

**Safety Data Sheet**  
**According to Hazard Communication Standard (29 CFR 1910.1200)**

Arti-Spot Frühkontaktindikator BK 87

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Version 1.0

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## 1. Identification

**Product name** Arti-Spot Frühkontaktindikator BK 87  
**Synonyms** -  
**CAS #** See section 3  
**Product code** -  
**Product use** Indicator solution. Paint.  
**Manufacturer/Supplier**  
**Supplier(Manufacturer):** Dr. Jean Bausch GmbH & Co. KG  
**Address:** Oskar-Schindler-Str. 4, D-50769 Köln  
**Contact person(E-mail):** info@BauschDental.de  
**Telephone:** +49 (0)221-70936-0  
**Fax:** +49 (0)221-70936-66  
**Emergency telephone Number:** +49 30 19240 (D-13437 Berlin, 24 hour)

## 2. Hazard(s) identification

### GHS classification

<b>Physical hazards</b>	Flammable liquids	Category 1
<b>Health hazards</b>	Serious eye damage/eye irritation	Category 2A
	Specific target organ toxicity after single exposure	Category 3
<b>Environmental hazards</b>	Not classified	

### GHS label elements

#### Hazard Pictograms



**Signal word** Danger  
**Hazard statement** Extremely flammable liquid and vapor.  
Causes serious eye irritation.  
May cause drowsiness or dizziness.

### Precautionary statement

**Prevention** Keep away from heat/sparks/open flames/hot surfaces. — No smoking.  
Keep container tightly closed.  
Ground/bond container and receiving equipment.  
Use explosion-proof electrical/ventilating/lighting/equipment.  
Use only non-sparking tools.  
Take precautionary measures against static discharge.  
Avoid breathing dust/fume/gas/mist/vapors/spray.  
Wash thoroughly after handling.

<b>Response</b>	<p>Use only outdoors or in a well-ventilated area.</p> <p>Wear protective gloves/protective clothing/eye protection/face protection.</p> <p>If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.</p> <p>If inhaled: Remove person to fresh air and keep comfortable for breathing.</p> <p>If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>Call a poison center /doctor if you feel unwell.</p> <p>If eye irritation persists: Get medical advice/attention.</p> <p>In case of fire: Use CO<sub>2</sub>, extinction powder, water jet spray, alcohol resistant foam for extinction.</p>
<b>Storage</b>	Store in a well-ventilated place. Keep container tightly closed. Keep cool.
<b>Disposal</b>	Dispose of contents/container in corroding with local regulation.

### 3. Composition / information on ingredients

Components	CAS#	Percent
ethanol	64-17-5	30-40%
ethyl acetate	141-78-6	20-30%
diethyl ether	60-29-7	10-<25%
butanone	78-93-3	0-1%

### 4. First-aid Measures

#### First aid procedures

<b>Eye contact</b>	Remove contact lenses. Wash thoroughly for several minutes using copious water. Seek medical help if necessary.
<b>Skin contact</b>	Remove polluted, soaked clothing immediately, wash thoroughly with plenty of water and soap, in case of irritation of the skin (flare), consult a doctor. Unsuitable cleaning product: Solvent, thinners.
<b>Inhalation</b>	Remove person from danger area. Supply person with fresh air and consult doctor according to symptoms. If the person is unconscious, place in a stable side position and consult a doctor.
<b>Ingestion</b>	Rinse the mouth thoroughly with water. Do not induce vomiting - give copious water to drink. Consult doctor immediately. Danger of aspiration.
<b>Notes to physician</b>	Treat symptoms.

### 5. Fire-fighting measures

<b>Flammable properties</b>	Extremely flammable.
<b>Extinguishing media</b>	
<b>Suitable extinguishing media</b>	Carbon dioxide, extinction powder, water jet spray, alcohol resistant foam.
<b>Unsuitable extinguishing media</b>	High volume water jet.
<b>Firefighting equipment/instructions</b>	In case of fire and/or explosion do not breathe fumes. Protective respirator with independent air supply. According to size of fire Full protection, if necessary. Dispose of contaminated extinction water according to official regulations.
<b>Hazardous combustion products</b>	Oxides of carbon, oxides of nitrogen, toxic pyrolysis products, explosive vapour/air

mixture, dangerous vapours heavier than air.

## 6. Accidental release measures

### Personal precautions

Remove possible causes of ignition - do not smoke. Ensure sufficient supply of air. Avoid inhalation, and contact with eyes or skin. If applicable, caution - risk of slipping. For personal protection see section 8.

### Environmental precautions

If leakage occurs, dam up. Resolve leaks if this possible without risk. Prevent surface and ground-water infiltration, as well as ground penetration. Prevent from entering drainage system. If accidental entry into drainage system occurs, inform responsible authorities.

### Methods for cleaning up

Soak up with absorbent material (e.g. universal binding agent, sand, diatomaceous earth) and dispose of according to Section 13. Use no flammable substances. Fill the absorbed material into lockable containers. Keep moist. Do not let the solution dry up. Flush residue using copious water.

## 7. Handling and storage

### Handling

Avoid inhalation of the vapours. Ensure good ventilation. Keep away from sources of ignition - Do not smoke. Take measures against electrostatic charging, if appropriate. Avoid contact with eyes or skin. Eating, drinking, smoking, as well as food-storage, is prohibited in work-room. Observe directions on label and instructions for use. Use working methods according to operating instructions. For precautions see section 2.2.

### Storage

Keep out of access to unauthorised individuals. Not to be stored in gangways or stair wells. Store product closed and only in original packing. Do not store with flammable or self-igniting materials. Store in a well-ventilated place. Protect from direct sunlight and warming. Store at room temperature. Do not store over 30°C.

## 8. Exposure controls / personal protection

### Control parameters:

#### OCCUPATIONAL EXPOSURE LIMITS (OEL)

##### INGREDIENT DATA:

Source	Ingredient	TWA	STEL	Peak
US OSHA Permissible Exposure Levels (PELs) - Table Z1	ethanol	1900 mg/m <sup>3</sup> /1000 ppm	Not Available	Not Available
US ACGIH Threshold Limit Values (TLV)	ethanol	Not Available	1000 ppm	Not Available
US NIOSH Recommended Exposure Limits (RELs)	ethanol	1900 mg/m <sup>3</sup> /1000 ppm	Not Available	Not Available
US OSHA Permissible Exposure Levels (PELs) - Table Z1	ethyl acetate	1400 mg/m <sup>3</sup> /400 ppm	Not Available	Not Available
US ACGIH Threshold Limit Values (TLV)	ethyl acetate	400 ppm	Not Available	Not Available

US NIOSH Recommended Exposure Limits (RELs)	ethyl acetate	1400 mg/m3 /400 ppm	Not Available	Not Available
US OSHA Permissible Exposure Levels (PELs) - Table Z1	diethyl ether	1200 mg/m3 /400 ppm	Not Available	Not Available
US ACGIH Threshold Limit Values (TLV)	diethyl ether	400 ppm	500 ppm	Not Available
US NIOSH Recommended Exposure Limits (RELs)	diethyl ether	Not Available	Not Available	Not Available
US OSHA Permissible Exposure Levels (PELs) - Table Z1	butanone	590 mg/m3 /200 ppm	Not Available	Not Available
US ACGIH Threshold Limit Values (TLV)	butanone	200 ppm	300 ppm	Not Available
US NIOSH Recommended Exposure Limits (RELs)	butanone	590 mg/m3 /200 ppm	885 mg/m3 /300 ppm	Not Available

**EMERGENCY LIMITS:**

Ingredient	TEEL-1	TEEL-2	TEEL-3
ethanol	Not Available	Not Available	Not Available
ethyl acetate	400 ppm	400 ppm	10000 ppm
diethyl ether	500 ppm	500 ppm	19000 ppm
butanone	Not Available	Not Available	Not Available

Ingredient	Original IDLH	Revised IDLH
ethanol	15,000 ppm	3,300 [LEL] ppm
ethyl acetate	10,000 ppm	2,000 [LEL] ppm
diethyl ether	19,000 [LEL] ppm	1,900 [LEL] ppm
butanone	3,000 ppm	3,000 [Unch] ppm

**Exposure controls:**

**Appropriate engineering controls:**

Ensure good ventilation. This can be achieved by local suction or general air extraction. If this is insufficient to maintain the concentration under the WEL or AGW values, suitable breathing protection should be worn. Applies only if maximum permissible exposure values are listed here.

**Individual protection measures, such as personal protective equipment:**

**Eye / face protection**

Tight fitting protective goggles (EN 166).

**Skin protection**

Solvent resistant protective gloves (EN 374). If applicable, safety gloves made of butyl (EN 374), protective Neoprene® / polychloroprene gloves (EN 374), protective nitrile gloves (EN 374), protective hand cream recommended. Protective working garments (e.g. safety shoes EN ISO 20345, long-sleeved protective working garments).

**Respiratory protection**

Normally not necessary. If OES or MEL is exceeded. Gas mask filter A (EN 14387), code colour

**General hygiene considerations**

brown. Observe wearing time limitations for respiratory protection equipment. 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. Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing.

**9. Physical and chemical properties**

**Appearance**

<b>Physical state</b>	Liquid
<b>Form</b>	Liquid
<b>Color</b>	Blue
<b>Odor</b>	Alcoholic, Characteristic
<b>Odor threshold</b>	Not available
<b>pH</b>	Not available
<b>Vapor pressure</b>	Not available
<b>Melting point/Freezing point</b>	Not available
<b>initial boiling point and boiling range</b>	Not available
<b>Flash point</b>	-28,5 °C (ISO 1523 (Rapid Equilibrium, closed cup, RECC))
<b>Evaporation rate</b>	Not available
<b>Flammability (solid, gas)</b>	200 °C (Ignition temperature )
<b>Explosion limits</b>	Lower: 2,1 Vol-% upper: 13,5 Vol-%
<b>Vapor density</b>	Not available
<b>Relative density</b>	Not available
<b>Solubility (water)</b>	Insoluble
<b>Partition coefficient</b>	Not available
<b>Auto-ignition temperature</b>	Not available
<b>Decomposition temperature</b>	Not available
<b>Specific gravity</b>	Not available
<b>Density</b>	0,902 g/ml
<b>Flammability limits in air, upper, %by volume</b>	Not available
<b>Flammability limits in air, lower, % by volume</b>	Not available
<b>VOC</b>	Not available
<b>Percent volatile</b>	Not available
<b>Other data</b>	
<b>Viscosity</b>	Not available

**10. Stability and reactivity**

<b>Reactivity</b>	Can form explosive peroxides.
<b>Chemical stability</b>	Explosive when dry.
<b>Conditions to avoid</b>	Incompatible materials. Heating, open flame, ignition sources, electrostatic charge. Protect from direct sunlight. Product is light sensitive.
<b>Incompatible materials</b>	Avoid contact with strong oxidizing agents, strong acids, alkali metals.
<b>Hazardous decomposition products</b>	Oxides of carbon, oxides of nitrogen, toxic pyrolysis products, explosive vapour/air

mixture, dangerous vapours heavier than air.

## Possibility of hazardous reactions

Possible build up of explosive/highly flammable vapour/air mixture.

## 11. Toxicological information

### Toxicokinetics, metabolism and distribution:

Non-human toxicological data: Not available

### Information on toxicological effects:

#### Acute toxicity:

ethanol (CAS#: 64-17-5)

LD50(Oral, Rat): 10470 mg/kg  
LD50(Dermal, Rabbit): >2000 mg/kg  
LC50(Inhalation, Rat): 117-125 mg/l/4h

#### Acute toxicity:

ethyl acetate (CAS#:141-78-6)

LD50(Oral, Rat): 5620 mg/kg  
LD50(Dermal, Rabbit): >18000 mg/kg  
LC50(Inhalation, Rat): >28,6 mg/l/4h

#### Acute toxicity:

diethyl ether (CAS#: 60-29-7)

LD50(Oral, Rat): 1215 mg/kg  
LD50(Dermal, Rabbit): >20000 mg/kg  
LC50(Inhalation, Rat): >20 mg/l/4h  
Skin corrosion/Irritation: Not classified.  
Serious eye damage/irritation: Causes serious eye irritation.  
Respiratory or skin sensitization: Not classified  
Germ cell mutagenicity: Not classified  
Carcinogenicity: Not classified  
Reproductive toxicity: Not classified  
STOT- single exposure: May cause drowsiness or dizziness.  
STOT-repeated exposure: Not classified  
Aspiration hazard: Not classified

## 12. Ecological information

### Toxicity:

ethanol (CAS#: 64-17-5)

Acute toxicity		Time	Species	Method	Evaluation	Remarks
LC50	13000 mg/l	96h	Fish	OECD 203	N/A	N/A
EC50	12340 mg/l	48h	Daphnia	OECD 202	N/A	N/A
EC50	275 mg/l	72h	Algae	OECD 201	N/A	N/A

### Toxicity:

ethyl acetate (CAS#:141-78-6)

Acute toxicity		Time	Species	Method	Evaluation	Remarks
LC50	230 mg/m3	96h	Fish	OECD 203	N/A	N/A
EC50	610 mg/l	48h	Daphnia	OECD 202	N/A	N/A

EC50	N/A	72h	Algae	OECD 201	N/A	N/A
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### Toxicity:

diethyl ether (CAS#: 60-29-7)

Acute toxicity		Time	Species	Method	Evaluation	Remarks
LC50	2600 mg/l	96h	Fish	OECD 203	N/A	N/A
EC50	165	24h	Daphnia	OECD 202	N/A	N/A
EC50	>100 mg/l	72h	Algae	OECD 201	N/A	N/A

<b>Persistence and degradability:</b>	Not available.
<b>Bioaccumulative potential:</b>	Not available.
<b>Mobility in soil:</b>	The product is Insoluble in water.
<b>Results of PBT&amp;vPvB assessment:</b>	Not available.
<b>Other adverse effects:</b>	No known significant effects or critical hazards.

## 13. Disposal considerations

<b>Disposal instructions</b>	Dispose of contents/container in accordance with local/regional/national/international regulations.
<b>Contaminated packaging</b>	Since emptied containers may retain product residue, follow label warnings even after container is emptied.

## 14. Transport information

<b>DOT</b>	
<b>Basic shipping requirements:</b>	
<b>UN number</b>	UN1263
<b>Proper shipping name</b>	Paint (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base)
<b>Hazard class</b>	3
<b>Packing group</b>	I
<b>Environmental hazards</b>	No
<b>IATA</b>	
<b>UN number</b>	UN1263
<b>UN proper shipping name</b>	Paint (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base)
<b>Transport hazard class(es)</b>	3
<b>Packing group</b>	I
<b>Environmental hazards</b>	No
<b>IMDG</b>	
<b>UN number</b>	UN1263
<b>UN proper shipping name</b>	Paint (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base)
<b>Transport hazard class(es)</b>	3
<b>Packing group</b>	I
<b>Environmental hazards</b>	No

## 15. Regulatory information

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

<b>ethanol (64-17-5) is found on the following regulatory lists</b>	"US - Hawaii Air Contaminant Limits" List. "US -Idaho - Limits for Air Contaminants" List. "US - Alaska Limits for Air Contaminants" List. "US Spacecraft Maximum Allowable Concentrations (SMACs) for Airborne Contaminants" List. "US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory" List. "US – Wyoming Toxic and Hazardous Substances Table Z1 Limits for Air Contaminants" List.
<b>ethyl acetate (141-78-6) is found on the following regulatory lists</b>	"US - Hawaii Air Contaminant Limits" List. "US -Idaho - Limits for Air Contaminants" List. "US - Alaska Limits for Air Contaminants" List. "US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory" List. "US – Wyoming Toxic and Hazardous Substances Table Z1 Limits for Air Contaminants" List.
<b>diethyl ether(60-29-7) is found on the following regulatory lists</b>	"US - Hawaii Air Contaminant Limits" List. "US -Idaho - Limits for Air Contaminants" List. "US - Alaska Limits for Air Contaminants" List. "US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory" List. "US – Wyoming Toxic and Hazardous Substances Table Z1 Limits for Air Contaminants" List.
<b>butanone (78-93-3) is found on the following regulatory lists</b>	"US - Hawaii Air Contaminant Limits" List. "US -Idaho - Limits for Air Contaminants" List. "US - Alaska Limits for Air Contaminants" List. "US - Washington Toxic air pollutants and their ASIL, SQER and de minimis emission values" List. "US Spacecraft Maximum Allowable Concentrations (SMACs) for Airborne Contaminants" List. "US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory" List. "US – Wyoming Toxic and Hazardous Substances Table Z1 Limits for Air Contaminants" List.

**16. Other information, including date of preparation or last revision****HMIS® ratings**

Health: 2  
Flammability: 3  
Physical hazard: 0

**NFPA ratings**

Health: 2  
Flammability: 3



Instability: 0

**Disclaimer**

The information in the sheet was written based on the best knowledge and experience currently available.

**Issue date**

02-06-2015