

# Safety Data Sheet

## Baxxodur® EC 301

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Version: 3.0

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(30345001/SDS\_GEN\_US/EN)

### 1. Identification

#### Product identifier used on the label

## Baxxodur® EC 301

#### 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: polyether, amine  
Synonyms: alpha-(2-Aminomethylethyl)-omega-(2-aminomethylethoxy)-  
poly(oxy(methyl-1,2-ethandiyl))

### 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

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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.  
P260 Do not breathe dust or mist.  
P264 Wash with plenty of water and soap thoroughly after handling.

Precautionary Statements (Response):

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 POISON CENTER, doctor/physician or emergency number 112.  
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.

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## 3. Composition / Information on Ingredients

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

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

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## 4. First-Aid Measures

**Description of first aid measures**

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### General advice:

Remove contaminated clothing.

### If inhaled:

Remove the affected individual into fresh air and keep the person calm. 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. 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. Medical monitoring for at least 24 hours.

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## 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:

nitrogen oxides, carbon oxides

The substances/groups of substances mentioned can be released in case of fire. Under certain conditions in case of fire other hazardous combustion products may be generated.

### Advice for fire-fighters

Protective equipment for fire-fighting:

Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.

### Further information:

Collect contaminated extinguishing water separately, do not allow to reach sewage or effluent systems.

### Impact Sensitivity:

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

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### 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. Dispose of absorbed material in accordance with regulations.

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### 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.

Further information on storage conditions: Keep container tightly closed in a cool, well-ventilated place.

Protect from temperatures above: 60 °C

To protect product purity, maintain indicated storage temperature.

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### 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 respiratory protection if ventilation is inadequate.

##### **Hand protection:**

Chemical resistant protective gloves

##### **Eye protection:**

Tightly fitting safety goggles (chemical goggles).

##### **Body protection:**

Body protection must be chosen depending on activity and possible exposure, e.g. head protection, apron, protective boots, chemical-protection suit.

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### General safety and hygiene measures:

Eye wash fountains must be easily accessible. Wear protective clothing as necessary to prevent contact. 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:	colourless to yellow	
pH value:	11.3 ( 10 g/l, 20 °C)	
Melting point:	-88 °C	
Boiling point:	232 °C ( 1,013.25 hPa) Extrapolated value	(measured)
Flash point:	128 °C	(DIN EN 22719; ISO 2719, closed cup)
Flammability:	hardly combustible	
Lower explosion limit:	0.7 %(V)	
Upper explosion limit:	5.0 %(V)	
Autoignition:	230 °C	(DIN EN 14522)
SADT:	Not a substance liable to self-decomposition according to UN transport regulations, class 4.1.	
Vapour pressure:	0.9 hPa ( 20 °C) static, Extrapolated value	(OECD Guideline 104)
Density:	0.9642 g/cm <sup>3</sup> ( 0 °C) 0.9472 g/cm <sup>3</sup> ( 20 °C) 0.9240 g/cm <sup>3</sup> ( 50 °C)	
Relative density:	0.9 ( 20 °C)	
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:	280 °C, 440 kJ/kg (DSC (DIN 51007)) Thermal decomposition above the indicated temperature is possible. self-accelerating reaction	
Viscosity, dynamic:	10.2 mPa.s ( 20 °C) 30.1 mPa.s ( 0 °C)	(calculated (from kinematic viscosity)) (calculated (from kinematic viscosity))
Viscosity, kinematic:	10.8 mm <sup>2</sup> /s ( 20 °C) 31.2 mm <sup>2</sup> /s ( 0 °C)	(OECD 114) (OECD 114)
Particle size:	The substance / product is marketed or used in a non solid or granular form.	

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Solubility in water:	( 20 °C) miscible
Miscibility with water:	( 20 °C) miscible
Solubility (qualitative):	soluble
Evaporation rate:	solvent(s): organic solvents, Value can be approximated from Henry's Law Constant or vapor pressure.

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## 10. Stability and Reactivity

### Reactivity

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

Oxidizing properties:  
not fire-propagating

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

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

### Possibility of hazardous reactions

Evolution of heat under influence of acids.

### Conditions to avoid

Temperature: > 60 degrees Celsius  
Avoid all sources of ignition: heat, sparks, open flame.

### Incompatible materials

acids

### Hazardous decomposition products

Decomposition products:  
Possible thermal decomposition products: nitrogen oxides, carbon oxides

Thermal decomposition:  
280 °C (DSC (DIN 51007))  
Thermal decomposition above the indicated temperature is possible. self-accelerating reaction

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## 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

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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

The vapour was tested.

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 is 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 organotoxicity 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.

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### 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

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## 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.



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### Chronic toxicity to fish

No data available regarding toxicity to fish.

### Chronic toxicity to aquatic invertebrates

No data available regarding toxicity to daphnids.

### Assessment of terrestrial toxicity

No data available.

## **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 (H<sub>2</sub>O)

Not readily biodegradable (by OECD criteria).

### Elimination information

0 % CO<sub>2</sub> 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

Experimental data did not show abiotic degradation by hydrolysis

### Information on Stability in Water (Hydrolysis)

$t_{1/2} > 1$  a (25 °C, pH value 7), (Directive 92/69/EEC, C.7, pH 7)

## **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).

### Bioaccumulation potential

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

## **Mobility in soil**

### Assessment transport between environmental compartments

The substance will not evaporate into the atmosphere from the water surface.

Adsorption to solid soil phase is not expected.

## **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.

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The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations.

Do not release untreated into natural waters.

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### 13. Disposal considerations

**Waste disposal of substance:**

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

**Container disposal:**

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

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### 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 POLYETHERDIAMINE)

**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 POLYETHERDIAMINE)

**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 POLYETHERDIAMINE)

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### 15. Regulatory Information

**Federal Regulations**

**Registration status:**

Chemical TSCA, US released / listed

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**EPCRA 311/312 (Hazard categories):** Refer to SDS section 2 for GHS hazard classes applicable for this product.

**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: 2018/08/06

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