

# Safety Data Sheet

## Quadrol®

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Version: 5.0

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(30243277/SDS\_GEN\_US/EN)

### 1. Identification

#### Product identifier used on the label

## Quadrol®

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

Recommended use\*: Detergent and cleaning agent for the chemical industry

Recommended use\*: Chemical

Suitable for use in industrial sector: chemical industry

\* 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: polyol

Synonyms: Use: Raw material for the chemical-technical industry

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### 2. Hazards Identification

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

#### Classification of the product

Eye Dam./Irrit.

2A

Serious eye damage/eye irritation

#### Label elements

Pictogram:

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Signal Word:  
Warning

Hazard Statement:  
H319 Causes serious eye irritation.

Precautionary Statements (Prevention):  
P280 Wear eye and/or face protection.  
P264 Wash contaminated body parts 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.  
P337 + P311 If eye irritation persists: Call a POISON CENTER or doctor/physician.

### Hazards not otherwise classified

No specific dangers known, if the regulations/notes for storage and handling are considered.

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## 3. Composition / Information on Ingredients

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

Tetrahydroxypropylethylenediamine  
CAS Number: 102-60-3  
Content (W/W): 75.0 - 100.0%  
Synonym: 1,1',1'',1'''-(1,2-Ethanediyldinitrilo)tetrakis-2-propanol; Quadrol

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## 4. First-Aid Measures

### Description of first aid measures

**General advice:**  
Remove contaminated clothing.

**If inhaled:**  
Keep patient calm, remove to fresh air, seek medical attention.

**If on skin:**  
Wash thoroughly with soap and water

If irritation develops, seek medical attention.

**If in eyes:**  
Wash affected eyes for at least 15 minutes under running water with eyelids held open.

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If irritation develops, seek medical attention.

### **If swallowed:**

Rinse mouth and then drink 200-300 ml of water. Do not induce vomiting. Immediate medical attention required.

### **Most important symptoms and effects, both acute and delayed**

Symptoms: Eye irritation

### **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:  
water spray, dry powder, foam

Unsuitable extinguishing media for safety reasons:  
water jet

### **Special hazards arising from the substance or mixture**

Hazards during fire-fighting:  
harmful vapours

Evolution of fumes/fog. The substances/groups of substances mentioned can be released in case of fire.

### **Advice for fire-fighters**

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

### **Further information:**

The degree of risk is governed by the burning substance and the fire conditions. Contaminated extinguishing water must be disposed of in accordance with official regulations.

### **Impact Sensitivity:**

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

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## 6. Accidental release measures

### Further accidental release measures:

High risk of slipping due to leakage/spillage of product.

### **Personal precautions, protective equipment and emergency procedures**

Use personal protective clothing. Information regarding personal protective measures, see section 8.

### **Environmental precautions**

Do not discharge into drains/surface waters/groundwater.

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### Methods and material for containment and cleaning up

For small amounts: Pick up with absorbent material (e.g. sand, sawdust, general-purpose binder).  
Dispose of absorbed material in accordance with regulations.  
For large amounts: Pump off product.  
Place absorbed material in the same container as the spilled substance/product for disposal.

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## 7. Handling and Storage

### Precautions for safe handling

No special measures necessary provided product is used correctly.

Protection against fire and explosion:

Take precautionary measures against static discharges.

### Conditions for safe storage, including any incompatibilities

Further information on storage conditions: Keep container tightly closed and dry; store in a cool place.

Storage stability:

Storage temperature: 70 - 80 °F

Protect against moisture.

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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/mists.

### Personal protective equipment

#### Respiratory protection:

Wear a NIOSH-certified (or equivalent) organic vapour/particulate respirator.

#### Hand protection:

Chemical resistant protective gloves

#### Eye protection:

Safety glasses with side-shields.

#### Body protection:

Body protection must be chosen based on level of activity and exposure.

#### General safety and hygiene measures:

Wear protective clothing as necessary to minimize contact. Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Avoid contact with skin and eyes. Remove contaminated clothing.

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## 9. Physical and Chemical Properties

Form: liquid

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Odour:	mild, of polyol	
Colour:	white	
pH value:	approx. 10	
Melting point:	not applicable	
Boiling point:	240 °C ( 13 mbar) Literature data.	
Flash point:	> 200 °C	
Flammability:	not flammable	(derived from flash point)
Autoignition:	dropped	
Vapour pressure:	1 mmHg ( 20 °C)	
Density:	1.01 g/cm <sup>3</sup> ( 20 - 25 °C)	
Relative density:	1.01	
Partitioning coefficient n-octanol/water (log Pow):	-2.08 ( 25 °C)	(calculated)
Thermal decomposition:	No data available.	
Viscosity, dynamic:	900 mPa.s ( 60 °C)	
Particle size:		(other)
Solubility in water:	( 20 °C) miscible	
Molar mass:	292 g/mol	

## 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. (other)

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

#### Possibility of hazardous reactions

No hazardous reactions when stored and handled according to instructions.

The product is chemically stable.

#### Conditions to avoid

Avoid moisture.

#### Incompatible materials

strong acids, strong oxidizing agents, reactive chemicals, strong bases

#### Hazardous decomposition products

Decomposition products:

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

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Thermal decomposition:  
No data available.

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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 low toxicity after single ingestion. Virtually nontoxic after a single skin contact.

#### Oral

Type of value: LD50

Species: rat

Value: > 2,000 - < 5,000 mg/kg (similar to OECD guideline 401)

#### Inhalation

Type of value: LC50

Species: rat

not determined

#### Dermal

Type of value: LD50

Species: rat

Value: > 2,000 mg/kg (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: Not irritating to the skin. Causes serious eye irritation.

#### Skin

Species: rabbit

Result: non-irritant

Method: OECD Guideline 404

#### Eye

Species: rabbit

Result: non-irritant

Method: OECD Guideline 405

#### Sensitization

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

Guinea pig maximization test

Species: guinea pig

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Result: Non-sensitizing.  
Method: OECD Guideline 406

### Aspiration Hazard

No aspiration hazard expected.

## Chronic Toxicity/Effects

### Repeated dose toxicity

Assessment of repeated dose toxicity: The substance may cause damage to the central nervous system after repeated ingestion of high doses.

### Genetic toxicity

Assessment of mutagenicity: The substance was not mutagenic in bacteria.

### Carcinogenicity

Assessment of carcinogenicity: Study scientifically not justified.

### 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. The results were determined in a Screening test (OECD 421/422).

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## 12. Ecological Information

### Toxicity

#### Aquatic toxicity

Assessment of aquatic toxicity:

There is a high probability that the product is not acutely harmful to aquatic organisms.

#### Toxicity to fish

LC50 (96 h) > 100 mg/l, *Leuciscus idus* (DIN 38412 Part 15)

#### Aquatic invertebrates

EC0 (48 h) > 100 mg/l, *Daphnia magna* (Directive 92/69/EEC, C.2, static)

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

#### Aquatic plants

EC50 (72 h) > 100 mg/l (growth rate), *Desmodium subspicatus* (Guideline 92/69/EEC, C.3)

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

#### Chronic toxicity to fish

No data available.

#### Chronic toxicity to aquatic invertebrates

No observed effect concentration (21 d) > 1 mg/l, *Daphnia magna* (OECD Guideline 211)

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

#### Assessment of terrestrial toxicity

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No data available concerning terrestrial toxicity.

### Soil living organisms

Toxicity to soil dwelling organisms:  
No data available.

### Toxicity to terrestrial plants

No data available.

### Other terrestrial non-mammals

No data available.

## Microorganisms/Effect on activated sludge

### Toxicity to microorganisms

DEV-L2 : > 1,000 mg/l

Inhibition of degradation activity in activated sludge is not to be anticipated during correct introduction of low concentrations.

DEV-L2 : > 1,000 mg/l

Inhibition of degradation activity in activated sludge is not to be anticipated during correct introduction of low concentrations.

## Persistence and degradability

### Assessment biodegradation and elimination (H<sub>2</sub>O)

Experience has shown that the product is difficult to eliminate in effluent treatment plants.

### Elimination information

9 % BOD of the ThOD (28 d) (OECD 301F; ISO 9408; 92/69/EEC, C.4-D) (aerobic, predominantly domestic sewage)

## 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).

## 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 possible.

## Additional information

### Sum parameter

Chemical oxygen demand (COD): 2,040 mg/g

Add. remarks environm. fate & pathway:



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Treatment in biological waste water treatment plants has to be performed according to local and administrative regulations.

### 13. Disposal considerations

**Waste disposal of substance:**

Dispose of in accordance with national, state and local regulations. It is the waste generator's responsibility to determine if a particular waste is hazardous under RCRA.

**Container disposal:**

Dispose of in a licensed facility. Recommend crushing, puncturing or other means to prevent unauthorized use of used containers.

### 14. Transport Information

**Land transport**

USDOT

Not classified as a dangerous good under transport regulations

**Sea transport**

IMDG

Not classified as a dangerous good under transport regulations

**Air transport**

IATA/ICAO

Not classified as a dangerous good under transport regulations

### 15. Regulatory Information

**Federal Regulations**

**Registration status:**

Chemical TSCA, US released / listed

Cosmetic TSCA, US released / exempt

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

**CERCLA RQ**

100 LBS

**CAS Number**

75-56-9

**Chemical name**

Propylene oxide

**Safe Drinking Water & Toxic Enforcement Act, CA Prop. 65:**

**WARNING:** This product can expose you to chemicals including PROPYLENE OXIDE, which is known to the State of California to cause cancer. For more information, go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**NFPA Hazard codes:**

Health: 2

Fire: 1

Reactivity: 0

Special:

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### HMIS III rating

Health: 2      Flammability: 1      Physical hazard: 0

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## 16. Other Information

### SDS Prepared by:

BASF NA Product Regulations  
SDS Prepared on: 2020/03/10

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