

# SAFETY DATA SHEET



according to GHS- B.E. 2555  
Leak Detection Spray frost-proof

## Section 1. Identification of the substance/mixture and of the company/undertaking

GHS product identifier : Leak Detection Spray frost-proof  
Product code : 116540

### Relevant identified uses of the substance or mixture and uses advised against

Aerosol product

Supplier's details : WEICON GmbH & Co. KG  
Königsberger Str. 255  
48157 Münster  
Germany  
Phone: +49 251 93220  
Fax: +49(0)251 / 9322 - 244  
Internet: www.weicon.de

e-mail address of person responsible for this SDS : msds@weicon.de

Emergency telephone number : **TRANSPORT / EMERGENCY CONTACT (24h): Tel: +44 1865 407333 (English)**

## Section 2. Hazards identification

Classification of the substance or mixture : TOXIC TO REPRODUCTION - Category 1  
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2  
AQUATIC HAZARD (ACUTE) - Category 3

### GHS label elements

Hazard pictograms :



Signal word : Danger

Hazard statements : H360 - May damage fertility or the unborn child.  
H373 - May cause damage to organs through prolonged or repeated exposure.  
H402 - Harmful to aquatic life.

### Precautionary statements

Prevention : P201 - Obtain special instructions before use.  
P281 - Use personal protective equipment as required.  
P273 - Avoid release to the environment.  
P260 - Do not breathe dust or mist.

Response : P308 + P313 - IF exposed or concerned: Get medical advice or attention.

Storage : P405 - Store locked up.

Disposal : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

Other hazards which do not result in classification : None known.

## Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Ingredient name	%	CAS number
nitrous oxide [Compressed or liquefied]	≤3	10024-97-2
Amines, coco alkyldimethyl, N-oxides	<1	61788-90-7

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

## Section 4. First aid measures

### Description of necessary first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

### Most important symptoms/effects, acute and delayed

#### Potential acute health effects

- Eye contact** : No known significant effects or critical hazards.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : No known significant effects or critical hazards.
- Ingestion** : No known significant effects or critical hazards.

#### Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:  
irritation  
redness
- Inhalation** : Adverse symptoms may include the following:  
respiratory tract irritation  
coughing  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations

## Section 4. First aid measures

- Skin contact** : Adverse symptoms may include the following:  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations
- Ingestion** : Adverse symptoms may include the following:  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations

### Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

### Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

- Specific hazards arising from the chemical** : In a fire or if heated, a pressure increase will occur and the container may burst. Bursting aerosol containers may be propelled from a fire at high speed. This material is harmful to aquatic life. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
- Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide  
nitrogen oxides
- Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. In the case of aerosols being ruptured, care should be taken due to the rapid escape of the pressurized contents and propellant. If a large number of containers are ruptured, treat as a bulk material spillage according to the instructions in the clean-up section. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

## Section 6. Accidental release measures

**For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

**Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

### Methods and materials for containment and cleaning up

**Small spill** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

## Section 7. Handling and storage

### Precautions for safe handling

**Protective measures** : Put on appropriate personal protective equipment (see Section 8). Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Avoid breathing gas. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Empty containers retain product residue and can be hazardous.

**Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

**Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

## Section 8. Exposure controls/personal protection

### Control parameters

#### Occupational exposure limits

Ingredient name	Exposure limits
nitrous oxide [Compressed or liquefied]	<b>Ministry of Labor (Thailand, 8/2017).</b> TWA: 50 ppm 8 hours.

**Appropriate engineering controls** : Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

**Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

### Individual protection measures

## Section 8. Exposure controls/personal protection

- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. Recommended : 1 - 4 hours (breakthrough time): nitrile rubber 4 - 8 hours (breakthrough time): Viton®/butyl rubber
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use. Recommended : organic vapor (Type AX) and particulate filter

## Section 9. Physical and chemical properties

### Appearance

- Physical state** : Aerosol.
- Color** : Colorless.
- Odor** : Characteristic.
- Odor threshold** : Not available.
- pH** : 7 to 8
- Melting point** : Not available.
- Boiling point** : Not available.
- Flash point** : Closed cup: Not applicable.
- Fire point** : >375°C (>707°F)
- Evaporation rate** : Not available.
- Flammability (solid, gas)** : Slightly flammable in the presence of the following materials or conditions: open flames, sparks and static discharge and heat.
- Lower and upper explosive (flammable) limits** : Not available.
- Vapor pressure** : 546.6 to 639.9 kPa (4100 to 4800 mm Hg) [room temperature]
- Vapor density** : Not available.
- Relative density** : Not available.
- Density** : 1.05 g/cm<sup>3</sup>
- Solubility** : Partially soluble in the following materials: cold water and hot water.
- Solubility in water** : Not available.
- Partition coefficient: n-octanol/water** : Not available.

## Section 9. Physical and chemical properties

**Auto-ignition temperature** : Not applicable.

**Decomposition temperature** : Not available.

**Viscosity** : Not available.

**Flow time (ISO 2431)** : Not available.

### Aerosol product

**Type of aerosol** : Spray

**Heat of combustion** : 8.993 kJ/g

## Section 10. Stability and reactivity

**Reactivity** : No specific test data related to reactivity available for this product or its ingredients.

**Chemical stability** : The product is stable.

**Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.

**Conditions to avoid** : No specific data.

**Incompatible materials** : No specific data.

**Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## Section 11. Toxicological information

### Information on toxicological effects

#### Acute toxicity

Not available.

#### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Amines, coco alkyldimethyl, N-oxides	Skin - Mild irritant	Guinea pig	-	840 hours	-
	Skin - Moderate irritant	Human	-	115 mg	-
				24 hours	
	Skin - Mild irritant	Rabbit	-	2500 ug	-
10 mg					
Skin - Mild irritant	Rabbit	-	840 hours	-	
				230 mg	

#### Sensitization

Not available.

#### Mutagenicity

Not available.

#### Carcinogenicity

Not available.

#### Reproductive toxicity

Not available.

#### Teratogenicity

Not available.

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

## Section 11. Toxicological information

Name	Category	Route of exposure	Target organs
nitrous oxide [Compressed or liquefied]	Category 3	-	Narcotic effects

### Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
nitrous oxide [Compressed or liquefied]	Category 1	-	-

### Aspiration hazard

Not available.

**Information on the likely routes of exposure** : Not available.

### Potential acute health effects

**Eye contact** : No known significant effects or critical hazards.  
**Inhalation** : No known significant effects or critical hazards.  
**Skin contact** : No known significant effects or critical hazards.  
**Ingestion** : No known significant effects or critical hazards.

### Symptoms related to the physical, chemical and toxicological characteristics

**Eye contact** : Adverse symptoms may include the following:  
irritation  
redness

**Inhalation** : Adverse symptoms may include the following:  
respiratory tract irritation  
coughing  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations

**Skin contact** : Adverse symptoms may include the following:  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations

**Ingestion** : Adverse symptoms may include the following:  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations

### Delayed and immediate effects and also chronic effects from short and long term exposure

#### Short term exposure

**Potential immediate effects** : Not available.  
**Potential delayed effects** : Not available.

#### Long term exposure

**Potential immediate effects** : Not available.  
**Potential delayed effects** : Not available.

#### Potential chronic health effects

Not available.

**General** : May cause damage to organs through prolonged or repeated exposure.  
**Carcinogenicity** : No known significant effects or critical hazards.  
**Mutagenicity** : No known significant effects or critical hazards.

## Section 11. Toxicological information

- Teratogenicity** : May damage the unborn child.  
**Developmental effects** : No known significant effects or critical hazards.  
**Fertility effects** : May damage fertility.

### Numerical measures of toxicity

#### Acute toxicity estimates

N/A

#### Acute toxicity estimates

Not available.

## Section 12. Ecological information

### Toxicity

Not available.

### Persistence and degradability

Not available.

### Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
nitrous oxide [Compressed or liquefied]	0.36	-	low

### Mobility in soil

- Soil/water partition coefficient (K<sub>oc</sub>)** : Not available.

- Other adverse effects** : No known significant effects or critical hazards.




## Section 13. Disposal considerations

- Disposal methods** : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.

## Section 14. Transport information



## Section 14. Transport information

	UN	IMDG	IATA
UN number	UN1950	UN1950	UN1950
UN proper shipping name	AEROSOLS	AEROSOLS	Aerosols, non-flammable
Transport hazard class(es)	2.2 	2.2 	2.2 
Packing group	-	-	-
Environmental hazards	No.	No.	No.

### Additional information

- UN** : **Special provisions** 63, 190, 277, 327, 344, 381
- IMDG** : **Emergency schedules** F-D, S-U  
**Special provisions** 63, 190, 277, 327, 344, 381, 959
- IATA** : **Quantity limitation** Passenger and Cargo Aircraft: 75 kg. Packaging instructions: 203. Cargo Aircraft Only: 150 kg. Packaging instructions: 203. Limited Quantities - Passenger Aircraft: 30 kg. Packaging instructions: Y203.  
**Special provisions** A98, A145, A167, A802

**Special precautions for user** : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**Transport in bulk according to IMO instruments** : Not available.

## Section 15. Regulatory information

### Hazardous Substances Act

#### Type

Ingredient name	CAS number	Threshold	Type	Authority	Conditions
triethanolamine	102-71-6	-	3	Department of Industrial Works	controlled hazardous substances according to list 3B (Precursors) annexed to chemical weapons convention.

**Harmful Chemicals List** : Listed

### International regulations

#### Chemical Weapon Convention List Schedules I, II & III Chemicals

Ingredient name	List name	Status
Triethanolamine	Schedule III	Listed

#### Montreal Protocol

Not listed.

#### Stockholm Convention on Persistent Organic Pollutants

Not listed.

#### Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

## Section 15. Regulatory information

### UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

### Inventory list

<b>Australia</b>	: All components are listed or exempted.
<b>Canada</b>	: All components are listed or exempted.
<b>China</b>	: All components are listed or exempted.
<b>Europe</b>	: All components are listed or exempted.
<b>Japan</b>	: <b>Japan inventory (ENCS)</b> : All components are listed or exempted. <b>Japan inventory (ISHL)</b> : Not determined.
<b>New Zealand</b>	: All components are listed or exempted.
<b>Philippines</b>	: All components are listed or exempted.
<b>Republic of Korea</b>	: All components are listed or exempted.
<b>Taiwan</b>	: All components are listed or exempted.
<b>Thailand</b>	: Not determined.
<b>Turkey</b>	: Not determined.
<b>United States</b>	: All components are active or exempted.
<b>Viet Nam</b>	: All components are listed or exempted.

## Section 16. Other information

### History

<b>Date of printing</b>	: 10.06.2020
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<b>Version</b>	: 1

<b>Key to abbreviations</b>	: ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IBC = Intermediate Bulk Container IMDG = International Maritime Dangerous Goods LogPow = logarithm of the octanol/water partition coefficient MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) N/A = Not available SGG = Segregation Group UN = United Nations
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### Procedure used to derive the classification

Classification	Justification
TOXIC TO REPRODUCTION - Category 1	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2	Calculation method
AQUATIC HAZARD (ACUTE) - Category 3	Calculation method

<b>References</b>	: Not available.
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☑ Indicates information that has changed from previously issued version.

### Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.