

\* **SECTION 1: Identification of the substance/mixture and of the company/undertaking**

- **1.1 Product identifier**
- **Trade name: MK-9 Red Pepper Spray -400 ml-**
- **Article number: 90000**
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.
- **Application of the substance / the mixture** Defense Spray
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
DEF-TEC Defense Technology GmbH  
Eschborner Landstr. 42 - 50  
D-60489 Frankfurt-Rödelheim  
Tel.: +49-69-743038-0  
Fax: +49-69-74303822  
info@deftec.de
- **Further information obtainable from:** Product safety department
- **1.4 Emergency telephone number:** Tel.:+49-69-743038-0 (Während der Geschäftszeiten)

\* **SECTION 2: Hazards identification**

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**  
Aerosol 3 H229 Pressurised container: May burst if heated.

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- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**  
The product is classified and labelled according to the CLP regulation.
- **Hazard pictograms** Void
- **Signal word** Warning
- **Hazard statements**  
H229 Pressurised container: May burst if heated.
- **Precautionary statements**  
P102 Keep out of reach of children.  
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P251 Do not pierce or burn, even after use.  
P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.
- **Additional information:**  
Contains fluorinated greenhouse gases HFC 134 a  
27.8666095 % by mass of the contents are flammable
- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

\* **SECTION 3: Composition/information on ingredients**

- **3.2 Chemical characterisation: Mixtures**
- **Description:** Mixture of substances listed below with nonhazardous additions.

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**· Dangerous components:**

CAS: 64-17-5 EINECS: 200-578-6 Index number: 603-002-00-5	ethanol ⚠ Flam. Liq. 2, H225; ⚠ Eye Irrit. 2, H319	20 - 30%
CAS: 811-97-2 EINECS: 212-377-0	1,1,1,2-tetrafluoroethane ⚠ Press. Gas C, H280	10 - 20%
CAS: 8023-77-6 EINECS: 283-256-8	Capsicum spp. ⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	1-<10%

**· Regulation (EC) No 648/2004 on detergents / Labelling for contents**

halogenated hydrocarbons	≥15 - <30%
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**· Additional information:** For the wording of the listed hazard phrases refer to section 16.**SECTION 4: First aid measures**

- **4.1 Description of first aid measures**
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** Seek medical treatment.
- **4.2 Most important symptoms and effects, both acute and delayed**
- Breathing difficulty
- Coughing
- Profuse sweating
- **4.3 Indication of any immediate medical attention and special treatment needed**
- No further relevant information available.

**SECTION 5: Firefighting measures**

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**  
CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **5.2 Special hazards arising from the substance or mixture** No further relevant information available.
- **5.3 Advice for firefighters**
- **Protective equipment:** No special measures required.
- **Additional information**  
Collect contaminated fire fighting water separately. It must not enter the sewage system.

**SECTION 6: Accidental release measures**

- **6.1 Personal precautions, protective equipment and emergency procedures**  
Ensure adequate ventilation  
Wear protective equipment. Keep unprotected persons away.
- **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:** Ensure adequate ventilation.
- **6.4 Reference to other sections**  
No dangerous substances are released.  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

**SECTION 7: Handling and storage**

- **7.1 Precautions for safe handling** No special precautions are necessary if used correctly.

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- **Information about fire - and explosion protection:**  
Do not spray onto a naked flame or any incandescent material.  
Keep ignition sources away - Do not smoke.  
Pressurised container: protect from sunlight and do not expose to temperatures exceeding 50 °C, i.e. electric lights. Do not pierce or burn, even after use.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**  
Observe official regulations on storing packagings with pressurised containers.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**  
Pressurised container: protect from sunlight and do not expose to temperatures exceeding 50 °C, i.e. electric lights. Do not pierce or burn, even after use.
- **Storage class:** 2 B
- **7.3 Specific end use(s)** No further relevant information available.

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

- **Additional information about design of technical facilities:** No further data; see item 7.
- **8.1 Control parameters**
- **Ingredients with limit values that require monitoring at the workplace:**  
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:** The lists valid during the making were used as basis.
- **8.2 Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:** Wash hands before breaks and at the end of work.
- **Respiratory protection:**  
Filter P1  
Not necessary if room is well-ventilated.
- **Protection of hands:**  
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.  
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
- **Material of gloves**  
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
- **Penetration time of glove material**  
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **As protection from splashes gloves made of the following materials are suitable:** Butyl rubber, BR
- **Eye protection:** Not required.

**SECTION 9: Physical and chemical properties**

- **9.1 Information on basic physical and chemical properties**
- **General Information**
- **Appearance:**

<b>Form:</b>	Aerosol
<b>Colour:</b>	Light brown

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· <b>Odour:</b>	Acrid
· <b>Odour threshold:</b>	Not determined.
· <b>pH-value:</b>	Not determined.
· <b>Change in condition</b>	
<b>Melting point/freezing point:</b>	Undetermined.
<b>Initial boiling point and boiling range:</b>	Not applicable, as aerosol.
· <b>Flash point:</b>	40 °C
· <b>Flammability (solid, gas):</b>	Not applicable.
· <b>Ignition temperature:</b>	371 °C
· <b>Decomposition temperature:</b>	Not determined.
· <b>Auto-ignition temperature:</b>	Product is not selfigniting.
· <b>Explosive properties:</b>	Product does not present an explosion hazard.
· <b>Explosion limits:</b>	
<b>Lower:</b>	3.5 Vol %
<b>Upper:</b>	15.0 Vol %
· <b>Vapour pressure at 20 °C:</b>	9600 hPa
· <b>Density at 20 °C:</b>	1 g/cm <sup>3</sup>
· <b>Relative density</b>	Not determined.
· <b>Vapour density</b>	Not determined.
· <b>Evaporation rate</b>	Not applicable.
· <b>Solubility in / Miscibility with water:</b>	Fully miscible.
· <b>Partition coefficient: n-octanol/water:</b>	Not determined.
· <b>Viscosity:</b>	
<b>Dynamic:</b>	Not determined.
<b>Kinematic:</b>	Not determined.
· <b>Solvent content:</b>	
<b>VOC (EC)</b>	31.97 %
· <b>9.2 Other information</b>	No further relevant information available.

### SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

### SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.
- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation** Based on available data, the classification criteria are not met.

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- **Values relevant for classification:**  
64-17-5 Ethanol: specific concentration limit [SCL] (ECHA)  $\geq 50.0\%$  Eye Irrit. 2
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

**SECTION 12: Ecological information**

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** Easily biodegradable
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**  
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water  
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

**SECTION 13: Disposal considerations**

- **13.1 Waste treatment methods**
  - **Recommendation**  
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
  - **European waste catalogue**
- |           |  |
|-----------|--|
| 15 01 10* | packaging containing residues of or contaminated by hazardous substances |
| 15 01 04  | metallic packaging   |
- **Uncleaned packaging:**
  - **Recommendation:** Disposal must be made according to official regulations.

**SECTION 14: Transport information**

- **14.1 UN-Number**
- **ADR, IMDG, IATA** UN1950
- **14.2 UN proper shipping name**
- **ADR** 1950 AEROSOLS
- **IMDG** AEROSOLS
- **IATA** AEROSOLS, non-flammable

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## · 14.3 Transport hazard class(es)

## · ADR



- Class 2 5A Gases.
- Label 2.2

## · IMDG, IATA



- Class 2.2
- Label 2.2

## · 14.4 Packing group

- ADR, IMDG, IATA Void

## · 14.5 Environmental hazards:

- Marine pollutant: No

## · 14.6 Special precautions for user

- Danger code (Kemler): -
- EMS Number: F-D,S-U
- Stowage Code SW1 Protected from sources of heat.  
SW22 For AEROSOLS with a maximum capacity of 1 litre: Category A. For AEROSOLS with a capacity above 1 litre: Category B. For WASTE AEROSOLS: Category C, Clear of living quarters.
- Segregation Code SG69 For AEROSOLS with a maximum capacity of 1 litre: Segregation as for class 9. Stow "separated from" class 1 except for division 1.4. For AEROSOLS with a capacity above 1 litre: Segregation as for the appropriate subdivision of class 2. For WASTE AEROSOLS: Segregation as for the appropriate subdivision of class 2.

## · 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable.

## · Transport/Additional information:

## · ADR

- Limited quantities (LQ) 1L
- Excepted quantities (EQ) Code: E0  
Not permitted as Excepted Quantity
- Transport category 3
- Tunnel restriction code E

## · IMDG

- Limited quantities (LQ) 1L
- Excepted quantities (EQ) Code: E0  
Not permitted as Excepted Quantity

## · UN "Model Regulation":

UN 1950 AEROSOLS, 2.2

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**SECTION 15: Regulatory information**

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

**SECTION 16: Other information**

*This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.*

- **Relevant phrases**
- H225 Highly flammable liquid and vapour.*
- H280 Contains gas under pressure; may explode if heated.*
- H315 Causes skin irritation.*
- H319 Causes serious eye irritation.*
- H335 May cause respiratory irritation.*
- **Contact:** Hr. Prase
- **Abbreviations and acronyms:**
- ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)*
- IMDG: International Maritime Code for Dangerous Goods*
- IATA: International Air Transport Association*
- GHS: Globally Harmonised System of Classification and Labelling of Chemicals*
- EINECS: European Inventory of Existing Commercial Chemical Substances*
- ELINCS: European List of Notified Chemical Substances*
- CAS: Chemical Abstracts Service (division of the American Chemical Society)*
- VOC: Volatile Organic Compounds (USA, EU)*
- PBT: Persistent, Bioaccumulative and Toxic*
- vPvB: very Persistent and very Bioaccumulative*
- Aerosol 3: Aerosols – Category 3*
- Press. Gas C: Gases under pressure – Compressed gas*
- Flam. Liq. 2: Flammable liquids – Category 2*
- Skin Irrit. 2: Skin corrosion/irritation – Category 2*
- Eye Irrit. 2: Serious eye damage/eye irritation – Category 2*
- STOT SE 3: Specific target organ toxicity (single exposure) – Category 3*
- **\* Data compared to the previous version altered.**

EU