

SAFETY DATA SHEETS

This SDS packet was issued with item:

075895313

The safety data sheets (SDS) in this packet apply to one or more components included in the items listed below. Items listed below may require one or more SDS. Please refer to invoice for specific item number(s).

075895289

MATERIAL SAFETY DATA SHEET: Bausch Arti Spot 3

IDENTITY: Trade Name: Bausch Arti Spot 3 CODE: BK 87 (Blue)
Chemical Description: Organic solvents (Ethanol, Propanol, Ethyl-Acetate), Glycerin, Natural resins, C.I. Pigment Blue 15 (FD&C Blue 1), Zinc stearate, Thickener, Camphor
Product Use: Dental material: High spot indicator for crowns.

SECTION I

Manufacturer: Dr. Jean Bausch KG
Oskar-Schindler-Str. 4
D-50769 Cologne, Germany
Tel: 49 221 70936-0 /
Fax: 49 221 70936-666262
Date Prepared: September 1, 2007

Distributor: Pulpdent Corporation
80 Oakland Street
Watertown, MA 02472 USA
Tel.: 1-800-3434342 / 1-617-926-6666 Fax: 1-617-926-6666
24 hour Emergency Number: 1-800-535-5053

SECTION II - HAZARDOUS INGREDIENTS

<i>Ingredients</i>	<i>PEL/TLV</i>	<i>UN Number</i>
Ethyl alcohol	1000 ppm	1170
Ethyl acetate	740 ppm	1173
Propyl alcohol	515 ppm	1274

DOT HAZARD CLASSIFICATION: Class 3 / Packing group II / Flammable liquid
WHMIS CLASSIFICATION: B-2, Flammable liquid
NFPA HMIS RATING: HEALTH: 0 FLAMMABILITY: 3 REACTIVITY: 0

SECTION III - PHYSICAL / CHEMICAL CHARACTERISTICS

Boiling Point: 192°F / 89.4°C	Specific Gravity: 0.81	Vapor Pressure: 44.6
Melting Point: -173°F / -114°C	Vapor Density: n/a	Evaporation Rate: 2.8
Solubility in water: Partial	Odor Threshold: 159 ppm	

Appearance / Odor: Blue liquid with characteristic alcohol / camphor odor.

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

WARNING! FLAMMABLE. Avoid heat, sparks, flame, other ignition sources. Vapor forms flammable mixtures with air.
Flash Point: 43°F / 6°C (Tag closed cup) Autoignition Temperature: 423°C; Flam. Limits: LEL: 2.1 UEL: 13.5
Extinguishing Media: Dry chemical, alcohol foam, carbon dioxide. Water will keep fire-exposed containers cool.
Special Fire Fighting Procedures: If a leak/spill has not ignited, use water spray to disperse vapors and protect personnel. Water spray may be used to flush spills away and to dilute spills to nonflammable mixtures.
Hazardous Combustion Products: Incomplete combustion may produce carbon monoxide / carbon dioxide.
Unusual Fire and Explosion Hazards: To protect from smoke, fumes, hazardous decomposition products, firefighters should wear self-contained breathing apparatus in positive pressure mode with full face piece.

SECTION V - REACTIVITY DATA

Stability: Generally stable. Conditions to avoid: Heat, flame, sparks.
Incompatibility: Avoid acetyl chloride and oxidizing agents which may react violently with this material.
Hazardous Decomposition Products: Incomplete combustion produces carbon monoxide / carbon dioxide.
Hazardous Polymerization: None. Conditions to avoid: None

SECTION VI - HEALTH HAZARD DATA

Summary of Acute Hazards: Minimal health hazard in normal use and in the quantities present in this product. For larger quantities and with prolonged exposure, ethyl alcohol is considered a moderate health hazard.

MATERIAL SAFETY DATA SHEET: Bausch Arti Spot 3

Route of Exposure	Signs & Symptoms
Inhalation	None in normal conditions of use. Exposure > 1000 ppm may cause headache, drowsiness, loss of appetite, confusion, irritation of throat.
Eye Contact	Liquid or vapor may cause irritation.
Skin absorption	None in normal conditions of use. However, for large quantities and prolonged contact, similar symptoms to inhalation/ ingestion may occur.
Skin Contact	May cause irritation and defatting of skin on prolonged contact.
Ingestion	None in small quantities of normal use. Large quantities may cause depression of central nervous system, nausea, vomiting and diarrhea.

Summary of Chronic Health Hazards: Not a chronic health hazard under the normal conditions of use. Large quantities ingested over a prolonged period may be carcinogenic or a cause of Fetal Alcohol syndrome.

Carcinogenicity Not a carcinogen under normal conditions of use. The IARC has reported a relationship between abuse of alcoholic beverages and cancer of the oral cavity, pharynx, esophagus and liver.

Teratogenicity, Mutagenicity, Reproductive Toxicity: Ingestion of alcohol by pregnant women is associated with Fetal Alcohol Syndrome in offspring.

Emergency First Aid Procedures:

Inhalation	Remove to fresh air. If victim has stopped breathing, give artificial respiration. Get immediate medical attention.
Eye contact	Flush immediately with water for 15+ minutes. Seek medical care.
Ingestion	Large quantities: If conscious and able to swallow, have victim drink water or milk to dilute. Never give anything by mouth to unconscious or convulsing person. Call a physician or Poison Control Center at once. Induce vomiting only on their advice.
Skin contact	Immediately flush with cool water. Get medical attention for irritation.

SECTION VII - PRECAUTIONS FOR SAFE HANDLING & USE

Handling / Storage Precautions: For small quantities: Store tightly capped in original container in a well-ventilated area; avoid heat, sparks, direct sunlight, oxidizing agents. Protect container against physical damage. Take same precautions when container is emptied, as residual product is hazardous.

Steps to Be Taken if Material is Released or Spilled: For small quantities: Wear gloves and safety glasses. Pick up with absorbent material, such as paper or cloth towels. Rinse towels and area of spill with water. Place all absorbent material in closed container away from heat, sparks, sun and oxidizers.

Waste Disposal Method: Follow all government regulations. **Other Precautions:** Wash hands after use.

SECTION VIII - CONTROL MEASURES

Respiratory Protection: Not necessary under normal conditions of use.

Ventilation: No special ventilation required under normal conditions of use. Large quantities and prolonged exposure require methods such as enclosure, local ventilation and dilution to reduce concentration below TLV.

Protective Gloves: Chemically impervious gloves are recommended.

Eye Protection: Safety glasses are recommended when no eye contact is anticipated. Chemical safety goggles should be worn whenever there is possibility of splashing or other contact with eyes.

Other Protective Clothing or Equipment: Emergency eye wash fountain.

Work / Hygienic Practices: Wash hands after use.

The information presented herein is believed to be factual as it has been derived from the works of persons believed to be qualified experts. However, nothing contained in this information is to be taken as a warranty or representation for which Dr. Jean Bausch KG bears legal responsibility. The user should review any recommendations in the specific context of the intended use to determine whether they are appropriate.

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

Arti-Spot Frühkontaktindikator BK 87

Issue date: 02/06/2015

Version 1.0

Revision date: 02/06/2015

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

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.

Response	Use only outdoors or in a well-ventilated area.
	Wear protective gloves/protective clothing/eye protection/face protection.
	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.
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, 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/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

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

Physical state	Liquid
Form	Liquid
Color	Blue
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/ml
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, 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

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

Material name: Arti-Spot Frühkontaktindikator BK 87
Version #:1.0 Revision date: 02-06-2015. Issue date: 02-06-2015.

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

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

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