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**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

Name of product INTER FORMALDEHYD

**1.2. Relevant identified uses of the substance or mixture and uses advised against**Recommended intended purpose(s)  
disinfectant**1.3. Details of the supplier of the safety data sheet**Manufacturer/distributor InterHygiene GmbH  
Neufelder Str. 30, D-27472 Cuxhaven  
Phone 04721/73400  
E-Mail info@interhygiene.de  
Internet www.interhygiene.de**1.4. Emergency telephone number****Emergency advice**Phone Giftnotruf München im Klinikum r.d.Isar 089/1924-0  
für Österreich: Vergiftungsinformationszentrale Wien  
Tel.: +43 1 406 43 43

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**! SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****! Classification according to Regulation (EC) No 1272/2008 [CLP/GHS]**

Hazard classes and Hazard categories	Hazard Statements	Classification procedure
Acute Tox. 2	H330	Calculation method.
Acute Tox. 3	H301	Calculation method.
Acute Tox. 3	H311	Calculation method.
Skin Corr. 1B	H314	Calculation method.
Eye Dam. 1	H318	Calculation method.
Skin Sens. 1	H317	Calculation method.
Muta. 2	H341	Calculation method.
Carc. 1B	H350	Calculation method.
STOT SE 3	H335	Calculation method.

**Hazard Statements**

H301 + H311	Toxic if swallowed or in contact with skin.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H330	Fatal if inhaled.
H335	May cause respiratory irritation.
H341	Suspected of causing genetic defects.
H350	May cause cancer.

**2.2. Label elements**

**Labelling according to Regulation (EC) No 1272/2008 [CLP/GHS]**

GHS05



GHS06



GHS08

**! Signal word**

Danger

**Hazard Statements**

H301 + H311 Toxic if swallowed or in contact with skin.  
H314 Causes severe skin burns and eye damage.  
H317 May cause an allergic skin reaction.  
H330 Fatal if inhaled.  
H335 May cause respiratory irritation.  
H341 Suspected of causing genetic defects.  
H350 May cause cancer.

**Precautionary Statements**

P102 Keep out of reach of children.  
P270 Do not eat, drink or smoke when using this product.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P281 Use personal protective equipment as required.  
P284 [In case of inadequate ventilation] wear respiratory protection.  
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.  
P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P308 + P313 IF exposed or concerned: Get medical advice/attention.  
P501 Dispose of container to useful material compound.

**2.3. Other hazards**

Dämpfe können mit Luft explosionsfähiges Gemisch bilden.

**! SECTION 3: Composition/ information on ingredients****3.1. Substances**

not applicable

**3.2. Mixtures****! Hazardous ingredients**

CAS No	EC No	Name	[% weight]	Classification according to Regulation (EC) No 1272/2008 [CLP/GHS]
67-56-1	200-659-6	methanol	>= 0,1 < 3	Flam. Liq. 2, H225 / Acute Tox. 3, H331 / Acute Tox. 3, H311 / Acute Tox. 3, H301 / STOT SE 1, H370

**Hazardous ingredients (continued)**

CAS No	EC No	Name	[% weight]	Classification according to Regulation (EC) No 1272/2008 [CLP/GHS]
50-00-0	200-001-8	Formaldehyd 37%	>= 30 < 50	Acute Tox. 3, H301 / Acute Tox. 2, H330 / Acute Tox. 3, H311 / Skin Corr. 1B, H314 / Eye Dam. 1, H318 / Skin Sens. 1, H317 / Muta. 1, H341 / Carc. 1B, H350 / STOT SE3, H335

**! SECTION 4: First aid measures****4.1. Description of first aid measures****! General information**

Remove contaminated soaked clothing immediately.

In case of accident or if you feel unwell, seek medical advice immediately.

Adhere to personal protective measures when giving first aid.

First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists.

Take away from danger area and lay down affected person.

**! In case of inhalation**

In case of difficulty in breathing: supply oxygen, seek medical advice.

In case of inhalation remove the casualty into fresh air and seek medical advice.

If breathing stops, give artificial respiration.

**! In case of skin contact**

In case of skin contact wash off with plenty of water for at least 15 minutes and take off contaminated clothes and shoes.

Take off contaminated clothes and shoes immediately and wash before wearing again.

Seek medical treatment immediately.

**! In case of eye contact**

If possible, remove contact lenses.

Continue to rinse the eye with eye rinsing solution.

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes.

Call for emergency doctor (eye burning)!

Further treatment by eye clinic / ophthalmologist. Continue eye rinsing until arriving at the eye clinic / ophthalmologist.

**! In case of ingestion**

Do not induce vomiting.

Do not administer anything to unconscious persons.

Call for ambulance immediately (intoxication and burning by formaldehyde).

In case of vomiting, let person bend forward.

Rinse out mouth thoroughly with water.

**4.2. Most important symptoms and effects, both acute and delayed****Physician's information / possible dangers**

May cause an allergic skin reaction.

May cause respiratory irritation.

Suspected of causing genetic defects.

May cause cancer.

Causes serious eye damage.

Causes severe burns.

Causes digestive tract burns.

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Toxic if swallowed, in contact with skin or if inhaled.

#### **4.3. Indication of any immediate medical attention and special treatment needed**

##### **Treatment (Advice to doctor)**

Treat symptomatically and supportively.

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## **! SECTION 5: Firefighting measures**

### **5.1. Extinguishing media**

#### **! Suitable extinguishing media**

Fire-extinguishing activities according to surrounding.

Alcohol-resistant foam

Dry fire-extinguishing substance

Carbon dioxide (CO<sub>2</sub>)

water mist

#### **! Unsuitable extinguishing media**

Full water jet

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

Vapours may form explosive mixtures with air.

In the event of fire the following can be released:

carbon oxides

formaldehyde

Exposure to combustion products may be a hazard to health.

### **5.3. Advice for firefighters**

#### **Special protective equipment for fire-fighters**

Use breathing apparatus with independent air supply ( isolated ).

Use personal protective equipment.

#### **! Additional information**

Cool endangered containers with water spray jet.

Do not use full water jet to suppress spreading of the fire.

Flashback possible over long distances.

Evacuate area.

Remove undamaged containers from fire area if it is safe to do so.

Extinguishing water may not get into drainage system, subsoil or waters.

Provide sufficient reservoir for extinguishing water.

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## **SECTION 6: Accidental release measures**

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

#### **For non-emergency personnel**

Follow safe handling advice and personal protective equipment recommendations.

Remove persons to safety.

Use personal protective clothing.

Keep away sources of ignition.

Only trained personnel should re-enter the area.

Use personal protective equipment.

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**6.2. Environmental precautions**

Retain and dispose of contaminated water / extinguishing water.  
Prevent spreading over a wide area (e. g. by containment or oil barriers).  
Discharge in the environment must be avoided.  
Prevent further leakage or spillage if safe to do so.  
Local authorities should be advised if significant spillages cannot be contained.

**6.3. Methods and material for containment and cleaning up**

For large spills, provide dyking or other appropriate containment to keep material from spreading.  
If dyked material can be pumped, store recovered material in appropriate container.  
Put down gases, vapours, fogs by water spray jet.  
Soak up with inert absorbent material.  
Use spark-proof tools.  
Clean up remaining materials from spill with suitable absorbent.

**Additional Information**

See information in chapter 13 and 15.  
Consider local and/or national regulations regarding release, clean up and disposal.

**6.4. Reference to other sections**

See chapters 7,8,11,12,13.

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**SECTION 7: Handling and storage****7.1. Precautions for safe handling****Advice on safe handling**

Sensitive persons should consult their physician regarding working with sensitizing substances that may irritate breathing.  
Do not breathe vapors, aerosoles or mist.  
Avoid contact with skin and eyes.  
Care for thoroughly room ventilation, if necessary use in well ventilated area with local exhaust ventilation at workplace.  
Use only in thoroughly ventilated areas.  
Handle according to the usual industrial safety- and hygiene practices based on the results of the evaluation of exposure at work site.  
Keep container tightly closed.  
Use personal protective equipment.  
Do not swallow.  
Take the usual precautions when handling with chemicals.

**General protective measures**

Wear suitable protective clothing, gloves and glasses / face protection.  
Take care to prevent spills, waste and minimize release to the environment.  
Working site values have to be kept below the limit.  
The personal protective equipment has to conform with the guideline 89/686/EWG and it's amendments (CE labelling).

**Hygiene measures**

All contaminated protective equipments have to be cleaned after use.  
Keep working clothes separated.  
Avoid contact with skin, eyes and clothes.  
Do not breathe vapours, aerosols, mist.  
At work do not eat, drink, smoke or take drugs.  
Take off contaminated and soaked clothing immediately and wash before wearing again.  
Work in rooms with good ventilation.

Ensure that eye flushing systems and safety showers are located close to the working place.  
 Wash hands before breaks and after work.

**Advice on protection against fire and explosion**

Keep away from sources of ignition - No smoking  
 Pay attention to anti-explosion rules.  
 Take precautionary measures against static discharges.

**7.2. Conditions for safe storage, including any incompatibilities**

**Requirements for storage rooms and vessels**

Keep in properly labelled containers.  
 Store in accordance with the particular national regulations.  
 Store in original container  
 Keep container tightly closed.  
 Keep in a cool, well-ventilated place.

**Advice on storage compatibility**

Do not store with the following product types: strong oxidizing agents, organic peroxides, explosives, gases.  
 Do not store together with: flammable liquids and solids, pyrophoric liquids and solids, self-heating substances and mixtures, substances and mixtures which in contact with water will develop flammable gases.  
 Do not store together with food, beverages and animal feedstuffs.

**Further information on storage conditions**

Keep away from heat and sources of ignition.  
 Keep locked up, out of reach of children  
 Do not smoke.  
 Transport and store in upright position.  
 Storage temperature may not fall below 10°C (=50°F).

**Storage group** 6.1A

**7.3. Specific end use(s)**

No information available.

**! SECTION 8: Exposure controls/personal protection**

**8.1. Control parameters**

**Indicative occupational exposure limit values (91/322/EEC, 2000/39/EC, 2004/37/EC, 2006/15/EC or 2009/161/EU)**

CAS No	Name	Code	[mg/m3]	[ppm]	Remark
67-56-1	methanol	8 hours	260	200	skin

**biological limits (TRGS 903)**

CAS No	Name	Parameter	BGW	Examination material	Test date
67-56-1	methanol	Methanol	15 mg/l	U	b, c

**DNEL-/PNEC-values**

**DNEL worker**

CAS No	Substance name	Value	Code	Remark
50-00-0	Formaldehyd 37%	9 mg/m3	DNEL long-term inhalative (systemic)	
		0,375 mg/m3	DNEL long-term inhalative (local)	

**INTER FORMALDEHYD**
**DNEL-/PNEC-values (continued)**

CAS No	Substance name	Value	Code	Remark
67-56-1	methanol	0,037 mg/cm <sup>2</sup>	DNEL long-term dermal (local)	
		240 mg/kg bw/day	DNEL long-term dermal (systemic)	
		0,75 mg/m <sup>3</sup>	DNEL acute inhalative (local)	
		260 mg/m <sup>3</sup>	DNEL acute inhalative (local)	
		40 mg/kg bw/day	DNEL acute dermal, short-term (systemic)	
		40 mg/kg bw/day	DNEL long-term dermal (systemic)	
		260 mg/m <sup>3</sup>	DNEL long-term inhalative (systemic)	
		260 mg/m <sup>3</sup>	DNEL acute inhalative (systemic)	
		260 mg/m <sup>3</sup>	DNEL long-term inhalative (local)	

**DNEL Consumer**

CAS No	Substance name	Value	Code	Remark
50-00-0	Formaldehyd 37%	0,1 mg/m <sup>3</sup>	DNEL long-term inhalative (local)	
		4,1 mg/kg bw/day	DNEL long-term oral (repeated)	
		102 mg/kg bw/day	DNEL long-term dermal (systemic)	
		3,2 mg/m <sup>3</sup>	DNEL long-term inhalative (systemic)	
		0,012 mg/cm <sup>2</sup>	DNEL long-term dermal (local)	
67-56-1	methanol	50 mg/m <sup>3</sup>	DNEL long-term inhalative (systemic)	
		50 mg/m <sup>3</sup>	DNEL acute inhalative (systemic)	
		8 mg/kg bw/day	DNEL long-term oral (repeated)	
		50 mg/m <sup>3</sup>	DNEL long-term inhalative (local)	
		8 mg/kg bw/day	DNEL short-term oral (acute)	
		8 mg/kg bw/day	DNEL acute dermal, short-term (systemic)	
		8 mg/kg bw/day	DNEL long-term dermal (systemic)	
		50 mg/m <sup>3</sup>	DNEL acute inhalative (local)	

**PNEC**

CAS No	Substance name	Value	Code	Remark
50-00-0	Formaldehyd 37%	0,44 mg/l	PNEC aquatic, freshwater	
		0,44 mg/l	PNEC aquatic, marine water	
		4,44 mg/l	PNEC aquatic, intermittent release	
		0,19 mg/l	PNEC sewage treatment plant (STP)	

**DNEL-/PNEC-values (continued)**

CAS No	Substance name	Value	Code	Remark
67-56-1	methanol	2,3 mg/kg	PNEC sediment, freshwater	
		2,3 mg/kg	PNEC sediment, marine water	
		0,2 mg/kg	PNEC soil	
		100 mg/l	PNEC sewage treatment plant (STP)	
		2,08 mg/l	PNEC aquatic, marine water	
		20,8 mg/l	PNEC aquatic, freshwater	
		1540 mg/l	PNEC aquatic, intermittent release	
		77 mg/kg	PNEC sediment, freshwater	
		7,7 mg/kg	PNEC sediment, marine water	
		100 mg/kg	PNEC soil	

**8.2. Exposure controls****Respiratory protection**

In case of insufficient ventilation, wear suitable respiratory equipment (multi-purpose filter ABEK).

Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines.

Do not inhale vapours.

Full mask (DIN EN 136), type of filter / device: combined filter A-B, brown/grey.

**Hand protection**

For special applications we recommend clarifying the resistance to chemicals of the mentioned protective gloves with the glove manufacturer.

Wash hands before breaks and at the end of workday.

Choose gloves to protect hands against chemicals depending on the concentration and quantity of the hazardous substance and specific to place of work.

Glove material [type, thickness, break through time]: nitrile rubber, 0,12 mm, 340 - < 480 min., DIN EN 374, class 5

Glove material [type, thickness, break through time]: nitrile rubber, 0,38 mm, > 480 min., DIN EN 374, class 6

Glove material [type, thickness, break through time]: butyl rubber, 0,3 mm, > 480 min., DIN EN 374, class 6

Glove material [type, thickness, break through time]: fluorinated rubber, 0,7 mm, > 480 min., DIN EN 374, class 6

**Eye protection**

Chemical resistant goggles must be worn.

If splashes are likely to occur, wear face-shield.

**Other protection measures**

If the test shows that there is a risk of an explosive atmosphere or deflagration, flame-resistant, antistatic protective clothing must be worn.

Skin contact must be avoided by using impervious protective clothing (gloves, aprons, boots, etc.) flame-stopping and antistatic protective clothing

Select appropriate protective clothing based on chemical resistance data and an assessment of the local exposure potential.

**Appropriate engineering controls**

Minimize workplace exposure concentrations.

Use only in area equipped with explosion proof exhaust ventilation.

Use with local exhaust ventilation.



**SECTION 9: Physical and chemical properties****9.1. Information on basic physical and chemical properties****Appearance**  
liquid**Colour**  
colourless**Odour**  
acrid**Odour threshold**  
0,1 - 0,2 ppm**Important health, safety and environmental information**

	Value	Temperature	at	Method	Remark
<b>pH value</b>	ca. 3,5 - 4,5	20 °C			
<b>boiling point</b>	97 °C				
<b>melting point</b>	< -15 °C				
<b>Flash point</b>	66 - 73 °C				Does not sustain combustion.
<b>Vapourisation rate</b>	not determined				
<b>Flammable (solid)</b>					not applicable
<b>Flammability (gas)</b>					not applicable
<b>Ignition temperature</b>	not determined				
<b>Self ignition temperature</b>	430 °C				1013 hPa
<b>Lower explosion limit</b>	7 Vol-%				
<b>Upper explosion limit</b>	72 Vol-%				
<b>Vapour pressure</b>	1 hPa	20 °C			
<b>Relative density</b>	not determined				
<b>Vapour density</b>	not determined				
<b>Solubility in water</b>					completely soluble
<b>Solubility/other</b>	not determined				
<b>Partition coefficient n-octanol/water (log P O/W)</b>	0,35				

	Value	Temperature	at	Method	Remark
<b>Decomposition temperature</b>					The substance / mixture is not classified self-reactive.
<b>Viscosity dynamic</b>	1,8 - 2,5 mPa*s	25 °C			
<b>Oxidising properties</b>	The substance or mixture is not classified as oxidizing.				
<b>Explosive properties</b>	non-explosive				
<b>9.2. Other information</b>	No information available.				

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Not classified as a reactivity hazard.

### 10.2. Chemical stability

Stable under the storage- and handling conditions given in the MSDS.

### 10.3. Possibility of hazardous reactions

Vapours may form explosive mixtures with air.  
 Reactions with combustible liquids.  
 Can react with strong oxidizing agents.

### 10.4. Conditions to avoid

Flames  
 sparks  
 heat

### 10.5. Incompatible materials

**Substances to avoid**  
 oxidizing agents

### 10.6. Hazardous decomposition products

No hazardous decomposition products are known.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

#### Acute toxicity/Irritation/Sensitization

	Value/Validation	Species	Method	Remark
<b>LD50 acute oral</b>	266,67 mg/kg		calculated	Values refer to the product.

	Value/Validation	Species	Method	Remark
<b>LD50 acute dermal</b>	704,04 mg/kg		calculated	Values refer to the product.
<b>LC50 acute inhalation</b>	271 ppm (4 h)		calculated	Values refer to the product.
<b>Skin irritation</b>	Corrosive after 3 minutes to 1 hours of exposure.	rabbit	OECD 404	Value refers to formaldehyde.
<b>Eye irritation</b>	irreversible effects on the eye	rabbit		Value refers to formaldehyde.
<b>Skin sensitization</b>	High degree of skin sensitization in human beings possible or proven.	mouse	OECD test guideline 429, local lymph node assay (LLNA)	Value refers to formaldehyde.
<b>Sensitization respiratory system</b>	Not classified based on available information.			

#### Subacute Toxicity - Carcinogenicity

	Value	Species	Method	Validation
<b>Mutagenicity</b>				Suspected of causing genetic defects.
<b>Reproduction-Toxicity</b>				Not classified based on available information.
<b>Carcinogenicity</b>		rat	Application route: vapour (Inhalation), exposure time: 28 months	Sufficient evidence of carcinogenicity in animal experiments.

#### Specific target organ toxicity (single exposure)

Formaldehyde: may cause respiratory irritation.  
 Methanol: causes damage to organs.

#### Specific target organ toxicity (repeated exposure)

Not classified based on available information.

#### Aspiration hazard

Not classified based on available information.

## SECTION 12: Ecological information

### 12.1. Toxicity

#### Ecotoxicological effects

Value	Species	Method	Validation
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	Value	Species	Method	Validation
<b>Fish</b>	LC50 6,7 mg/l (96 h)		Based on data from similar materials.	Refers to formaldehyde.
<b>Daphnia</b>	EC50 5,8 mg/l (48 h)	Daphnia pulex	OECD 202	Refers to formaldehyde.
<b>Algae</b>	EC50 4,89 mg/l (72 h)	Desmodesmus subspicatus	OECD 201	Value refers to formaldehyde.
<b>Bacteria</b>	EC50 34,1 mg/l (120 h)			Refers to formaldehyde.

### 12.2. Persistence and degradability

	Elimination rate	Method of analysis	Method	Validation
<b>Biological degradability</b>	91 % (14 d) Value refers to formaldehyde (based on data from similar materials).		OECD 301 C	easily biodegradable

### 12.3. Bioaccumulative potential

No information available.

### 12.4. Mobility in soil

No data available.

### 12.5. Results of PBT and vPvB assessment

No information available.

### 12.6. Other adverse effects

#### General regulation

Hazardous water pollutant

Product is not allowed to be discharged into aquatic environment.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

#### Recommendations for the product

Remove in accordance with local official regulations.

#### Recommendations for packaging

Empty containers contain product remnants and may be dangerous.

Do not: put container under pressure, cut, weld, solder, drill or expose to heat, flames, sparks or other sources of ignition. Containers may explode and cause injuries and/or death.

Dispose of empty containers at an official dump for recycling or disposal.

#### Recommended cleansing agent

water

#### General information

A waste code according to the European waste catalogue cannot be specified for this product as the specification is based on the intended use.

**SECTION 14: Transport information**

	<b>ADR/RID</b>	<b>IMDG</b>	<b>IATA-DGR</b>
<b>14.1. UN number</b>	2209	2209	-
<b>14.2. UN proper shipping name</b>	FORMALDEHYDE SOLUTION	FORMALDEHYDE SOLUTION	-
<b>14.3. Transport hazard class(es)</b>	8	8	-
<b>14.4. Packing group</b>	III	III	-
<b>14.5. Environmental hazards</b>	No	No	-

**14.6. Special precautions for user**

No information available.

**14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

The transport takes place only in approved and appropriate packaging.

**Land and inland navigation transport ADR/RID**

Hazard label(s) 8

Tunnel restriction code E

Classification code C9

**Marine transport IMDG**

EmS: F-A, S-B

**SECTION 15: Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****National regulations****Restriction of occupation**

Observe employment restrictions for young people.

Observe employment restrictions for mothers-to-be and nursing mothers.

Observe employment restrictions for women of child-bearing age.

Observe hazardous incident regulations.

**Other regulations, restrictions and prohibition regulations**

chemicals prohibition ordinance

Pay attention to BGI 614 "Formaldehyde".

**Water hazard class** 2 Classification according to VwVwS, Annex 2**15.2. Chemical Safety Assessment**

For this substance a chemical safety assessment has been carried out.

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**SECTION 16: Other information****Further information**

The information contained herein is based on the state of our knowledge. It characterizes the product with regard to the appropriate safety precautions. It does not represent a guarantee of the properties of the product.

Indication of changes: "!" = Data changed compared with the previous version. Previous version: 1.6

- H225 Highly flammable liquid and vapour.
- H301 Toxic if swallowed.
- H311 Toxic in contact with skin.
- H314 Causes severe skin burns and eye damage.
- H317 May cause an allergic skin reaction.
- H318 Causes serious eye damage.
- H330 Fatal if inhaled.
- H331 Toxic if inhaled.
- H335 May cause respiratory irritation.
- H341 Suspected of causing genetic defects (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard).
- H350 May cause cancer (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard).
- H370 Causes damage to organs (or state all organs affected, if known) (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard).