SAFETY DATA SHEETS

This SDS packet was issued with item:

075895313

N/A

MATERIAL SAFETY DATA SHEET: Bausch Arti Spot 3

IDENTITY: Trade Name: Bausch Arti Spot 3 CODE: BK 87 (Blue)

Chemical Description: Organic solvents (Ethanol, Propanol, Ethyl-Acetate), Glycerin, Natural resins, C.I. Pigment Blue 15 (FD&C Blue 1), Zinc stearate, Thickener, Camphor

Product Use: Dental material: High spot indicator for crowns.

SECTION I

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

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

Date Prepared: September 1, 2007

SECTION II - HAZARDOUS INGREDIENTS

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

DOT HAZARD CLASSIFICATION: Class 3 / Packing group II /Flammable liquid

WHMIS CLASSIFICATION: B-2, Flammable liquid

NFPA HMIS RATING: HEALTH: 0 FLAMMABILITY: 3 REACTIVITY: 0

SECTION III - PHYSICAL / CHEMICAL CHARACTERISTICS

Boiling Point: 192°F / 89.4°C Specific Gravity: 0.81 Vapor Pressure: 44.6

Melting Point: -173°F / -114°C Vapor Density: n/a Evaporation Rate: 2.8

Solubility in water: Partial Odor Threshold: 159 ppm

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

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

WARNING! FLAMMABLE. Avoid heat, sparks, flame, other ignition sources. Vapor forms flammable mixtures with air.

Flash Point: 43°F/ 6°C (Tag closed cup) Autoignition Temperature: 423°C; Flam. Limits: LEL: 2.1 UEL: 13.5

Extinguishing Media: Dry chemical, alcohol foam, carbon dioxide. Water will keep fire-exposed containers cool.

Special Fire Fighting Procedures: If a leak/spill has not ignited, use water spray to disperse vapors and protect personnel. Water spray may be used to flush spills away and to dilute spills to nonflammable mixtures.

Hazardous Combustion Products: Incomplete combustion may produce carbon monoxide / carbon dioxide.

Unusual Fire and Explosion Hazards: To protect from smoke, fumes, hazardous decomposition products, firefighters should wear self-contained breathing apparatus in positive pressure mode with full face piece.

SECTION V - REACTIVITY DATA

Stability: Generally stable. Conditions to avoid: Heat, flame, sparks.

Incompatibility: Avoid acetyl chloride and oxidizing agents which may react violently with this material.

Hazardous Decomposition Products: Incomplete combustion produces carbon monoxide / carbon dioxide.

Hazardous Polymerization: None. Conditions to avoid: None

SECTION VI - HEALTH HAZARD DATA

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

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

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

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

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

Emergency First Aid Procedures:

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

SECTION VII - PRECAUTIONS FOR SAFE HANDLING & USE

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

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

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

SECTION VIII - CONTROL MEASURES

Respiratory Protection: Not necessary under normal conditions of use.

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

Protective Gloves: Chemically impervious gloves are recommended.

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

Other Protective Clothing or Equipment: Emergency eye wash fountain.

Work / Hygienic Practices: Wash hands after use.

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

Material Safety Data Sheet

Arti-Spot Frühkontaktindikator BK 87

1. Product and company identification

Product name	:	Arti-Spot Frühkontaktindikator BK 87
Supplier/Manufacturer	:	Dr. Jean Bausch GmbH & Co. KG Oskar-Schindler-Str. 4 D-50769 Köln Tel: +49 (0)221-70936-0 Fax: +49 (0)221-70936-66 info@BauschDental.de, http://BauschDental.de
Material uses	:	Paint. Indicators.
Validation date	:	03.02.2014.
Responsible name	:	Chemical Check GmbH
e-mail address of person responsible for this SDS	:	info@chemical-check.de; k.schnurbusch@chemical-check.de
In case of emergency	:	+49 30 / 19240 Berlin
Product type	:	Liquid.

2. Hazards identification

Emergency overview

Color	:	Blue.
Physical state	:	Liquid.
Odor	:	Alcohol-like. Characteristic.
Signal word	:	WARNING!
Hazard statements	:	FLAMMABLE LIQUID AND VAPOR. INHALATION CAUSES HEADACHES, DIZZINESS, DROWSINESS AND NAUSEA AND MAY LEAD TO UNCONSCIOUSNESS. CAUSES RESPIRATORY TRACT AND EYE IRRITATION. MAY BE HARMFUL IF SWALLOWED. MAY CAUSE SKIN IRRITATION. PROLONGED OR REPEATED CONTACT MAY DRY SKIN AND CAUSE IRRITATION. CONTAINS MATERIAL THAT MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA. Flammable liquid. May be harmful if swallowed. Severely irritating to eyes. Irritating to respiratory system. Slightly irritating to the skin. Defatting to the skin. Keep away from heat, sparks and flame. Do not breathe vapor or mist. Do not ingest. Do not get in eyes. Avoid contact with skin and clothing. Contains material that may cause target organ damage, based on animal data. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.
OSHA/HCS status	:	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Routes of entry	:	Dermal contact. Eye contact. Inhalation. Ingestion.

Potential acute health effects

Inhalation	:	Can cause central nervous system (CNS) depression. Irritating to respiratory system. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
Ingestion	:	Harmful if swallowed. Can cause central nervous system (CNS) depression.
Skin	:	Slightly irritating to the skin.
Eyes	:	Severely irritating to eyes. Risk of serious damage to eyes.

Potential chronic health effects

Chronic effects	:	Contains material that may cause target organ damage, based on animal data. Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.
Carcinogenicity	:	No known significant effects or critical hazards.
Mutagenicity	:	No known significant effects or critical hazards.
Teratogenicity	:	No known significant effects or critical hazards.
Developmental effects	:	No known significant effects or critical hazards.
Fertility effects	:	No known significant effects or critical hazards.
Target organs	:	Contains material which may cause damage to the following organs: blood, kidneys, the reproductive system, liver, mucous membranes, gastrointestinal tract, upper respiratory tract, skin, eyes, central nervous system (CNS).

Over-exposure signs/symptoms

2. Hazards identification

Inhalation : Adverse symptoms may include the following:
nausea or vomiting
respiratory tract irritation
coughing
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness

Ingestion : No specific data.

Skin : Adverse symptoms may include the following:
irritation
redness
dryness
cracking

Eyes : Adverse symptoms may include the following:
pain or irritation
watering
redness

Medical conditions aggravated by over-exposure : Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

See toxicological information (section 11)

3. Composition/information on ingredients

Name	CAS number	%
Ethanol	64-17-5	15-40
ethyl acetate	141-78-6	10-30
Diethyl ether	60-29-7	10-30
zinc distearate	557-05-1	3-7
29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32 copper	147-14-8	3-7
glycerol	56-81-5	1-5

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4. First aid measures

Eye contact : Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.

Skin contact : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.

Inhalation : Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

Ingestion : Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

Notes to physician : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

5. Fire-fighting measures

Flammability of the product : Flammable liquid. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Runoff to sewer may create fire or explosion hazard.

Extinguishing media

Suitable : Use dry chemical, CO_2, water spray (fog) or foam.

Not suitable : Do not use water jet.

Special exposure hazards : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
metal oxide/oxides

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Special remarks on explosion hazards : May form explosive peroxides.

6. Accidental release measures

Personal precautions : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8).

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods for cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

7. Handling and storage

Handling : Put on appropriate personal protective equipment (see section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Do not breathe vapor or mist. Do not ingest. Avoid contact with eyes, skin and clothing. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use non-sparking tools. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.

7. Handling and storage

Storage : Do not store above the following temperature: 30°C (86°F). Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

8. Exposure controls/personal protection

Ingredient	Exposure limits
Ethanol	**ACGIH TLV (United States, 1/2009).** STEL: 1000 ppm 15 minute(s). **OSHA PEL 1989 (United States, 3/1989).** TWA: 1000 ppm 8 hour(s). TWA: 1900 mg/m³ 8 hour(s). **NIOSH REL (United States, 6/2008).** TWA: 1000 ppm 10 hour(s). TWA: 1900 mg/m³ 10 hour(s). **OSHA PEL (United States, 11/2006).** TWA: 1000 ppm 8 hour(s). TWA: 1900 mg/m³ 8 hour(s).
ethyl acetate	**ACGIH TLV (United States, 1/2009).** TWA: 400 ppm 8 hour(s). TWA: 1440 mg/m³ 8 hour(s). **OSHA PEL 1989 (United States, 3/1989).** TWA: 400 ppm 8 hour(s). TWA: 1400 mg/m³ 8 hour(s). **NIOSH REL (United States, 6/2009).** TWA: 400 ppm 10 hour(s). TWA: 1400 mg/m³ 10 hour(s). **OSHA PEL (United States, 11/2006).** TWA: 400 ppm 8 hour(s). TWA: 1400 mg/m³ 8 hour(s).
Diethyl ether	**ACGIH TLV (United States, 2/2010).** TWA: 400 ppm 8 hour(s). TWA: 1210 mg/m³ 8 hour(s). STEL: 500 ppm 15 minute(s). STEL: 1520 mg/m³ 15 minute(s). **OSHA PEL 1989 (United States, 3/1989).** TWA: 400 ppm 8 hour(s). TWA: 1200 mg/m³ 8 hour(s). STEL: 500 ppm 15 minute(s). STEL: 1500 mg/m³ 15 minute(s). **OSHA PEL (United States, 11/2006).** TWA: 400 ppm 8 hour(s). TWA: 1200 mg/m³ 8 hour(s).
zinc distearate	**OSHA PEL 1989 (United States, 3/1989).** TWA: 5 mg/m³ 8 hour(s). Form: Respirable fraction TWA: 10 mg/m³ 8 hour(s). Form: Total dust **NIOSH REL (United States, 6/2009).** TWA: 5 mg/m³ 10 hour(s). Form: Respirable fraction TWA: 10 mg/m³ 10 hour(s). Form: Total **OSHA PEL (United States, 11/2006).** TWA: 5 mg/m³ 8 hour(s). Form: Respirable fraction TWA: 15 mg/m³ 8 hour(s). Form: Total dust **ACGIH TLV (United States, 2/2010).** TWA: 10 mg/m³ 8 hour(s). Form: Total particulate mass
29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32 copper	**ACGIH TLV (United States).** TWA: 1 mg/m³, (as, Cu) 8 hour(s). Form: Dusts and mists TWA: 0,2 mg/m³, (as, Cu) 8 hour(s). Form: Fume
glycerol	**ACGIH TLV (United States, 2/2010).** TWA: 10 mg/m³ 8 hour(s). Form: Inhalable fraction. See Appendix C, paragraph A. Inhalable Particulate Mass TLVs (IPM–TLVs) for those materials that are hazardous when deposited anywhere in the

8. Exposure controls/personal protection

	respiratory tract. **OSHA PEL 1989 (United States, 3/1989).** TWA: 5 mg/m³ 8 hour(s). Form: Respirable fraction TWA: 10 mg/m³ 8 hour(s). Form: Total dust **OSHA PEL (United States, 11/2006).** TWA: 5 mg/m³ 8 hour(s). Form: Respirable fraction TWA: 15 mg/m³ 8 hour(s). Form: Total dust

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

Engineering measures : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protection

Respiratory : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Recommended: Use appropriate respiratory protection if there is a risk of exceeding any exposure limits. organic vapor filter (Type A)

Hands : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. >8 hours (breakthrough time): butyl rubber , neoprene , nitrile rubber . Protective hand cream.

Eyes : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts. Recommended: Tight fitting protective goggles with side shields.

Skin : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Recommended: Long-sleeved protective clothing. Safety shoes.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9. Physical and chemical properties

Physical state : Liquid.

Flash point : -28,5 °C (-19.3 °F) (ISO 1523 (Rapid Equilibrium, closed cup, RECC))

Flammable limits : Lower: 2,1%
Upper: 13,5%

Color : Blue.

Odor : Alcohol-like. Characteristic.

Density : 0,902 g/cm^3

Solubility : Insoluble in the following materials: cold water and hot water.

10. Stability and reactivity

Chemical stability : The product is stable.

Conditions to avoid : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

Materials to avoid : Reactive or incompatible with the following materials: oxidizing materials and acids.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

10. Stability and reactivity

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

11. Toxicological information

Potential acute health effects

Inhalation : Can cause central nervous system (CNS) depression. Irritating to respiratory system. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Ingestion : Harmful if swallowed. Can cause central nervous system (CNS) depression.

Eyes : Severely irritating to eyes. Risk of serious damage to eyes.

Skin : Slightly irritating to the skin.

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Ethanol	LD50 Intra-arterial	Rat	11 mg/kg	-
	LD50 Intraperitoneal	Rat	3600 ug/kg	-
	LD50 Intravenous	Rat	1440 mg/kg	-
	LD50 Oral	Rat	7 g/kg	-
	LD50 Oral	Rat	7060 mg/kg	-
	LDLo Dermal	Rabbit	20 g/kg	-
	TDLo Intracerebral	Rat	363,6 ug/kg	-
	TDLo Intracerebral	Rat	106 ug/kg	-
	TDLo Intraperitoneal	Rat	2,45 g/kg	-
	TDLo Intraperitoneal	Rat	2 g/kg	-
	TDLo Intraperitoneal	Rat	1,5 g/kg	-
	TDLo Intraperitoneal	Rat	1,2 g/kg	-
	TDLo Intraperitoneal	Rat	1 g/kg	-
	TDLo Intraperitoneal	Rat	0,5 g/kg	-
	TDLo Intraperitoneal	Rat	0,25 g/kg	-
	TDLo Intraperitoneal	Rat	3500 mg/kg	-
	TDLo Intraperitoneal	Rat	3000 mg/kg	-
	TDLo Intraperitoneal	Rat	2700 mg/kg	-
	TDLo Intraperitoneal	Rat	2000 mg/kg	-
	TDLo Intraperitoneal	Rat	1000 mg/kg	-
	TDLo Intraperitoneal	Rat	500 mg/kg	-
	TDLo Intraperitoneal	Rat	2,4 mg/kg	-
	TDLo Intraperitoneal	Rat	1,25 mg/kg	-
	TDLo Intravenous	Rat	0,5 g/kg	-
	TDLo Oral	Rat	6,4 g/kg	-
	TDLo Oral	Rat	6 g/kg	-
	TDLo Oral	Rat	5,25 g/kg	-
	TDLo Oral	Rat	5 g/kg	-
	TDLo Oral	Rat	3 g/kg	-
	TDLo Oral	Rat	2,5 g/kg	-
	TDLo Oral	Rat	0,72 g/kg	-
	TDLo Oral	Rat	0,5 g/kg	-

11. Toxicological information

	TDLo Oral	Rat	0,4 g/kg	-
	TDLo Oral	Rat	10 mL/kg	-
	TDLo Oral	Rat	5 mL/kg	-
	TDLo Oral	Rat	4,44 mL/kg	-
	TDLo Oral	Rat	4 mL/kg	-
	TDLo Oral	Rat	8000 mg/kg	-
	TDLo Oral	Rat	6000 mg/kg	-
	TDLo Oral	Rat	5250 mg/kg	-
	TDLo Oral	Rat	5000 mg/kg	-
	TDLo Oral	Rat	4800 mg/kg	-
	TDLo Oral	Rat	4300 mg/kg	-
	TDLo Oral	Rat	1600 mg/kg	-
	TDLo Oral	Rat	1500 mg/kg	-
	TDLo Unreported	Rat	3 g/kg	-
	LC50 Inhalation Gas.	Rat	20000 ppm	10 hours
29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32 copper	LD Intraperitoneal	Rat	>3 g/kg	-
	LD Oral	Rat	>15 g/kg	-
Diethyl ether	LD50 Dermal	Rabbit	>20 mL/kg	-
	LD50 Oral	Rat	1211 mg/kg	-
glycerol	LD50 Intraperitoneal	Rat	4420 mg/kg	-
	LD50 Intravenous	Rat	5566 mg/kg	-
	LD50 Oral	Rat	12600 mg/kg	-
	LD50 Subcutaneous	Rat	100 mg/kg	-
	LDLo Intramuscular	Rat	10 mL/kg	-
	LDLo Intramuscular	Rat	10 mg/kg	-
	TDLo Intramuscular	Rat	8 mL/kg	-
	TDLo Intramuscular	Rat	4 mL/kg	-
	TDLo Intramuscular	Rat	5000 mg/kg	-
	TDLo Intramuscular	Rat	4000 mg/kg	-
zinc distearate	LD50 Oral	Rat	>10 g/kg	-
	LDLo Intratracheal	Rat	250 mg/kg	-
ethyl acetate	LD50 Dermal	Rabbit	>20 mL/kg	-
	LD50 Oral	Rat	5620 mg/kg	-
	LDLo Subcutaneous	Rat	5 g/kg	-
	LC50 Inhalation Gas.	Rat	>6000 ppm	6 hours
	LC50 Inhalation Gas.	Rat	1600 ppm	8 hours

Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
Ethanol	A3	-	-	-	-	-
ethyl acetate	A4	-	-	-	-	-
Diethyl ether	-	3	-	-	-	-
zinc distearate	A4	-	-	-	-	-

12. Ecological information

Ecotoxicity : No known significant effects or critical hazards.

Aquatic ecotoxicity

Product/ingredient name	Test	Result	Species	Exposure
Ethanol	-	Acute EC50 >100 ppm Fresh water	Daphnia - Water flea - Daphnia magna - <24 hours	48 hours
	-	Acute EC50 2000 ug/L Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
	-	Acute LC50 5680 mg/L Fresh water	Daphnia - Water flea - Daphnia magna - Neonate - <24 hours	48 hours
	-	Acute LC50 13 ml/L Fresh water	Fish - Rainbow trout,donaldson trout - Oncorhynchus mykiss - 0,8 g	96 hours
	-	Acute LC50 14200000 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas - 30 days - 19,4 mm - 0,099 g	96 hours
	-	Acute LC50 13480000 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas - Juvenile (Fledgling, Hatchling, Weanling) - 4 to 8 weeks - 1,1 to 3,1 cm	96 hours
	-	Acute LC50 11000000 ug/L Marine water	Fish - Bleak - Alburnus alburnus - 8 to 10 cm	96 hours
	-	Acute LC50 10000000 to 11500000 ug/L Marine water	Fish - Bleak - Alburnus alburnus - 8 cm	96 hours
	-	Acute LC50 6772000 ug/L Fresh water	Daphnia - Water flea - Ceriodaphnia dubia - Neonate	48 hours
	-	Acute LC50 6386000 ug/L Fresh water	Daphnia - Water flea - Ceriodaphnia dubia - Neonate	48 hours
	-	Acute LC50 6325000 ug/L Fresh water	Daphnia - Water flea - Ceriodaphnia dubia - Neonate	48 hours
	-	Acute LC50 6076000 ug/L Fresh water	Daphnia - Water flea - Ceriodaphnia dubia - Neonate	48 hours
	-	Acute LC50 5577000 ug/L Fresh water	Daphnia - Water flea - Ceriodaphnia dubia - Neonate	48 hours
	-	Acute LC50 3715000 ug/L Fresh water	Daphnia - Water flea - Ceriodaphnia dubia - Neonate	48 hours
	-	Acute LC50 >100000 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas - Juvenile (Fledgling, Hatchling, Weanling) - 0,2 to 0,5 g	96 hours
	-	Acute LC50 42000 ug/L Fresh water	Fish - Rainbow trout,donaldson trout - Oncorhynchus mykiss	4 days
	-	Acute LC50 25500 ug/L Marine water	Crustaceans - Brine shrimp - Artemia franchiscana - LARVAE	48 hours
	-	Chronic NOEC <6,3 g/L Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
Diethyl ether	-	Acute LC50 >10000000 ug/L Fresh water	Fish - Bluegill - Lepomis macrochirus - 33 to 75 mm	96 hours
	-	Acute LC50 2560000 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas - 29 days - 17 mm - 0,069 g	96 hours
glycerol	-	Acute LC50 54 ml/L Fresh water	Fish - Rainbow trout,donaldson trout - Oncorhynchus mykiss - 0,9 g	96 hours
ethyl acetate	-	Acute LC50 1600000 ug/L Fresh water	Crustaceans - Aquatic sowbug - Asellus aquaticus	48 hours
	-	Acute LC50 819000 ug/L Fresh water	Daphnia - Water flea - Daphnia magna - <1 days	48 hours
	-	Acute LC50 786000 ug/L Fresh water	Daphnia - Water flea - Daphnia magna - <1 days	48 hours
	-	Acute LC50 778000 ug/L Fresh water	Daphnia - Water flea - Daphnia magna - <1 days	48 hours
	-	Acute LC50 698000 ug/L Fresh water	Daphnia - Water flea - Daphnia magna - <1 days	48 hours
	-	Acute LC50 660000	Daphnia - Water flea - Daphnia	48 hours

12. Ecological information

-	Acute LC50 660000 ug/L Fresh water	Daphnia - Water flea - Daphnia magna - <1 days	48 hours
-	Acute LC50 560000 ug/L Fresh water	Daphnia - Water flea - Daphnia magna - <1 days	48 hours
-	Acute LC50 484000 ug/L Fresh water	Fish - Rainbow trout,donaldson trout - Oncorhynchus mykiss - Juvenile (Fledgling, Hatchling, Weanling)	96 hours
-	Acute LC50 425300 ug/L Fresh water	Fish - Rainbow trout,donaldson trout - Oncorhynchus mykiss - Juvenile (Fledgling, Hatchling, Weanling)	96 hours
-	Acute LC50 295000 ug/L Fresh water	Daphnia - Water flea - Daphnia pulex - <1 days	48 hours
-	Acute LC50 230000 ug/L Fresh water	Daphnia - Water flea - Daphnia pulex - <1 days	48 hours
-	Acute LC50 230000 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas - 29 to 30 days - 18,2 mm - 0,106 g	96 hours
-	Acute LC50 212500 ug/L Fresh water	Fish - Indian catfish - Heteropneustes fossilis - 14,16 cm - 25,54 g	96 hours
-	Acute LC50 175000 ug/L Fresh water	Daphnia - Water flea - Daphnia cucullata - 11 days	48 hours
-	Acute LC50 154000 ug/L Fresh water	Daphnia - Water flea - Daphnia cucullata - 11 days	48 hours

13. Disposal considerations

Waste disposal : The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

14. Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
DOT Classification	UN1263	PAINT	3	I		**Limited quantity** Yes. **Packaging instruction** **Passenger aircraft** Quantity limitation: 1 to 1 L **Cargo aircraft** Quantity limitation: 30 to 30 L **Special provisions** T11, TP1, TP8, TP27
IMDG Class	UN1263	PAINT	3	I		**Emergency schedules (EmS)** F-E, _S-E_

14. Transport information

IATA-DGR Class	UN1263	Paint	3	I		**Passenger and Cargo Aircraft** Quantity limitation: 1 L Packaging instructions: 302 **Cargo Aircraft Only** Quantity limitation: 30 L Packaging instructions: 303 **Limited Quantities - Passenger Aircraft** Quantity limitation: Forbidden Packaging instructions: Forbidden

PG* : Packing group

15. Regulatory information

HCS Classification : Flammable liquid
Irritating material
Target organ effects

U.S. Federal regulations : **TSCA 8(a) PAIR**: Diethyl ether
TSCA 8(a) IUR: glycerol
United States inventory (TSCA 8b): All components are listed or exempted.

SARA 302/304/311/312 extremely hazardous substances: No products were found.
SARA 302/304 emergency planning and notification: No products were found.
SARA 302/304/311/312 hazardous chemicals: Ethanol; ethyl acetate; zinc distearate; glycerol; Diethyl ether
SARA 311/312 MSDS distribution - chemical inventory - hazard identification: Ethanol: Fire hazard, Immediate (acute) health hazard, Delayed (chronic) health hazard; ethyl acetate: Fire hazard, Immediate (acute) health hazard, Delayed (chronic) health hazard; zinc distearate: Immediate (acute) health hazard; glycerol: Immediate (acute) health hazard, Delayed (chronic) health hazard; Diethyl ether: Fire hazard, Immediate (acute) health hazard, Delayed (chronic) health hazard

Clean Water Act (CWA) 307: zinc distearate; 29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32 copper

Clean Water Act (CWA) 311: No products were found.

Clean Air Act (CAA) 112 accidental release prevention: Diethyl ether

Clean Air Act (CAA) 112 regulated flammable substances: Diethyl ether

Clean Air Act (CAA) 112 regulated toxic substances: No products were found.

Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Listed

SARA 313

Product name	CAS number	Concentration

SARA 313 notifications must not be detached from the MSDS and any copying and redistribution of the MSDS shall include copying and redistribution of the notice attached to copies of the MSDS subsequently redistributed.

15. Regulatory information

State regulations : **Connecticut Carcinogen Reporting**: None of the components are listed.
Connecticut Hazardous Material Survey: None of the components are listed.
Florida substances: None of the components are listed.
Illinois Chemical Safety Act: None of the components are listed.
Illinois Toxic Substances Disclosure to Employee Act: None of the components are listed.
Louisiana Reporting: None of the components are listed.
Louisiana Spill: None of the components are listed.
Massachusetts Spill: None of the components are listed.
Massachusetts Substances: The following components are listed: ETHYL ALCOHOL; ETHYL ETHER; GLYCERINE MIST; ZINC STEARATE; ETHYL ACETATE
Michigan Critical Material: None of the components are listed.
Minnesota Hazardous Substances: None of the components are listed.
New Jersey Hazardous Substances: The following components are listed: ETHYL ALCOHOL; COPPER compounds; DIETHYL ETHER; ETHANE, 1,1'-OXYBIS-; GLYCERIN; 1,2,3-PROPANETRIOL; ZINC STEARATE; OCTADECANOIC ACID, ZINC SALT; ETHYL ACETATE; ACETIC ACID, ETHYL ESTER
New Jersey Spill: None of the components are listed.
New Jersey Toxic Catastrophe Prevention Act: None of the components are listed.
New York Acutely Hazardous Substances: The following components are listed: Diethyl ether; Ethyl acetate
New York Toxic Chemical Release Reporting: None of the components are listed.
Pennsylvania RTK Hazardous Substances: The following components are listed: DENATURED ALCOHOL; COPPER COMPOUNDS; ETHANE, 1,1'-OXYBIS-; 1,2,3-PROPANETRIOL; OCTADECANOIC ACID, ZINC SALT; ACETIC ACID ETHYL ESTER
Rhode Island Hazardous Substances: None of the components are listed.

United States inventory (TSCA 8b) : All components are listed or exempted.

International regulations

International lists : **Australia inventory (AICS)**: All components are listed or exempted.
China inventory (IECSC): All components are listed or exempted.
Japan inventory: All components are listed or exempted.
Korea inventory: All components are listed or exempted.
New Zealand Inventory of Chemicals (NZIoC): All components are listed or exempted.
Philippines inventory (PICCS): All components are listed or exempted.

Chemical Weapons Convention List Schedule I Chemicals : Not listed

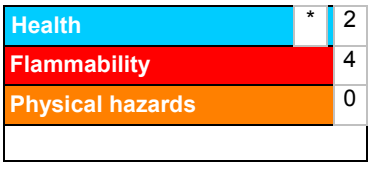
Chemical Weapons Convention List Schedule II Chemicals : Not listed

Chemical Weapons Convention List Schedule III Chemicals : Not listed

16. Other information

Label requirements : FLAMMABLE LIQUID AND VAPOR. INHALATION CAUSES HEADACHES, DIZZINESS, DROWSINESS AND NAUSEA AND MAY LEAD TO UNCONSCIOUSNESS. CAUSES RESPIRATORY TRACT AND EYE IRRITATION. MAY BE HARMFUL IF SWALLOWED. MAY CAUSE SKIN IRRITATION. PROLONGED OR REPEATED CONTACT MAY DRY SKIN AND CAUSE IRRITATION. CONTAINS MATERIAL THAT MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA.

Hazardous Material Information System (U.S.A.) :



16. Other information

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.) :

Date of issue : 03.02.2014.

Date of previous issue : No previous validation.

Version : 1

Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.