

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006

### Best-Aktiv C Spray

Print date: 18.12.2011

Product code:

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

##### Product identifier

Best-Aktiv C Spray

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

###### Use of the substance/mixture

See product information.

###### Uses advised against

none/none

##### Details of the supplier of the safety data sheet

Company name:	Best Klebstoffe GmbH & Co. KG		
Street:	Gewerbestraße 10-14		
Place:	D-86981 Kinsau		
Telephone:	+49 (0)8869-93139	Telefax: +49 (0)8869-5238	
e-mail:	info@bestklebstoffe.de		
Internet:	www.bestklebstoffe.de		
Responsible Department:	Dr. Timo Gans-Eichler	e-mail: tge-consult@t-online.de	
	Chemieberatung	Tel.: +49 (0)251/924520-60	
	Raesfeldstr. 22	www.tge-consult.de	
	48149 Münster		

**Emergency telephone:** +49 (0)8869-93139 (08:00 - 17:00)

#### SECTION 2: Hazards identification

##### Classification of the substance or mixture

Indications of danger : Extremely flammable, Irritant  
R-phrases:  
Extremely flammable.  
Irritating to eyes.  
Repeated exposure may cause skin dryness or cracking.  
Vapours may cause drowsiness and dizziness.

##### **GHS classification**

Hazard categories:  
Flammable aerosol: Flam. Aerosol 1  
Serious eye damage/eye irritation: Eye Irrit. 2  
Specific target organ toxicity - single exposure: STOT SE 3  
Hazard Statements:  
Extremely flammable aerosol.  
Causes serious eye irritation.  
May cause drowsiness or dizziness.

##### Label elements

Signal word: Danger  
Pictograms: GHS02-GHS07



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#### Hazard statements

H222 Extremely flammable aerosol.  
 H319 Causes serious eye irritation.  
 H336 May cause drowsiness or dizziness.

#### Precautionary statements

P102 Keep out of reach of children.  
 P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.  
 P211 Do not spray on an open flame or other ignition source.  
 P251 Pressurized container: Do not pierce or burn, even after use.  
 P261 Avoid breathing dust/fume/gas/mist/vapours/spray.  
 P280 Wear protective gloves/protective clothing/eye protection/face protection.  
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P337+P313 If eye irritation persists: Get medical advice/attention.  
 P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

#### Special labelling of certain mixtures

EUH066 Repeated exposure may cause skin dryness or cracking.

### SECTION 3: Composition/information on ingredients

#### Mixtures

##### Hazardous components

EC No.	Chemical name	Quantity
CAS No.	Classification	
Index No.	GHS classification	
REACH No.		
204-065-8	dimethyl ether	50- < 80 %
115-10-6	F+ R12	
603-019-00-8	Flam. Gas 1; H220	
200-662-2	acetone; propan-2-one; propanone	20 - < 40%
67-64-1	F, Xi R11-36-66-67	
606-001-00-8	Flam. Liq. 2, Eye Irrit. 2, STOT SE 3; H225 H319 H336	
202-805-4	N,N-dimethyl-p-toluidine	0,1 - <1 %
99-97-8	T R23/24/25-33-52-53	
612-056-00-9	Acute Tox. 3, Acute Tox. 3, Acute Tox. 3, STOT RE 2, Aquatic Chronic 3; H331 H311 H301 H373 ** H412	

Full text of R- and H-phrases: see section 16.

#### Further Information

Full text of R- and H-phrases: see section 16.  
 Product does not contain SVHC substances.

### SECTION 4: First aid measures

#### Description of first aid measures

##### General information

In case of accident or if you feel unwell, seek medical advice immediately (show safety data sheet if possible).

##### After inhalation

Provide fresh air. In case of breathing difficulties administer oxygen. In case of irritation of the respiratory tract seek medical advice.

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#### After contact with skin

After contact with skin, wash immediately with plenty of water and soap. Change contaminated clothing. In case of skin irritation, seek medical treatment.

#### After contact with eyes

In case of contact with eyes, rinse immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Subsequently consult an ophthalmologist.

#### After ingestion

Caution if victim vomits: Risk of aspiration! Rinse mouth thoroughly with water. Immediately call a POISON CENTER or doctor/physician. Let water be swallowed in little sips (dilution effect). Do not induce vomiting. Never give anything by mouth to an unconscious person or a person with cramps.

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

Treat symptomatically.

### SECTION 5: Firefighting measures

#### Extinguishing media

##### Suitable extinguishing media

Water spray. Foam. Carbon dioxide. Extinguishing powder. Dry extinguishing powder. alcohol resistant foam.

##### Extinguishing media which must not be used for safety reasons

High power water jet.

#### Special hazards arising from the substance or mixture

Combustible. Vapours may form explosive mixtures with air. Can be released in case of fire: Carbon monoxide. Carbon dioxide (CO<sub>2</sub>). Nitrogen oxides (NO<sub>x</sub>).

#### Advice for firefighters

Wear a self-contained breathing apparatus and chemical resistant suit.

#### Additional information

Use water spray/stream to protect personnel and to cool endangered containers. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water. In case of fire and/or explosion do not breathe fumes.

### SECTION 6: Accidental release measures

#### Personal precautions, protective equipment and emergency procedures

Wear personal protection equipment. (Refer to chapter 8.) Remove all sources of ignition. Guide people to safety. Vapours are heavier than air and will spread at floor level.

#### Environmental precautions

Cover drains. Prevent spreading over great surfaces (e.g. by damming or installing oil booms). Do not empty into drains or the aquatic environment.

#### Methods and material for containment and cleaning up

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Treat the assimilated material according to the section on waste disposal. Ventilate affected area.

#### Reference to other sections

Clean contaminated objects and areas thoroughly observing environmental regulations.

### SECTION 7: Handling and storage

#### Precautions for safe handling

##### Advice on safe handling

In case of open handling equipment with built-in suction must be used. Do not breathe gas/fumes/vapour/spray. Use only in well-ventilated areas. Take precautionary measures against static

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discharges. Do not spray into flames or ignition sources. Due to danger of explosion, prevent leakage of vapours into cellars, flues and ditches.

**Advice on protection against fire and explosion**

Do not breathe gas/fumes/vapour/spray. Keep away from sources of ignition - No smoking. Heating causes rise in pressure with risk of bursting.

**Conditions for safe storage, including any incompatibilities****Requirements for storage rooms and vessels**

Keep container tightly closed in a cool, well-ventilated place. Please note: 300 aerosol directive (75/324/EEC).

**Advice on storage compatibility**

Radioactive substances. Infectious substances. Organic peroxides Oxidizing solids Oxidizing liquids Pyrophoric liquids and solids. Inflammatory substances. Substances or mixtures which, in contact with water emit flammable gases.

**Further information on storage conditions**

Recommended storage temperature: 10-30°C Do not store at temperatures over: 50°C

**SECTION 8: Exposure controls/personal protection****Control parameters****Exposure limits (EH40)**

CAS No.	Chemical name	ml/m <sup>3</sup>	mg/m <sup>3</sup>	F/ml	Category	Origin
67-64-1	Acetone	500	1210		TWA (8 h)	WEL
		1500	3620		STEL (15 min)	WEL
115-10-6	Dimethyl ether	400	766		TWA (8 h)	WEL
		500	958		STEL (15 min)	WEL

**Exposure controls****Occupational exposure controls**

In case of open handling equipment with built-in suction must be used. Do not breathe gas/fumes/vapour/spray.

**Protective and hygiene measures**

Always close containers tightly after the removal of product. Do not eat, drink, smoke or sneeze at the workplace. Wash hands before breaks and at the end of work. Remove contaminated clothing immediately and dispose off safely. Wash contaminated clothing prior to re-use. Used working clothes should not be used outside the work area. Street clothing should be stored separately from work clothing. Protect skin by using skin protective cream.

**Respiratory protection**

With correct and proper use, and under normal conditions, breathing protection is not required.

Respiratory protection required in case of:

Generation/formation of aerosols exceeding critical value  
insufficient ventilation.

Generation/formation of mist

Suitable respiratory protective equipment: gas filtering equipment (EN 141).

**Hand protection**

Pull-over gloves of rubber. DIN EN 374

Suitable material:

(penetration time (maximum wearing period):  $\geq$  4 h):

Butyl rubber. (0,5 mm)

In case of reutilization, clean gloves before taking off and store in well-aired place.

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#### Eye protection

Suitable eye protection: Tightly sealed safety glasses. DIN EN 166

### SECTION 9: Physical and chemical properties

#### Information on basic physical and chemical properties

Physical state: Aerosol  
Colour: colourless  
Odour: characteristic

#### Test method

pH-Value: N/A

#### Changes in the physical state

Boiling point: < 0 °C

Flash point: < 0 °C

Lower explosion limits: 2,7 (dimethyl ether)

Upper explosion limits: 32 (dimethyl ether)

#### Oxidizing properties

none/none

Density: 0,70 g/cm<sup>3</sup>

Water solubility: insoluble

### SECTION 10: Stability and reactivity

#### Reactivity

No information available.

#### Chemical stability

Stable under normal storage and handling conditions.

#### Possibility of hazardous reactions

Reacts with : Hydrogen peroxide, bromine trifluoride, Difluordioxid, 2-methyl-1,3-butadiene, nitromethane, nitrosyl chloride (catalyst), Nitrosylperchlorat, alkali hydroxide, bromine, fluorine, sodium, strong reducing agents, nitric acid, chromic acid, chromium trioxide, chromyl chloride, ethanolamine, Potassium tert-butoxide. Oxidizing agents, strong.

#### Conditions to avoid

Ignition hazard. Keep away from heat. Do not spray on a naked flame or any incandescent material. Keep away from sources of ignition - No smoking. Keep out of the reach of children. Take precautionary measures against static discharges. See protective measures under point 7 and 8.

#### Incompatible materials

Hydrogen peroxide, bromine trifluoride, Difluordioxid, 2-methyl-1,3-butadiene, nitromethane, nitrosyl chloride (catalyst), Nitrosylperchlorat, alkali hydroxide, bromine, fluorine, sodium, strong reducing agents, nitric acid, chromic acid, chromium trioxide, chromyl chloride, ethanolamine, Potassium tert-butoxide. Oxidizing agents, strong.

#### Hazardous decomposition products

In use, may form flammable/explosive vapour-air mixture. Can be released in case of fire: Carbon monoxide. Carbon dioxide (CO<sub>2</sub>). Nitrogen oxides (NO<sub>x</sub>).

### SECTION 11: Toxicological information

#### Information on toxicological effects

##### Toxicokinetics, metabolism and distribution

No information available.

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#### Acute toxicity

CAS No.	Chemical name					
	Exposure routes	Method	Dose	Species	h	Source
115-10-6	dimethyl ether					
	Acute inhalation toxicity	LC50	309 mg/l	Rat.	4	
67-64-1	acetone; propan-2-one; propanone					
	Acute oral toxicity	LD50	5800 mg/kg	Rat.		
	Acute dermal toxicity	LD50	20000 mg/kg	Rabbit.		
	Acute inhalation toxicity	LC50	76 mg/l	Rat.	4	
99-97-8	N,N-dimethyl-p-toluidine					
	Acute oral toxicity	ATE	100 mg/kg			
	Acute dermal toxicity	LD50	>2000 mg/kg	Rat.		
	Acute inhalation toxicity	LC50	1,4 mg/l	Rat.	4	

#### Irritation and corrosivity

Irritant effect on the eye: slightly irritant but not relevant for classification.

Irritant effect on the skin: irritant.

#### Sensitizing effects

No information available.

#### Severe effects after repeated or prolonged exposure

dimethyl ether:

 Chronic inhalative toxicity: NOAEL = 47106 mg/m<sup>3</sup> (Rat.)

OECD Guideline 452

acetone; propan-2-one; propanone:

 Subchronic oral toxicity (90d): NOAEL = 900 mg/m<sup>3</sup> (Rat.)

#### Carcinogenic/mutagenic/toxic effects for reproduction

N,N-dimethyl-p-toluidine:

Evidence for: In-vitro mutagenicity

dimethyl ether:

Developmental toxicity/teratogenicity: NOAEL = 5000 ppm

No experimental indications of mutagenicity in-vivo exist.

## SECTION 12: Ecological information

#### Toxicity

CAS No.	Chemical name					
	Aquatic toxicity	Method	Dose	Species	h	Source
115-10-6	dimethyl ether					
	Acute fish toxicity	LC50	>4,1 mg/l	Poecilia reticulata	96	
	Acute crustacea toxicity	EC50	>4,4 mg/l	Daphnia magna	48	
67-64-1	acetone; propan-2-one; propanone					
	Acute fish toxicity	LC50	5540 mg/l	Onchorhynchus mykiss	96	
	Acute crustacea toxicity	EC50	6100 mg/l	Daphnia magna	48	
99-97-8	N,N-dimethyl-p-toluidine					
	Acute fish toxicity	LC50	46-53 mg/l		96	

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**Persistence and degradability**

dimethyl ether:  
OECD 301D / EEC 92/69 annex V, C.4-E = 5% (28d)  
Not easily bio-degradable (according to OECD-criteria).

**Bioaccumulative potential**

No information available.

**Partition coefficient n-octanol/water**

CAS No.	Chemical name	Log Pow
115-10-6	dimethyl ether	0,07
67-64-1	acetone; propan-2-one; propanone	-0,24
99-97-8	N,N-dimethyl-p-toluidine	2,81

**Mobility in soil**

No information available.

**Results of PBT and vPvB assessment**

No information available.

**SECTION 13: Disposal considerations****Waste treatment methods****Advice on disposal**

Moreover, national legislation has to be observed! Consult the local waste disposal expert about waste disposal.

**Waste disposal number of waste from residues/unused products**

160504 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; gases in pressure containers (including halons) containing dangerous substances  
Classified as hazardous waste.

**Waste disposal number of used product**

160504 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; gases in pressure containers (including halons) containing dangerous substances  
Classified as hazardous waste.

**Waste disposal number of contaminated packaging**

150110 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); packaging containing residues of or contaminated by dangerous substances  
Classified as hazardous waste.

**Contaminated packaging**

Cleaned containers may be recycled.

**SECTION 14: Transport information****Land transport (ADR/RID)**

**UN number:** 1950  
**UN proper shipping name:** AEROSOLS  
**Transport hazard class(es):** 2  
Hazard label: 2.1



Classification code: 5F

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Special Provisions: 190 327 625  
Limited quantity: 1 L  
Transport category: 2  
Tunnel restriction code: D

#### Other applicable information (land transport)

Excepted quantity: E0

#### Inland waterways transport

**UN number:** 1950  
**UN proper shipping name:** AEROSOLS  
**Transport hazard class(es):** 2  
Hazard label: 2.1



Classification code: 5F  
Special Provisions: 190 327 344 625  
Limited quantity: 1 L

#### Other applicable information (inland waterways transport)

Excepted quantity: E0

#### Marine transport

**UN number:** 1950  
**UN proper shipping name:** AEROSOLS  
**Transport hazard class(es):** 2  
**Packing group:** -  
Hazard label: 2, see SP63

Special Provisions: 63, 190, 277, 327, 344, 9  
Limited quantity: See SP277  
EmS: F-D, S-U

#### Other applicable information (marine transport)

Excepted quantity: E0

#### Air transport

**UN/ID number:** 1950  
**UN proper shipping name:** AEROSOLS, flammable  
**Transport hazard class(es):** 2.1  
Hazard label: 2.1



Special Provisions: A145 A167  
Limited quantity Passenger: 30 kg G  
IATA-packing instructions - Passenger: 203  
IATA-max. quantity - Passenger: 75 kg  
IATA-packing instructions - Cargo: 203  
IATA-max. quantity - Cargo: 150 kg



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#### Other applicable information (air transport)

Excepted quantity: E0  
Passenger-LQ: Y203

### SECTION 15: Regulatory information

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

##### EU regulatory information

1999/13/EC (VOC): ~99% (Data concerning the Directive 1999/13/EC on the limitation of emissions of volatile organic compounds (VOC-RL))

##### Additional information

1967/548 (2008/58, 30. ATP/ 31. ATP); 1991/689 (2001/118); 1999/13; 2004/42; 648/2004; 1907/2006; 1272/2008; 75/324/EWG (2008/47/EG)

##### National regulatory information

Employment restrictions: Observe employment restrictions for young people. Observe employment restrictions for child bearing mothers and nursing.  
Water contaminating class (D): 1 - slightly water contaminating

### SECTION 16: Other information

#### Changes

Rev. 1.0 Initial release 12.12.11

#### Full text of R-phrases referred to under sections 2 and 3

- 11 Highly flammable.
- 12 Extremely flammable.
- 23/24/25 Toxic by inhalation, in contact with skin and if swallowed.
- 33 Danger of cumulative effects.
- 36 Irritating to eyes.
- 52 Harmful to aquatic organisms.
- 53 May cause long-term adverse effects in the aquatic environment.
- 66 Repeated exposure may cause skin dryness or cracking.
- 67 Vapours may cause drowsiness and dizziness.

#### Full text of H-Statements referred to under sections 2 and 3

- H220 Extremely flammable gas.
- H222 Extremely flammable aerosol.
- H225 Highly flammable liquid and vapour.
- H301 Toxic if swallowed.
- H311 Toxic in contact with skin.
- H319 Causes serious eye irritation.
- H331 Toxic if inhaled.
- H336 May cause drowsiness or dizziness.
- H373 May cause damage to organs through prolonged or repeated exposure.
- H412 Harmful to aquatic life with long lasting effects.

#### Further Information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

*(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)*