

Based upon Regulation (EC) No 1907/2006, as amended by Regulation (EU) 2015/830

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

1.1 Product Identifier

Product Name: Ink, Alcohol Resistant Black
Product Code: 51-0032-01

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

Product Use: Printing ink for use in BestCode CIJ

1.3 Details of the supplier of the safety data sheet

BestCode
3034 SE Loop 820
Fort Worth, TX 76140
817-349-8555

For further information, please contact Customer Service:

Customer Service: 817-349-8555
Email: Info@Bestcode.co

1.4 Emergency telephone number

Emergency Contact: Local Poison Information Center
Chem Tel. Inc. Toll Free 800-255-3924
International 813-248-0585

Section 2: Hazards identification

2.1 Classification of the mixture in accordance with Article 40 of Regulation (EC) No 1272/2008

GHS Rating:

Flammable Liquids, Category 2
Serious Eye Damage/Eye Irritation, Category 2
Specific Target Organ Toxicity (single exposure), Category 3

2.2 Label elements



Signal word: Danger

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Hazard statements:

- H201 - Explosive; mass explosion hazard.
- H225 - Highly flammable liquid and vapor.
- H319 - Causes serious eye irritation.
- H335 - May cause respiratory irritation.

Precautionary statements:

- P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
- P230 - Keep wetted with ...
- P240 - Ground/bond container and receiving equipment.
- P250 - Do not subject to grinding/shock/.../ friction.
- P280 - Wear protective gloves/protective clothing/eye protection/face protection.
- P233 - Keep container tightly closed.
- P241 - Use explosion-proof electrical/ventilating/lighting/.../ equipment.
- P243 - Take precautionary measures against static discharge.
- P242 - Use only non-sparking tools.
- P264 - Wash hands thoroughly after handling.
- P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.
- P271 - Use only outdoors or in a well-ventilated area.
- P373 - DO NOT fight fire when fire reaches explosives.
- P370+380 - In case of fire, evacuate area.
- P372 - Explosion risk in case of fire.
- P370+378 - In case of fire, use carbon dioxide, dry chemical powder, or appropriate foam to extinguish.
- P303+361+353 - IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.
- P305+351+338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P337+313 - If eye irritation persists, get medical advice/attention.
- P304+340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- P312 - Call a POISON CENTER/doctor/... if you feel unwell.
- P501 - Dispose of contents/container in accordance with local regulations.
- P403+235 - Store in cool/well-ventilated place.
- P403+233 - Store container tightly closed in well-ventilated place.
- P405 - Store locked up.

2.3 Adverse Human Health Effects and Symptoms:

Chronic: Chronic inhalation may cause effects similar to those of acute inhalation. Prolonged or repeated skin contact may cause defatting and dermatitis. Animal studies have reported that fetal effects/abnormalities may occur when maternal toxicity is seen. Chronic overexposure to vapors may cause lung damage. Prolonged or repeated exposure may cause permanent eye damage.

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May cause liver and kidney damage. Sophisticated modeling has clearly proven that 2-butoxyethanol does not build up in the body under any kinds of normal use.

Inhalation: Causes respiratory tract irritation. Inhalation of vapors may cause drowsiness and dizziness. May cause central nervous system effects such as nausea and headache. Neurobehavioural effects of exposure to MEK (200 ppm for 4 hrs) were studied with 137 volunteers. There were no statistically significant effects observed in biochemical, psychomotor, sensorimotor and psychological tests. May cause irritation of the respiratory tract with burning pain in the nose and throat, coughing, wheezing, shortness of breath and pulmonary edema. May cause adverse central nervous system effects including headache, convulsions, and possible death. Olfactory fatigue may occur. Can produce delayed pulmonary edema. May be harmful if inhaled. Vapors may cause drowsiness and dizziness. May cause respiratory tract irritation. The toxicological properties of this substance have not been fully investigated. Harmful if inhaled. May cause narcotic effects in high concentration. May cause lung damage. May cause anemia.

Skin Contact: May be absorbed through the skin in harmful amounts. Repeated or prolonged exposure may cause drying and cracking of the skin. Only one human case of skin sensitization was located. Negative results were obtained in an animal test; MEK did not produce skin sensitization in the mouse ear thickness test. Prolonged and/or repeated contact may cause defatting of the skin and dermatitis. May cause skin irritation and possible burns. May be harmful if absorbed through the skin. Causes skin irritation. May cause skin irritation. Harmful if absorbed through the skin. Substance is rapidly absorbed through the skin. Causes symptoms similar to those of inhalation. Skin sensitization testing with human volunteers produced negative results. A skin notation is not recommended by ACGIH, based on estimates from physiologically based pharmacokinetic models which indicate that, even in worst-case dermal-exposure scenarios, 2-butoxyethanol is not absorbed in amounts sufficient to cause red blood cell hemolysis in humans.

Eye Contact: Causes eye irritation. Vapors may cause eye irritation. Animal evidence suggests that MEK is a moderate to severe eye irritant. Contact with eyes may cause severe irritation, and possible eye burns. May cause lacrimation (tearing), blurred vision, and photophobia. May cause chemical conjunctivitis and corneal damage. May cause eye irritation. Causes redness and pain.

Ingestion: May cause irritation of the digestive tract. Possible aspiration hazard. May cause central nervous system depression. Animal evidence suggests that MEK can be aspirated (inhaled) into the lungs during ingestion or vomiting. May cause central nervous system depression, kidney damage, and liver damage. Symptoms may include: headache, excitement, fatigue, nausea, vomiting, stupor, and coma. May cause nausea, vomiting, abdominal pain, and increased salivation. Aspiration hazard if swallowed - can enter lungs and cause damage. May be harmful if swallowed. The toxicological properties of this substance have not been fully investigated. Harmful if swallowed. May cause gastrointestinal irritation with nausea, vomiting and diarrhea.

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Section 3: Composition/information on ingredients

3.1 Substances:

3.2 Mixtures:

CAS #	EC #	Hazardous components / REACH Registration No.	Concentration	GHS Classification
78-93-3	201-159-0	Methyl Ethyl Ketone	60.0 – 90.0%	Flam. Liq. 2: H225; Eye Irrit. 2: H319; STOT SE 3: H336;
9004-70-0	NA	Nitrocellulose	1.0 -5.0 %	Explosive 1.1: H201 STOT (SE) 3: H335 H336
108-83-8	203-620-1 606-005-00-X	Diisobutyl ketone	0.0 -1.0 %	Flam. Liq. 3: H226 STOT (SE) 3: H335 H336

Section 4: First Aid Measures

4.1 Description of first aid measures

Inhalation inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid. Get medical aid immediately. Remove from exposure and move to fresh air immediately. Do NOT use mouth-to-mouth resuscitation. If breathed in, move person into fresh air. If not breathing give artificial respiration. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

Eyes: In case of contact, immediately flush eyes with plenty of water for a t least 15 minutes. Get medical aid. Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately. Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

Skin: In case of contact, flush skin with plenty of water. Remove contaminated clothing and shoes. Get medical aid if irritation develops and persists. Wash clothing before reuse. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists. Wash off with soap and plenty of water. Consult a physician. Get medical aid. Get medical aid immediately.

Ingestion: Potential for aspiration if swallowed. Get medical aid immediately. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If vomiting occurs naturally, have victim lean forward. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4

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cupfuls of milk or water. Rinse mouth with water. Consult a physician. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Call a poison control center.

4.2 Most Important symptoms and effects, both acute and delayed

Inhalation	Lung irritation, Chest pain, Pulmonary edema. Inhalation studies on toluene have demonstrated the development of inflammatory and ulcerous lesions of the penis, prepuce, and scrotum in animals.
Eye contact	No Data Available
Skin contact	No Data Available
Ingestion	No Data Available

4.3 Indication of any immediate medical attention and special treatment needed

Notes to doctor: Treat symptomatically and supportively. Move out of dangerous area. Consult a physician. Show this safety data sheet to the doctor in attendance.

Section 5: Fire Fighting Measures

5.1 Extinguishing media

In case of fire, use carbon dioxide, dry chemical powder or appropriate foam. Water may be ineffective because it will not cool material below its flash point. For large fires, use water spray, fog or regular foam. Contact professional fire-fighters immediately. For small fires, use dry chemical, carbon dioxide, sand, earth, water spray or regular foam. Cool containers with flooding quantities of water until well after fire is out. For small (incipient) fires, use media such as "alcohol" foam, dry chemical, or carbon dioxide. For large fires, apply water from as far as possible. Use very large quantities (flooding) of water applied as a mist or spray; solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water. Use water spray, dry chemical, carbon dioxide, or appropriate foam. Use water spray, dry chemical, carbon dioxide, or chemical foam.

5.2 Special hazards arising from the substance or mixture

Use water spray to cool unopened containers. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Will burn if involved in a fire. Combustible liquid and vapor.

5.3 Advice for firefighters

As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Extremely flammable liquid and vapor. Vapor may cause flash fire. Vapors are heavier than air and may travel to a source of ignition and flash back. Vapors can spread along the ground and collect in low or confined areas. Do NOT use mouth-to-mouth resuscitation. Combustion generates toxic fumes. Use water spray to keep fire-exposed containers cool. Water may be ineffective. Material is lighter than water and a fire may be spread by the use of

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water. This chemical poses an explosion hazard. Flammable Solid. May burn rapidly with flare burning effect. May re-ignite after fire is extinguished. This material is an explosion hazard when exposed to heat, mechanical shock, friction or when agitated. Wear self-contained breathing apparatus for firefighting if necessary.

Section 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

6.1.1 For non-emergency personnel

Evacuate

6.1.2 For emergency responders

Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

6.2 Environmental Precautions

Do not let this chemical enter the environment. Prevent further leakage or spillage if safe to do so. Do not let product enter drains

6.3 Methods and material for containment and cleaning up

6.3.1 For Containment:

Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Clean up spills immediately, observing precautions in the Protective Equipment section. Remove all sources of ignition. Use a spark-proof tool. Provide ventilation. Sweep up, then place into a suitable container for disposal. Avoid generating dusty conditions. Personal precautions.

6.3.2 Clean up and disposal of spill:

Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Sweep up or absorb material, then place into a suitable clean, dry, closed container for disposal. Wear a self contained breathing apparatus and appropriate personal protection. (See Exposure Controls, Personal Protection section).



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Section 7: Handling and storage

7.1 Precautions for safe handling

Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Ground and bond containers when transferring material. Use spark-proof tools and explosion proof equipment. Avoid contact with eyes, skin, and clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep container tightly closed. Keep away from heat, sparks and flame. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames. Use only with adequate ventilation. Avoid breathing vapor. Use with adequate ventilation. Minimize dust generation and accumulation. Material is heat, shock and/or friction sensitive. Use care in handling and storage. Take precautionary measures against static discharges. Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Keep away from sources of ignition - No smoking. Take measures to prevent the buildup of electrostatic charge. Avoid ingestion and inhalation. Do not get in eyes, on skin, or on clothing. Do not ingest or inhale. Use only in a chemical fume hood.

7.2 Conditions for safe storage, including any compatibilities

Keep away from sources of ignition. Store in a cool, dry, well-ventilated area away from incompatible substances. Flammables-area. Keep away from heat, sparks and flame. Keep from contact with oxidizing materials. Keep away from strong acids. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Store in cool place. Handle and store under inert gas. Keep container closed when not in use. Store in a tightly closed container. Store in a cool, dry place.

7.3 Specific end use(s)

Fluid delivery to BestCode Series 8 CIJ. Follow safety instructions outlined in 7.1 & 7.2 while handling. Observe warnings provided with BestCode Series 8 CIJ system when installing and handling fluids.

Section 8: Exposure control/personal protection

8.1 Control parameters

CAS #	Hazardous components	ACGIH TLV	Australia	Austria
78-93-3	Methyl Ethyl Ketone	TLV: 200 ppm STEL: 300 ppm	TWA: 295 mg/m3 (100 ppm) STEL: 590 mg/m3 (200 ppm)	TWA: 445 mg/m3 (150 ppm) STEL: 890 mg/m3 (300 ppm)
108-83-8	Diisobutyl ketone	TLV: 25 ppm	TWA: 290 mg/m3 (50 ppm)	TWA: 145 mg/m3 (25 ppm) STEL: ()

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CAS #	Hazardous components	Belgium OEL	California, USA	Ontario, CA
78-93-3	Methyl Ethyl Ketone	TWA: 600 mg/m ³ (200 ppm) STEL: 900 mg/m ³ (300 ppm)	TWA: 590 mg/m ³ (200 ppm) STEL: 885 mg/m ³ (300 ppm)	TWA: 200 ppm STEL: 300 ppm
108-83-8	Diisobutyl ketone	TWA: 147 mg/m ³ (25 ppm)	TWA: 150 mg/m ³ (25 ppm)	TWA: 25 ppm

CAS #	Hazardous components	China	Québec, CA	German AGS
78-93-3	Methyl Ethyl Ketone	TWA: 300 mg/m ³ STEL: 600 mg/m ³ (15 min)	TWA: 150 mg/m ³ (50 ppm) STEL: 300 mg/m ³ (100 ppm)	TWA: 600 mg/m ³ (200 ppm) STEL: 600 mg/m ³ (200 ppm) (15 min)
108-83-8	Diisobutyl ketone	TWA: 145 mg/m ³	TWA: 145 mg/m ³ (25 ppm)	

CAS #	Hazardous components	Germany MAK/TRK	Denmark OEL	Spain OEL
78-93-3	Methyl Ethyl Ketone	TWA: 295 mg/m ³ (100 ppm) STEL: 600 mg/m ³ (200 ppm) (30min) (4x)	TWA: 145 mg/m ³ (50 ppm) STEL: 290 mg/m ³ (100 ppm)	TWA: 600 mg/m ³ (200 ppm) STEL: 900 mg/m ³ (300 ppm)
108-83-8	Diisobutyl ketone	TWA: 290 mg/m ³ (50 ppm)	TWA: 150 mg/m ³ (25 ppm) STEL: 300 mg/m ³ (50 ppm)	TWA: 148 mg/m ³ (25 ppm)

CAS #	Hazardous components	Europe	Finland OEL	France VL
78-93-3	Methyl Ethyl Ketone	TWA: 600 mg/m ³ (200 ppm) STEL: 900 mg/m ³ (300 ppm)	STEL: 300 mg/m ³ (100 ppm) (15 min)	TWA: 600 mg/m ³ (200 ppm) STEL: 900 mg/m ³ (300 ppm)
108-83-8	Diisobutyl ketone		TWA: 150 mg/m ³ (25 ppm) STEL: 240 mg/m ³ (40 ppm) (15 min)	TWA: 250 mg/m ³ (25 ppm)

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CAS #	Hazardous components	Hungary OEL	Ireland OEL	Italy OEL
78-93-3	Methyl Ethyl Ketone	TWA: 600 mg/m ³ STEL: 900 mg/m ³	TWA: 600 mg/m ³ (200 ppm) STEL: 900 mg/m ³ (300 ppm) (15 min)	TWA: 600 mg/m ³ (200 ppm) STEL: 900 mg/m ³ (300 ppm)
108-83-8	Diisobutyl ketone		TWA: 150 mg/m ³ (25 ppm)	

CAS #	Hazardous components	South Korea	Latvia OEL	Mexico OEL
78-93-3	Methyl Ethyl Ketone	TWA: 590 mg/m ³ (200 ppm) STEL: 885 mg/m ³ (300 ppm)	TWA: 200 mg/m ³ (67 ppm) STEL: 900 mg/m ³ (300 ppm) (15 min)	TWA: 590 mg/m ³ (200 ppm) STEL: 885 mg/m ³ (300 ppm)
108-83-8	Diisobutyl ketone	TWA: 150 mg/m ³ (25 ppm)		TWA: 145 mg/m ³ (25 ppm) STEL: ()

CAS #	Hazardous components	Malaysia OEL	NIOSH	Netherlands OEL
78-93-3	Methyl Ethyl Ketone	TWA: 590 mg/m ³ (200 ppm)	TWA: 200 ppm STEL: 300 ppm	TWA: 590 mg/m ³ STEL: 900 mg/m ³
108-83-8	Diisobutyl ketone	TWA: 145 mg/m ³ (25 ppm)	TWA: 150 mg/m ³ (25 ppm)	

CAS #	Hazardous components	New Zealand	OSHA PELs	Poland
78-93-3	Methyl Ethyl Ketone	TWA: 445 mg/m ³ (150 ppm) STEL: 890 mg/m ³ (300 ppm)	PEL: 200 ppm	TWA: 450 mg/m ³ STEL: 900 mg/m ³
108-83-8	Diisobutyl ketone	TWA: 145 mg/m ³ (25 ppm)	PEL: 50 ppm	TWA: 150 mg/m ³ STEL: 300 mg/m ³

CAS #	Hazardous components	Sweden OEL	Singapore	Britain EH40
78-93-3	Methyl Ethyl Ketone	TWA: 150 mg/m ³ (50 ppm) STEL: 300 mg/m ³ (100 ppm) (15 min)	TWA: 590 mg/m ³ (200 ppm) STEL: 885 mg/m ³ (300 ppm)	TWA: 600 mg/m ³ (200 ppm) STEL: 899 mg/m ³ (300 ppm)
108-83-8	Diisobutyl ketone		TWA: 145 mg/m ³ (25 ppm)	



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CAS #	Hazardous components	Switzerland OEL	Japan OEL	
78-93-3	Methyl Ethyl Ketone			
108-83-8	Diisobutyl ketone	TWA: 150 mg/m ³ (25 ppm)		

8.2 Exposure controls:

8.2.1 Appropriate engineering controls:

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits. Ventilation fans and other electrical service must be non-sparking and have an explosion-proof design. Use adequate general or local explosion-proof ventilation to keep airborne levels to acceptable levels. Use adequate ventilation to keep airborne concentrations low. Use explosion-proof ventilation equipment. Use only under a chemical fume hood.

8.2.2 Individual protection measures, such as personal protective equipment

Eye/Face protection: Wear chemical splash goggles. Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166. Face shield and safety glasses.

Skin protection: Wear appropriate protective gloves to prevent skin exposure. Handle with gloves. Wear appropriate protective clothing to prevent skin exposure. Choose body protection according to the amount and concentration of the dangerous substance at the workplace.

Respiratory protection: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced. Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hygienic Practices: DO NOT SMOKE IN WORK AREA! Promptly remove contaminated clothing. Wash immediately if skin becomes contaminated. Do not eat or drink in work area while using this product. Wash thoroughly at the end of the workday, before eating and using the restroom.

Section 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance:	Dark liquid		
Odor:	Solvent	Odor threshold:	No data available
pH:	5.48	Melting point:	-90.0 C - 135.00 C
Boiling range:	80.0 C - 171.00 C	Flash point:	>-7.0 C
Evaporation rate:	4.6 (BuAC=1)	Upper Explosive Limit:	No data available
		Lower Explosive Limit:	No data available
Flammability:	No data available	Vapor Pressure:	85 MM_HG at 20.0 C
Vapor density:	> Air	Relative Density:	0.898 (H2O = 1 @ 20 °C)
Solubility(ies):	Miscible	Partition coefficient n-octanol/water:	No data available
Auto-ignition temperature:	>238.00 C	Decomposition temperature:	No data available
Viscosity:	No data available		No data available
Explosive properties:	> 81.0% Volatile by volume.		
Oxidizing properties:	No data available		

9.2 Other information:

Miscibility:	No data available	VOC:	No data available
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Section 10: Stability and reactivity

10.1 Reactivity

No data available.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Vapors may form explosive mixture with air.

10.4 Conditions to avoid:

ignition sources, Excess heat, dust generation, temperatures above 55°C, mechanical shock, Heat, flames and sparks. Incompatible materials, Strong oxidants.

10.5 Incompatible materials:

Strong oxidizing agents, Strong acids, 2-propanol, Strong oxidizing agents. Strong bases, Aluminum.

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10.6 Hazardous decomposition products

Carbon monoxide, Carbon dioxide, oxides of nitrogen, formed under fire conditions. Carbon oxides, Hydrogen chloride, irritating and toxic fumes and gases.

Section 11: Toxicological information

11.1 Information on Toxicological effects

Acute toxicity:	CAS# 78-93-3: Acute toxicity, LD50, Intraperitoneal, Mouse, 616.0 MG/KG. Result: Lungs, Thorax, or Respiration: Sputum. Biochemical: Metabolism (Intermediary): Other proteins. Biochemical: Metabolism (intermediary): Effect on inflammation or mediation of inflammation. - Shell Chemical Company. Unpublished Report., Vol/p/yr: -,6, 1961 Acute toxicity, LD50, Skin, Species: Rabbit, 6480. MG/KG. Result: Lungs, Thorax, or Respiration: Other changes. Biochemical: Metabolism (intermediary): Effect on inflammation or mediation of inflammation. - Shell Chemical Company., Vol/p/yr: MSDS-5390-, Acute toxicity, LC50, Inhalation, Mouse, 32.00 MG/M3. Result: Brain and Coverings: Other degenerative changes. Biochemical: Metabolism (intermediary): Effect on inflammation or mediation of inflammation. Acute toxicity, LD50, Intraperitoneal, Species: Guinea pig, 2.000 GM/KG. Result: Immunological Including Allergic: Increase in humoral immune response.
Skin corrosion/irritation:	Skin - rabbit - Skin irritation - -24. Serious eye damage/eye irritation: Eyes - rabbit - Severe eye irritation.
Serious eye damage/irritation:	No data available
Respiratory or skin sensitization:	No data available
Germ cell mutagenicity:	No data available

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Carcinogenicity:

CAS# 78-93-3: Not listed by ACGIH, IARC, NTP, or CA Prop 65.
CAS# 9004-70-0: Not listed by ACGIH, IARC, NTP, or CA Prop 65.
CAS# 57-13-6: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

IARC: Group 3: Not classifiable as to its carcinogenicity to humans
3.NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

CAS# 68442-33-1: Not listed by ACGIH, IARC, NTP, or CA Prop 65. CAS# 111-76-2: ACGIH: A3 - Confirmed animal carcinogen with unknown relevance to humans.

California: Not listed.

Reproductive toxicity: No data available

STOT-single exposure: No data available

STOT-repeated exposure: No data available

Aspiration hazard No data available

11.1.1 Hazard Class information:

No data available

11.1.2 Mixture toxicity:

No data available

11.1.3 Critical studies:

No data available

11.1.4 Non-compliance hazard class:

No data available

11.1.5 Information on likely routes of exposure:

No data available

11.1.6 Symptoms related to the physical, chemical and toxicological characteristics:

No data available

11.1.7 Delayed and immediate effects as well as chronic effects from short and long-term exposure:

No data available

11.1.8 Interactive effects:

No data available

11.1.9 Absence of specific data:

No data available

11.1.10 Mixtures:

No data available

11.1.11 Mixture vs Substance information:

No data available

11.1.12 Other information:

No data available

Section 12: Ecological information

12.1 Toxicity:

Environmental: Substance evaporates in water with T_{1/2}= 3D (rivers) to 12D (lakes). Substance is not expected to bioconcentrate in marine life. Physical: Substance photodegrades in air with T_{1/2} = 2.3 days. Oxidizes rapidly by photo-chemical reactions in air. Readily biodegradable meeting the 10 day window criterion. Not expected to bioaccumulate significantly.

No information found.

Other: No information available. TERRESTRIAL FATE: Based on a recommended classification scheme, an estimated K_{oc} value of 67, determined from an experimental log K_{ow} and a recommended regression-derived equation, indicates that ethylene glycol mono-n-butyl ether is expected to have high mobility in soil. An estimated BCF value of 2.5 was calculated for ethylene glycol mono-n-butyl ether, using an experimental log K_{ow} of 0.83 and a recommended regression-derived equation. According to a recommended classification scheme, this BCF value suggests that bioconcentration in aquatic organisms is low.

Other: An estimated BCF value of 2.5, from an experimental log K_{ow}, suggests that ethylene glycol mono-n-butyl ether bioconcentration in aquatic organisms will be low, according to a recommended classification scheme.

12.2 Persistence and degradability:

No data available

12.3 Bioaccumulative potential:

Bioaccumulation: Leuciscus idus (Golden orfe) - 3 d.

Bioconcentration factor (BCF): 94

12.4 Mobility in soil:

No data available

12.5 Results of PBT and vPvB assessment:

No data available

12.6 Other adverse effects:

No data available



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Section 13: Disposal considerations

13.1 Waste treatment methods:

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P-Series: None listed.

RCRA U-Series:

CAS# 78-93-3: waste number U159 (Ignitable waste, Toxic waste). RCRA U-Series: None listed. Product.

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging.

Dispose of as unused product.

Section 14: Transport information

14.1	UN number:	1210
14.2	Proper shipping name:	
	US DOT:	Printing Ink
	Canadian TDG:	Printing ink, [flammable or] Printing ink related material [(including printing ink thinning or reducing compound), flammable]
	European ADR/RID:	Printing ink, [flammable or] Printing ink related material [(including printing ink thinning or reducing compound), flammable]
	IMDG/IMO:	Printing ink, [flammable or] Printing ink related material [(including printing ink thinning or reducing compound), flammable]
	ICAO/IATA:	Printing ink, [flammable or] Printing ink related material [(including printing ink thinning or reducing compound), flammable]
14.3	Transport hazard class(es) :	3 - FLAMMABLE LIQUID
14.4	Packing group:	II
14.5	Environmental hazards:	N/A
14.6	Special precautions for user:	N/A
14.7	Transport in bulk according to Annex II of Marpol and the IBC Code:	
		N/A

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Section 15: Regulatory information

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

EPA SARA (Superfund Amendments and Reauthorization Act of 1986) Lists				
CAS #	Hazardous components	S. 302 (EHS)	S. 304 RQ	S. 313 (TRI)
78-93-3	Methyl Ethyl Ketone	No	Yes 5000LB	No
9004-70-0	Nitrocellulose	No	No	No
108-83-8	Diisobutyl ketone	No	No	NO

CAS #	Hazardous components	Canadian NPRI	Canadian Toxic	Canadian DSL
78-93-3	Methyl Ethyl Ketone	Yes	No	Yes
9004-70-0	Nitrocellulose	No	No	Yes
108-83-8	Diisobutyl ketone	No	No	Yes

CAS #	Hazardous components	CAA HAP, ODC	CWA NPDES	TSCA
78-93-3	Methyl Ethyl Ketone	No	No	Yes - Inv
9004-70-0	Nitrocellulose	No	No	Yes - Inv
108-83-8	Diisobutyl ketone	No	No	Yes - Inv

CAS #	Hazardous components	CA Prop 65	Mexico INSQ	Australia ICS
78-93-3	Methyl Ethyl Ketone	No	Yes - 1193	Listed
9004-70-0	Nitrocellulose	No	Yes	Listed
108-83-8	Diisobutyl ketone	No	Yes - 1157	Listed

CAS #	Hazardous components	New Zealand IOC	China IECSC	Japan ENCS
78-93-3	Methyl Ethyl Ketone	Listed	Listed	Yes - 2-542
9004-70-0	Nitrocellulose	Listed	Listed	Yes - 8-176
108-83-8	Diisobutyl ketone	Listed	Listed	Yes - 2-2475

CAS #	Hazardous components	Japan ISHL	Korea ECL	Philippines
78-93-3	Methyl Ethyl Ketone	Listed	Yes KE-24094	Listed
9004-70-0	Nitrocellulose	No	Yes KE-25980	Listed
108-83-8	Diisobutyl ketone	Yes - 2-(8)-16	Yes KE-10907	Listed

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CAS #	Hazardous components	Taiwan TCSCA	Singapore HSL	Israel HSL:
78-93-3	Methyl Ethyl Ketone	Listed	No	No
9004-70-0	Nitrocellulose	Listed	No	No
108-83-8	Diisobutyl ketone	Listed	No	No

CAS #	Hazardous components	Germany WHCS	Switzerland Giftliste 1	Switzerland INNS
78-93-3	Methyl Ethyl Ketone	Yes – 150	Yes G-2429	No
9004-70-0	Nitrocellulose	No	Yes G-8365	No
108-83-8	Diisobutyl ketone	Yes – 591	Yes G-1546	No

CAS #	Hazardous components	REACH	Kyoto GHG	Rotterdam
78-93-3	Methyl Ethyl Ketone	Yes - (R), (P)	No	No
9004-70-0	Nitrocellulose	Yes - (P)	No	No
108-83-8	Diisobutyl ketone	Yes - (R), (P)	No	No

CAS #	Hazardous components	Stockholm		
78-93-3	Methyl Ethyl Ketone	No		
9004-70-0	Nitrocellulose	No		
108-83-8	Diisobutyl ketone	No		

Canadian WHMIS Classification:



CLASS B, DIVISION 2: Flammable Liquids

CLASS D, DIVISION 2, SUBDIVISION B: Toxic Materials (Mutagenicity, skin sensitization, irritation, etc.)

CLASS F: Dangerously Reactive Materials

CLASS D, DIVISION 1, SUBDIVISION A: Very Toxic Materials (low LD50 values)

15.2 Chemical safety assessment



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Section 16: Other information

Revision Date: 5/29/2020
Revision Notes: Revision B: Format updated to (EU) 2015/830.
Additional Information:

Company Disclaimer:

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