1. Identification

Product name	Arti-Spot Frühkontaktindikator BK 85
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

Physical hazards	Flammable liquids	Category 1
Health hazards	Serious eye damage/eye irritation	Category 2A
	Specific target organ toxicity after single exposure	Category 3
Environmental hazards	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.

	Use only outdoors or in a well-ventilated area.
	Wear protective gloves/protective clothing/eye protection/face protection.
Response	If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
	If inhaled: Remove person to fresh air and keep comfortable for breathing.
	If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	Call a poison center /doctor if you feel unwell.
	If eye irritation persists: Get medical advice/attention.
	In case of fire: Use CO2, extinction powder, water jet spray, alcohol resistant foam for extinction.
Storage	Store in a well-ventilated place. Keep container tightly closed. Keep cool.
Disposal	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

Eye contact	Remove contact lenses. Wash thoroughly for several minutes using copious water. Seek medical help if necessary.
Skin contact	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.
Inhalation	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.
Ingestion	Rinse the mouth thoroughly with water. Do not induce vomiting - give copious water to drink. Consult doctor immediately. Danger of aspiration.
Notes to physician	Treat symptoms.

5. Fire-fighting measures

Flammable properties	Extremely flammable.
Extinguishing media	
Suitable extinguishing media	Carbon dioxide, extinction powder, water jet spray, alcohol resistant foam.
Unsuitable extinguishing media	High volume water jet.
Firefighting equipment/instructions	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.
Hazardous combustion products	Oxides of carbon, 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/m3 /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/m3 /1000 ppm	Not Available	Not Available
US OSHA Permissible Exposure Levels (PELs) - Table Z1	ethyl acetate	1400 mg/m3 /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

	brown. Observe wearing time limitations for respiratory protection equipment.
General hygiene considerations	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	
Physical state	Liquid
Form	Liquid
Color	White
Odor	Alcoholic, Characteristic
Odor threshold	Not available
pH	Not available
Vapor pressure	Not available
Melting point/Freezing point	Not available
initial boiling point and boiling range	Not available
Flash point	-28,5 °C (ISO 1523 (Rapid Equilibrium, closed cup, RECC))
Evaporation rate	Not available
Flammability (solid, gas)	200 °C (Ignition temperature)
Explosion limits	Lower: 2,1 Vol-% upper: 13,5 Vol-%
Vapor density	Not available
Relative density	Not available
Solubility (water)	Insoluble
Partition coefficient	Not available
Auto-ignition temperature	Not available
Decomposition temperature	Not available
Specific gravity	Not available
Density	0,902 g/cm3 (20°C)
Flammability limits in air, upper, %by volume	Not available
Flammability limits in air, lower, % by volume	Not available
VOC	Not available
Percent volatile	Not available
Other data	
Viscosity	Not available

10. Stability and reactivity

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

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

Persistence and degradability: Not available.

Bioaccumulative potential: Not available.

Mobility in soil: The product is Insoluble in water.

Results of PBT&vPvB assessment: Not available.

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

13. Disposal considerations

Disposal instructions Dispose of contents/container in accordance with local/regional/national/international regulations.

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT

Basic shipping requirements:

UN number UN1263

Proper shipping name Paint (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base)

Hazard class 3

Packing group I

Environmental hazards No

IATA

UN number UN1263

UN proper shipping name Paint (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base)

Transport hazard class(es) 3

Packing group I

Environmental hazards No

IMDG

UN number UN1263

UN proper shipping name Paint (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base)

Transport hazard class(es) 3

Packing group I

Environmental hazards No

15. Regulatory information

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

ethanol (64-17-5) is found on the following regulatory lists	“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.
ethyl acetate (141-78-6) is found on the following regulatory lists	“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.
diethyl ether(60-29-7) is found on the following regulatory lists	“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.
butanone (78-93-3) is found on the following regulatory lists	“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