

SECTION 1: Identification

1.1. Identification

Product form	: Substance
Trade name	: Poly-A® 27-2000
Chemical name	: Poly[oxy(methyl-1,2-ethanediyl)], alpha-(2-aminomethylethyl)-omega-(2-aminomethylethoxy)-
CAS-No.	: 9046-10-0
Formula	: (C3H6O) _n C6H16N2O
Synonyms	: Propylene glycol diamine, 2-amino-, diether with Propylene / Polypropylene glycol bis(2-aminopropyl) ether / Poly(oxypropylene)diamine / Diaminopolypropylene glycol / Jeffamine D-230 / Polypropylene glycol bis(aminopropyl) ether / Poly(oxy(methyl-1,2-ethanediyl)), .alpha.-(2-aminomethylethyl)-.omega.-(2-aminomethylethoxy)- / Poly(propyleneglycol)diamine / O,O'-Bis(2-aminopropyl)polypropylene glycol / .alpha.-[2-(Aminomethyl)ethyl]-.omega.-(2-aminomethylethoxy)poly[oxy(methylethylene)] / Reaction products of propane-1,2-diol, propoxylated by amination of the terminal hydroxyl groups / Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia

1.2. Recommended use and restrictions on use

Use of the substance/mixture	: Chemical intermediate for urethane polymer production
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1.3. Supplier

Monument Chemical
 2450 Olin Road
 Brandenburg, KY 40108 - USA
 T (270)422-6860
sds@monumentchemical.com - www.monumentchemical.com

1.4. Emergency telephone number

Emergency number	: 24 HR CHEMTREC: 1-800-424-9300 (International +1 703-741-5970); 24 HR Emergency Assistance: 1-270-422-6860
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SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture


GHS US classification

Skin corrosion/irritation Category 2	H315	Causes skin irritation
Serious eye damage/eye irritation Category 2A	H319	Causes serious eye irritation
Hazardous to the aquatic environment - Acute Hazard Category 3	H402	Harmful to aquatic life

Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements

GHS US labeling

Hazard pictograms (GHS US)	:	
Signal word (GHS US)	:	Warning
Hazard statements (GHS US)	:	H315 - Causes skin irritation H319 - Causes serious eye irritation H402 - Harmful to aquatic life
Precautionary statements (GHS US)	:	P264 - Wash face, hands, hands, forearms and face, clothing thoroughly after handling. P273 - Avoid release to the environment. P280 - Wear eye protection, protective clothing, protective gloves. P302+P352 - If on skin: Wash with plenty of water. P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Poly-A® 27-2000

Safety Data Sheet

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

P321 - Specific treatment (see Consult a doctor/medical service if you feel unwell on this label).
P332+P313 - If skin irritation occurs: Get medical advice/attention.
P337+P313 - If eye irritation persists: Get medical advice/attention.
P362+P364 - Take off contaminated clothing and wash it before reuse.
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Name	Product identifier	%
Poly[oxy(methyl-1,2-ethanediyl)], alpha-(2-aminomethylethyl)-omega-(2-aminomethylethoxy)- (Main constituent)	(CAS-No.) 9046-10-0	99 – 100

Full text of hazard classes and H-statements : see section 16

3.2. Mixtures

Not applicable

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general	: Call a physician immediately. Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. Allow affected person to breathe fresh air. Allow the victim to rest.
First-aid measures after skin contact	: Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing. Call a physician immediately. Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation occurs: Consult a doctor/medical service. Get medical advice/attention. Specific treatment (see supplemental first aid instruction on this label).
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately. If eye irritation persists: Consult an eye specialist. Get medical advice/attention.
First-aid measures after ingestion	: Rinse mouth. Do not induce vomiting. Call a physician immediately. Do NOT induce vomiting. Obtain emergency medical attention.

4.2. Most important symptoms and effects (acute and delayed)

Potential Adverse human health effects and symptoms	: Based on available data, the classification criteria are not met.
Symptoms/effects after skin contact	: Burns. Causes skin irritation.
Symptoms/effects after eye contact	: Serious damage to eyes. Causes serious eye irritation.
Symptoms/effects after ingestion	: Burns.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media	: Water spray. Dry powder. Foam. Carbon dioxide. Sand.
Unsuitable extinguishing media	: Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

Hazardous decomposition products in case of fire	: Toxic fumes may be released.
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5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions	: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.
Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing. Do not enter fire area without proper protective equipment, including respiratory protection.

Poly-A® 27-2000

Safety Data Sheet

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

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. Avoid contact with skin and eyes. Do not breathe dust/fume/gas/mist/vapors/spray. Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection". Equip cleanup crew with proper protection.

Emergency procedures : Ventilate area.

6.2. Environmental precautions

Avoid release to the environment. 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 : Take up liquid spill into absorbent material. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13. See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Avoid contact with skin and eyes. Do not breathe dust/fume/gas/mist/vapors/spray. Wear personal protective equipment. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor.

Hygiene measures : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Wash hands, forearms and face thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store locked up. Store in a well-ventilated place. Keep cool. Keep only in the original container in a cool, well ventilated place away from : Heat sources, Ignition sources, Incompatible materials. Keep container closed when not in use.

Incompatible products : Strong bases. Strong acids.

Incompatible materials : Sources of ignition. Direct sunlight.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Poly[oxy(methyl-1,2-ethanediyl)], alpha-(2-aminomethylethyl)-omega-(2-aminomethylethoxy)- (9046-10-0)

No additional information available

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.

Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

Avoid all unnecessary exposure.

Hand protection:

Protective gloves. Wear protective gloves.

Eye protection:

Safety glasses. Chemical goggles or safety glasses

Poly-A® 27-2000

Safety Data Sheet

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

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment. Wear appropriate mask

Personal protective equipment symbol(s):



Other information:

Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Colorless to pale yellow liquid.
Color	: Colorless
Odor	: Pungent
Odor threshold	: No data available
pH	: ~ 11.5
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: No data available
Flash point	: 185 °C
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Not applicable. Non flammable.
Vapor pressure	: No data available
Relative vapor density at 20 °C	: > 1
Relative density	: 0.996
Specific gravity / density	: 0.966 g/ml
Molecular mass	: ~ 2000 g/mol
Solubility	: Water: 0.1 - 1 %
Partition coefficient n-octanol/water (Log Pow)	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions. Not established.

Poly-A® 27-2000

Safety Data Sheet

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

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use. Not established.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7). Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

Strong acids. Strong bases.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced. fume. Carbon monoxide. Carbon dioxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

Poly[oxy(methyl-1,2-ethanediyl)], alpha-(2-aminomethylethyl)-omega-(2-aminomethylethoxy)- (9046-10-0)	
LD50 oral rat	> 2000 mg/kg
LD50 dermal rabbit	2980 mg/kg
LC50 Inhalation - Rat	> 0.74 mg/l
ATE US (dermal)	2980 mg/kg body weight

Skin corrosion/irritation : Causes skin irritation.
pH: ~ 11.5
Serious eye damage/irritation : Causes serious eye irritation.
pH: ~ 11.5
Respiratory or skin sensitization : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified
Reproductive toxicity : Not classified
STOT-single exposure : Not classified
STOT-repeated exposure : Not classified
Aspiration hazard : Not classified
Viscosity, kinematic : No data available
Potential Adverse human health effects and symptoms : Based on available data, the classification criteria are not met.
Symptoms/effects after skin contact : Burns. Causes skin irritation.
Symptoms/effects after eye contact : Serious damage to eyes. Causes serious eye irritation.
Symptoms/effects after ingestion : Burns.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Harmful to aquatic life.
Ecology - water : Harmful to aquatic life.

Poly[oxy(methyl-1,2-ethanediyl)], alpha-(2-aminomethylethyl)-omega-(2-aminomethylethoxy)- (9046-10-0)	
LC50 fish 1	> 15 mg/l Oncorhynchus mykiss (OECD Guideline 203, semistatic)
EC50 Daphnia 1	80 mg/l Daphnia magna (OECD Guideline 202, part 1, static)
LC50 fish 2	772.14 Cyprinodon variegatus (OECD Guideline 203, static)
EC50 Daphnia 2	418.34 mg/l Arcatia tonsa (Daphnia test acute, static)
ErC50 (algae)	15 mg/l Pseudokirchneriella subcapitata (OECD Guideline 201, static)
ErC50 (other aquatic plants)	141.72 mg/l

12.2. Persistence and degradability

Poly[oxy(methyl-1,2-ethanediyl)], alpha-(2-aminomethylethyl)-omega-(2-aminomethylethoxy)- (9046-10-0)	
Persistence and degradability	Not established.

Poly-A® 27-2000

Safety Data Sheet

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

12.3. Bioaccumulative potential

Poly[oxy(methyl-1,2-ethanediyl)], alpha-(2-aminomethylethyl)-omega-(2-aminomethylethoxy)- (9046-10-0)

Bioaccumulative potential	Not established.
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12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Product/Packaging disposal recommendations	: Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.
Ecology - waste materials	: Avoid release to the environment.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Not regulated

Transport by sea

Not regulated

Air transport

Not regulated

SECTION 15: Regulatory information

15.1. US Federal regulations

Poly[oxy(methyl-1,2-ethanediyl)], alpha-(2-aminomethylethyl)-omega-(2-aminomethylethoxy)- (9046-10-0)

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

EPA TSCA Regulatory Flag

XU - XU - indicates a substance exempt from reporting under the Chemical Data Reporting Rule, (40 CFR 711).

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

This product or mixture is not known to contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

15.2. International regulations

CANADA

Poly[oxy(methyl-1,2-ethanediyl)], alpha-(2-aminomethylethyl)-omega-(2-aminomethylethoxy)- (9046-10-0)

Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

No additional information available

Poly-A® 27-2000

Safety Data Sheet

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

National regulations

Poly[oxy(methyl-1,2-ethanediyl)], alpha-(2-aminomethylethyl)-omega-(2-aminomethylethoxy)- (9046-10-0)

Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on the Japanese ISHL (Industrial Safety and Health Law)
Listed on KECL/KECI (Korean Existing Chemicals Inventory)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on INSQ (Mexican National Inventory of Chemical Substances)
Listed on the TCSI (Taiwan Chemical Substance Inventory)

15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

SECTION 16: Other information

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

Revision date : 10/10/2020

Other information : None.

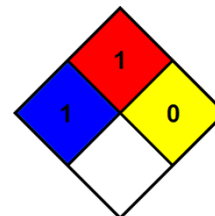
Full text of H-phrases:

H315	Causes skin irritation
H319	Causes serious eye irritation
H402	Harmful to aquatic life

NFPA health hazard : 1 - Materials that, under emergency conditions, can cause significant irritation.

NFPA fire hazard : 1 - Materials that must be preheated before ignition can occur.

NFPA reactivity : 0 - Material that in themselves are normally stable, even under fire conditions.



SDS US (GHS HazCom 2012)

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