Section 1 - Identification of the material and supplier

1.1 Product identifier

Product name	WESTCO A-1120
Chemical Name	N-[3-(trimethoxysilyl)propyl]ethylenediamine

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

Recommended use: industrial use

Uses advised against: Not for food, drug, pesticide or biocidal product use

1.3 Details of the supplier of the safety data sheet

Supplier:	Western Reserve Chemicals
Address:	4837 Darrow Road, Stow, Ohio 44224 USA
Telephone:	330-650-2244
Website:	www.wrchem.com

1.4 Emergency telephone number

Emergency response service: Chemtrec: 1-800-424 9300 USA

Section 2 - Hazards identification

2.1 Classification of the substance or mixture

Skin irritation (Category 2), H315

Serious eye damage (Category 1), H318

Skin sensitization (Category 1), H317

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008 [CLP]

Pictogram

Signal word : Danger

Hazard statement(s)

H315	Causes skin irritation
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.

Precautionary statement(s)

P280	Wear protective gloves/ eye protection/ face protection.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Section 3 - Composition/information on ingredients

3.1 Substances

Synonyms:	[3-(2-Aminoethylamino)propyl]trimethoxysilane N-[3-(Trimethoxysilyl)propyl]ethylenediamine
Formula	$C_8H_{22}N_2O_3Si$
Molecular Weight	222.36 g/mol

Component	Concentration
N-(2-Aminoethyl-3-aminopropyl)trimethoxysilane CAS-No. 1760-24-3 EC-No. 217-164-6	-

3.2 Mixtures

Not Relevant

Section 4 -First-aid measures

4.1 Description of first aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Section 5 - Firefighting Measures

5.1 Extinguishing media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture

Carbon oxides, nitrogen oxides (NOx), silicon oxides

5.3 Advice for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

5.4 Further information

Use water spray to cool unopened containers.

Section 6 - Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation.Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For disposal see section 13.

Section 7 - Handling and Storage

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

Keep away from sources of ignition - No smoking.Take measures to prevent the build up of Electrostatic charge.

7.2 Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Moisture sensitive.

7.3 Specific end uses

no data available

Section 8 - Exposure Controls / Personal Protection

8.1 Control parameters

8.2 Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before

breaks and at the end of workday.

Personal protective equipment

Eye/face protection

Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

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

Complete suit protecting against chemicals, The type of protective equipment must be Selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face Respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Section 9 - Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	Colourless or light yellow liquid
Odour	no data available
Odour Threshold	no data available
pH	no data available
Melting point/freezing	no data available
Initial boiling point and	146 °C at 20 hPa - lit.
Flash point	136 ° C(277 ° F)-DIN 51758
Evaporation rate	no data available
Flammability (solid, gas)	no data available
Upper/lower flammability or explosive limits	no data available
Vapour pressure	no data available
Vapour density	no data available
Relative density	1.028 g/cm^3 at 25 °C
Water solubility	no data available
Partition coefficient: noctanol/	no data available

water

Autoignition temperature	no data available
Decomposition temperature	no data available
Viscosity	no data available
Explosive properties	no data available
Oxidizing properties	no data available

9.2 Other safety information

no data available

Section 10 - Stability and Reactivity

10.1 Reactivity

no data available

10.2 Chemical stability

no data available

10.3 Possibility of hazardous reactions

no data available

10.4 Conditions to avoid

Heat, flames and sparks.

10.5 Incompatible materials

Oxidizing agents, Water and acids react with material to liberate methanol. Heat of reaction may ignite vapors of the alcohol, acids

10.6 Hazardous decomposition products

Other decomposition products - no data available

Section 11 - Toxicological Information

11.1 Information on toxicological effects

Acute toxicity

LD50 Oral - Rat - male and female - 2.295 mg/kg
(US-EPA)
LC50 Inhalation - Rat - male and female - 4 h - 1,49 - 2,44 mg/l
(US-EPA)
LD50 Dermal - Rat - > 2.000 mg/kg
(OECD Test Guideline 402)

Skin corrosion/irritation

Skin - Rabbit
Result: slight irritation - 4 h
(US-EPA)

Serious eye damage/eye irritation

Eyes - Rabbit

Result: Causes serious eye damage.
(OECD Test Guideline 405)

Respiratory or skin sensitization

Maximisation Test - Guinea pig
Result: positive
(OECD Test Guideline 406)
Sensitisation test (Magnusson and Kligman):
Result: positive
Remarks: (External MSDS)

Germ cell mutagenicity

Ames test
Escherichia coli/Salmonella typhimurium
Result: negative
In vitro mammalian cell gene mutation test
Chinese hamster ovary cells
Result: negative
OECD Test Guideline 474
Mouse - male and female
Result: negative

Carcinogenicity

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.

Reproductive toxicity

Specific target organ toxicity - single exposure

Specific target orgtoxicity - repeated exposure

Aspiration hazard

Additional Information

RTECS: KV7400000

Section 12 - Ecological Information

12.1 Toxicity

Toxicity to fish	semi-static test LC50 - Danio rerio (zebra fish) - 597 mg/l - 96 h(N-(2-Aminoethyl)-3-(trimethoxysilyl)propylamine) Remarks: (External MSDS)
Toxicity to daphnia and other aquatic invertebrates	static test EC50 - Daphnia magna (Water flea) - 81 mg/l - 48 h(N-(2-Aminoethyl)-3-(trimethoxysilyl)propylamine) Remarks: (External MSDS)
Toxicity to algae	static test EC50 - Pseudokirchneriella subcapitata (green algae) - 8,8 mg/l - 72 h(N-(2-Aminoethyl)-3-(trimethoxysilyl)propylamine)

	(OECD Test Guideline 201)
Toxicity to algae	static test NOEC - Pseudokirchneriella subcapitata (green algae) - 3,1 mg/l - 72 h(N-(2-Aminoethyl)-3-(trimethoxysilyl)propylamine) (OECD Test Guideline 201)
Toxicity to bacteria	static test EC10 - Pseudomonas putida - 25 mg/l - 16 h(N-(2-Aminoethyl)-3-(trimethoxysilyl)propylamine) Remarks: (External MSDS)

12.2 Persistence and degradability

Biodegradability	aerobic - Exposure time 28d(N-(2-Aminoethyl)-3-(trimethoxysilyl)propylamine) Result: 39 % - Not readily biodegradable. (Regulation (EC) No. 440/2008, Annex, C.4-A)

12.3 Bioaccumulative potential

12.4 Mobility in soil

12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects

Section 13 - Disposal Considerations

13.1 Waste treatment methods

Product

This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber. Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging

Dispose of as unused product.

Section 14 - Transport Information

14.1 DOT

Not regulated IMDG: Not regulated IATA: Not regulated

14.2 UN proper shipping name

ADR/RID: Not dangerous goods

IMDG: Not dangerous goods

IATA: Not dangerous goods

14.3 Transport hazard class(es)

ADR/RID: - IMDG: - IATA: -

14.4 Packaging group

ADR/RID: - IMDG: - IATA: -

14.5 Environmental hazards

ADR/RID: no IMDG Marine pollutant: no IATA: no

14.6 Special precautions for user

no data available

Section 15 - Regulatory Information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

US TSCA Inventory: 1760-24-3 is listed as Active

15.2 Chemical Safety Assessment

Section 16 - Other Information

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- End of Safety Data Sheet