Symptoms/injuries after aix nontact : Causes skin irritation. May cause an allergic akin reaction. Symptoms/injuries after aix nontact : Causes skin irritation. May cause an allergic akin reaction. Symptoms/injuries after aix nontact : Causes skin irritation. May cause an allergic akin reaction. Symptoms/injuries after infostion : Contract with water the compound liberates methanol which is known to have a chronic comprised vision. Extension in the symptoms : Expert judgment : Extension in the adaption is a stering headaches or impaired vision. Extension information information : Expert judgment : Extension information is a stering information information available : Cause as kin and information available : Cause as a manner in accordance with local/national regulations. Dispose in a safe manner in accordance with local/national regulations. Dispose in a safe manner in accordance with local/national regulations. Dispose in a safe manner in accordance with local/national regulations. Dispose	Specific target organ toxicity (repeated exposure)	: Not classified
Headache. Nausea. Headache. Nausea. Symptons/hjuries after skin contact Clauses skin irritation. May cause an allergic skin reaction. Symptons/hjuries after spacental Clauses skin irritation. May cause an allergic skin reaction. Symptons/hjuries after spacental Clauses skin irritation. May cause an allergic skin reaction. Chronic symptons Clauses skin irritation. Mascan for classification Expert judgment SECTION 122: Ecological information Itamino and sectors inpaired vision. Reason for classification Expert judgment SECTION 122: Ecological information Itamino and sectors inpaired vision. R1. Oxicity Itamino and sectors inpaired vision. SECTION 122: Ecological information 90 mg/l IEGO bit 1 > 100 mg/l IEGO bit 1 > 100 mg/l IEGO loghnia 1 90 mg/l VEC chronic rustacea 1.6 mg/l VA additional information available Value and sectors information Value additingon informat	Aspiration hazard	: Not classified
Symptoms/injunies after igns contact Symptoms/injunies after igns contact Chronic symptoms	Symptoms/injuries after inhalation	
Symptoms injuries after ingestion : May be harmful if swaltowed. Chronic symptoms : May be number this compound heartes methanol which is known to have a chronic diffed on the contrai nervous system. Methanol may effect the central nervous system resulting in persistent or recurring headaches or impaired vision. Reason for classification : Expert judgment SECTION 122 Ecological information 121. Toxicity Coolegy water : Harmful to aquatic life with long lasting effects. Mc2-Aninoethyl-3-aminopropytrimethoxyslame (1760-24-3) LC20 linh 2 100 mg1 ErcS0 lajapa 8 8 mg1 NOEC chronic custacea < 63 mg1 NOEC chronic custacea < 63 mg1 NOEC chronic custacea < 63 mg1 NOEC chronic routacea < 63 mg1 NOEC chronic agae 12. Persistence and degradability No additional information available 12. Moenticus and the potential No additional information available 12. Moenticus available 12. Moenticus available 12. Moenticus available 13. Waste disposal considerations Effect on the global avarning 14. Waste transport information 15. Waste disposal considerations 15. Disposal considerations 15. Waste disposal considerations 15. May be incinerated. Dispose in a safe manner in accordance with localmational regulations. Dispose of contents:container to licensed waste disposal facility. Ecology - waste materials 15. Waste disposal reconsiderations 15. May be incinerated. Dispose in a safe manner in accordance with localmational regulations. Dispose of contents:container to licensed waste disposal facility. Ecology - waste materials 15. Waste transport information 16. More Teapport Shipping	Symptoms/injuries after skin contact	: Causes skin irritation. May cause an allergic skin reaction.
Chronic symptoms : On contract with water this compound liberates methanol which is known to have a chronic diffect on the contral nervous system resulting in persistent or resurring headaches or impaired vision. Reason for classification : Experi judgment SECTION 12: Ecological information : Experi judgment Reason for classification : Experi judgment SECTION 12: Ecological information : Experi judgment Reason for classification : Harmful to aquatic life with long lasting effects. M12: Aninocotty)-saminopropytrimethoxysilane (1760-24-3) : LCS0 loghnin 1 90 mg/l ECS0 logphina 1 90 mg/l RCS0 classification : 6 a mg/l NOEC chronic sigae : 6 a mg/l NOEC chronic sigae : 6 a mg/l NOEC chronic sigae : 6 mg/l RC30 logpoint in si	Symptoms/injuries after eye contact	: Causes serious eye damage.
effect on the central nervous system. Methanol may effect the central nervous system resulting in persistent or recurring headaches or impaired vision. Reason for classification : Expert judgment SECTION 12: Ecological information 12.1. Toxicity Coology - water : Hamful to aquatic life with long lasting effects. NE2-Aminoethyl-3-aminopropyltrimethoxysilam (1760-243) LC50 fieln 1 9 0 mg/l EC50 loghnia 1 9 0 loghnia 1 9 0 mg/l EC50 loghnia 1 9 0 loghnia 1 9 0 mg/l EC50 loghnia 1 9 0 loghnia 1 9 0 mg/l EC50	Symptoms/injuries after ingestion	: May be harmful if swallowed.
SECTION 12: Ecological information 12.1. Toxicity Ecolog - water : Harmful to aquatic life with long lasting effects. H2:A-minoteHyb3-aminopropytrimethoxysilane (1760-24-3) LG50 figh 1 > 100 mg/l EC50 apphnia 1 90 mg/l EC50 figh 1 > 100 mg/l EC50 figh 2 8.8 mg/l NDEC chronic crustacea < 63 mg/l	Chronic symptoms	effect on the central nervous system. Methanol may effect the central nervous system resulting
12.1. Toxicity Coology - water : Harmful to aquatic life with long lasting effects. HC2-Aminochty)3-aminopropytimethoxysilane (1760-24-3) LC50 fish 1 > 100 mg/l EC50 daphnia 1 90 mg/l EC50 chronic crustacea < 63 mg/l	Reason for classification	: Expert judgment
Ecology - water : Harmful to aquatic life with long lasting effects. N42-Aminoathyl3-aminopropytrimethoxysilane (176b-24-3) LC50 figh1 > 100 mg1 ECSD Daphnia 1 90 mg1 ECSD Caphnia 1 90 mg1 MCE Chronic crustacea < 63 mg1	SECTION 12: Ecological information	
N42-Aminoethyl)-3-aminopropyltrimethoxysilane (1760-24-3) LG50 fish 1 > 100 mg/l EC50 logaphinis 1 90 mg/l NDEC chronic crustacea < 68 mg/l	12.1. Toxicity	
LC80 Ish 1 > 100 mg/l EC50 Logaphnia 1 90 mg/l NOEC chronic crustacea < 63 mg/l	Ecology - water	: Harmful to aquatic life with long lasting effects.
EC50 Daphnia 1 90 mg/l EC50 (algae) 8.8 mg/l EC50 (algae) 8.8 mg/l NOEC chronic crustacea < 63 mg/l	N-(2-Aminoethyl)-3-aminopropyltrimethoxys	silane (1760-24-3)
ErC50 (algae) 8.8 mg/l NOEC chronic crustacea < 63 mg/l	LC50 fish 1	> 100 mg/l
NOEC chronic crustacea < 63 mg/t	EC50 Daphnia 1	90 mg/l
NOEC chronic algae 1.6 mgT 12.2. Persistence and degradability No additional information available 12.3. Bioaccumulative potential No additional information available 12.4. Mobility in soil No additional information available 12.5. Other adverse effects Other adverse effects Chren adverse effects Effect on ozone layer Effect on ozone layer Effect on the global warming SECTION 13: Disposal considerations State treatment methods Waste disposal recommendations : May be inclinerated. Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to licensed waste disposal facility. Ecology - waste materials : Avoid release to the environment. SECTION 14: Transport information UN-No.(DOT) : 3082 UN-No.(DOT) : 3082 Proper Shipping Name (DOT) : Environmentally hazardous substances, liquid, n.o.s. (N-(2-MINOETHYL)-3-MINOPROPYLTRIMETHOXYSILANE) Department of Transportation (DOT) Hazard : 9 - Class 9 (Miscellaneous dangerous materials) (Dasses : 9 - Class 9 (Miscellaneous dangerous materials) UN-Solo : 9 - Identifies PS	ErC50 (algae)	8.8 mg/l
12.2. Persistence and degradability No additional information available 12.3. Bioaccumulative potential No additional information available 12.4. Mobility in soil No additional information available 12.5. Other adverse effects Ciffer adverse effects Effect on coone layer Effect on the global warming SECTION 13: Disposal considerations 13.1. Waste treatment methods Waste disposal recommendations Ecology - waste materials : Avate treatment methods UN-No.(DOT) 14.1. UN number UN-No.(DOT) 14.2. Up proper shipping name Proper Shipping Name (DOT) : Environmentally hazardous substances, liquid, n.o.s. (N-(2-AMINOETHYL)-3-AMINOPROPYLTRIMETHOXYSILANE) Department of Transportation (DOT) Hazard Classes Hazard labels (DOT) : 9 - Class 9 (Miscellaneous hazardous materials) : 9 - Class 9 (Miscellaneous dangerous materials)	NOEC chronic crustacea	< 63 mg/l
No additional information available 12.3. Bioaccumulative potential No additional information available Information available 12.4. Mobility in soil No additional information available Information available 12.5. Other adverse effects Cher adverse effects : This substance may be hazardous to the environment. Effect on ozone layer : No additional information available Effect on ozone layer : No known ecological damage caused by this product. SECTION 13: Disposal considerations : May be incinerated. Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to licensed waste disposal facility. Ecology - waste materials : Avoid release to the environment. SECTION 14: Transport information UNNo.(DOT) 14.1 UN number UN-No.(DOT) : 3082 14.2 UN proper shipping name Proper Shipping Name (DOT) : Environmentally hazardous substances, liquid, n.o.s. (N-(2-AMINOETHYL)-3-AMINOPROPYLTRIMETHOXYSILANE) Department of Transportation (DOT) Hazard : 9 - Class 9 - Miscellaneous hazardous material 49 CFR 173.140 Classes : 9 - Class 9 - Miscellaneous dangerous materials Hazard labels (DOT) : 9 - Class 9 (Miscellaneous dangerous m	NOEC chronic algae	1.6 mg/l
12.3. Bioaccumulative potential No additional information available 12.4. Mobility in soil No additional information available 12.5. Other adverse effects 12.6. Other adverse effects 12.7. Other adverse effects 12.8. Other adverse effects 12.9. Other adverse effects 12.1. Waste treatment methods 13.1. Waste treatment methods Waste disposal recommendations 13.1. Waste treatment methods Waste disposal recommendations 14.1. UN number UN-No.(DOT) 14.1. UN number UN-No.(DOT) 14.2. UN proper shipping name Proper Shipping Name (DOT) 15.3. Environmentally hazardous substances, liquid, n.o.s. (H-(2-AIINOETHYL)-3-AIINOPROYLITRIMETHOXYSILANE) Department of Transportation (DOT) Hazard Classes Hazard labels (DOT) 2.9 - Class 9 (Miscellaneous dangerous materials) 2.9 - Class 9 (Miscellaneous dangerous materials) DOT Symbols 2.9 - Class 9 (Miscellaneous dangerous materials) DOT Symbols 2.6 - Identifies PSN requiring a technical name	12.2. Persistence and degradability	
No additional information available 12.4. Mobility in soil No additional information available 12.5. Other adverse effects 12.6. Other adverse effects 12.7. This substance may be hazardous to the environment. 12.6. Other adverse effects 12.7. No additional information available 12.8. No additional information available 12.6. No additional information available 12.6. No additional information available Effect on the global warming : No known ecological damage caused by this product. SECTION 13: Disposal considerations : May be incinerated. Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to licensed waste disposal facility. Ecology - waste materials : Avoid release to the environment. SECTION 14: Transport information UNANO(DOT) 14.1. UN number UN-No. (DOT) : 3082 DOT NA no. UN3082 14.2. UN proper shipping name Proper Shipping Name (DOT) : Environmentally hazardous substances, liquid, n.o.s. (N-(2-AMINOETHYL)-3-AMINOPROPYLTRIMETHOXYSILANE) : 9 - Class 9 (Miscellaneous dangerous material 49 CFR 173.140	No additional information available	
No additional information available 12.4. Mobility in soil No additional information available 12.5. Other adverse effects 12.6. Other adverse effects 12.7. This substance may be hazardous to the environment. 12.6. Other adverse effects 12.7. No additional information available 12.8. No additional information available 12.6. No additional information available 12.6. No additional information available Effect on the global warming : No known ecological damage caused by this product. SECTION 13: Disposal considerations : May be incinerated. Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to licensed waste disposal facility. Ecology - waste materials : Avoid release to the environment. SECTION 14: Transport information UNANO(DOT) 14.1. UN number UN-No. (DOT) : 3082 DOT NA no. UN3082 14.2. UN proper shipping name Proper Shipping Name (DOT) : Environmentally hazardous substances, liquid, n.o.s. (N-(2-AMINOETHYL)-3-AMINOPROPYLTRIMETHOXYSILANE) : 9 - Class 9 (Miscellaneous dangerous material 49 CFR 173.140	12.3. Bioaccumulative potential	
12.4. Mobility in soil No additional information available 12.5. Other adverse effects 12.6. Other adverse effects Effect on zone layer Effect on zone layer Effect on the global warming SECTION 13: Disposal considerations SECTION 13: Disposal considerations State fielposal recommendations : May be incinerated. Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to licensed waste disposal facility. Ecology - waste materials : Avoid release to the environment. SECTION 14: Transport information 14.1. UN number UN-No.(DT) : 3082 DOT NA no. UN3082 14.2. UN proper shipping name Proper Shipping Name (DOT) : Environmentally hazardous substances, liquid, n.o.s. (N-(2-AMINOETHYL)-3-AMINOPROPYLTRIMETHOXYSILANE) Department of Transportation (DOT) Hazard : 9 - Class 9 - Miscellaneous hazardous material 49 CFR 173.140 Classes : 9 - Class 9 (Miscellaneous dangerous materials) Hazard labels (DOT) : 9 - Class 9 (Miscellaneous dangerous materials) DOT Symbols : G - I dentifies PSN requiring a technical name Packing group (DOT) : 10 - Minor Danger		
No additional information available 12.5. 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 : No known ecological damage caused by this product. SECTION 13: Disposal considerations : May be incinerated. Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to licensed waste disposal facility. Ecology - waste materials : Avoid release to the environment. SECTION 14: Transport information UNNo(DOT) 14.1. UN number UNNo(DOT) Proper Shipping Name (DOT) : Environmentally hazardous substances, liquid, n.o.s. (N-(2-AMINOETHYL)-3-AMINOPROPYLTRIMETHOXYSILANE) Department of Transportation (DOT) Hazard : 9 - Class 9 - Miscellaneous hazardous material 49 CFR 173.140 Classes : 9 - Class 9 (Miscellaneous dangerous materials) Itazard labels (DOT) : 9 - Class 9 (Miscellaneous dangerous materials) DOT Symbols : G - Identifies PSN requiring a technical name Packing group (DOT) : III - Minor Danger		
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 : Na y be incinerated. Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to licensed waste disposal facility. Ecology - waste materials : Avoid release to the environment. SECTION 14: Transport information : 3082 UN-No.(DOT) : 3082 DOT NA no. UN3082 14.1. UN number : Environmentally hazardous substances, liquid, n.o.s. (N-(2-AMINOETHYL)-3-AMINOPROPYLTRINETHOXYSILANE) Department of Transportation (DOT) Hazard : 9 - Class 9 - Miscellaneous dangerous materials) Hazard labels (DOT) : 9 - Class 9 (Miscellaneous dangerous materials) DOT Symbols : G - Identifies PSN requiring a technical name Packing group (DOT) : III - Minor Danger	12.4. Mobility in soil No additional information available	
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 : Na y be incinerated. Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to licensed waste disposal facility. Ecology - waste materials : Avoid release to the environment. SECTION 14: Transport information : 3082 UN-No.(DOT) : 3082 DOT NA no. UN3082 14.1. UN number : Environmentally hazardous substances, liquid, n.o.s. (N-(2-AMINOETHYL)-3-AMINOPROPYLTRINETHOXYSILANE) Department of Transportation (DOT) Hazard : 9 - Class 9 - Miscellaneous dangerous materials) Hazard labels (DOT) : 9 - Class 9 (Miscellaneous dangerous materials) DOT Symbols : G - Identifies PSN requiring a technical name Packing group (DOT) : III - Minor Danger	12.5. Other adverse effects	
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. Ecology - waste materials : Avoid release to the environment. SECTION 14: Transport information 14.1. UN-No.(DOT) : 3082 DOT NA no. UN3082 14.2. UN proper shipping name Proper Shipping Name (DOT) : Environmentally hazardous substances, liquid, n.o.s. (N-(2-AMINOETHYL)-3-AMINOPROPYLTRINETHOXYSILANE) Department of Transportation (DOT) Hazard : 9 - Class 9 - Miscellaneous hazardous material set of the conversional substances, liquid, n.o.s. (N-(2-AMINOETHYL)-3-AMINOPROPYLTRINETHOXYSILANE) Hazard labels (DOT) : 9 - Class 9 (Miscellaneous dangerous materials) July	Other adverse effects	: This substance may be hazardous to the environment.
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. Ecology - waste materials : Avoid release to the environment. SECTION 14: Transport information : 3082 UN-No.(DOT) : 3082 DOT NA no. UN3082 14.2. UN proper shipping name Proper Shipping Name (DOT) : Environmentally hazardous substances, liquid, n.o.s. (N-(2-AMINOPROPYLTRIMETHOXYSILANE) Department of Transportation (DOT) Hazard : 9 - Class 9 - Miscellaneous hazardous material 49 CFR 173.140 Classes : 9 - Class 9 (Miscellaneous dangerous materials) Hazard labels (DOT) : 9 - Class 9 (Miscellaneous dangerous materials) UN : 9 - Class 9 (Miscellaneous dangerous materials) UN : 9 - Class 9 (Miscellaneous dangerous materials) UN : 9 - Class 9 (Miscellaneous dangerous materials) UN : 9 - Class 9 (Miscellaneous dangerous materials) UN : 9 - Identifies PSN requiring a technical name Packing group (DOT)		
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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. Ecology - waste materials : Avoid release to the environment. SECTION 14: Transport information Image: Contents/container to licensed waste disposal facility. 14.1. UN number UN-No.(DOT) : 3082 DOT NA no. UN3082 14.2. UN proper shipping name Image: Contents/con	SECTION 13: Disposal consideration	ns
Ecology - waste materials : Avoid release to the environment. SECTION 14: Transport information	13.1. Waste treatment methods	
SECTION 14: Transport information 14.1. UN number UN-No.(DOT) : 3082 UDT NA no. UN3082 14.2. UN proper shipping name Environmentally hazardous substances, liquid, n.o.s. (N-(2-AMINOETHYL)-3-AMINOPROPYLTRIMETHOXYSILANE) Department of Transportation (DOT) Hazard : 9 - Class 9 - Miscellaneous hazardous material 49 CFR 173.140 Classes : 9 - Class 9 (Miscellaneous dangerous materials) Hazard labels (DOT) : 9 - Class 9 (Miscellaneous dangerous materials) DOT Symbols : G - Identifies PSN requiring a technical name Packing group (DOT) : III - Minor Danger	Waste disposal recommendations	
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Hazard labels (DOT) : 9 - Class 9 (Miscellaneous dangerous materials) Image: Dot Symbols : G - Identifies PSN requiring a technical name Packing group (DOT) : III - Minor Danger	Department of Transportation (DOT) Hazard Classes	
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Packing group (DOT) : III - Minor Danger		
Packing group (DOT) : III - Minor Danger	DOT Symbols	G - Identifies PSN requiring a technical name
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Safety Data Sheet

DOT Packaging Non Bulk (49	,	3			
DOT Packaging Bulk (49 CF	R 173.xxx) : 24'	l			
14.3. Additional informati	on				
Other information : No supplementary information available.					
Transport by sea					
DOT Vessel Stowage Location	cation : A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.				
Air transport DOT Quantity Limitations Part (49 CFR 173.27)	DOT Quantity Limitations Passenger aircraft/rail : No limit				
DOT Quantity Limitations Ca CFR 175.75)	rgo aircraft only (49 : No	limit			
SECTION 15: Regulate	ory information				
15.1. US Federal regulation	S				
N-(2-Aminoethyl)-3-amino	propyltrimethoxysilane (1760-24-3)			
Listed on the United States		, .			
N,N'-Bis[(3-trimethoxysily					
Listed on the United States	,	Control Act) inventory			
15.2. International regulation					
N-(2-Aminoethyl)-3-amino Listed on the AICS (Austral					
	of Existing Chemical Subs / EINECS (European Inver CS (Existing & New Chemi IL (Industrial Safety and He Existing Chemicals List) and Inventory of Chemicals	stances Produced or Imported in nory of Existing Commercial Ch cal Substances) inventory ealth Law)			
N,N'-Bis[(3-trimethoxysily	l)propyl]ethylenediamine	e (68845-16-9)			
	SL (Non-Domestic Substar of Existing Chemical Subs / EINECS (European Inver CS (Existing & New Chemi and Inventory of Chemicals	nces List) stances Produced or Imported i ntory of Existing Commercial Ch cal Substances) inventory s)			
15.3. US State regulations					
N-(2-AMINOETHYL)-3-AMIN	IOPROPYLTRIMETHOXY	SILANE, 98%(1760-24-3)			
U.S California - Proposition	65 - Carcinogens List	No			
U.S California - Propositior Toxicity	65 - Developmental	No			
U.S California - Propositior Toxicity - Female	U.S California - Proposition 65 - Reproductive		No		
U.S California - Propositior Toxicity - Male	65 - Reproductive	No			
N-(2-Aminoethyl)-3-aminop	ropyltrimethoxysilane (1	760-24-3)			
U.S California -	U.S California -	U.S California -	U.S California -	No significance risk level	
Proposition 65 - Carcinogens List	Proposition 65 - Developmental Toxicity	Proposition 65 - Reproductive Toxicity - Female	Proposition 65 - Reproductive Toxicity - Male	(NSRL)	
No	No	No	No		
N,N'-Bis[(3-trimethoxysilyl)		-			
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 -		

Carcinogens List

No

Reproductive Toxicity -

Female

No

Developmental Toxicity

No

Reproductive Toxicity -

Male

No

Safety Data Sheet

N-(2-Aminoethyl)-3-aminopropyltrim	ethoxysilane (1760-24-3)		
U.S Texas - Effects Screening Levels			
U.S Texas - Effects Screening Levels	s - Short Term		
N,N'-Bis[(3-trimethoxysilyl)propyl]et	hylenediamine (68845-16-9)		
U.S Texas - Effects Screening Levels	s - Long Term		
U.S Texas - Effects Screening Levels			
SECTION 40. Other informati			
SECTION 16: Other informati			
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. 3 (Inhalation:vapou	ur)	Acute toxicity (inhalation:vapor) Category 3	
Aquatic Acute 2	, iii)	Hazardous to the aquatic environment - Acute Hazard Category 2	
Eye Dam. 1		Serious eye damage/eye irritation Category 1	
Skin Irrit. 2		Skin corrosion/irritation Category 2	
Skin Sens. 1		Skin sensitization Category 1	
Skin Sens. 1B		Skin sensitization Category 1B	
STOT SE 3		Specific target organ toxicity (single exposure) Category 3	
H315		Causes skin irritation	
H317		May cause an allergic skin reaction	
H318		Causes serious eve damage	
H331		Toxic if inhaled	
H335		May cause respiratory irritation	
- H401		Toxic to aquatic life	
HMIS III Rating			
Health	: 3 Serious Hazard - given	Major injury likely unless prompt action is taken and medical treatment	

Flammability Physical : 1 Slight Hazard

: 1 Slight Hazard

Prepared by safety and environmental affairs.

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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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