1. Identification

Product identifier used on the label

Baxxodur® EC 302

Recommended use of the chemical and restriction on use
Recommended use*: for industrial use only

* The “Recommended use” identified for this product is provided solely to comply with a Federal requirement and is not part of the seller's published specification. The terms of this Safety Data Sheet (SDS) do not create or infer any warranty, express or implied, including by incorporation into or reference in the seller's sales agreement.

Details of the supplier of the safety data sheet

Company:
BASF CORPORATION
100 Park Avenue
Florham Park, NJ 07932, USA

Telephone: +1 973 245-6000

Emergency telephone number

CHEMTREC: 1-800-424-9300
BASF HOTLINE: 1-800-832-HELP (4357)

Other means of identification
Chemical family: aliphatic, amines
Synonyms: POLYETHERAMIN D 400

2. Hazards Identification

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

Classification of the product

Skin Corr./Irrit.	1C	Skin corrosion/irritation
Eye Dam./Irrit.	1	Serious eye damage/eye irritation
Aquatic Acute	3	Hazardous to the aquatic environment - acute
Aquatic Chronic	3	Hazardous to the aquatic environment - chronic

Label elements

Pictogram:

Signal Word:
Danger

Hazard Statement:

H314	Causes severe skin burns and eye damage.
H402	Harmful to aquatic life.
H412	Harmful to aquatic life with long lasting effects.

Precautionary Statements (Prevention):

P280	Wear protective gloves/protective clothing/eye protection/face protection.
P273	Avoid release to the environment.
P261	Avoid breathing mist/vapours/spray.
P264	Wash with plenty of water and soap thoroughly after handling.

Precautionary Statements (Response):

P310	Immediately call a POISON CENTER or doctor/physician.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
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.
P301 + P330 + P331	IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

Precautionary Statements (Storage):

P405	Store locked up.

Precautionary Statements (Disposal):

P501	Dispose of contents/container to hazardous or special waste collection point.

Hazards not otherwise classified

If applicable information is provided in this section on other hazards which do not result in classification but which may contribute to the overall hazards of the substance or mixture.

3. Composition / Information on Ingredients

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

CAS Number	Weight %	Chemical name
9046-10-0	>= 97.0 - <= 100.0%	alpha-(2-Aminomethylethyl)-omega-(2-aminomethylethoxy)- poly(oxy(methyl-1,2-ethanediyl))

4. First-Aid Measures

Description of first aid measures

General advice:
Remove contaminated clothing.

If inhaled:
Remove the affected individual into fresh air and keep the person calm. Assist in breathing if necessary. Immediate medical attention required.

If on skin:
Wash affected areas thoroughly with soap and water. If irritation develops, seek medical attention.

If in eyes:
Flush with copious amounts of water for at least 15 minutes. Hold eyelids open to facilitate rinsing. Seek medical attention.

If swallowed:
Rinse mouth and then drink plenty of water. Do not induce vomiting. Never induce vomiting or give anything by mouth if the victim is unconscious or having convulsions. Seek medical attention.

Most important symptoms and effects, both acute and delayed

Symptoms: The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11., Further symptoms are possible

Indication of any immediate medical attention and special treatment needed

Note to physician

Treatment:	Treat according to symptoms (decontamination, vital functions), no known specific antidote. Pulmonary odema prophylaxis. Medical monitoring for at least 24 hours.

5. Fire-Fighting Measures

Extinguishing media

Suitable extinguishing media:
water spray, dry powder, alcohol-resistant foam, carbon dioxide

Special hazards arising from the substance or mixture

Hazards during fire-fighting:
No particular hazards known.

Advice for fire-fighters

Protective equipment for fire-fighting:
Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.

Further information:
Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

Impact Sensitivity:

Remarks:	Based on the chemical structure there is no shock-sensitivity.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures
Avoid inhalation. Avoid contact with the skin, eyes and clothing.

Environmental precautions
Do not discharge into drains/surface waters/groundwater.

Methods and material for containment and cleaning up
Spills should be contained, solidified, and placed in suitable containers for disposal.

7. Handling and Storage

Precautions for safe handling
Ensure adequate ventilation.

Protection against fire and explosion:
Prevent electrostatic charge - sources of ignition should be kept well clear - fire extinguishers should be kept handy.

Conditions for safe storage, including any incompatibilities
Segregate from acids and acid forming substances.

Suitable materials for containers: Low density polyethylene (LDPE), Stainless steel 1.4301 (V2), Stainless steel 1.4401, glass, High density polyethylene (HDPE), Aluminium, tinned carbon steel (Tinplate), Carbon steel (Iron)

Further information on storage conditions: Keep container tightly closed in a cool, well-ventilated place.
Protect from temperatures above: 60 °C

8. Exposure Controls/Personal Protection

No occupational exposure limits known.

Advice on system design:
Provide local exhaust ventilation to control vapours.

Personal protective equipment

Respiratory protection:
Wear a NIOSH-certified (or equivalent) organic vapour respirator.

Hand protection:
Chemical resistant protective gloves

Eye protection:
Tightly fitting safety goggles (chemical goggles). Wear face shield if splashing hazard exists.

General safety and hygiene measures:
Handle in accordance with good industrial hygiene and safety practice. Wearing of closed work clothing is required additionally to the stated personal protection equipment. Avoid contact with the

skin, eyes and clothing. Do not breathe vapour/spray. When using, do not eat, drink or smoke. Hands and/or face should be washed before breaks and at the end of the shift. Gloves must be inspected regularly and prior to each use. Replace if necessary (e.g. pinhole leaks). Take off immediately all contaminated clothing. Wash contaminated clothing before reuse. Store work clothing separately.

9. Physical and Chemical Properties

Form:	liquid	
Odour:	amine-like	
Odour threshold:	Not determined due to potential health hazard by inhalation.	
Colour:	yellowish	
pH value:	11 (10 g/l, 20 °C)	
glass transition temperature:	-88 °C (1,013 hPa)	(OECD Guideline 102)
Boiling point:	232 °C (1,013.25 hPa) Extrapolated value	(measured)
Flash point:	128 °C	(DIN EN 22719; ISO 2719, closed cup)
Flammability:	not flammable	
Lower explosion limit:	For liquids not relevant for classification and labelling. The lower explosion point may be 5 - 15 °C below the flash point.	
Upper explosion limit:	For liquids not relevant for classification and labelling.	
Autoignition:	235 °C	(DIN 51794)
Vapour pressure:	1 mbar (20 °C) 3 mbar (50 °C)	
Density:	0.97 g/cm3 (20 °C)	
Relative density:	0.97 (20 °C)	(calculated)
Partitioning coefficient n-octanol/water (log Pow):	1.34 (25 °C)	(OECD Guideline 117)
Self-ignition temperature:	Based on its structural properties the product is not classified as self-igniting.	
Thermal decomposition:	140 °C, 50 kJ/kg (DSC (DIN 51007)) 290 °C, 430 kJ/kg (DSC (DIN 51007)) Thermal decomposition above the indicated temperature is possible. self-accelerating reaction	
Viscosity, dynamic:	24.4 mPa.s (25 °C)	
Viscosity, kinematic:	25.2 mm2/s (25 °C)	
Particle size:	The substance / product is marketed or used in a non solid or granular form.	
Solubility in water:	(20 °C) miscible	

Evaporation rate:	Value can be approximated from Henry's Law Constant or vapor pressure.

10. Stability and Reactivity

Reactivity
No hazardous reactions if stored and handled as prescribed/indicated.

Corrosion to metals:
Corrosive effects to metal are not anticipated.

Oxidizing properties:
Based on its structural properties the product is not classified as oxidizing.

Formation of flammable gases:	Remarks:	Forms no flammable gases in the presence of water.

Chemical stability
The product is stable if stored and handled as prescribed/indicated.

Possibility of hazardous reactions
Exothermic reaction. Reacts with acids.

Conditions to avoid
Avoid extreme temperatures.

Incompatible materials
acids

Hazardous decomposition products

Decomposition products:
Hazardous decomposition products: No hazardous decomposition products if stored and handled as prescribed/indicated.

Thermal decomposition:
140 °C (DSC (DIN 51007))

290 °C (DSC (DIN 51007))
Thermal decomposition above the indicated temperature is possible. self-accelerating reaction

11. Toxicological information

Primary routes of exposure

Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

Acute Toxicity/Effects

Acute toxicity
Assessment of acute toxicity: Of low toxicity after single ingestion. Of low toxicity after short-term skin contact. The inhalation of a highly enriched/saturated vapor-air-mixture represents an unlikely acute hazard.

Oral
Type of value: LD50
Species: rat (male/female)
Value: 2,885 mg/kg (similar to OECD guideline 401)

Inhalation
Type of value: LC0
Species: rat (male/female)
Value: > 0.74 mg/l (IRT)
Exposure time: 8 h
No mortality was observed.

Dermal
Type of value: LD50
Species: rabbit (male/female)
Value: 2,980 mg/kg (similar to OECD guideline 402)

Assessment other acute effects
Assessment of STOT single:
Based on the available information there is no specific target organ toxicity to be expected after a single exposure.

Irritation / corrosion
Assessment of irritating effects: Corrosive! Damages skin and eyes.

Skin
Species: rabbit
Result: Corrosive.
Method: similar to OECD guideline 404

Eye
Species: rabbit
Result: Risk of serious damage to eyes.
Method: similar to OECD guideline 405

Sensitization
Assessment of sensitization: As the substance ís corrosive, conducting sensitization studies is not feasible.

Aspiration Hazard
No aspiration hazard expected.

Chronic Toxicity/Effects

Repeated dose toxicity
Assessment of repeated dose toxicity: No substance-specific organtoxicity was observed after repeated administration to animals. After repeated exposure the prominent effect is local irritation.

Genetic toxicity
Assessment of mutagenicity: No mutagenic effect was found in various tests with mammalian cell culture and mammals. The substance was not mutagenic in bacteria.

Carcinogenicity
Assessment of carcinogenicity: No data available concerning carcinogenic effects.

Reproductive toxicity

Assessment of reproduction toxicity: The results of animal studies gave no indication of a fertility impairing effect. The results were determined in a Screening test (OECD 421/422).

Teratogenicity
Assessment of teratogenicity: No indications of a developmental toxic / teratogenic effect were seen in animal studies. Mortality observed in rabbits following oral gavage exposure to this corrosive substance. However, the relevance of this result for humans is unclear.

Other Information
No experimental evidence available for genotoxicity in vitro (Ames test negative). Literature data.

Symptoms of Exposure

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11., Further symptoms are possible

12. Ecological Information

Toxicity

Aquatic toxicity
Assessment of aquatic toxicity:
Acutely harmful for aquatic organisms. The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations.

Toxicity to fish
LC50 (96 h) > 15 mg/l, Oncorhynchus mykiss (OECD Guideline 203, semistatic)
The details of the toxic effect relate to the nominal concentration. Limit concentration test only (LIMIT test).

LC50 (96 h) 772.14 mg/l, Cyprinodon variegatus (OECD Guideline 203, static)
The details of the toxic effect relate to the nominal concentration.

Aquatic invertebrates
EC50 (48 h) 80 mg/l, Daphnia magna (OECD Guideline 202, part 1, static)
The details of the toxic effect relate to the nominal concentration.

EC50 (48 h) 418.34 mg/l, Arcatia tonsa (Daphnia test acute, static)
The details of the toxic effect relate to the nominal concentration.

Aquatic plants
EC50 (72 h) 15 mg/l (growth rate), Pseudokirchneriella subcapitata (OECD Guideline 201, static)
The details of the toxic effect relate to the nominal concentration.

EC10 (72 h) 1.4 mg/l (growth rate), Pseudokirchneriella subcapitata (OECD Guideline 201, static)
The details of the toxic effect relate to the nominal concentration.

EC50 (72 h) 141.72 mg/l, Skeletonema costatum (ISO/DIS 10253, static)
The details of the toxic effect relate to the nominal concentration.

No observed effect concentration (72 h) 100 mg/l, Skeletonema costatum (ISO/DIS 10253, static)
The details of the toxic effect relate to the nominal concentration.

Chronic toxicity to fish
Study does not need to be conducted.

Chronic toxicity to aquatic invertebrates
Study does not need to be conducted.

Assessment of terrestrial toxicity
Study not necessary due to exposure considerations.

Microorganisms/Effect on activated sludge

Toxicity to microorganisms
OECD Guideline 209 aerobic
activated sludge of a predominantly domestic sewage/EC20 (3 h): 380 mg/l
The details of the toxic effect relate to the nominal concentration.

Persistence and degradability

Assessment biodegradation and elimination (H2O)
Not readily biodegradable (by OECD criteria).

Elimination information

0 % CO2 formation relative to the theoretical value (28 d) (OECD 301B; ISO 9439; 92/69/EEC, C.4-C) (aerobic, activated sludge, domestic)

Assessment of stability in water
In contact with water the substance will hydrolyse slowly.

Information on Stability in Water (Hydrolysis)
$t_{1/2}$ > 1 a (25 °C, pH value 7), (Directive 92/69/EEC, C.7)
In contact with water the substance will hydrolyse slowly.

Assessment photodegration
After evaporation or exposure to the air, the product will be rapidly degraded by photochemical processes.

Photodegradation
$t_{1/2}$ (Indirect photolysis) 1.6 h; OH radical
After evaporation or exposure to the air, the product will be rapidly degraded by photochemical processes.

Bioaccumulative potential

Assessment bioaccumulation potential
No significant accumulation in organisms is expected as a result of the distribution coefficient of n-octanol/water (log Pow).

Additional information

Adsorbable organically-bound halogen (AOX):
This product contains no organically-bound halogen.

Other ecotoxicological advice:
Due to the pH-value of the product, neutralization is generally required before discharging sewage into treatment plants.

13. Disposal considerations

Waste disposal of substance:

Dispose of in accordance with national, state and local regulations.

Container disposal:
No special precautions necessary.

14. Transport Information

Land transport
USDOT

Hazard class:	8
Packing group:	III
ID number:	UN 2735
Hazard label:	8
Proper shipping name:	AMINES, LIQUID, CORROSIVE, N.O.S. (contains POLYETHERAMINE)

Sea transport
IMDG

Hazard class:	8
Packing group:	III
ID number:	UN 2735
Hazard label:	8
Marine pollutant:	NO
Proper shipping name:	AMINES, LIQUID, CORROSIVE, N.O.S. (contains POLYETHERAMINE)

Air transport
IATA/ICAO

Hazard class:	8
Packing group:	III
ID number:	UN 2735
Hazard label:	8
Proper shipping name:	AMINES, LIQUID, CORROSIVE, N.O.S. (contains POLYETHERAMINE)

15. Regulatory Information

Federal Regulations

Registration status:
Chemical TSCA, US released / listed

EPCRA 311/312 (Hazard categories): Acute;

NFPA Hazard codes:
Health : 3 Fire: 1 Reactivity: 0 Special:

Assessment of the hazard classes according to UN GHS criteria (most recent version):

Acute Tox.	5 (oral)	Acute toxicity
Acute Tox.	5 (dermal)	Acute toxicity

Skin Corr./Irrit.	1C	Skin corrosion/irritation
Aquatic Acute	3	Hazardous to the aquatic environment - acute
Eye Dam./Irrit.	1	Serious eye damage/eye irritation
Aquatic Chronic	3	Hazardous to the aquatic environment - chronic

16. Other Information

SDS Prepared by:
BASF NA Product Regulations
SDS Prepared on: 2017/03/15

We support worldwide Responsible Care® initiatives. We value the health and safety of our employees, customers, suppliers and neighbors, and the protection of the environment. Our commitment to Responsible Care is integral to conducting our business and operating our facilities in a safe and environmentally responsible fashion, supporting our customers and suppliers in ensuring the safe and environmentally sound handling of our products, and minimizing the impact of our operations on society and the environment during production, storage, transport, use and disposal of our products.