

# Safety Data Sheet

## QUADROL

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### 1. Identification

#### Product identifier used on the label

## QUADROL

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

Recommended use\*: polyurethane component; industrial chemicals  
Suitable for use in industrial sector: Polymers industry; chemical industry

\* The "Recommended use" identified for this product is provided solely to comply with a US 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

Molecular formula: C<sub>14</sub>H<sub>32</sub>N<sub>2</sub>O<sub>4</sub>  
Chemical family: amine, alkoxyated  
Synonyms: N,N,N',N'-TETRAKIS(2-HYDROXYLPROPYL)ETHYLENEDIAMINE

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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/face protection.  
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.  
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.

**According to Regulation 1994 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200**

### Emergency overview

CAUTION:  
Causes serious eye irritation.

## 3. Composition / Information on Ingredients

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

<u>CAS Number</u>	<u>Content (W/W)</u>	<u>Chemical name</u>
102-60-3	$\geq 100.0 - \leq 100.0$ %	Tetrahydroxypropylethyldiamine

**According to Regulation 1994 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200**

<u>CAS Number</u>	<u>Content (W/W)</u>	<u>Chemical name</u>
102-60-3	$\leq 100.0$ %	Tetrahydroxypropylethyldiamine
102-60-3	100.0 %	Tetrahydroxypropylethyldiamine

## 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.

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### **If on skin:**

Wash thoroughly with soap and water.

### **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: No significant reaction of the human body to the product known.  
Hazards: No hazards anticipated.

### **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, carbon dioxide, foam

### **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.

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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.

### **Environmental precautions**

Do not empty into drains. Do not discharge into the subsoil/soil.

### **Methods and material for containment and cleaning up**

Spills should be contained, solidified, and placed in suitable containers for disposal.

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### 7. Handling and Storage

#### Precautions for safe handling

Ensure thorough ventilation of stores and work areas. Protect against moisture.

Protection against fire and explosion:

No explosion proofing necessary.

#### Conditions for safe storage, including any incompatibilities

Segregate from foods and animal feeds. Segregate from acids. Segregate from oxidants.

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

Further information on storage conditions: No special precautions necessary. Avoid extreme heat. Store protected against freezing.

Storage stability:

Protect against moisture.

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### 8. Exposure Controls/Personal Protection

#### 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 as needed.

##### Hand protection:

Chemical resistant protective gloves

##### Eye protection:

Wear face shield or tightly fitting safety goggles (chemical goggles) if splashing hazard exists.

##### Body protection:

Standard work clothes and shoes.

##### General safety and hygiene measures:

Avoid contact with skin. Handle in accordance with good industrial hygiene and safety practice. Wear protective clothing as necessary to prevent contact. Avoid inhalation of vapours/mists. Wash soiled clothing immediately.

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### 9. Physical and Chemical Properties

Form:	liquid	
Odour:	mild, of polyol	
Odour threshold:		not applicable
Colour:	white	
pH value:	10	
Freezing point:		No applicable information available.
Boiling point:	> 140 °C	

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Sublimation point:		No applicable information available.
Flash point:	400 °F	
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:	> 300 °C	
Vapour pressure:		Unspecified
Density:	approx. 1.1 g/cm <sup>3</sup>	( 20 °C)
Relative density:		No applicable information available.
Vapour density:		not applicable
Partitioning coefficient n-octanol/water (log Pow):		not applicable
Self-ignition temperature:		not self-igniting
Thermal decomposition:	No decomposition if stored and handled as prescribed/indicated.	
Viscosity, kinematic:		No applicable information available.
Solubility in water:		partly soluble
Solubility (quantitative):		No applicable information available.
Solubility (qualitative):	No applicable information available.	
Evaporation rate:		Value can be approximated from Henry's Law Constant or vapor pressure.
Other Information:	If necessary, information on other physical and chemical parameters is indicated in this section.	

## 10. Stability and Reactivity

### Reactivity

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

Corrosion to metals:

No corrosive effect on metal.

### Chemical stability

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

### Possibility of hazardous reactions

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

### Conditions to avoid

Avoid moisture.

### Incompatible materials

acids, oxidizing agents, isocyanates

### Hazardous decomposition products

Decomposition products:

carbon monoxide, carbon dioxide

Hazardous decomposition products:

Thermal decomposition:

No decomposition if stored and handled as prescribed/indicated.

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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

##### Oral

Type of value: LD50  
Species: rat  
Moderately toxic.

##### 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.

Origin of data: expert judgement

##### Irritation / corrosion

Assessment of irritating effects: Eye contact causes irritation.

##### Eye

Species: rabbit  
Result: Slightly irritating.

##### Sensitization

Assessment of sensitization: The chemical structure does not suggest a sensitizing effect.

##### Aspiration Hazard

No aspiration hazard expected.

#### Chronic Toxicity/Effects

##### Repeated dose toxicity

Assessment of repeated dose toxicity: Repeated oral uptake of the substance did not cause substance-related effects. Repeated inhalative uptake of the substance did not cause substance-related effects. Repeated dermal uptake of the substance did not cause substance-related effects.

##### Genetic toxicity

Assessment of mutagenicity: The chemical structure does not suggest a specific alert for such an effect.

##### Carcinogenicity

Assessment of carcinogenicity: The chemical structure does not suggest a specific alert for such an effect.

##### Reproductive toxicity

Assessment of reproduction toxicity: The chemical structure does not suggest a specific alert for such an effect.

##### Teratogenicity

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Assessment of teratogenicity: The chemical structure does not suggest a specific alert for such an effect.

### Other Information

The product has not been tested. The statement has been derived from the properties of the individual components.

### **Symptoms of Exposure**

No significant reaction of the human body to the product known.

### Medical conditions aggravated by overexposure

Data available do not indicate that there are medical conditions that are generally recognized as being aggravated by exposure to this substance/product.

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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) > 1000 ppm, Pimephales promelas (static)

Insignificant hazard

### **Persistence and degradability**

#### Assessment biodegradation and elimination (H2O)

Poorly eliminated from water.

#### Elimination information

< 20 % DOC reduction Poorly eliminated from water.

### **Bioaccumulative potential**

#### Assessment bioaccumulation potential

Does not significantly accumulate in organisms.

### **Mobility in soil**

#### Assessment transport between environmental compartments

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:

The product has not been tested. Do not discharge product into the environment without control.

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### 13. Disposal considerations

**Waste disposal of substance:**

Incinerate in a licensed facility. Dispose of in a licensed facility. Do not discharge substance/product into sewer system.

**Container disposal:**

Steel drums must be emptied and can be sent to a licensed drum reconditioner for reuse, a scrap metal dealer or an approved landfill. Refer to 40 CFR § 261.7 (residues of hazardous waste in empty containers). Decontaminate containers prior to disposal. Recommend crushing, puncturing or other means to prevent unauthorized use of used containers.

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### 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

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### 15. Regulatory Information

**Federal Regulations**

**Registration status:**

Chemical TSCA, US released / listed

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

**NFPA Hazard codes:**

Health : 1 Fire: 1 Reactivity: 1 Special:

**HMIS III rating**

Health: 2 Flammability: 1 Physical hazard: 1

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### 16. Other Information

**SDS Prepared by:**

BASF NA Product Regulations  
SDS Prepared on: 2014/09/26

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