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

1.1. Product identifier

Name of product Stichfrei Spray

1.2. Relevant identified uses of the substance or mixture and uses advised against

! **Recommended intended purpose(s)**
Mosquito repellent added with skin care and sun protection

1.3. Details of the supplier of the safety data sheet

Manufacturer
F.W.Klever
Hauptstraße 20, D-84168 Aham
Phone +49 (0) 8744 96 99 10, Fax + 49 (0) 8744 96 99 96

E-Mail info@ballistol.de
Internet www.ballistol.de

Advice
Qualitätssicherung
Phone +49 (0) 8744 96 99 30
E-mail (competent person):
info@ballistol.de

1.4. Emergency telephone number

Emergency advice
Dr.Zettler (Werktags von 8.00 Uhr bis 16.00 Uhr) oder
Giftnotrufzentrale 022819240
Phone +49 (0) 8744 96 99 30

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
Aerosol 1	**H222, H229**	
Aquatic Chronic 3	**H412**	

Hazard statements for physical hazards

H222	**Extremely flammable aerosol.**
H229	**Pressurised container: May burst if heated.**

Hazard statements for environmental hazards

H412	**Harmful to aquatic life with long lasting effects.**

! **Additional hints**
This is a biocidal product (Reg: N-33738)
Repellent: sec-Butyl-2(2-hydroxyethyl)piperidin-1-carboxylat 20g/100g

2.2. Label elements

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

GHS02

Signal word
Danger

Hazard statements for physical hazards

H222	**Extremely flammable aerosol.**
H229	**Pressurised container: May burst if heated.**

Hazard statements for environmental hazards

H412	**Harmful to aquatic life with long lasting effects.**

Precautionary Statements

General

P102	Keep out of reach of children.

Prevention

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.
P273	Avoid release to the environment.

Response

P370 + P378	In case of fire: Use water for extinction.

Storage

P410 + P412	Protect from sunlight. Do no expose to temperatures exceeding 50°C/122°F.

Disposal

P501	Dispose of contents/container to ... .
P501	Dispose of contents/container to recycling

2.3. Other hazards
No information available.

SECTION 3: Composition/ information on ingredients

3.1. Substances
not applicable

3.2. Mixtures
Hazardous ingredients

CAS No	EC No	Name	[%]	Classification according to Regulation (EC) No 1272/2008 [CLP/ GHS]
74-98-6	**200-827-9**	**propane**	**< 10**	**Flam. Gas 1, H220 / Press. Gas**
106-97-8	**203-448-7**	**butane**	**< 20**	**Flam. Gas 1, H220 / Press. Gas**
		Parfüm	**< 2**	**Aquatic Chronic 3**

SECTION 4: First aid measures

4.1. Description of first aid measures

General information
Take away from danger area and lay down affected person.

In case of inhalation
Ensure fresh air.
In the event of symptoms refer for medical treatment.

In case of skin contact
Consult a doctor if skin irritation persists.

In case of eye contact
In case of contact with eyes rinse with plenty of water carefully. In the event of persistent symptoms seek medical treatment.

In case of ingestion
Turn a vomiting person lying on his back onto his side.
Do not induce vomiting.
Rinse out mouth and give plenty of water to drink.

4.2. Most important symptoms and effects, both acute and delayed

Physician's information / possible symptoms
The following symptoms may occur:
In case of inhalation of plenty of solvent-containing fumes the following symptoms may occur:
Coughing
Headache
Confusion

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

Treatment (Advice to doctor)
Treat symptoms.

! SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media
Foam
Carbon dioxide
Water spray jet

Unsuitable extinguishing media
Full water jet

5.2. Special hazards arising from the substance or mixture

Carbon dixide (CO_2)

5.3. Advice for firefighters

Special protective equipment for fire-fighters
Use breathing apparatus with independent air supply (isolated).
Wear full protective clothing.

Additional information
Cool endangered containers with water spray jet.
Heating causes rise in pressure with risk of bursting
Fire residues and contaminated firefighting water must be disposed of in accordance with the local regulations.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel
Ensure adequate ventilation.
Keep people away and stay on the upwind side.
Use personal protective clothing.
Keep away sources of ignition.

6.2. Environmental precautions

Do not discharge into the drains/surface waters/groundwater.

6.3. Methods and material for containment and cleaning up

Take up mechanically and send for disposal.

6.4. Reference to other sections

No information available.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling
No special measures necessary if used correctly.

General protective measures
Do not inhale aerosols
Avoid contact with the eyes.

Hygiene measures
At work do not eat, drink, smoke or take drugs.
Storing of food in workroom forbidden.
Wash hands before breaks and after work.

Advice on protection against fire and explosion
Keep away from sources of ignition - No smoking
Protect aerosols from temperatures exceeding 50°C/ 122°F

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels
Keep only in original container.

Advice on storage compatibility
Do not store together with food.

Further information on storage conditions
Protect of heat.

Storage group 2B

7.3. Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.2. Exposure controls

Respiratory protection
Respiratory protection must be worn whenever the WEL levels have been exceeded
The following applies to propane in general: If the concentration is exceeded, closed-circuit breathing apparatures must be used
Use filter apparatus type AX, identification colour brown according to EN 371

Hand protection
Stichfrei Dermatologist with was "very good" so that no hands protection needed.

Eye protection
tightly fitting goggles

Other protection measures
protective clothing

Limitation and surveillance of the environment

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Colour	Odour
aerosol	colourless, clear	fruity

Odour threshold
not determined

Important health, safety and environmental information

	Value	Temperature	at	Method	Remark
pH value	ca. 7,5	20 °C			neutral
boiling point	78,2 °C		1013 hPa		
Melting point / Freezing point	not determined				
Flash point	ca. 12 °C			DIN 51755	
Vapourisation rate	not determined				
Flammable (solid)	not determined				
Flammability (gas)	not determined				
Ignition temperature	not determined				
Self ignition temperature	not determined				
Lower explosion limit	3,5 Vol-%				

	Value	Temperature	at	Method	Remark
Upper explosion limit	15 Vol-%				
Vapour pressure	ca. 60 hPa	20 °C			
Relative density	ca. 0,916 g/cm3	20 °C	1013 hPa	pycnometer	
Vapour density	not determined				
Solubility in water					insoluble
Solubility/other	not determined				
Partition coefficient n-octanol/water (log P O/W)	not determined				
Decomposition temperature	not determined				
Viscosity kinematic	ca. 10 mm2/s	20 °C			information concerns to liquid phase

Oxidising properties
No information available.

Explosive properties
No information available.

9.2. Other information
No information available.

SECTION 10: Stability and reactivity

10.1. Reactivity
No information available.

10.2. Chemical stability
No information available.

10.3. Possibility of hazardous reactions
No information available.

10.4. Conditions to avoid
Container under pressure. Protect from direct exposure to sunlight and temperatures exceeding 50°C/ 122°F.

10.5. Incompatible materials
Substances to avoid
Reactions with strong oxidising agents.

10.6. Hazardous decomposition products
Carbon monoxide and carbon dioxide.

! SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity/Irritation/Sensitization

	Value/Validation	Species	Method	Remark
LD50 acute oral	> 10000 mg/kg	rat		
LC50 acute inhalation	> 1800 mg/l (4 h)	Rat (female)	OECD 403	
Skin irritation	non-irritant			
Eye irritation	low irritant			
Skin sensitization	non-sensitizing			experiences

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicological effects

	Value	Species	Method	Validation
Fish	LC50 > 100 mg/l (24 h)	Oncorhynchus mykiss	EPA	Based on the actual test result or equivalent product
Daphnia	EC50 > 100 mg/l (48 h)	Daphnia magna	OECD	
Algae	EC50 > 100 g/m3 (72 h)	Scenedesmus quadricauda		

12.2. Persistence and degradability

	Elimination rate	Method of analysis	Method	Validation
Biological degradability				readily degradable

12.3. Bioaccumulative potential

No information available.

12.4. Mobility in soil

No information available.

12.5. Results of PBT and vPvB assessment

No information available.

12.6. Other adverse effects

General regulation

Do not allow uncontrolled leakage of product into the environment.

The breakdown properties of the product have not been tested. The information on these is given on the basis of details in the literature.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste code No.	Name of waste
13 08 99*	wastes not otherwise specified

Wastes marked with an asterisk are considered to be hazardous waste pursuant to Directive 2008/98/EC on hazardous waste.

Recommendations for the product
Incinerate in suitable incineration plant, but care for official regulations.

Recommendations for packaging
Totally emptied packaging may be taken for recycling.
Barrel: return by DSD (Dualistic System Germany)

! SECTION 14: Transport information

	ADR/RID	IMDG	IATA-DGR
14.1. UN number	1950	1950	1950
14.2. UN proper shipping name	Druckgaspackung	Aerosols	Aerosols, flammable
14.3. Transport hazard class(es)	2	2	2.1
14.4. Packing group	-	-	-
14.5. Environmental hazards	No	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
No information available.

Land and inland navigation transport ADR/RID
tunnel restriction code D
Classification code 5F

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulations

Water hazard class 1 self-classification

15.2. Chemical Safety Assessment
For this substance a chemical safety assessment is not required.

SECTION 16: Other information

Recommended uses and restrictions
National and local regulations concerning chemicals shall be observed.

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: 5.8

H220 Extremely flammable gas.