

# Safety Data Sheet

## Baxxodur® EC 311

Revision date : 2016/10/31

Version: 3.0

Page: 1/11

(30340656/SDS\_GEN\_US/EN)

### 1. Identification

#### Product identifier used on the label

## Baxxodur® EC 311

#### Recommended use of the chemical and restriction on use

Recommended use\*: Chemical

\* 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: ether amines  
Synonyms: Poly[oxy(methyl-1,2-ethanediyl)], .alpha.,.alpha.',.alpha."-1,2,3-propanetriyltris[.omega.-(2-aminomethylethoxy)-

### 2. Hazards Identification

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

#### Classification of the product

Acute Tox.	4 (oral)	Acute toxicity
Skin Corr./Irrit.	2	Skin corrosion/irritation
Eye Dam./Irrit.	1	Serious eye damage/eye irritation
Aquatic Acute	2	Hazardous to the aquatic environment - acute
Aquatic Chronic	2	Hazardous to the aquatic environment - chronic

#### Label elements

# Safety Data Sheet

## Baxxodur® EC 311

Revision date : 2016/10/31

Version: 3.0

Page: 2/11

(30340656/SDS\_GEN\_US/EN)

Pictogram:



Signal Word:

Danger

Hazard Statement:

H318	Causes serious eye damage.
H315	Causes skin irritation.
H302	Harmful if swallowed.
H401	Toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.

Precautionary Statements (Prevention):

P280	Wear protective gloves and eye/face protection.
P273	Avoid release to the environment.
P270	Do not eat, drink or smoke when using this product.
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. Immediately call a POISON CENTER or doctor/physician.
P310	Immediately call a POISON CENTER or doctor/physician.
P303 + P352	IF ON SKIN (or hair): Wash with plenty of soap and water.
P330	Rinse mouth.
P391	Collect spillage.
P362 + P364	Take off contaminated clothing and wash it before reuse.

Precautionary Statements (Disposal):

P501	Dispose of contents/container to hazardous or special waste collection point.
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### 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>
64852-22-8	>= 99.5 - <= 100.0%	Poly[oxy(methyl-1,2-ethanediyl)], .alpha.,.alpha.',.alpha."-1,2,3-propanetriyltris[.omega.-(2-aminomethylethoxy)]-
1336-21-6	>= 0.0 - < 0.5%	Ammonium hydroxide

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## 4. First-Aid Measures

Description of first aid measures

# Safety Data Sheet

## Baxxodur® EC 311

Revision date : 2016/10/31  
Version: 3.0

Page: 3/11  
(30340656/SDS\_GEN\_US/EN)

### General advice:

Remove contaminated clothing.

### If inhaled:

Keep patient calm, remove to fresh air, seek medical attention. Immediately administer a corticosteroid from a controlled/metered dose inhaler.

### If on skin:

Immediately wash thoroughly with plenty of water, apply sterile dressings, consult a skin specialist.

After contact with skin, wash immediately with plenty of water and soap.

### If in eyes:

Wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.

### If swallowed:

Immediately rinse mouth and then drink 200-300 ml of water, 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.

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## 5. Fire-Fighting Measures

### Extinguishing media

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

### Special hazards arising from the substance or mixture

Hazards during fire-fighting:  
nitrogen oxides, carbon oxides, nitrogenous compounds  
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:  
Wear self-contained breathing apparatus and chemical-protective clothing.

### Further information:

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

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## 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

# Safety Data Sheet

## Baxxodur® EC 311

Revision date : 2016/10/31

Version: 3.0

Page: 4/11

(30340656/SDS\_GEN\_US/EN)

Avoid contact with skin and eyes. Take off immediately all contaminated clothing. Do not breathe vapour/aerosol/spray mists.

### Environmental precautions

Do not discharge into drains/surface waters/groundwater.

### Methods and material for containment and cleaning up

For small amounts: Pick up with suitable appliance and dispose of.

For large amounts: Pick up with suitable appliance and dispose of.

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## 7. Handling and Storage

### Precautions for safe handling

Ensure thorough ventilation of stores and work areas.

Protection against fire and explosion:

Prevent electrostatic charge - sources of ignition should be kept well clear - fire extinguishers should be kept handy.

Avoid all sources of ignition: heat, sparks, open flame. Take precautionary measures against static discharges. Provide exhaust ventilation.

### Conditions for safe storage, including any incompatibilities

Segregate from acids and acid forming substances.

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

Further information on storage conditions: Containers should be stored tightly sealed in a dry place.

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## 8. Exposure Controls/Personal Protection

### Components with occupational exposure limits

Ammonium hydroxide	OSHA PEL	PEL 50 ppm 35 mg/m <sup>3</sup> ; STEL value 35 ppm 27 mg/m <sup>3</sup> ;
	ACGIH TLV	TWA value 25 ppm ; STEL value 35 ppm ;

### Personal protective equipment

#### Respiratory protection:

Breathing protection if gases/vapours are formed. Gas filter for gases/vapours of organic compounds (boiling point >65 °C, e. g. EN 14387 Type A)

#### Hand protection:

Chemical resistant protective gloves, Consult with glove manufacturer for testing data.

#### Eye protection:

Safety glasses with side-shields and face shield.

#### Body protection:

Body protection must be chosen depending on activity and possible exposure, e.g. apron, protecting boots, chemical-protection suit (according to EN 14605 in case of splashes or EN ISO 13982 in case of dust).

# Safety Data Sheet

## Baxxodur® EC 311

Revision date : 2016/10/31  
Version: 3.0

Page: 5/11  
(30340656/SDS\_GEN\_US/EN)

chemical-protection suit (f.e. according to EN 14605)

### General safety and hygiene measures:

Avoid contact with the skin, eyes and clothing. Do not breathe vapour/spray. Wearing of closed work clothing is required additionally to the stated personal protection equipment. Handle in accordance with good industrial hygiene and safety practice. When using, do not eat, drink or smoke. Hands and/or face should be washed before breaks and at the end of the shift.

## 9. Physical and Chemical Properties

Form:	liquid	
Odour:	amine-like	
Colour:	colourless to yellow	
pH value:	10.5 ( 100 g/l, 20 °C)	
solidification temperature:	-50 °C	
Boiling point:	> 200 °C	
Flash point:	236 °C	(DIN ISO 2592)
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:	385 °C	(DIN 51794)
Vapour pressure:	< 10 hPa ( 20 °C) < 10 hPa ( 50 °C)	
Density:	0.998 g/cm <sup>3</sup> ( 20 °C)	
Partitioning coefficient n- octanol/water (log Pow):	No data available.	
Viscosity, kinematic:	1,045 mm <sup>2</sup> /s ( 20 °C)	
Solubility in water:	< 10 mg/l ( 20 °C)	
Miscibility with water:	moderately soluble	
Solubility (qualitative):	soluble solvent(s): organic solvents, Methanol, Acetone	
Evaporation rate:	Value can be approximated from Henry's Law Constant or vapor pressure.	

## 10. Stability and Reactivity

### Reactivity

### Chemical stability

### Possibility of hazardous reactions

Strong exothermic reaction with acids.

### Conditions to avoid

# Safety Data Sheet

## Baxxodur® EC 311

Revision date : 2016/10/31  
Version: 3.0

Page: 6/11  
(30340656/SDS\_GEN\_US/EN)

Avoid extreme temperatures.

**Incompatible materials**  
acids

### **Hazardous decomposition products**

Decomposition products:  
Thermal decomposition products: carbon oxides, nitrogen oxides

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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

Assessment of acute toxicity: Of moderate toxicity after single ingestion.

#### Oral

Type of value: LD50

Species: rat (female)

Value: > 300 - < 2,000 mg/kg (OECD Guideline 423)

#### 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: Skin contact causes irritation. May cause severe damage to the eyes.

#### Skin

Species: rabbit

Result: Irritant.

Method: OECD Guideline 404

The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

#### Eye

Result: Risk of serious damage to eyes.

Method: HET-CAM test in vitro

The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

#### Sensitization

Assessment of sensitization: Skin sensitizing effects were not observed in animal studies.

#### Buehler test

Species: guinea pig

Result: Non-sensitizing.

# Safety Data Sheet

## Baxxodur® EC 311

Revision date : 2016/10/31  
Version: 3.0

Page: 7/11  
(30340656/SDS\_GEN\_US/EN)

Method: similar to OECD guideline 406

The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

### Chronic Toxicity/Effects

#### Repeated dose toxicity

Assessment of repeated dose toxicity: No data available.

#### Genetic toxicity

Assessment of mutagenicity: The substance was not mutagenic in bacteria. The substance was not mutagenic in mammalian cell culture. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

#### Carcinogenicity

Assessment of carcinogenicity: No data available.

#### Reproductive toxicity

Assessment of reproduction toxicity: No data available.

#### Teratogenicity

Assessment of teratogenicity: No data available.

### 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 toxic for aquatic organisms. Toxic to aquatic organisms based on long-term (chronic) toxicity study data. Inhibition of degradation activity in activated sludge is not to be anticipated during correct introduction of low concentrations.

#### Toxicity to fish

LC50 (96 h) > 100 mg/l, Oncorhynchus mykiss (OECD 203; ISO 7346; 84/449/EEC, C.1, static)

The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

#### Aquatic invertebrates

EC50 (48 h) 13.0 mg/l, Daphnia magna (OECD Guideline 202, part 1, static)

Nominal values (confirmed by concentration control analytics) The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

#### Aquatic plants

EC50 (72 h) 4.4 mg/l (growth rate), Pseudokirchneriella subcapitata (OECD Guideline 201, static)

The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

No observed effect concentration (72 h) 1 mg/l (growth rate), Pseudokirchneriella subcapitata (OECD Guideline 201, static)

# Safety Data Sheet

## Baxxodur® EC 311

Revision date : 2016/10/31  
Version: 3.0

Page: 8/11  
(30340656/SDS\_GEN\_US/EN)

The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

### Toxicity to fish

*Information on: Poly[oxy(methyl-1,2-ethanediyl)], .alpha.,.alpha.',.alpha."-1,2,3-propanetriyltris[.omega.-(2-aminomethylethoxy)]-*  
LC50 (96 h) > 100 mg/l, *Oncorhynchus mykiss* (OECD 203; ISO 7346; 84/449/EEC, C.1, static)  
The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

*Information on: Ammonium hydroxide*  
LC50 (48 h) approx. 14.2 - 15.7 mg/l, *Cyprinus carpio* (static)  
LC50 (96 h) 0,163-1,09 mg/l un-ionized NH<sub>3</sub>, *Salmo gairdneri*, syn. *O. mykiss* (Fish test acute, Flow through.)  
Literature data. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

### Aquatic invertebrates

*Information on: Poly[oxy(methyl-1,2-ethanediyl)], .alpha.,.alpha.',.alpha."-1,2,3-propanetriyltris[.omega.-(2-aminomethylethoxy)]-*  
EC50 (48 h) 13.0 mg/l, *Daphnia magna* (OECD Guideline 202, part 1, static)  
Nominal values (confirmed by concentration control analytics) The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

### Aquatic plants

*Information on: Poly[oxy(methyl-1,2-ethanediyl)], .alpha.,.alpha.',.alpha."-1,2,3-propanetriyltris[.omega.-(2-aminomethylethoxy)]-*  
EC50 (72 h) 4.4 mg/l (growth rate), *Pseudokirchneriella subcapitata* (OECD Guideline 201, static)  
The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.  
No observed effect concentration (72 h) 1 mg/l (growth rate), *Pseudokirchneriella subcapitata* (OECD Guideline 201, static)  
The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

### Chronic toxicity to fish

*Information on: Ammonium hydroxide*  
No observed effect concentration (27 d) 0,06 mg/l un-ionized NH<sub>3</sub>-N, *Ictalurus punctatus*, syn: *I. robustus* (Flow through.)  
The statement of the toxic effect relates to the analytically determined concentration.

### Soil living organisms

*Information on: Ammonium hydroxide*  
Toxicity to soil dwelling organisms:  
LC50 (14 d) 51,8 mg/l total NH<sub>4</sub>/kg soil dw, *Eisenia foetida* (other, artificial soil)  
The product has not been tested. The statement has been derived from substances/products of a similar structure or composition. Literature data.



# Safety Data Sheet

## Baxxodur® EC 311

Revision date : 2016/10/31  
Version: 3.0

Page: 9/11  
(30340656/SDS\_GEN\_US/EN)

### Microorganisms/Effect on activated sludge

#### Toxicity to microorganisms

OECD Guideline 209 aerobic

activated sludge, domestic/EC20 (30 min): approx. 130 mg/l

The details of the toxic effect relate to the nominal concentration. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

*Information on: Poly[oxy(methyl-1,2-ethanediyl)], .alpha.,.alpha.,.alpha."-1,2,3-propanetriyltris[.omega.-(2-aminomethylethoxy)]-*

*OECD Guideline 209 aerobic*

*activated sludge, domestic/EC20 (30 min): approx. 130 mg/l*

*The details of the toxic effect relate to the nominal concentration. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.*

### Persistence and degradability

#### Assessment biodegradation and elimination (H2O)

Not readily biodegradable (by OECD criteria). Poorly biodegradable.

#### Elimination information

< 5 % BOD of the ThOD (28 d) (OECD Guideline 301 F) (aerobic, activated sludge)

The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

#### Assessment of stability in water

In contact with water the substance will hydrolyse slowly.

#### Information on Stability in Water (Hydrolysis)

3 % (5 d) (pH value 7), (OECD Guideline 111, pH 7)

The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

### Mobility in soil

#### Assessment transport between environmental compartments

No data available.

Adsorption to solid soil phase is not expected.

### Additional information

Other ecotoxicological advice:

Due to the pH-value of the product, neutralization is generally required before discharging sewage into treatment plants. Do not discharge product into the environment without control.

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## 13. Disposal considerations

#### **Waste disposal of substance:**

Incinerate in suitable incineration plant, observing local authority regulations.

#### **Container disposal:**

Contaminated packaging should be emptied as far as possible; then it can be passed on for recycling after being thoroughly cleaned.

# Safety Data Sheet

## Baxxodur® EC 311

Revision date : 2016/10/31  
Version: 3.0

Page: 10/11  
(30340656/SDS\_GEN\_US/EN)

### 14. Transport Information

#### Land transport

USDOT

Hazard class: 9  
Packing group: III  
ID number: UN 3082  
Hazard label: 9, EHSM  
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains POLY[OXY(METHYL-1,2-ETHANEDIYL)], 1,2,3-PROPANETRIYLTRIS(2-AMINOMETHYLETHOXY))

#### Sea transport

IMDG

Hazard class: 9  
Packing group: III  
ID number: UN 3082  
Hazard label: 9, EHSM  
Marine pollutant: YES  
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains POLY[OXY(METHYL-1,2-ETHANEDIYL)], 1,2,3-PROPANETRIYLTRIS(2-AMINOMETHYLETHOXY))

#### Air transport

IATA/ICAO

Hazard class: 9  
Packing group: III  
ID number: UN 3082  
Hazard label: 9, EHSM  
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains POLY[OXY(METHYL-1,2-ETHANEDIYL)], 1,2,3-PROPANETRIYLTRIS(2-AMINOMETHYLETHOXY))

### 15. Regulatory Information

#### Federal Regulations

##### Registration status:

Chemical TSCA, US released / listed

**EPCRA 311/312 (Hazard categories):** Acute;

##### NFPA Hazard codes:

Health : 3 Fire: 0 Reactivity: 0 Special:

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

Aquatic Acute	2	Hazardous to the aquatic environment - acute
Aquatic Chronic	2	Hazardous to the aquatic environment - chronic
Skin Corr./Irrit.	2	Skin corrosion/irritation

# Safety Data Sheet

## Baxxodur® EC 311

Revision date : 2016/10/31

Page: 11/11

Version: 3.0

(30340656/SDS\_GEN\_US/EN)

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Eye Dam./Irrit.	1	Serious eye damage/eye irritation
Acute Tox.	4 (oral)	Acute toxicity

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### 16. Other Information

**SDS Prepared by:**

BASF NA Product Regulations

SDS Prepared on: 2016/10/31

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.

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