

Safety data sheet according to Regulation (EC) No 1907/2006, Annex II

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

1.1 Product identifier

Arti-Spot Frühkontaktindikator BK 85

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

Relevant identified uses of the substance or mixture:

Indicator solution

Paint

Uses advised against:

No information available at present.

1.3 Details of the supplier of the safety data sheet

Dr. Jean Bausch GmbH & Co. KG, Oskar-Schindler-Str. 4, D-50769 Köln

Telephone +49 (0)221-70936-0, Fax +49 (0)221-70936-66

info@BauschDental.de, <http://BauschDental.de>

E-mail address of the competent person: info@chemical-check.de, k.schnurbusch@chemical-check.de

1.4 Emergency telephone

Advisory office in case of poisoning:

+49 30 19240 (D-13437 Berlin, 24 hour)

Telephone number of the company in case of emergencies:

Tel.: ---

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

2.1.1 Classification according to Regulation (EC) 1272/2008 (CLP)

Hazard class	Hazard category	Hazard statement
Flam. Liq.	1	H224-Extremely flammable liquid and vapour.
Eye Irrit.	2	H319-Causes serious eye irritation.
STOT SE	3	H336-May cause drowsiness or dizziness.

2.1.2 Classification according to Directives 67/548/EEC and 1999/45/EC (including amendments).

F+, Extremely flammable, R12

R19

Xi, Irritant, R36

R66

R67

2.2 Label elements

2.2.1 Labeling according to Regulation (EC) 1272/2008 (CLP)



Danger

Hazard statement

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H224-Extremely flammable liquid and vapour. H319-Causes serious eye irritation. H336-May cause drowsiness or dizziness.

Prevention

P210-Keep away from heat/sparks/open flames/hot surfaces. - No smoking. P233-Keep container tightly closed. P261-Avoid breathing vapour or spray. P280-Wear protective gloves/clothing and eye/face protection.

Response

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.

Storage

P403+P235-Store in a well-ventilated place. Keep cool.

EUH019-May form explosive peroxides.

EUH066-Repeated exposure may cause skin dryness or cracking.

Ethyl acetate
 diethyl ether

2.3 Other hazards

The mixture contains no vPvB substance (vPvB = very persistent, very bioaccumulative).

The mixture contains no PBT substance (PBT = persistent, bioaccumulative, toxic).

SECTION 3: Composition/information on ingredients

3.1 Substance

n.a.

3.2 Mixture

Ethyl acetate	
Registration number (ECHA)	01-2119475103-46-XXXX
Index	607-022-00-5
EINECS, ELINCS	205-500-4
content %	20-30
Symbol	F/Xi
R-phrases	11-36-66-67
Classification categories / Indications of danger	Highly flammable, Irritant
Hazard class/Hazard category	Hazard statement
Flam. Liq./2	H225
Eye Irrit./2	H319
STOT SE/3	H336

diethyl ether	
Registration number (ECHA)	Substance for which an EU exposure limit value applies.
Index	-
EINECS, ELINCS	603-022-00-4
content %	200-467-2
Symbol	10-<25
R-phrases	F+/Xn
Classification categories / Indications of danger	12-19-22-66-67
Hazard class/Hazard category	Extremely flammable, Harmful
Hazard class/Hazard category	Hazard statement
Flam. Liq./1	H224
Acute Tox./4	H302
STOT SE/3	H336

For the text of the R-phrases / H-phrases and classification codes (GHS/CLP), see Section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

Never pour anything into the mouth of an unconscious person!

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.

Skin contact

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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

Eye contact

Remove contact lenses.

Wash thoroughly for several minutes using copious water. Seek medical help if necessary.

Ingestion

Rinse the mouth thoroughly with water.

Do not induce vomiting - give copious water to drink. Consult doctor immediately.

Danger of aspiration

4.2 Most important symptoms and effects, both acute and delayed

Where relevant delayed occurring symptoms and effects will be found in section 11. or at the exposure routes under section 4.1.

After resorption:

drowsiness

Dizziness

Euphoria

annoyance

Cramps

Narcotic effect.

4.3 Indication of any immediate medical attention and special treatment needed

n.c.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

CO₂

Extinction powder

Water jet spray

Alcohol resistant foam

Unsuitable extinguishing media

High volume water jet

5.2 Special hazards arising from the substance or mixture

In case of fire the following can develop:

Oxides of carbon

Toxic pyrolysis products.

Explosive vapour/air mixture

Dangerous vapours heavier than air.

5.3 Advice for firefighters

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

Cool container at risk with water.

Dispose of contaminated extinction water according to official regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

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

6.2 Environmental precautions

If leakage occurs, dam up.

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.

6.3 Methods and material for containment and 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.

6.4 Reference to other sections

For personal protective equipment see Section 8 and for disposal instructions see Section 13.

SECTION 7: Handling and storage

In addition to information given in this section, relevant information can also be found in section 8 and 6.1.

7.1 Precautions for safe 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.
 General hygiene measures for the handling of chemicals are applicable.
 Wash hands before breaks and at end of work.
 Keep away from food, drink and animal feedingstuffs.
 Remove contaminated clothing and protective equipment before entering areas in which food is consumed.

7.2 Conditions for safe storage, including any incompatibilities

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.
 Observe special storage conditions (in Germany, e.g., in accordance with the regulations in the "Betriebssicherheitsverordnung").

7.3 Specific end use(s)

No information available at present.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

GB	Chemical Name	Ethyl acetate	Content %:	20-30
WEL-TWA: 200 ppm		WEL-STEL: 400 ppm		---
BMGV: ---		Other information: ---		
GB	Chemical Name	diethyl ether	Content %:	10-<25
WEL-TWA: 100 ppm (310 mg/m3) (WEL), 100 ppm (308 mg/m3) (EC)		WEL-STEL: 200 ppm (620 mg/m3) (WEL), 200 ppm (616 mg/m3) (EC)		---
BMGV: ---		Other information: ---		
GB	Chemical Name	Ethanol	Content %:	
WEL-TWA: 1000 ppm (1920 mg/m3)		WEL-STEL: ---		---
BMGV: ---		Other information: ---		
GB	Chemical Name	Titanium dioxide	Content %:	
WEL-TWA: 10 mg/m3 (total inhalable dust), 4 mg/m3 (respirable dust)		WEL-STEL: ---		---
BMGV: ---		Other information: ---		

GB WEL-TWA = Workplace Exposure Limit - Long-term exposure limit (8-hour TWA (= time weighted average) reference period) EH40. AGW = "Arbeitsplatzgrenzwert" (workplace limit value, Germany). | WEL-STEL = Workplace Exposure Limit - Short-term exposure limit (15-minute reference period). | BMGV = Biological monitoring guidance value EH40. BGW = "Biologischer Grenzwert" (biological limit value, Germany) | Other information: Sen = Capable of causing occupational asthma. Sk = Can be absorbed through skin. Carc = Capable of causing cancer and/or heritable genetic damage.
 ** = The exposure limit for this substance is repealed through the TRGS 900 (Germany) of January 2006 with the goal of revision.

Ethanol						
Use-Area	Exposure-Route	Exposure-Pattern	Descriptor	Value	Unit	Note
Worker	Human - inhalation	Short term, local effects	DNEL (Derived No Effect Level)	1900	mg/m ³	
Worker	Human - inhalation	Long term, systemic effects	DNEL (Derived No Effect Level)	950	mg/m ³	
Worker	Human - dermal	Long term, systemic effects	DNEL (Derived No Effect Level)	343	mg/kg bw/d	
Consumer	Human - inhalation	Short term, local effects	DNEL (Derived No Effect Level)	950	mg/m ³	
Consumer	Human - dermal	Short term, local effects	DNEL (Derived No Effect Level)	950	mg/m ³	
Consumer	Human - inhalation	Long term, systemic effects	DNEL (Derived No Effect Level)	114	mg/m ³	
Consumer	Human - oral	Long term, systemic effects	DNEL (Derived No Effect Level)	87	mg/kg	
Consumer	Human - dermal	Long term, systemic effects	DNEL (Derived No Effect Level)	206	mg/kg bw/d	
	Environment - freshwater		PNEC (Predicted No Effect Concentration)	0,96	mg/l	
	Environment - marine		PNEC (Predicted No Effect Concentration)	0,79	mg/l	
	Environment - water, sporadic (intermittent) release		PNEC (Predicted No Effect Concentration)	2,75	mg/l	
	Environment - sewage treatment plant		PNEC (Predicted No Effect Concentration)	580	mg/l	
	Environment - sediment, freshwater		DNEL (Derived No Effect Level)	3,6	mg/kg dry weight	
	Environment - soil		DNEL (Derived No Effect Level)	0,63	mg/kg dry weight	
	Environment - oral (feed)		PNEC (Predicted No Effect Concentration)	0,72	mg/kg feed	

8.2 Exposure controls

8.2.1 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.

8.2.2 Individual protection measures, such as personal protective equipment

General hygiene measures for the handling of chemicals are applicable.

Wash hands before breaks and at end of work.

Keep away from food, drink and animal feedingstuffs.

Remove contaminated clothing and protective equipment before entering areas in which food is consumed.

Eye/face protection:

Tight fitting protective goggles with side protection (EN 166).

Skin protection - Hand protection:

Solvent resistant protective gloves (EN 374).

If applicable

Safety gloves made of butyl (EN 374)

Protective Neopren gloves (EN 374).

Protective nitrile gloves (EN 374)

Protective hand cream recommended.

Skin protection - Other:

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.

Thermal hazards:

If applicable, these are included in the individual protective measures (eye/face protection, skin protection, respiratory protection).

Additional information on hand protection - No tests have been performed.

In the case of mixtures, the selection has been made according to the knowledge available and the information about the contents.

Selection of materials derived from glove manufacturer's indications.

Final selection of glove material must be made taking the breakthrough times, permeation rates and degradation into account.

Selection of a suitable glove depends not only on the material but also on other quality characteristics and varies from manufacturer to manufacturer.

In the case of mixtures, the resistance of glove materials cannot be predicted and must therefore be tested before use.

The exact breakthrough time of the glove material can be requested from the protective glove manufacturer and must be observed.

8.2.3 Environmental exposure controls

No information available at present.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state:	Liquid
Colour:	White
Odour:	Alcoholic, Characteristic
Odour threshold:	Not determined
pH-value:	Not determined
Melting point/freezing point:	Not determined
Initial boiling point and boiling range:	Not determined
Flash point:	-28,5 °C (ISO 1523 (Rapid Equilibrium, closed cup, RECC))
Evaporation rate:	Not determined
Flammability (solid, gas):	200 °C (Ignition temperature)
Lower explosive limit:	2,1 Vol-%
Upper explosive limit:	13,5 Vol-%
Vapour pressure:	Not determined
Vapour density (air = 1):	Not determined
Density:	0,902 g/cm ³ (20°C)
Bulk density:	Not determined
Solubility(ies):	Not determined
Water solubility:	Insoluble
Partition coefficient (n-octanol/water):	Not determined
Auto-ignition temperature:	Not determined
Decomposition temperature:	Not determined
Viscosity:	Not determined
Explosive properties:	Not determined
Oxidising properties:	Not determined

9.2 Other information

Miscibility:	Not determined
Fat solubility / solvent:	Not determined
Conductivity:	Not determined
Surface tension:	Not determined
Solvents content:	Not determined

SECTION 10: Stability and reactivity

10.1 Reactivity

See also Subsection 10.4 to 10.6.

Can form explosive peroxides.

10.2 Chemical stability

See also Subsection 10.4 to 10.6.

Explosive when dry.

10.3 Possibility of hazardous reactions

See also Subsection 10.4 to 10.6.

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

10.4 Conditions to avoid

See also section 7.

Heating, open flame, ignition sources

Electrostatic charge

Protect from direct sunlight.

Product is light sensitive.

10.5 Incompatible materials

Avoid contact with strong oxidizing agents.

Avoid contact with strong acids.

Alkali metals

10.6 Hazardous decomposition products

See also Subsection 10.4 to 10.6.

No decomposition when used as directed.

SECTION 11: Toxicological information

The product was not tested.

Classification according to calculation procedure.

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Toxicity/effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	ATE	>5000	mg/kg			calculated value
Acute toxicity, by dermal route:						n.d.a.
Acute toxicity, by inhalation:						n.d.a.
Skin corrosion/irritation:						n.d.a.
Serious eye damage/irritation:						n.d.a.
Respiratory or skin sensitisation:						n.d.a.
Germ cell mutagenicity:						n.d.a.
Carcinogenicity:						n.d.a.
Reproductive toxicity:						n.d.a.
Specific target organ toxicity - single exposure (STOT-SE):						n.d.a.
Specific target organ toxicity - repeated exposure (STOT-RE):						n.d.a.
Aspiration hazard:						n.d.a.
Respiratory tract irritation:						n.d.a.
Repeated dose toxicity:						n.d.a.
Symptoms:						annoyance, cramps, drowsiness, dizziness

Ethyl acetate

Toxicity/effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	5620	mg/kg	Rat		
Acute toxicity, by dermal route:	LD50	>18000	mg/kg	Rabbit		
Acute toxicity, by inhalation:	LC50	>28,6	mg/l/4h	Rat		
Symptoms:						lack of appetite, breathing difficulties, dizziness, unconsciousness, drop in blood pressure, cornea opacity, coughing, headaches, gastrointestinal disturbances, intoxication, drowsiness, mucous membrane irritation, dizziness, salivation, nausea and vomiting.

diethyl ether

Toxicity/effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	1215	mg/kg	Rat		
Acute toxicity, by inhalation:	LC50	73000	ppm	Rat		
Skin corrosion/irritation:						Not irritant
Serious eye damage/irritation:						Mild irritant
Respiratory or skin sensitisation:						Not sensitizing
Germ cell mutagenicity:					OECD 471 (Bacterial Reverse Mutation Test)	Negative
Symptoms:						acidosis, ataxia, dizziness, unconsciousness, increased blood pressure, cornea opacity, collapse, headaches, intoxication, drowsiness, mucous membrane irritation, dizziness, salivation, nausea and vomiting.

Ethanol						
Toxicity/effect	Endpoint	Value	Unit	Organism	Test method	Notes
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Not irritant
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Mild irritant
Respiratory or skin sensitisation:				Mouse	OECD 429 (Skin Sensitisation - Local Lymph Node Assay)	Not sensitizing
Germ cell mutagenicity:				Salmonella typhimurium	OECD 471 (Bacterial Reverse Mutation Test)	Negative
Germ cell mutagenicity:					OECD 475 (Mammalian Bone Marrow Chromosome Aberration Test)	Negative
Germ cell mutagenicity:				Mouse	OECD 476 (In Vitro Mammalian Cell Gene Mutation Test)	Negative
Germ cell mutagenicity:					OECD 473 (In Vitro Mammalian Chromosome Aberration Test)	Negative
Germ cell mutagenicity:					OECD 471 (Bacterial Reverse Mutation Test)	Negative
Specific target organ toxicity - repeated exposure (STOT-RE):	NOAEL	1730	mg/kg/d	Rat	OECD 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)	Female
Specific target organ toxicity - repeated exposure (STOT-RE):	NOAL	>20	mg/l	Rat	OECD 403 (Acute Inhalation Toxicity)	Male
Aspiration hazard:				Human being		No indications of such an effect.

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Symptoms:						respiratory distress, dizziness, unconsciousness, drop in blood pressure, vomiting, coughing, headaches, intoxication, drowsiness, mucous membrane irritation, dizziness, nausea
Teratogenicity:						Negative
Experiences in humans:						There is no sign that this syndrome is also caused by dermal or inhalative absorption., Excessive alcohol consumption during pregnancy induces the foetus alcohol syndrome (reduced weight at birth, physical and mental disorders).

Titanium dioxide						
Toxicity/effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	>10000	mg/kg	Rat		
Acute toxicity, by dermal route:	LD50	>10000	mg/kg	Rabbit		
Acute toxicity, by inhalation:	LD50	>6,8	mg/l/4h	Rat		
Skin corrosion/irritation:				Rabbit		Not irritant
Respiratory or skin sensitisation:						Not sensitising
Symptoms:						mucous membrane irritation

SECTION 12: Ecological information

The product was not tested.

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Toxicity/effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
Toxicity to fish:							n.d.a.
Toxicity to daphnia:							n.d.a.
Toxicity to algae:							n.d.a.
Persistence and degradability:							n.d.a.
Bioaccumulative potential:							n.d.a.
Mobility in soil:							n.d.a.
Results of PBT and vPvB assessment							n.d.a.
Other adverse effects:							n.d.a.

Ethyl acetate							
Toxicity/effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
Toxicity to fish:	LC50	96h	320	mg/l	(Oncorhynchus mykiss)		
Toxicity to daphnia:	EC50	48h	717	mg/l	(Daphnia magna)		
Toxicity to algae:	IC50	48h	3300	mg/l	(Scenedesmus subspicatus)		
Persistence and degradability:		28d	100	%		OECD 301 D (Ready Biodegradability - Closed Bottle Test)	

Persistence and degradability:		28d	93,9	%		OECD 301 B (Ready Biodegradability - Co2 Evolution Test)	
Bioaccumulative potential:	BCF		30				
Bioaccumulative potential:	Log Pow		0,73				
Mobility in soil:	H (Henry)		0,0001 2	atm*m3 /mol			

diethyl ether							
Toxicity/effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
Toxicity to fish:	LC50	96h	2600	mg/l	(Pimephales promelas)		
Toxicity to daphnia:	EC50	24h	165	mg/l	(Daphnia magna)		
Persistence and degradability:							Not readily biodegradable
Bioaccumulative potential:							Not to be expected
Toxicity to bacteria:	EC50	15min	5600	mg/l	(Photobacterium phosphoreum)		

Ethanol							
Toxicity/effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
Toxicity to fish:	LC50	96h	13000	mg/l	(Oncorhynchus mykiss)	OECD 203 (Fish, Acute Toxicity Test)	
Toxicity to daphnia:	LC50	48h	12340	mg/l	(Daphnia magna)		
Persistence and degradability:			97	%		OECD 301 B (Ready Biodegradability - Co2 Evolution Test)	
Bioaccumulative potential:	BCF		3,2	mg/l			
Bioaccumulative potential:	Log Pow		-0,32				
Results of PBT and vPvB assessment							Not a PBT-substance, Not a vPvB-substance
Other ecotoxicological data:	COD		1,9	g/g			
Other ecotoxicological data:	BOD5		1	g/g			

Titanium dioxide							
Toxicity/effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
Toxicity to fish:	LC0	48h	>1000	mg/l	(Leuciscus idus)		
Toxicity to daphnia:	LC0	30d	>3	mg/l	(Daphnia magna)		
Persistence and degradability:							Not readily biodegradable
Bioaccumulative potential:							No
Toxicity to bacteria:			>5000	mg/l	(Escherichia coli)		
Toxicity to bacteria:			>5000	mg/l	(Pseudomonas fluorescens)		
Toxicity to bacteria:	LC0	24h	>1000 0	mg/l	(Pseudomonas fluorescens)		

SECTION 13: Disposal considerations

13.1 Waste treatment methods

For the substance / mixture / residual amounts

EC disposal code no.:

The waste codes are recommendations based on the scheduled use of this product. Owing to the user's specific conditions for use and disposal, other waste codes may be allocated under certain circumstances. (2001/118/EC, 2001/119/EC, 2001/573/EC)

07 03 04 other organic solvents, washing liquids and mother liquors

18 01 06 chemicals consisting of or containing dangerous substances

Recommendation:

Pay attention to local and national official regulations

E.g. suitable incineration plant.

For contaminated packing material

Pay attention to local and national official regulations

Empty container completely.

Uncontaminated packaging can be recycled.

Dispose of packaging that cannot be cleaned in the same manner as the substance.

Do not perforate, cut up or weld uncleaned container.

Residues may present a risk of explosion.

15 01 04 metallic packaging

SECTION 14: Transport information

General statements

UN number: 1263

Transport by road/by rail (ADR/RID)

UN proper shipping name:

UN 1263 PAINT

Transport hazard class(es): 3

Packing group: I

Classification code: F1

LQ (ADR 2011): 500 ml

LQ (ADR 2009): 3

Environmental hazards: Not applicable

Tunnel restriction code: D/E



Transport by sea (IMDG-code)

UN proper shipping name:

PAINT

Transport hazard class(es): 3

Packing group: I

EmS: F-E, S-E

Marine Pollutant: n.a

Environmental hazards: Not applicable



Transport by air (IATA)

UN proper shipping name:

Paint

Transport hazard class(es): 3

Packing group: I

Environmental hazards: Not applicable



Special precautions for user

Persons employed in transporting dangerous goods must be trained.

All persons involved in transporting must observe safety regulations.

Precautions must be taken to prevent damage.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Freighted as packaged goods rather than in bulk, therefore not applicable.

Additional information:

Danger code and packing code on request.

SECTION 15: Regulatory information

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

For classification and labelling see Section 2.

Observe restrictions: Yes

Observe youth employment law (German regulation).

Regulation (EC) No 1907/2006, Annex XVII

VOC (1999/13/EC): ~ 77,35% w/w

15.2 Chemical safety assessment

No information available at present.

SECTION 16: Other information

These details refer to the product as it is delivered.

Revised sections:

1, 9

The following statements are the indicated R-phrases / H-phrases and classification codes (GHS/CLP) for the ingredients (listed in Section 3).

11 Highly flammable.

12 Extremely flammable.

19 May form explosive peroxides.

22 Harmful if swallowed.

36 Irritating to eyes.

66 Repeated exposure may cause skin dryness or cracking.

67 Vapours may cause drowsiness and dizziness.

H224 Extremely flammable liquid and vapour.

H225 Highly flammable liquid and vapour.

H302 Harmful if swallowed.

H319 Causes serious eye irritation.

H336 May cause drowsiness or dizziness.

Flam. Liq.-Flammable liquid

Eye Irrit.-Eye irritation

STOT SE-Specific target organ toxicity - single exposure - narcotic effects

Acute Tox.-Acute toxicity - oral

Legend:

AC = Article Categories

acc., acc. to = according, according to

ACGIH = American Conference of Governmental Industrial Hygienists

ADR = Accord européen relatif au transport international des marchandises Dangereuses par Route (= European Agreement concerning the International Carriage of Dangerous Goods by Road)

AOX = Adsorbable organic halogen compounds

approx. = approximately

Art., Art. no. = Article number

ATE = Acute Toxicity Estimate according to Regulation (EC) 1272/2008 (CLP)

BAM = Bundesanstalt für Materialforschung und -prüfung (Federal Institute for Materials Research and Testing, Germany)

BAuA = Bundesanstalt für Arbeitsschutz und Arbeitsmedizin (= Federal Institute for Occupational Health and Safety, Germany)

BCF = Bioconcentration factor

BGV = Berufsgenossenschaftliche Vorschrift (= Accident Prevention Regulation)

BHT = Butylhydroxytoluol (= 2,6-Di-*t*-butyl-4-methyl-phenol)

BMGV = Biological monitoring guidance value (EH40, UK)

BOD = Biochemical oxygen demand

CAS = Chemical Abstracts Service

CESIO = Comité Européen des Agents de Surface et de leurs Intermédiaires Organiques

CIPAC = Collaborative International Pesticides Analytical Council

CLP = Classification, Labelling and Packaging (REGULATION (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures)

CMR = carcinogenic, mutagenic, reproductive toxic

COD = Chemical oxygen demand

CTFA = Cosmetic, Toiletry, and Fragrance Association

DMEL = Derived Minimum Effect Level

DNEL = Derived No Effect Level

DOC = Dissolved organic carbon

DVS = Deutscher Verband für Schweißen und verwandte Verfahren e.V. (= German Association for Welding and Allied Processes)

e.g. = for example (abbreviation of Latin 'exempli gratia'), for instance

EC = European Community

ECHA = European Chemicals Agency

EEA = European Economic Area

EEC = European Economic Community

EINECS = European Inventory of Existing Commercial Chemical Substances

ELINCS = European List of Notified Chemical Substances

EN = European Norms

EPA = United States Environmental Protection Agency (United States of America)

ERC = Environmental Release Categories

ES = Exposure scenario

etc. = et cetera

EU = European Union

EWC = European Waste Catalogue

Fax. = Fax number

gen. = general

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

GWP = Global warming potential

HET-CAM = Hen's Egg Test - Chorionallantoic Membrane

IARC = International Agency for Research on Cancer

IATA = International Air Transport Association

IBC = Intermediate Bulk Container

IBC (Code) = International Bulk Chemical (Code)

IC = Inhibitory concentration

IMDG-code = International Maritime Code for Dangerous Goods

incl. = including, inclusive

IUCLID = International Uniform Chemical Information Database

LC = lethal concentration

LC50 = lethal concentration 50 percent kill

LCLo = lowest published lethal concentration

LD = Lethal Dose of a chemical

LD50 = Lethal Dose, 50% kill

LDLo = Lethal Dose Low

LMBG = Lebensmittel- und Bedarfsgegenständegesetz (= Foodstuffs and Commodities Law)

LOAEL = Lowest Observed Adverse Effect Level

LOEC = Lowest Observed Effect Concentration

LOEL = Lowest Observed Effect Level

LQ = Limited Quantities

MARPOL = International Convention for the Prevention of Marine Pollution from Ships

n.a. = not applicable

n.av. = not available

n.c. = not checked

n.d.a. = no data available

NIOSH = National Institute of Occupational Safety and Health

No. = Number

NOAEC = No Observed Adverse Effective Concentration

NOAEL = No Observed Adverse Effect Level

NOEC = No Observed Effect Concentration

NOEL = No Observed Effect Level

ODP = Ozone Depletion Potential

OECD = Organisation for Economic Co-operation and Development

PC = product category (= Chemical product category)

PE = Polyethylene

PNEC = Predicted No Effect Concentration

POCP = Photochemical ozone creation potential

ppm = parts per million

PROC = Process category

PTFE = Polytetrafluorethylene

REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals (REGULATION (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals)

RID = Règlement concernant le transport International ferroviaire de marchandises Dangereuses (= Regulation concerning the International Carriage of Dangerous Goods by Rail)

SADT = Self-Accelerating Decomposition Temperature

SAR = Structure Activity Relationship

SU = Sector of use

SVHC = Substances of Very High Concern

Tel. = Telephone

ThOD = Theoretical oxygen demand

TOC = Total organic carbon

TRGS = Technische Regeln für Gefahrstoffe (= Technical Regulations for Hazardous Substances)

VbF = Verordnung über brennbare Flüssigkeiten (= Regulation for flammable liquids (Austria))

VOC = Volatile organic compounds

vPvB = very Persistent, very Bioaccumulative

WEL-TWA, WEL-STEL = WEL-TWA = Workplace Exposure Limit - Long-term exposure limit (8-hour TWA (= time weighted average) reference period), WEL-STEL = Workplace Exposure Limit - Short-term exposure limit (15-minute reference period) (EH40, UK).

WHO = World Health Organization

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Revised on / Version: 04.08.2011 / 0002

Replaces revision of / Version: 07.02.2011 / 0001

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Arti-Spot Frühkontaktindikator BK 85

The statements made here should describe the product with regard to the necessary safety precautions - they are not meant to guarantee definite characteristics - but they are based on our present up-to-date knowledge.

No responsibility.

These statements were made by:

Chemical Check GmbH, Wöbbeler Straße 2-4, D-32839 Steinheim, Tel.: +49 5233 94 17 0, +49 1805-CHEMICAL / +49 180 52 43 642, Fax: +49 5233 94 17 90, +49 180 50 50 455

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Safety data sheet according to Regulation (EC) No 1907/2006, Annex II

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

1.1 Product identifier

Arti-Spot Frühkontaktindikator BK 86

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

Relevant identified uses of the substance or mixture:

Indicator solution

Paint

Uses advised against:

No information available at present.

1.3 Details of the supplier of the safety data sheet

Dr. Jean Bausch GmbH & Co. KG, Oskar-Schindler-Str. 4, D-50769 Köln

Telephone +49 (0)221-70936-0, Fax +49 (0)221-70936-66

info@BauschDental.de, <http://BauschDental.de>

E-mail address of the competent person: info@chemical-check.de, k.schnurbusch@chemical-check.de

1.4 Emergency telephone

Advisory office in case of poisoning:

+49 30 19240 (D-13437 Berlin, 24 hour)

Telephone number of the company in case of emergencies:

Tel.: ---

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

2.1.1 Classification according to Regulation (EC) 1272/2008 (CLP)

Hazard class	Hazard category	Hazard statement
Flam. Liq.	1	H224-Extremely flammable liquid and vapour.
Eye Irrit.	2	H319-Causes serious eye irritation.
STOT SE	3	H336-May cause drowsiness or dizziness.

2.1.2 Classification according to Directives 67/548/EEC and 1999/45/EC (including amendments).

F+, Extremely flammable, R12

R19

Xi, Irritant, R36

R66

R67

2.2 Label elements

2.2.1 Labeling according to Regulation (EC) 1272/2008 (CLP)



Danger

Hazard statement

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H224-Extremely flammable liquid and vapour. H319-Causes serious eye irritation. H336-May cause drowsiness or dizziness.

Prevention

P210-Keep away from heat/sparks/open flames/hot surfaces. - No smoking. P233-Keep container tightly closed. P261-Avoid breathing vapour or spray. P280-Wear protective gloves/clothing and eye/face protection.

Response

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.

Storage

P403+P235-Store in a well-ventilated place. Keep cool.

EUH019-May form explosive peroxides.

EUH066-Repeated exposure may cause skin dryness or cracking.

Ethyl acetate
 diethyl ether

2.3 Other hazards

The mixture contains no vPvB substance (vPvB = very persistent, very bioaccumulative).

The mixture contains no PBT substance (PBT = persistent, bioaccumulative, toxic).

SECTION 3: Composition/information on ingredients

3.1 Substance

n.a.

3.2 Mixture

Ethyl acetate	
Registration number (ECHA)	01-2119475103-46-XXXX
Index	607-022-00-5
EINECS, ELINCS	205-500-4
content %	20-30
Symbol	F/Xi
R-phrases	11-36-66-67
Classification categories / Indications of danger	Highly flammable, Irritant
Hazard class/Hazard category	Hazard statement
Flam. Liq./2	H225
Eye Irrit./2	H319
STOT SE/3	H336

diethyl ether	
Registration number (ECHA)	Substance for which an EU exposure limit value applies.
Index	-
EINECS, ELINCS	603-022-00-4
content %	200-467-2
Symbol	10-<25
R-phrases	F+/Xn
Classification categories / Indications of danger	12-19-22-66-67
Hazard class/Hazard category	Extremely flammable, Harmful
Hazard class/Hazard category	Hazard statement
Flam. Liq./1	H224
Acute Tox./4	H302
STOT SE/3	H336

For the text of the R-phrases / H-phrases and classification codes (GHS/CLP), see Section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

Never pour anything into the mouth of an unconscious person!

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.

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

Eye contact

Remove contact lenses.

Wash thoroughly for several minutes using copious water. Seek medical help if necessary.

Ingestion

Rinse the mouth thoroughly with water.

Do not induce vomiting - give copious water to drink. Consult doctor immediately.

Danger of aspiration

4.2 Most important symptoms and effects, both acute and delayed

Where relevant delayed occurring symptoms and effects will be found in section 11. or at the exposure routes under section 4.1.

After resorption:

drowsiness

Dizziness

Euphoria

annoyance

Cramps

Narcotic effect.

4.3 Indication of any immediate medical attention and special treatment needed

n.c.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

CO2

Extinction powder

Water jet spray

Alcohol resistant foam

Unsuitable extinguishing media

High volume water jet

5.2 Special hazards arising from the substance or mixture

In case of fire the following can develop:

Oxides of carbon

Oxides of nitrogen

Toxic pyrolysis products.

Explosive vapour/air mixture

Dangerous vapours heavier than air.

5.3 Advice for firefighters

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

Cool container at risk with water.

Dispose of contaminated extinction water according to official regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

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

6.2 Environmental precautions

If leakage occurs, dam up.

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.

6.3 Methods and material for containment and 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.

6.4 Reference to other sections

For personal protective equipment see Section 8 and for disposal instructions see Section 13.

SECTION 7: Handling and storage

In addition to information given in this section, relevant information can also be found in section 8 and 6.1.

7.1 Precautions for safe 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.

General hygiene measures for the handling of chemicals are applicable.

Wash hands before breaks and at end of work.

Keep away from food, drink and animal feedingstuffs.

Remove contaminated clothing and protective equipment before entering areas in which food is consumed.

7.2 Conditions for safe storage, including any incompatibilities

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.

Observe special storage conditions (in Germany, e.g., in accordance with the regulations in the "Betriebssicherheitsverordnung").

7.3 Specific end use(s)

No information available at present.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

(GB)	Chemical Name	Ethyl acetate	Content %:	20-30
	WEL-TWA:	200 ppm	WEL-STEL:	400 ppm
	BMGV:	---	Other information:	---
(GB)	Chemical Name	diethyl ether	Content %:	10- <25
	WEL-TWA:	100 ppm (310 mg/m ³) (WEL), 100 ppm (308 mg/m ³) (EC)	WEL-STEL:	200 ppm (620 mg/m ³) (WEL), 200 ppm (616 mg/m ³) (EC)
	BMGV:	---	Other information:	---
(GB)	Chemical Name	Ethanol	Content %:	
	WEL-TWA:	1000 ppm (1920 mg/m ³)	WEL-STEL:	---
	BMGV:	---	Other information:	---
(GB)	Chemical Name	Glycerine	Content %:	
	WEL-TWA:	10 mg/m ³ (mist)	WEL-STEL:	---
	BMGV:	---	Other information:	---

(GB) WEL-TWA = Workplace Exposure Limit - Long-term exposure limit (8-hour TWA (= time weighted average) reference period) EH40. AGW = "Arbeitsplatzgrenzwert" (workplace limit value, Germany). | WEL-STEL = Workplace Exposure Limit - Short-term exposure limit (15-minute reference period). | BMGV = Biological monitoring guidance value EH40. BGW = "Biologischer Grenzwert" (biological limit value, Germany) | Other information: Sen = Capable of causing occupational asthma. Sk = Can be absorbed through skin. Carc = Capable of causing cancer and/or heritable genetic damage.

** = The exposure limit for this substance is repealed through the TRGS 900 (Germany) of January 2006 with the goal of revision.

Ethanol						
Use-Area	Exposure-Route	Exposure-Pattern	Descriptor	Value	Unit	Note
Worker	Human - inhalation	Short term, local effects	DNEL (Derived No Effect Level)	1900	mg/m ³	
Worker	Human - inhalation	Long term, systemic effects	DNEL (Derived No Effect Level)	950	mg/m ³	
Worker	Human - dermal	Long term, systemic effects	DNEL (Derived No Effect Level)	343	mg/kg bw/d	
Consumer	Human - inhalation	Short term, local effects	DNEL (Derived No Effect Level)	950	mg/m ³	
Consumer	Human - dermal	Short term, local effects	DNEL (Derived No Effect Level)	950	mg/m ³	
Consumer	Human - inhalation	Long term, systemic effects	DNEL (Derived No Effect Level)	114	mg/m ³	
Consumer	Human - oral	Long term, systemic effects	DNEL (Derived No Effect Level)	87	mg/kg	
Consumer	Human - dermal	Long term, systemic effects	DNEL (Derived No Effect Level)	206	mg/kg bw/d	
	Environment - freshwater		PNEC (Predicted No Effect Concentration)	0,96	mg/l	
	Environment - marine		PNEC (Predicted No Effect Concentration)	0,79	mg/l	
	Environment - water, sporadic (intermittent) release		PNEC (Predicted No Effect Concentration)	2,75	mg/l	
	Environment - sewage treatment plant		PNEC (Predicted No Effect Concentration)	580	mg/l	
	Environment - sediment, freshwater		DNEL (Derived No Effect Level)	3,6	mg/kg dry weight	
	Environment - soil		DNEL (Derived No Effect Level)	0,63	mg/kg dry weight	
	Environment - oral (feed)		PNEC (Predicted No Effect Concentration)	0,72	mg/kg feed	

8.2 Exposure controls

8.2.1 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.

8.2.2 Individual protection measures, such as personal protective equipment

General hygiene measures for the handling of chemicals are applicable.

Wash hands before breaks and at end of work.

Keep away from food, drink and animal feedingstuffs.

Remove contaminated clothing and protective equipment before entering areas in which food is consumed.

Eye/face protection:

Tight fitting protective goggles with side protection (EN 166).

Skin protection - Hand protection:

Solvent resistant protective gloves (EN 374).

If applicable

Safety gloves made of butyl (EN 374)

Protective Neopren gloves (EN 374).

Protective nitrile gloves (EN 374)

Protective hand cream recommended.

Skin protection - Other:

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

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Observe wearing time limitations for respiratory protection equipment.

Thermal hazards:

If applicable, these are included in the individual protective measures (eye/face protection, skin protection, respiratory protection).

Additional information on hand protection - No tests have been performed.

In the case of mixtures, the selection has been made according to the knowledge available and the information about the contents.

Selection of materials derived from glove manufacturer's indications.

Final selection of glove material must be made taking the breakthrough times, permeation rates and degradation into account.

Selection of a suitable glove depends not only on the material but also on other quality characteristics and varies from manufacturer to manufacturer.

In the case of mixtures, the resistance of glove materials cannot be predicted and must therefore be tested before use.

The exact breakthrough time of the glove material can be requested from the protective glove manufacturer and must be observed.

8.2.3 Environmental exposure controls

No information available at present.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state:	Liquid
Colour:	Red
Odour:	Alcoholic, Characteristic
Odour threshold:	Not determined
pH-value:	Not determined
Melting point/freezing point:	Not determined
Initial boiling point and boiling range:	Not determined
Flash point:	-28,5 °C (ISO 1523 (Rapid Equilibrium, closed cup, RECC))
Evaporation rate:	Not determined
Flammability (solid, gas):	200 °C (Ignition temperature)
Lower explosive limit:	2,1 Vol-%
Upper explosive limit:	13,5 Vol-%
Vapour pressure:	Not determined
Vapour density (air = 1):	Not determined
Density:	0,902 g/ml
Bulk density:	Not determined
Solubility(ies):	Not determined
Water solubility:	Insoluble
Partition coefficient (n-octanol/water):	Not determined
Auto-ignition temperature:	Not determined
Decomposition temperature:	Not determined
Viscosity:	Not determined
Explosive properties:	Not determined
Oxidising properties:	Not determined

9.2 Other information

Miscibility:	Not determined
Fat solubility / solvent:	Not determined
Conductivity:	Not determined
Surface tension:	Not determined
Solvents content:	Not determined

SECTION 10: Stability and reactivity

10.1 Reactivity

See also Subsection 10.4 to 10.6.

Can form explosive peroxides.

10.2 Chemical stability

See also Subsection 10.4 to 10.6.

Explosive when dry.

10.3 Possibility of hazardous reactions

See also Subsection 10.4 to 10.6.

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

10.4 Conditions to avoid

See also section 7.

Heating, open flame, ignition sources

Electrostatic charge

Protect from direct sunlight.

Product is light sensitive.

10.5 Incompatible materials

Avoid contact with strong oxidizing agents.

Avoid contact with strong acids.

Alkali metals

10.6 Hazardous decomposition products

See also Subsection 10.4 to 10.6.

No decomposition when used as directed.

SECTION 11: Toxicological information

The product was not tested.

Classification according to calculation procedure.

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Toxicity/effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	ATE	>5000	mg/kg			calculated value
Acute toxicity, by dermal route:						n.d.a.
Acute toxicity, by inhalation:						n.d.a.
Skin corrosion/irritation:						n.d.a.
Serious eye damage/irritation:						n.d.a.
Respiratory or skin sensitisation:						n.d.a.
Germ cell mutagenicity:						n.d.a.
Carcinogenicity:						n.d.a.
Reproductive toxicity:						n.d.a.
Specific target organ toxicity - single exposure (STOT-SE):						n.d.a.
Specific target organ toxicity - repeated exposure (STOT-RE):						n.d.a.
Aspiration hazard:						n.d.a.
Respiratory tract irritation:						n.d.a.
Repeated dose toxicity:						n.d.a.
Symptoms:						annoyance, cramps, drowsiness, dizziness

Ethyl acetate

Toxicity/effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	5620	mg/kg	Rat		
Acute toxicity, by dermal route:	LD50	>18000	mg/kg	Rabbit		
Acute toxicity, by inhalation:	LC50	>28,6	mg/l/4h	Rat		
Symptoms:						lack of appetite, breathing difficulties, dizziness, unconsciousness, drop in blood pressure, cornea opacity, coughing, headaches, gastrointestinal disturbances, intoxication, drowsiness, mucous membrane irritation, dizziness, salivation, nausea and vomiting.

diethyl ether

Toxicity/effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	1215	mg/kg	Rat		
Acute toxicity, by inhalation:	LC50	73000	ppm	Rat		
Skin corrosion/irritation:						Not irritant
Serious eye damage/irritation:						Mild irritant
Respiratory or skin sensitisation:						Not sensitizing
Germ cell mutagenicity:					OECD 471 (Bacterial Reverse Mutation Test)	Negative
Symptoms:						acidosis, ataxia, dizziness, unconsciousness, increased blood pressure, cornea opacity, collapse, headaches, intoxication, drowsiness, mucous membrane irritation, dizziness, salivation, nausea and vomiting.

Ethanol						
Toxicity/effect	Endpoint	Value	Unit	Organism	Test method	Notes
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Not irritant
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Mild irritant
Respiratory or skin sensitisation:				Mouse	OECD 429 (Skin Sensitisation - Local Lymph Node Assay)	Not sensitizing
Germ cell mutagenicity:				Salmonella typhimurium	OECD 471 (Bacterial Reverse Mutation Test)	Negative
Germ cell mutagenicity:					OECD 475 (Mammalian Bone Marrow Chromosome Aberration Test)	Negative
Germ cell mutagenicity:				Mouse	OECD 476 (In Vitro Mammalian Cell Gene Mutation Test)	Negative
Germ cell mutagenicity:					OECD 473 (In Vitro Mammalian Chromosome Aberration Test)	Negative
Germ cell mutagenicity:					OECD 471 (Bacterial Reverse Mutation Test)	Negative
Specific target organ toxicity - repeated exposure (STOT-RE):	NOAEL	1730	mg/kg/d	Rat	OECD 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)	Female
Specific target organ toxicity - repeated exposure (STOT-RE):	NOAL	>20	mg/l	Rat	OECD 403 (Acute Inhalation Toxicity)	Male
Aspiration hazard:				Human being		No indications of such an effect.

Symptoms:						respiratory distress, dizziness, unconsciousness, drop in blood pressure, vomiting, coughing, headaches, intoxication, drowsiness, mucous membrane irritation, dizziness, nausea
Teratogenicity:						Negative
Experiences in humans:						There is no sign that this syndrome is also caused by dermal or inhalative absorption., Excessive alcohol consumption during pregnancy induces the foetus alcohol syndrome (reduced weight at birth, physical and mental disorders).

Glycerine						
Toxicity/effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	>12600	mg/kg	Rat		
Acute toxicity, by dermal route:	LD50	>18700	mg/kg	Rabbit		
Skin corrosion/irritation:					OECD 404 (Acute Dermal Irritation/Corrosion)	Not irritant
Serious eye damage/irritation:					OECD 405 (Acute Eye Irritation/Corrosion)	Not irritant
Respiratory or skin sensitisation:						Not sensitizing
Respiratory or skin sensitisation:						Not sensitizing
Germ cell mutagenicity:					OECD 471 (Bacterial Reverse Mutation Test)	Negative
Symptoms:						abdominal pain, dizziness, diarrhoea, vomiting, headaches, mucous membrane irritation

SECTION 12: Ecological information

The product was not tested.

Arti-Spot Frühkontaktindikator BK 86							
Toxicity/effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
Toxicity to fish:							n.d.a.
Toxicity to daphnia:							n.d.a.
Toxicity to algae:							n.d.a.
Persistence and degradability:							n.d.a.
Bioaccumulative potential:							n.d.a.
Mobility in soil:							n.d.a.
Results of PBT and vPvB assessment							n.d.a.
Other adverse effects:							n.d.a.

Ethyl acetate

Toxicity/effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
Toxicity to fish:	LC50	96h	320	mg/l	(Oncorhynchus mykiss)		
Toxicity to daphnia:	EC50	48h	717	mg/l	(Daphnia magna)		
Toxicity to algae:	IC50	48h	3300	mg/l	(Scenedesmus subspicatus)		
Persistence and degradability:		28d	100	%		OECD 301 D (Ready Biodegradability - Closed Bottle Test)	
Persistence and degradability:		28d	93,9	%		OECD 301 B (Ready Biodegradability - Co2 Evolution Test)	
Bioaccumulative potential:	BCF		30				
Bioaccumulative potential:	Log Pow		0,73				
Mobility in soil:	H (Henry)		0,00012	atm*m3/mol			

diethyl ether

Toxicity/effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
Toxicity to fish:	LC50	96h	2600	mg/l	(Pimephales promelas)		
Toxicity to daphnia:	EC50	24h	165	mg/l	(Daphnia magna)		
Persistence and degradability:							Not readily biodegradable
Bioaccumulative potential:							Not to be expected
Toxicity to bacteria:	EC50	15min	5600	mg/l	(Photobacterium phosphoreum)		

Ethanol

Toxicity/effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
Toxicity to fish:	LC50	96h	13000	mg/l	(Oncorhynchus mykiss)	OECD 203 (Fish, Acute Toxicity Test)	
Toxicity to daphnia:	LC50	48h	12340	mg/l	(Daphnia magna)		
Persistence and degradability:			97	%		OECD 301 B (Ready Biodegradability - Co2 Evolution Test)	
Bioaccumulative potential:	BCF		3,2	mg/l			
Bioaccumulative potential:	Log Pow		-0,32				
Results of PBT and vPvB assessment							Not a PBT-substance, Not a vPvB-substance
Other ecotoxicological data:	COD		1,9	g/g			
Other ecotoxicological data:	BOD5		1	g/g			

Glycerine

Toxicity/effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
Toxicity to fish:	LC50	96h	> 5000	mg/l	(Carassius auratus)		
Toxicity to fish:	LC50	96h	>10000	mg/l	(Leuciscus idus)		
Toxicity to daphnia:	EC50	24h	>10000	mg/l	(Daphnia magna)		
Toxicity to algae:	IC5	7d	>10000	mg/l	(Scenedesmus quadricauda)		

Persistence and degradability:		14d	63	%		OECD 301 C (Ready Biodegradability - Modified MITI Test (I))	
Bioaccumulative potential:	Log Pow		-2,66				
Results of PBT and vPvB assessment							n.a.
Toxicity to bacteria:	EC5	16h	> 10000	mg/l	(Pseudomonas putida)		
Other ecotoxicological data:	BOD5		0,87	g/g			
Other ecotoxicological data:	COD		1,16	g/g			

SECTION 13: Disposal considerations

13.1 Waste treatment methods

For the substance / mixture / residual amounts

EC disposal code no.:

The waste codes are recommendations based on the scheduled use of this product.

Owing to the user's specific conditions for use and disposal, other waste codes may be allocated under certain circumstances. (2001/118/EC, 2001/119/EC, 2001/573/EC)

07 03 04 other organic solvents, washing liquids and mother liquors

18 01 06 chemicals consisting of or containing dangerous substances

Recommendation:

Pay attention to local and national official regulations

E.g. suitable incineration plant.

For contaminated packing material

Pay attention to local and national official regulations

Empty container completely.

Untamminated packaging can be recycled.

Dispose of packaging that cannot be cleaned in the same manner as the substance.

Do not perforate, cut up or weld uncleaned container.

Residues may present a risk of explosion.

15 01 04 metallic packaging

SECTION 14: Transport information

General statements

UN number: 1263

Transport by road/by rail (ADR/RID)

UN proper shipping name:

UN 1263 PAINT

Transport hazard class(es): 3

Packing group: I

Classification code: F1

LQ (ADR 2011): 500 ml

LQ (ADR 2009): 3

Environmental hazards: Not applicable

Tunnel restriction code: D/E

Transport by sea (IMDG-code)

UN proper shipping name:

PAINT

Transport hazard class(es): 3

Packing group: I

EmS: F-E, S-E

Marine Pollutant: n.a

Environmental hazards: Not applicable

Transport by air (IATA)

UN proper shipping name:

Paint



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Transport hazard class(es): 3
 Packing group: I
 Environmental hazards: Not applicable

Special precautions for user

Persons employed in transporting dangerous goods must be trained.
 All persons involved in transporting must observe safety regulations.
 Precautions must be taken to prevent damage.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Freighted as packaged goods rather than in bulk, therefore not applicable.

Additional information:

Danger code and packing code on request.

SECTION 15: Regulatory information

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

For classification and labelling see Section 2.

Observe restrictions: Yes
 Observe youth employment law (German regulation).
 Regulation (EC) No 1907/2006, Annex XVII
 VOC (1999/13/EC): ~ 77,35% w/w

15.2 Chemical safety assessment

No information available at present.

SECTION 16: Other information

These details refer to the product as it is delivered.

Revised sections: 1, 9
 The following statements are the indicated R-phrases / H-phrases and classification codes (GHS/CLP) for the ingredients (listed in Section 3).
 11 Highly flammable.
 12 Extremely flammable.
 19 May form explosive peroxides.
 22 Harmful if swallowed.
 36 Irritating to eyes.
 66 Repeated exposure may cause skin dryness or cracking.
 67 Vapours may cause drowsiness and dizziness.
 H224 Extremely flammable liquid and vapour.
 H225 Highly flammable liquid and vapour.
 H302 Harmful if swallowed.
 H319 Causes serious eye irritation.
 H336 May cause drowsiness or dizziness.

Flam. Liq.-Flammable liquid
 Eye Irrit.-Eye irritation
 STOT SE-Specific target organ toxicity - single exposure - narcotic effects
 Acute Tox.-Acute toxicity - oral

Legend:

AC = Article Categories
 acc., acc. to = according, according to
 ACGIH = American Conference of Governmental Industrial Hygienists
 ADR = Accord européen relatif au transport international des marchandises Dangereuses par Route (= European Agreement concerning the International Carriage of Dangerous Goods by Road)
 AOX = Adsorbable organic halogen compounds
 approx. = approximately
 Art., Art. no. = Article number
 ATE = Acute Toxicity Estimate according to Regulation (EC) 1272/2008 (CLP)
 BAM = Bundesanstalt für Materialforschung und -prüfung (Federal Institute for Materials Research and Testing, Germany)
 BAuA = Bundesanstalt für Arbeitsschutz und Arbeitsmedizin (= Federal Institute for Occupational Health and Safety, Germany)
 BCF = Bioconcentration factor
 BGV = Berufsgenossenschaftliche Vorschrift (= Accident Prevention Regulation)
 BHT = Butylhydroxytoluol (= 2,6-Di-t-butyl-4-methyl-phenol)

BMGV = Biological monitoring guidance value (EH40, UK)

BOD = Biochemical oxygen demand

CAS = Chemical Abstracts Service

CESIO = Comité Européen des Agents de Surface et de leurs Intermédiaires Organiques

CIPAC = Collaborative International Pesticides Analytical Council

CLP = Classification, Labelling and Packaging (REGULATION (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures)

CMR = carcinogenic, mutagenic, reproductive toxic

COD = Chemical oxygen demand

CTFA = Cosmetic, Toiletry, and Fragrance Association

DMEL = Derived Minimum Effect Level

DNEL = Derived No Effect Level

DOC = Dissolved organic carbon

DVS = Deutscher Verband für Schweißen und verwandte Verfahren e.V. (= German Association for Welding and Allied Processes)

e.g. = for example (abbreviation of Latin 'exempli gratia'), for instance

EC = European Community

ECHA = European Chemicals Agency

EEA = European Economic Area

EEC = European Economic Community

EINECS = European Inventory of Existing Commercial Chemical Substances

ELINCS = European List of Notified Chemical Substances

EN = European Norms

EPA = United States Environmental Protection Agency (United States of America)

ERC = Environmental Release Categories

ES = Exposure scenario

etc. = et cetera

EU = European Union

EWC = European Waste Catalogue

Fax. = Fax number

gen. = general

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

GWP = Global warming potential

HET-CAM = Hen's Egg Test - Chorionallantoic Membrane

IARC = International Agency for Research on Cancer

IATA = International Air Transport Association

IBC = Intermediate Bulk Container

IBC (Code) = International Bulk Chemical (Code)

IC = Inhibitory concentration

IMDG-code = International Maritime Code for Dangerous Goods

incl. = including, inclusive

IUCLID = International Uniform Chemical Information Database

LC = lethal concentration

LC50 = lethal concentration 50 percent kill

LCLo = lowest published lethal concentration

LD = Lethal Dose of a chemical

LD50 = Lethal Dose, 50% kill

LDLo = Lethal Dose Low

LMBG = Lebensmittel- und Bedarfsgegenständegesetz (= Foodstuffs and Commodities Law)

LOAEL = Lowest Observed Adverse Effect Level

LOEC = Lowest Observed Effect Concentration

LOEL = Lowest Observed Effect Level

LQ = Limited Quantities

MARPOL = International Convention for the Prevention of Marine Pollution from Ships

n.a. = not applicable

n.av. = not available

n.c. = not checked

n.d.a. = no data available

NIOSH = National Institute of Occupational Safety and Health

No. = Number

NOAEC = No Observed Adverse Effective Concentration

NOAEL = No Observed Adverse Effect Level

NOEC = No Observed Effect Concentration

NOEL = No Observed Effect Level

ODP = Ozone Depletion Potential

OECD = Organisation for Economic Co-operation and Development

PC = product category (= Chemical product category)

PE = Polyethylene

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PNEC = Predicted No Effect Concentration
POCP = Photochemical ozone creation potential
ppm = parts per million
PROC = Process category
PTFE = Polytetrafluorethylene
REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals (REGULATION (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals)
RID = Règlement concernant le transport International ferroviaire de marchandises Dangereuses (= Regulation concerning the International Carriage of Dangerous Goods by Rail)
SADT = Self-Accelerating Decomposition Temperature
SAR = Structure Activity Relationship
SU = Sector of use
SVHC = Substances of Very High Concern
Tel. = Telephone
ThOD = Theoretical oxygen demand
TOC = Total organic carbon
TRGS = Technische Regeln für Gefahrstoffe (=Technical Regulations for Hazardous Substances)
VbF = Verordnung über brennbare Flüssigkeiten (= Regulation for flammable liquids (Austria))
VOC = Volatile organic compounds
vPvB = very Persistent, very Bioaccumulative
WEL-TWA, WEL-STEL = WEL-TWA = Workplace Exposure Limit - Long-term exposure limit (8-hour TWA (= time weighted average) reference period), WEL-STEL = Workplace Exposure Limit - Short-term exposure limit (15-minute reference period) (EH40, UK).
WHO = World Health Organization

The statements made here should describe the product with regard to the necessary safety precautions - they are not meant to guarantee definite characteristics - but they are based on our present up-to-date knowledge.
No responsibility.

These statements were made by:

Chemical Check GmbH, Wöbbeler Straße 2-4, D-32839 Steinheim, Tel.: +49 5233 94 17 0, +49 1805-CHEMICAL / +49 180 52 43 642, Fax: +49 5233 94 17 90, +49 180 50 50 455

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Safety data sheet according to Regulation (EC) No 1907/2006, Annex II

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

1.1 Product identifier

Arti-Spot Frühkontaktindikator BK 87

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

Relevant identified uses of the substance or mixture:

Indicator solution

Paint

Uses advised against:

No information available at present.

1.3 Details of the supplier of the safety data sheet

Dr. Jean Bausch GmbH & Co. KG, Oskar-Schindler-Str. 4, D-50769 Köln

Telephone +49 (0)221-70936-0, Fax +49 (0)221-70936-66

info@BauschDental.de, <http://BauschDental.de>

E-mail address of the competent person: info@chemical-check.de, k.schnurbusch@chemical-check.de

1.4 Emergency telephone

Advisory office in case of poisoning:

+49 30 19240 (D-13437 Berlin, 24 hour)

Telephone number of the company in case of emergencies:

Tel.: ---

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

2.1.1 Classification according to Regulation (EC) 1272/2008 (CLP)

Hazard class	Hazard category	Hazard statement
Flam. Liq.	1	H224-Extremely flammable liquid and vapour.
Eye Irrit.	2	H319-Causes serious eye irritation.
STOT SE	3	H336-May cause drowsiness or dizziness.

2.1.2 Classification according to Directives 67/548/EEC and 1999/45/EC (including amendments).

F+, Extremely flammable, R12

R19

Xi, Irritant, R36

R66

R67

2.2 Label elements

2.2.1 Labeling according to Regulation (EC) 1272/2008 (CLP)



Danger

Hazard statement

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H224-Extremely flammable liquid and vapour. H319-Causes serious eye irritation. H336-May cause drowsiness or dizziness.

Prevention

P210-Keep away from heat/sparks/open flames/hot surfaces. - No smoking. P233-Keep container tightly closed. P261-Avoid breathing vapour or spray. P280-Wear protective gloves/clothing and eye/face protection.

Response

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.

Storage

P403+P235-Store in a well-ventilated place. Keep cool.

EUH019-May form explosive peroxides.

EUH066-Repeated exposure may cause skin dryness or cracking.

Ethyl acetate
 diethyl ether

2.3 Other hazards

The mixture contains no vPvB substance (vPvB = very persistent, very bioaccumulative).

The mixture contains no PBT substance (PBT = persistent, bioaccumulative, toxic).

SECTION 3: Composition/information on ingredients

3.1 Substance

n.a.

3.2 Mixture

Ethyl acetate	
Registration number (ECHA)	01-2119475103-46-XXXX
Index	607-022-00-5
EINECS, ELINCS	205-500-4
content %	20-30
Symbol	F/Xi
R-phrases	11-36-66-67
Classification categories / Indications of danger	Highly flammable, Irritant
Hazard class/Hazard category	Hazard statement
Flam. Liq./2	H225
Eye Irrit./2	H319
STOT SE/3	H336

diethyl ether	
Registration number (ECHA)	Substance for which an EU exposure limit value applies.
Index	-
EINECS, ELINCS	603-022-00-4
content %	200-467-2
Symbol	10-<25
R-phrases	F+/Xn
Classification categories / Indications of danger	12-19-22-66-67
Hazard class/Hazard category	Extremely flammable, Harmful
Hazard class/Hazard category	Hazard statement
Flam. Liq./1	H224
Acute Tox./4	H302
STOT SE/3	H336

For the text of the R-phrases / H-phrases and classification codes (GHS/CLP), see Section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

Never pour anything into the mouth of an unconscious person!

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.

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

Eye contact

Remove contact lenses.

Wash thoroughly for several minutes using copious water. Seek medical help if necessary.

Ingestion

Rinse the mouth thoroughly with water.

Do not induce vomiting - give copious water to drink. Consult doctor immediately.

Danger of aspiration

4.2 Most important symptoms and effects, both acute and delayed

Where relevant delayed occurring symptoms and effects will be found in section 11. or at the exposure routes under section 4.1.

After resorption:

drowsiness

Dizziness

Euphoria

annoyance

Cramps

Narcotic effect.

4.3 Indication of any immediate medical attention and special treatment needed

n.c.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

CO₂

Extinction powder

Water jet spray

Alcohol resistant foam

Unsuitable extinguishing media

High volume water jet

5.2 Special hazards arising from the substance or mixture

In case of fire the following can develop:

Oxides of carbon

Oxides of nitrogen

Toxic pyrolysis products.

Explosive vapour/air mixture

Dangerous vapours heavier than air.

5.3 Advice for firefighters

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

Cool container at risk with water.

Dispose of contaminated extinction water according to official regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

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

6.2 Environmental precautions

If leakage occurs, dam up.

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.

6.3 Methods and material for containment and cleaning up

Soak up with absorbent material (e.g. universal binding agent, sand, diatomaceous earth) and dispose of according to Section 13.

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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.

6.4 Reference to other sections

For personal protective equipment see Section 8 and for disposal instructions see Section 13.

SECTION 7: Handling and storage

In addition to information given in this section, relevant information can also be found in section 8 and 6.1.

7.1 Precautions for safe 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.
 General hygiene measures for the handling of chemicals are applicable.
 Wash hands before breaks and at end of work.
 Keep away from food, drink and animal feedingstuffs.
 Remove contaminated clothing and protective equipment before entering areas in which food is consumed.

7.2 Conditions for safe storage, including any incompatibilities

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.
 Observe special storage conditions (in Germany, e.g., in accordance with the regulations in the "Betriebssicherheitsverordnung").

7.3 Specific end use(s)

No information available at present.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

(GB)	Chemical Name	Ethyl acetate	Content %:20-30
	WEL-TWA: 200 ppm	WEL-STEL: 400 ppm	---
	BMGV: ---	Other information: ---	
(GB)	Chemical Name	diethyl ether	Content %:10-<25
	WEL-TWA: 100 ppm (310 mg/m ³) (WEL), 100 ppm (308 mg/m ³) (EC)	WEL-STEL: 200 ppm (620 mg/m ³) (WEL), 200 ppm (616 mg/m ³) (EC)	---
	BMGV: ---	Other information: ---	
(GB)	Chemical Name	Ethanol	Content %:
	WEL-TWA: 1000 ppm (1920 mg/m ³)	WEL-STEL: ---	---
	BMGV: ---	Other information: ---	
(GB)	Chemical Name	Glycerine	Content %:
	WEL-TWA: 10 mg/m ³ (mist)	WEL-STEL: ---	---
	BMGV: ---	Other information: ---	

(GB) WEL-TWA = Workplace Exposure Limit - Long-term exposure limit (8-hour TWA (= time weighted average) reference period) EH40. AGW = "Arbeitsplatzgrenzwert" (workplace limit value, Germany). | WEL-STEL = Workplace Exposure Limit - Short-term exposure limit (15-minute reference period). | BMGV = Biological monitoring guidance value EH40. BGW = "Biologischer Grenzwert" (biological limit value, Germany) | Other information: Sen = Capable of causing occupational asthma. Sk = Can be absorbed through skin. Carc = Capable of causing cancer and/or heritable genetic damage.

** = The exposure limit for this substance is repealed through the TRGS 900 (Germany) of January 2006 with the goal of revision.

Ethanol						
Use-Area	Exposure-Route	Exposure-Pattern	Descriptor	Value	Unit	Note
Worker	Human - inhalation	Short term, local effects	DNEL (Derived No Effect Level)	1900	mg/m ³	
Worker	Human - inhalation	Long term, systemic effects	DNEL (Derived No Effect Level)	950	mg/m ³	
Worker	Human - dermal	Long term, systemic effects	DNEL (Derived No Effect Level)	343	mg/kg bw/d	
Consumer	Human - inhalation	Short term, local effects	DNEL (Derived No Effect Level)	950	mg/m ³	
Consumer	Human - dermal	Short term, local effects	DNEL (Derived No Effect Level)	950	mg/m ³	
Consumer	Human - inhalation	Long term, systemic effects	DNEL (Derived No Effect Level)	114	mg/m ³	
Consumer	Human - oral	Long term, systemic effects	DNEL (Derived No Effect Level)	87	mg/kg	
Consumer	Human - dermal	Long term, systemic effects	DNEL (Derived No Effect Level)	206	mg/kg bw/d	
	Environment - freshwater		PNEC (Predicted No Effect Concentration)	0,96	mg/l	
	Environment - marine		PNEC (Predicted No Effect Concentration)	0,79	mg/l	
	Environment - water, sporadic (intermittent) release		PNEC (Predicted No Effect Concentration)	2,75	mg/l	
	Environment - sewage treatment plant		PNEC (Predicted No Effect Concentration)	580	mg/l	
	Environment - sediment, freshwater		DNEL (Derived No Effect Level)	3,6	mg/kg dry weight	
	Environment - soil		DNEL (Derived No Effect Level)	0,63	mg/kg dry weight	
	Environment - oral (feed)		PNEC (Predicted No Effect Concentration)	0,72	mg/kg feed	

8.2 Exposure controls

8.2.1 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.

8.2.2 Individual protection measures, such as personal protective equipment

General hygiene measures for the handling of chemicals are applicable.

Wash hands before breaks and at end of work.

Keep away from food, drink and animal feedingstuffs.

Remove contaminated clothing and protective equipment before entering areas in which food is consumed.

Eye/face protection:

Tight fitting protective goggles with side protection (EN 166).

Skin protection - Hand protection:

Solvent resistant protective gloves (EN 374).

If applicable

Safety gloves made of butyl (EN 374)

Protective Neopren gloves (EN 374).

Protective nitrile gloves (EN 374)

Protective hand cream recommended.

Skin protection - Other:

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

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Observe wearing time limitations for respiratory protection equipment.

Thermal hazards:

If applicable, these are included in the individual protective measures (eye/face protection, skin protection, respiratory protection).

Additional information on hand protection - No tests have been performed.

In the case of mixtures, the selection has been made according to the knowledge available and the information about the contents.

Selection of materials derived from glove manufacturer's indications.

Final selection of glove material must be made taking the breakthrough times, permeation rates and degradation into account.

Selection of a suitable glove depends not only on the material but also on other quality characteristics and varies from manufacturer to manufacturer.

In the case of mixtures, the resistance of glove materials cannot be predicted and must therefore be tested before use.

The exact breakthrough time of the glove material can be requested from the protective glove manufacturer and must be observed.

8.2.3 Environmental exposure controls

No information available at present.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state:	Liquid
Colour:	Blue
Odour:	Alcoholic, Characteristic
Odour threshold:	Not determined
pH-value:	Not determined
Melting point/freezing point:	Not determined
Initial boiling point and boiling range:	Not determined
Flash point:	-28,5 °C (ISO 1523 (Rapid Equilibrium, closed cup, RECC))
Evaporation rate:	Not determined
Flammability (solid, gas):	200 °C (Ignition temperature)
Lower explosive limit:	2,1 Vol-%
Upper explosive limit:	13,5 Vol-%
Vapour pressure:	Not determined
Vapour density (air = 1):	Not determined
Density:	0,902 g/ml
Bulk density:	Not determined
Solubility(ies):	Not determined
Water solubility:	Insoluble
Partition coefficient (n-octanol/water):	Not determined
Auto-ignition temperature:	Not determined
Decomposition temperature:	Not determined
Viscosity:	Not determined
Explosive properties:	Not determined
Oxidising properties:	Not determined

9.2 Other information

Miscibility:	Not determined
Fat solubility / solvent:	Not determined
Conductivity:	Not determined
Surface tension:	Not determined
Solvents content:	Not determined

SECTION 10: Stability and reactivity

10.1 Reactivity

See also Subsection 10.4 to 10.6.

Can form explosive peroxides.

10.2 Chemical stability

See also Subsection 10.4 to 10.6.

Explosive when dry.

10.3 Possibility of hazardous reactions

See also Subsection 10.4 to 10.6.

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

10.4 Conditions to avoid

See also section 7.

Heating, open flame, ignition sources

Electrostatic charge

Protect from direct sunlight.

Product is light sensitive.

10.5 Incompatible materials

Avoid contact with strong oxidizing agents.

Avoid contact with strong acids.

Alkali metals

10.6 Hazardous decomposition products

See also Subsection 10.4 to 10.6.

No decomposition when used as directed.

SECTION 11: Toxicological information

The product was not tested.

Classification according to calculation procedure.

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Toxicity/effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	ATE	>5000	mg/kg			calculated value
Acute toxicity, by dermal route:						n.d.a.
Acute toxicity, by inhalation:						n.d.a.
Skin corrosion/irritation:						n.d.a.
Serious eye damage/irritation:						n.d.a.
Respiratory or skin sensitisation:						n.d.a.
Germ cell mutagenicity:						n.d.a.
Carcinogenicity:						n.d.a.
Reproductive toxicity:						n.d.a.
Specific target organ toxicity - single exposure (STOT-SE):						n.d.a.
Specific target organ toxicity - repeated exposure (STOT-RE):						n.d.a.
Aspiration hazard:						n.d.a.
Respiratory tract irritation:						n.d.a.
Repeated dose toxicity:						n.d.a.
Symptoms:						annoyance, cramps, drowsiness, dizziness

Ethyl acetate

Toxicity/effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	5620	mg/kg	Rat		
Acute toxicity, by dermal route:	LD50	>18000	mg/kg	Rabbit		
Acute toxicity, by inhalation:	LC50	>28,6	mg/l/4h	Rat		
Symptoms:						lack of appetite, breathing difficulties, dizziness, unconsciousness, drop in blood pressure, cornea opacity, coughing, headaches, gastrointestinal disturbances, intoxication, drowsiness, mucous membrane irritation, dizziness, salivation, nausea and vomiting.

diethyl ether

Toxicity/effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	1215	mg/kg	Rat		
Acute toxicity, by inhalation:	LC50	73000	ppm	Rat		
Skin corrosion/irritation:						Not irritant
Serious eye damage/irritation:						Mild irritant
Respiratory or skin sensitisation:						Not sensitizing
Germ cell mutagenicity:					OECD 471 (Bacterial Reverse Mutation Test)	Negative
Symptoms:						acidosis, ataxia, dizziness, unconsciousness, increased blood pressure, cornea opacity, collapse, headaches, intoxication, drowsiness, mucous membrane irritation, dizziness, salivation, nausea and vomiting.

Ethanol						
Toxicity/effect	Endpoint	Value	Unit	Organism	Test method	Notes
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Not irritant
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Mild irritant
Respiratory or skin sensitisation:				Mouse	OECD 429 (Skin Sensitisation - Local Lymph Node Assay)	Not sensitizing
Germ cell mutagenicity:				Salmonella typhimurium	OECD 471 (Bacterial Reverse Mutation Test)	Negative
Germ cell mutagenicity:					OECD 475 (Mammalian Bone Marrow Chromosome Aberration Test)	Negative
Germ cell mutagenicity:				Mouse	OECD 476 (In Vitro Mammalian Cell Gene Mutation Test)	Negative
Germ cell mutagenicity:					OECD 473 (In Vitro Mammalian Chromosome Aberration Test)	Negative
Germ cell mutagenicity:					OECD 471 (Bacterial Reverse Mutation Test)	Negative
Specific target organ toxicity - repeated exposure (STOT-RE):	NOAEL	1730	mg/kg/d	Rat	OECD 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)	Female
Specific target organ toxicity - repeated exposure (STOT-RE):	NOAL	>20	mg/l	Rat	OECD 403 (Acute Inhalation Toxicity)	Male
Aspiration hazard:				Human being		No indications of such an effect.

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Symptoms:						respiratory distress, dizziness, unconsciousness, drop in blood pressure, vomiting, coughing, headaches, intoxication, drowsiness, mucous membrane irritation, dizziness, nausea
Teratogenicity:						Negative
Experiences in humans:						There is no sign that this syndrome is also caused by dermal or inhalative absorption., Excessive alcohol consumption during pregnancy induces the foetus alcohol syndrome (reduced weight at birth, physical and mental disorders).

Glycerine						
Toxicity/effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	>12600	mg/kg	Rat		
Acute toxicity, by dermal route:	LD50	>18700	mg/kg	Rabbit		
Skin corrosion/irritation:					OECD 404 (Acute Dermal Irritation/Corrosion)	Not irritant
Serious eye damage/irritation:					OECD 405 (Acute Eye Irritation/Corrosion)	Not irritant
Respiratory or skin sensitisation:						Not sensitizing
Respiratory or skin sensitisation:						Not sensitizing
Germ cell mutagenicity:					OECD 471 (Bacterial Reverse Mutation Test)	Negative
Symptoms:						abdominal pain, dizziness, diarrhoea, vomiting, headaches, mucous membrane irritation

SECTION 12: Ecological information

The product was not tested.

Arti-Spot Frühkontaktindikator BK 87							
Toxicity/effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
Toxicity to fish:							n.d.a.
Toxicity to daphnia:							n.d.a.
Toxicity to algae:							n.d.a.
Persistence and degradability:							n.d.a.
Bioaccumulative potential:							n.d.a.
Mobility in soil:							n.d.a.
Results of PBT and vPvB assessment							n.d.a.
Other adverse effects:							n.d.a.

Ethyl acetate

Toxicity/effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
Toxicity to fish:	LC50	96h	320	mg/l	(Oncorhynchus mykiss)		
Toxicity to daphnia:	EC50	48h	717	mg/l	(Daphnia magna)		
Toxicity to algae:	IC50	48h	3300	mg/l	(Scenedesmus subspicatus)		
Persistence and degradability:		28d	100	%		OECD 301 D (Ready Biodegradability - Closed Bottle Test)	
Persistence and degradability:		28d	93,9	%		OECD 301 B (Ready Biodegradability - Co2 Evolution Test)	
Bioaccumulative potential:	BCF		30				
Bioaccumulative potential:	Log Pow		0,73				
Mobility in soil:	H (Henry)		0,00012	atm*m3/mol			

diethyl ether

Toxicity/effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
Toxicity to fish:	LC50	96h	2600	mg/l	(Pimephales promelas)		
Toxicity to daphnia:	EC50	24h	165	mg/l	(Daphnia magna)		
Persistence and degradability:							Not readily biodegradable
Bioaccumulative potential:							Not to be expected
Toxicity to bacteria:	EC50	15min	5600	mg/l	(Photobacterium phosphoreum)		

Ethanol

Toxicity/effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
Toxicity to fish:	LC50	96h	13000	mg/l	(Oncorhynchus mykiss)	OECD 203 (Fish, Acute Toxicity Test)	
Toxicity to daphnia:	LC50	48h	12340	mg/l	(Daphnia magna)		
Persistence and degradability:			97	%		OECD 301 B (Ready Biodegradability - Co2 Evolution Test)	
Bioaccumulative potential:	BCF		3,2	mg/l			
Bioaccumulative potential:	Log Pow		-0,32				
Results of PBT and vPvB assessment							Not a PBT-substance, Not a vPvB-substance
Other ecotoxicological data:	COD		1,9	g/g			
Other ecotoxicological data:	BOD5		1	g/g			

Glycerine

Toxicity/effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
Toxicity to fish:	LC50	96h	> 5000	mg/l	(Carassius auratus)		
Toxicity to fish:	LC50	96h	>10000	mg/l	(Leuciscus idus)		
Toxicity to daphnia:	EC50	24h	>10000	mg/l	(Daphnia magna)		
Toxicity to algae:	IC5	7d	>10000	mg/l	(Scenedesmus quadricauda)		

Persistence and degradability:		14d	63	%		OECD 301 C (Ready Biodegradability - Modified MITI Test (I))	
Bioaccumulative potential:	Log Pow		-2,66				
Results of PBT and vPvB assessment							n.a.
Toxicity to bacteria:	EC5	16h	> 10000	mg/l	(Pseudomonas putida)		
Other ecotoxicological data:	BOD5		0,87	g/g			
Other ecotoxicological data:	COD		1,16	g/g			

SECTION 13: Disposal considerations

13.1 Waste treatment methods

For the substance / mixture / residual amounts

EC disposal code no.:

The waste codes are recommendations based on the scheduled use of this product.

Owing to the user's specific conditions for use and disposal, other waste codes may be allocated under certain circumstances. (2001/118/EC, 2001/119/EC, 2001/573/EC)

07 03 04 other organic solvents, washing liquids and mother liquors

18 01 06 chemicals consisting of or containing dangerous substances

Recommendation:

Pay attention to local and national official regulations

E.g. suitable incineration plant.

For contaminated packing material

Pay attention to local and national official regulations

Empty container completely.

Untamminated packaging can be recycled.

Dispose of packaging that cannot be cleaned in the same manner as the substance.

Do not perforate, cut up or weld uncleaned container.

Residues may present a risk of explosion.

15 01 04 metallic packaging

SECTION 14: Transport information

General statements

UN number: 1263

Transport by road/by rail (ADR/RID)

UN proper shipping name:

UN 1263 PAINT

Transport hazard class(es): 3

Packing group: I

Classification code: F1

LQ (ADR 2011): 500 ml

LQ (ADR 2009): 3

Environmental hazards: Not applicable

Tunnel restriction code: D/E

Transport by sea (IMDG-code)

UN proper shipping name:

PAINT

Transport hazard class(es): 3

Packing group: I

EmS: F-E, S-E

Marine Pollutant: n.a.

Environmental hazards: Not applicable

Transport by air (IATA)

UN proper shipping name:

Paint



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Transport hazard class(es): 3
 Packing group: I
 Environmental hazards: Not applicable

Special precautions for user

Persons employed in transporting dangerous goods must be trained.
 All persons involved in transporting must observe safety regulations.
 Precautions must be taken to prevent damage.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Freighted as packaged goods rather than in bulk, therefore not applicable.

Additional information:

Danger code and packing code on request.

SECTION 15: Regulatory information

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

For classification and labelling see Section 2.

Observe restrictions: Yes
 Observe youth employment law (German regulation).
 Regulation (EC) No 1907/2006, Annex XVII
 VOC (1999/13/EC): ~ 77,35% w/w

15.2 Chemical safety assessment

No information available at present.

SECTION 16: Other information

These details refer to the product as it is delivered.

Revised sections: 1, 9
 The following statements are the indicated R-phrases / H-phrases and classification codes (GHS/CLP) for the ingredients (listed in Section 3).
 11 Highly flammable.
 12 Extremely flammable.
 19 May form explosive peroxides.
 22 Harmful if swallowed.
 36 Irritating to eyes.
 66 Repeated exposure may cause skin dryness or cracking.
 67 Vapours may cause drowsiness and dizziness.
 H224 Extremely flammable liquid and vapour.
 H225 Highly flammable liquid and vapour.
 H302 Harmful if swallowed.
 H319 Causes serious eye irritation.
 H336 May cause drowsiness or dizziness.

Flam. Liq.-Flammable liquid
 Eye Irrit.-Eye irritation
 STOT SE-Specific target organ toxicity - single exposure - narcotic effects
 Acute Tox.-Acute toxicity - oral

Legend:

AC = Article Categories
 acc., acc. to = according, according to
 ACGIH = American Conference of Governmental Industrial Hygienists
 ADR = Accord européen relatif au transport international des marchandises Dangereuses par Route (= European Agreement concerning the International Carriage of Dangerous Goods by Road)
 AOX = Adsorbable organic halogen compounds
 approx. = approximately
 Art., Art. no. = Article number
 ATE = Acute Toxicity Estimate according to Regulation (EC) 1272/2008 (CLP)
 BAM = Bundesanstalt für Materialforschung und -prüfung (Federal Institute for Materials Research and Testing, Germany)
 BAuA = Bundesanstalt für Arbeitsschutz und Arbeitsmedizin (= Federal Institute for Occupational Health and Safety, Germany)
 BCF = Bioconcentration factor
 BGV = Berufsgenossenschaftliche Vorschrift (= Accident Prevention Regulation)
 BHT = Butylhydroxytoluol (= 2,6-Di-t-butyl-4-methyl-phenol)

BMGV = Biological monitoring guidance value (EH40, UK)

BOD = Biochemical oxygen demand

CAS = Chemical Abstracts Service

CESIO = Comité Européen des Agents de Surface et de leurs Intermédiaires Organiques

CIPAC = Collaborative International Pesticides Analytical Council

CLP = Classification, Labelling and Packaging (REGULATION (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures)

CMR = carcinogenic, mutagenic, reproductive toxic

COD = Chemical oxygen demand

CTFA = Cosmetic, Toiletry, and Fragrance Association

DMEL = Derived Minimum Effect Level

DNEL = Derived No Effect Level

DOC = Dissolved organic carbon

DVS = Deutscher Verband für Schweißen und verwandte Verfahren e.V. (= German Association for Welding and Allied Processes)

e.g. = for example (abbreviation of Latin 'exempli gratia'), for instance

EC = European Community

ECHA = European Chemicals Agency

EEA = European Economic Area

EEC = European Economic Community

EINECS = European Inventory of Existing Commercial Chemical Substances

ELINCS = European List of Notified Chemical Substances

EN = European Norms

EPA = United States Environmental Protection Agency (United States of America)

ERC = Environmental Release Categories

ES = Exposure scenario

etc. = et cetera

EU = European Union

EWC = European Waste Catalogue

Fax. = Fax number

gen. = general

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

GWP = Global warming potential

HET-CAM = Hen's Egg Test - Chorionallantoic Membrane

IARC = International Agency for Research on Cancer

IATA = International Air Transport Association

IBC = Intermediate Bulk Container

IBC (Code) = International Bulk Chemical (Code)

IC = Inhibitory concentration

IMDG-code = International Maritime Code for Dangerous Goods

incl. = including, inclusive

IUCLID = International Uniform Chemical Information Database

LC = lethal concentration

LC50 = lethal concentration 50 percent kill

LCLo = lowest published lethal concentration

LD = Lethal Dose of a chemical

LD50 = Lethal Dose, 50% kill

LDLo = Lethal Dose Low

LMBG = Lebensmittel- und Bedarfsgegenständegesetz (= Foodstuffs and Commodities Law)

LOAEL = Lowest Observed Adverse Effect Level

LOEC = Lowest Observed Effect Concentration

LOEL = Lowest Observed Effect Level

LQ = Limited Quantities

MARPOL = International Convention for the Prevention of Marine Pollution from Ships

n.a. = not applicable

n.av. = not available

n.c. = not checked

n.d.a. = no data available

NIOSH = National Institute of Occupational Safety and Health

No. = Number

NOAEC = No Observed Adverse Effective Concentration

NOAEL = No Observed Adverse Effect Level

NOEC = No Observed Effect Concentration

NOEL = No Observed Effect Level

ODP = Ozone Depletion Potential

OECD = Organisation for Economic Co-operation and Development

PC = product category (= Chemical product category)

PE = Polyethylene

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PNEC = Predicted No Effect Concentration
POCP = Photochemical ozone creation potential
ppm = parts per million
PROC = Process category
PTFE = Polytetrafluorethylene
REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals (REGULATION (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals)
RID = Règlement concernant le transport International ferroviaire de marchandises Dangereuses (= Regulation concerning the International Carriage of Dangerous Goods by Rail)
SADT = Self-Accelerating Decomposition Temperature
SAR = Structure Activity Relationship
SU = Sector of use
SVHC = Substances of Very High Concern
Tel. = Telephone
ThOD = Theoretical oxygen demand
TOC = Total organic carbon
TRGS = Technische Regeln für Gefahrstoffe (=Technical Regulations for Hazardous Substances)
VbF = Verordnung über brennbare Flüssigkeiten (= Regulation for flammable liquids (Austria))
VOC = Volatile organic compounds
vPvB = very Persistent, very Bioaccumulative
WEL-TWA, WEL-STEL = WEL-TWA = Workplace Exposure Limit - Long-term exposure limit (8-hour TWA (= time weighted average) reference period), WEL-STEL = Workplace Exposure Limit - Short-term exposure limit (15-minute reference period) (EH40, UK).
WHO = World Health Organization

The statements made here should describe the product with regard to the necessary safety precautions - they are not meant to guarantee definite characteristics - but they are based on our present up-to-date knowledge.
No responsibility.

These statements were made by:

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