

# Material Safety Data Sheet

according to Regulation (EC) 1907/2006

Product name : HD 410 Hand disinfection  
Revision : 12.01.2010      Version : 2.0.0  
Print date : 12.01.2010

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## 01. Identification of the substance/preparation and of the company/undertaking

**Product name :** oro<sup>®</sup> Hygienesystem HD 410 Hand disinfection  
**Use of the substance / preparation :** HD 410 is an alcohol-based rub-in preparation for hygienic and surgical hand disinfection.  
**Manufacturer/Supplier :** orochemie GmbH + Co. KG  
**Street/P.O.Box :** Max-Planck-Straße 27  
**Country code/Postal code/Town/City :** 70806 Kornwestheim  
**Telephone :** +49 7154 1308-0  
**Telefax :** +49 7154 1308-40  
**Emergency information :** +49 7154 1308-0

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## 02. Hazards identification

### Hazard designation

Flammable.  
Classification : R 10

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## 03. Composition/information on ingredients

### Chemical characterization

HD 410 contains alcohols and auxiliary agents in aqueous solution.

### Hazardous components

PROPAN-2-OL ; EC-No. : 200-661-7; CAS-No. : 67-63-0

Percentage : 45 - 50 %  
Classification : F ; R 11 Xi ; R 36 R 67

N-PROPANOL ; EC-No. : 200-746-9; CAS-No. : 71-23-8

Percentage : 25 - 30 %  
Classification : F ; R 11 Xi ; R 41 R 67

For the wording of the listed risk phrases refer to section 16.

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## 04. First-aid measures

### General

No particular measures required.

### After inhalation

In all cases of doubt, or when symptoms persist, seek medical attention.

### After skin contact

No particular measures required.

### After eye contact

Flush with plenty of water (10 - 15 min.). Contact a doctor immediately.

### After ingestion

Drink plenty of water. Do not induce vomiting. Contact a doctor immediately.

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## 05. Fire-fighting measures

### Suitable extinguishing media

Carbon dioxide. Extinguishing powder. Water haze.

### Unsuitable extinguishing media

Waterjet.

### Special risk posed by the substance or by the actual preparation, its combustion products or gases discharged

None known.

### Special protective equipment

When extinguishing fires, use breathing apparatus with an independent source of air.

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### Additional information

Cool endangered containers with water in case of fire.

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## 06. Accidental release measures

### Personal precautions

Wear suitable protective clothing, gloves and eye/face protection. Keep away from ignition sources - No smoking.

### Environmental precautions

Prevent from flowing into surface water/ground water.

### Methods for cleaning up/collecting

Take up with a liquid absorbing material and proceed according to the waste disposal regulations.

### Additional information

Remove according to regulations.

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## 07. Handling and storage

### Information for safe handling

Containers to be opened and handled with care. Keep away from ignition sources and provide for good ventilation.

### Information about protection against explosions and fires

Keep away from ignition sources - No smoking.

### Requirements to be met by storerooms and containers

Keep only in the original container. Keep in a cool place. Do not store in temperatures below 5 °C. Keep container tightly closed.

### Information about separation of incompatible products

Store the foodstuffs separately. Do not store together with oxidizing, self-igniting substances and highly flammable solid substances.

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## 08. Exposure controls/personal protection

### Additional information about engineering measures

No particular measures required.

### Components with critical values that require monitoring at the workplace (exposure limits)

PROPAN-2-OL ; CAS-No. : 67-63-0

Specification : Limit value (8 hours) ( GB )  
Value : 400 ppm / 999 mg/m<sup>3</sup>

N-PROPANOL ; CAS-No. : 71-23-8

Specification : Limit value (8 hours) ( GB )  
Value : 200 ppm / 500 mg/m<sup>3</sup>

### Personal protective equipment

Do not eat or drink during work - no smoking. Keep away from food, drink and animal feeding stuff. Avoid contact with eyes.

### Respiratory protection

No particular measures required.

### Hand protection

No particular measures required.

### Eye protection

No particular measures required.

### Body protection

No particular measures required.

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## 09. Physical and chemical properties

### Image

Form : Liquid.  
Colour : Light blue.  
Odour : Mild aromatic. Like alcohol.

### Relevant safety data

Boiling point / range : ( 1013 hPa )      no data available  
Flash point : 22 °C      DIN 51755

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Ignition temperature :		360	°C	
Lower explosion limit :		1	% b.v.	
Upper explosion limit :		13,5	% b.v.	
Vapour pressure :	( 50 °C )	160	hPa	
Density :	( 20 °C )	0,84 - 0,88	g/cm <sup>3</sup>	
Solvent-separation test :	( 20 °C )	<	3	%
Solubility in water :	( 20 °C )		100	% b.w.
pH value :			6 - 7	
Flow time :	( 20 °C )	<	20	s DIN-cup 4 mm

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### 10. Stability and reactivity

#### Conditions to avoid

None, if handled according to order.

#### Materials to avoid

None known.

#### Hazardous decomposition products

None known.

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### 11. Toxicological information

#### Toxicological tests

##### LD50/LC50 values that are relevant for classification

Specification : LD-50  
Routes of entry : oral  
Test species : Rat  
Value / dosage : > 5 ml/kg  
Testing method : OECD 401. - OECD 402.

##### Primary irritant effect

Rabbit skin: no irritation. Testing method : OECD 404. Rabbit's eye: mild irritation. Testing method : OECD 405.

##### Sensitization

Guinea-pig: non-sensitizing. Testing method : OECD 406.

#### Experience on practice

The product does not have any skin irritating or sensitizing properties. The product has a slightly irritating effect on the eyes.

#### Additional toxicological information

The product was classified in toxicological terms on the basis of the results of the calculation procedure outlined within General Directive on Preparations (1999/45/EC) as well as to our own test reports.

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### 12. Ecological information

#### Details on elimination (persistence / degradability)

##### Abiotoxic elimination

No data available.

##### Biological degradation / elimination

All active agents are biodegradable at the dilution rates arising in the sewage system.

#### Fate in environmental compartments

There are no data available on the preparation itself.

#### Ecotoxicological effects

##### Performance in sewage-treatment plants

In case of appropriate conduction into adapted biological purification plants no disturbances have to be expected.

##### Other information

1-Propanol: fish toxicity LC50 > 4000 mg/l (Leuciscus idus, 48 h); harmfulness limit for small crustaceans EC50 = 3642 mg/l (Daphnia magna, 48 h).  
2-Propanol: fish toxicity LC50 = 8970 mg/l (Leuciscus idus, 48 h); harmfulness limit for small crustaceans EC50 > 1000 mg/l (Daphnia magna).

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### 13. Disposal considerations

#### Product

Concentrate/larger quantities: EWC 18 01 06 (disinfectant). Disposal in conformity with authority regulations.

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### Contaminated packaging

Contaminated packaging must be emptied of all residues and, following appropriate cleaning, may be sent to a recycling plant. Uncleaned packaging must be disposed of in the same manner as the medium.

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## 14. Transport information

### Land transport ADR/RID

#### Classification

Class : 3      Kemlercode : 33  
UN number : 1987      Classification-Code : F1

LQ 4 · E 2 · Tunnel restriction code : D/E

#### Proper shipping name

ALCOHOLS, N.O.S.

#### Hazardous components

ISOPROPANOL · N-PROPANOL

#### Packaging

Packaging group : II  
Label : 3

### Maritime transport IMDG/GGVSea

#### Classification

IMDG-Code : 3      EmS number : F-E / S-E  
UN number : 1987      Marine Poll. : -

LQ 1 I · E 2

#### Proper shipping name

ALCOHOLS, N.O.S.

#### Hazardous components

ISOPROPANOL · N-PROPANOL

#### Packaging

Packaging group : II  
Label : 3

### Air transport ICAO-TI and IATA-DGR

#### Classification

Class : 3  
UN number : 1987

E 2

#### Proper shipping name

ALCOHOLS, N.O.S.

#### Hazardous components

ISOPROPANOL · N-PROPANOL

#### Packaging

Packaging group : II  
Label : 3

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## 15. Regulatory information

### Classification according to EC directives

#### R-phrases

10      Flammable.

#### S-phrases

46      If swallowed, seek medical advice immediately and show this container or label.  
26      In case of contact with eyes, rinse immediately with plenty of water and seek medical advice .  
16      Keep away from sources of ignition - No smoking.

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## 16. Other information

### Processing instructions / technical data sheets

Please observe the label/directions for use!

### Further information

Relevant changes

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08. Components with critical values that require monitoring at the workplace (exposure limits) · 14. Land transport ADR/RID and GGVS/GGVE · 14. Classification (ADR) · 14. Classification (IMDG) · 14. Air transport ICAO-TI and IATA-DGR · 14. Classification (ICAO)

### R-Phrases of components

11                      Highly flammable.  
36                      Irritating to eyes.  
41                      Risk of serious damage to eyes.  
67                      Vapours may cause drowsiness and dizziness.

### Contact

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Dipl. Ing. Elisabeth Gehring Tel. No.: +49 7154 1308-37

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These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

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