

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, Black to Red**
Product Code: **51-0029-01**

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:

Skin Corrosion/irritation Category 1 Sub-category C - (H314)
Serious eye damage/eye irritation Category 1 - (H318)
Specific target organ toxicity (single exposure) Category 3 - (H336)
Acute aquatic toxicity Category 1 - (H400)
Chronic aquatic toxicity Category 2 - (H411)
Flammable liquids Category 2 - (H225)

2.2 Label elements



Signal word: Danger



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Hazard statements:

- H225 - Highly flammable liquid and vapor
- H314 - Causes severe skin burns and eye damage
- H336 - May cause drowsiness or dizziness
- H400 - Very toxic to aquatic life
- H411 - Toxic to aquatic life with long lasting effects

Precautionary statements:

- P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
- P235 - Keep cool
- P261 - Avoid breathing dust/fume/gas/mist/vapors/spray
- P264 - Wash face, hands and any exposed skin thoroughly after handling
- P273 - Avoid release to the environment
- P280 - Wear protective gloves/protective clothing/eye protection/face protection
- P301 + P330 + P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting
- P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
- P332 + P313 - If skin irritation occurs: Get medical advice/attention
- P363 - Wash contaminated clothing before reuse
- P403 + P233 - Store in a well-ventilated place. Keep container tightly closed.

2.3 Other Hazards

N/A

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	30.0-60.0%	Flam. Liq. 2: H225; Eye Irrit. 2: H319; STOT SE 3: H336;
64-17-5	200-578-6 603-002-00-5	Ethyl alcohol	10.0-30.0%	Flam. Liq. 2: H225 Eye Irrit. 2: H319;
Trade Secret		Additive	5.0-10.0%	
107-98-2		Propylene glycol monomethyl ether	5.0-10.0%	



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34590-94-8		Dipropylene glycol monomethyl ether	1.0-5.0%	
71-36-3	200-751-6	1-Butanol	1.0-5.0%	Flam. Liq. 3 Acute Tox. 4 Skin Irrit. 2 Eye Dam. 1 STOT SE 3
Trade Secret		Blue Colorant	1.0-5.0%	
67-63-0	603-117-00-0 200-661-7	Isopropyl alcohol	1.0-5.0%	Eye Irrit. 2 Flam. Liq. 3 STOT SE 3
109-60-4	203-686-1	n-Propyl acetate	1.0-5.0%	Flam. Liq. 2: H225; Eye Irrit. 2A: H319; STOT SE 3: H336;
Trade Secret		Red Colorant	1.0-5.0%	

Section 4: First Aid Measures

4.1 Description of first aid measures

General Advice Show this safety data sheet to the doctor in attendance.

Inhalation Remove person to fresh air and keep comfortable for breathing. If breathing is irregular or stopped, administer artificial respiration. Get medical attention immediately.

Eyes: Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Get medical attention if irritation develops and persists.

Skin: Wash off immediately with soap and plenty of water for at least 15 minutes. Remove contaminated clothing. If irritation (redness, rash, blistering) develops, get medical attention.

Ingestion: Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

4.2 Most Important symptoms and effects, both acute and delayed

None under normal use conditions.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to doctor: Treat symptomatically.

Section 5: Fire Fighting Measures

5.1 Extinguishing media

Foam. Carbon dioxide (CO₂). Dry chemical. Water spray. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

5.2 Special hazards arising from the substance or mixture

Thermal decomposition can lead to release of irritating gases and vapors. May emit toxic fumes under fire conditions.

5.3 Advice for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Cool containers / tanks with water spray. Sealed containers may rupture when heated.

Section 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

6.1.1 For non-emergency personnel

Remove persons to safety.

6.1.2 For emergency responders

Remove all sources of ignition. Ventilate the area. Avoid contact with eyes, skin and clothing. Avoid breathing dust or vapor. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

6.2 Environmental Precautions

Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. Keep out of drains, sewers, ditches and waterways. Local authorities should be advised if significant spillages cannot be contained.

6.3 Methods and material for containment and cleaning up

6.3.1 For Containment:

Contain spillage

6.3.2 Clean up and disposal of spill:

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). Use clean non-sparking tools to collect absorbed material.



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Section 7: Handling and storage

7.1 Precautions for safe handling

Use personal protective equipment as required. Do not eat, drink or smoke when using this product. Ensure adequate ventilation.

7.2 Conditions for safe storage, including any incompatibilities

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from open flames, hot surfaces and sources of ignition. Keep container closed when not in use.

Keep out of the reach of children.

Incompatible with strong acids, strong bases, strong oxidizing agents and reducing agents.

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	TWA: 200 ppm STEL: 300 ppm	TWA: 295 mg/m3 (100 ppm) STEL: 590 mg/m3 (200 ppm)	TWAs - 100 ppm
64-17-5	Ethyl alcohol	TLV: 1000 ppm	TWA: 1900 mg/m3 (1000 ppm) STEL: 3800 mg/m3 (2000 ppm)	TWA: 1880 mg/m3 (1000 ppm) STEL: ()
107-98-2	Propylene glycol monomethyl ether	TWA: 50 ppm STEL: 100 ppm		
34590-94-8	Dipropylene glycol monomethyl ether	TWA: 100 ppm STEL: 150 ppm Skin		
71-36-3	1-Butanol	TWA: 20 ppm		
67-63-0	Isopropyl alcohol	TLV: 200 ppm STEL: 400 ppm	TWA: 500 mg/m3 (200 ppm) STEL: 2000 mg/m3 (800 ppm)	TWA: 983 mg/m3 (400 ppm) STEL: 1230 mg/m3 (500 ppm)
109-60-4	n-Propyl acetate	TWA: 100 ppm STEL: 150 ppm		



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CAS #	Hazardous components	Belgium OEL	California, USA PELs	Ontario, CA
78-93-3	Methyl ethyl ketone	200 ppm TWA	PELs 200 ppm STELs 300 ppm	TWA: 200 ppm STEL: 300 ppm
64-17-5	Ethyl alcohol	TWA: 1907 mg/m ³ (1000 ppm)	TWA: 1900 mg/m ³ (1000 ppm)	STEL: 1000 ppm
107-98-2	Propylene glycol monomethyl ether			TWA: 50 ppm STEL: 100 ppm
34590-94-8	Dipropylene glycol monomethyl ether			TWA: 100 ppm STEL: 150 ppm Skin
71-36-3	1-Butanol			TWA: 20 ppm
67-63-0	Isopropyl alcohol	TWA: 500 mg/m ³ (200 ppm) STEL: 1000 mg/m ³ (400 ppm)	TWA: 980 mg/m ³ (400 ppm) STEL: 1225 mg/m ³ (500 ppm)	TWA: 200 ppm STEL: 400 ppm
109-60-4	n-Propyl acetate			TWA: 200 ppm STEL: 250 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)	STELs 100 ppm PELs 50 ppm	TWA: 600 mg/m ³ (200 ppm) STEL: 600 mg/m ³ (200 ppm) (15 min)
64-17-5	Ethyl alcohol		TWA: 1880 mg/m ³ (1000 ppm)	TWA: 960 mg/m ³ (500 ppm) STEL: 1920 mg/m ³ (1000 ppm) (15 min)
107-98-2	Propylene glycol monomethyl ether			
34590-94-8	Dipropylene glycol monomethyl ether			
71-36-3	1-Butanol			
67-63-0	Isopropyl alcohol	TWA: 350 mg/m ³ STEL: 700 mg/m ³ (15 min)	TWA: 983 mg/m ³ (400 ppm) STEL: 1230 mg/m ³ (500 ppm)	TWA: 500 mg/m ³ (200 ppm) STEL: 1000 mg/m ³ (400 ppm) (15 min)
109-60-4	n-Propyl acetate			

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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)
64-17-5	Ethyl alcohol	TWA: 1900 mg/m ³ (1000 ppm) STEL: 3800 mg/m ³ (2000 ppm) (60min) (3x) TWA: 960 mg/m ³ (500 ppm)	TWA: 1900 mg/m ³ (1000 ppm) STEL: 3800 mg/m ³ (2000 ppm)	STEL: 1910 mg/m ³ (1000 ppm)
107-98-2	Propylene glycol monomethyl ether			
34590-94-8	Dipropylene glycol monomethyl ether			
71-36-3	1-Butanol			
67-63-0	Isopropyl alcohol	TWA: 500 mg/m ³ (200 ppm) STEL: 2000 mg/m ³ (15/30min)(4x) (800 ppm (15/30min) (4x))	TWA: 500 mg/m ³ (200 ppm) STEL: 980 mg/m ³ (400 ppm)	TWA: 500 mg/m ³ (200 ppm) STEL: 1000 mg/m ³ (400 ppm)
109-60-4	n-Propyl acetate			

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)
64-17-5	Ethyl alcohol		TWA: 1900 mg/m ³ (1000 ppm) STEL: 2500 mg/m ³ (1300 ppm) (15 min)	TWA: 1900 mg/m ³ (1000 ppm) STEL: 9500 mg/m ³ (5000 ppm)
107-98-2	Propylene glycol monomethyl ether			
34590-94-8	Dipropylene glycol monomethyl ether			
71-36-3	1-Butanol			



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67-63-0	Isopropyl alcohol		TWA: 500 mg/m3 (200 ppm) STEL: 620 mg/m3 (250 ppm) (15 min)	STEL: 980 mg/m3 (400 ppm)
109-60-4	n-Propyl acetate			

CAS #	Hazardous components	Hungary OEL	Ireland OEL	Italy OEL
78-93-3	Methyl ethyl ketone	TWA: 600 mg/m3 STEL: 900 mg/m3	TWA: 600 mg/m3 (200 ppm) STEL: 900 mg/m3 (300 ppm) (15 min)	TWA: 600 mg/m3 (200 ppm) STEL: 900 mg/m3 (300 ppm)
64-17-5	Ethyl alcohol	TWA: 1900 mg/m3 STEL: 7600 mg/m3	STEL: 1000 ppm (15 min)	
107-98-2	Propylene glycol monomethyl ether			
34590-94-8	Dipropylene glycol monomethyl ether			
71-36-3	1-Butanol			
67-63-0	Isopropyl alcohol	TWA: 500 mg/m3 STEL: 2000 mg/m3	TWA: 200 ppm STEL: 400 ppm (15 min)	
109-60-4	n-Propyl acetate			

CAS #	Hazardous components	South Korea	Latvia OEL	Mexico OEL
78-93-3	Methyl ethyl ketone	TWA: 590 mg/m3 (200 ppm) STEL: 885 mg/m3 (300 ppm)	TWA: 200 mg/m3 (67 ppm) STEL: 900 mg/m3 (300 ppm) (15 min)	TWA/VLE-PPT: 200 ppm TWA/VLE-PPT: 590 mg/m3 STEL/PPT-CT: 300 ppm STEL/PPT-CT: 885 mg/m3
64-17-5	Ethyl alcohol	TWA: 1900 mg/m3 (1000 ppm)	TWA: 1000 mg/m3	TWA/VLE-PPT: 1000 ppm TWA/VLE-PPT: 1900 mg/m3
107-98-2	Propylene glycol monomethyl ether			
34590-94-8	Dipropylene glycol monomethyl ether			TWA/VLE-PPT: 100 ppm TWA/VLE-PPT: 60 mg/m3 STEL/PPT-CT: 150 ppm



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				STEL/PPT-CT: 900 mg/m3
71-36-3	1-Butanol			Ceiling: 50 ppm Ceiling: 150 mg/m3
67-63-0	Isopropyl alcohol	TWA: 480 mg/m3 (200 ppm) STEL: 980 mg/m3 (400 ppm)	TWA: 350 mg/m3 STEL: 600	TWA/VLE-PPT: 400 ppm TWA/VLE-PPT: 980 mg/m3 STEL/PPT-CT: 500 ppm STEL/PPT-CT: 1225 mg/m3
109-60-4	n-Propyl acetate			TWA/VLE-PPT: 200 ppm TWA/VLE-PPT: 840 mg/m3 STEL/PPT-CT: 250 ppm STEL/PPT-CT: 1050 mg/m3

CAS #	Hazardous components	Malaysia OEL	NIOSH	Netherlands OEL
78-93-3	Methyl ethyl ketone	TWA: 590 mg/m3 (200 ppm)	TWA: 200 ppm STEL: 300 ppm	TWA: 590 mg/m3 STEL: 900 mg/m3
64-17-5	Ethyl alcohol	Ethyl alcohol	TWA: 1880 mg/m3 (1000 ppm)	TWA: 1900 mg/m3 (1000 ppm)
107-98-2	Propylene glycol monomethyl ether			
34590-94-8	Dipropylene glycol monomethyl ether			
71-36-3	1-Butanol			
67-63-0	Isopropyl alcohol	TWA: 983 mg/m3 (400 ppm)	TWA: 980 mg/m3 (400 ppm) STEL: 1225	
109-60-4	n-Propyl acetate			

CAS #	Hazardous components	New Zealand	OSHA PELs	Poland
78-93-3	Methyl ethyl ketone	TWA: 445 mg/m3 (150 ppm) STEL: 890 mg/m3 (300 ppm)	TWA: 200 ppm TWA: 590 mg/m3	TWA: 450 mg/m3 STEL: 900 mg/m3
64-17-5	Ethyl alcohol	TWA: 1880 mg/m3 (1000 ppm)	TWA: 1000 ppm TWA: 1900 mg/m3	TWA: 1900 mg/m3



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107-98-2	Propylene glycol monomethyl ether		TWA: 100 ppm TWA: 600 mg/m3 Skin	
34590-94-8	Dipropylene glycol monomethyl ether			
71-36-3	1-Butanol		TWA: 100 ppm TWA: 300 mg/m3 Ceiling: 50 ppm Ceiling: 150 mg/m3 Skin	
67-63-0	Isopropyl alcohol	TWA: 983 mg/m3 (400 ppm) STEL: 1230 mg/m3 (500 ppm)	TWA: 400 ppm TWA: 980 mg/m3 STEL: 500 ppm STEL: 1225 mg/m3	TWA: 900 mg/m3 STEL: 1200 mg/m3
109-60-4	n-Propyl acetate		TWA: 200 ppm TWA: 840 mg/m3 STEL: 250 ppm STEL: 1050 mg/m3	

CAS #	Hazardous components	Sweden OEL	Singapore	Britain EH40
78-93-3	Methyl ethyl ketone	TWA: 150 mg/m3 (50 ppm) STEL: 300 mg/m3 (100 ppm) (15 min)	TWA: 590 mg/m3 (200 ppm) STEL: 885 mg/m3 (300 ppm)	TWA: 600 mg/m3 (200 ppm) STEL: 899 mg/m3 (300 ppm)
64-17-5	Ethyl alcohol	TWA: 1000 mg/m3 (500 ppm) STEL: 1900 mg/m3 (1000 ppm) (15 min)	TWA: 1880 mg/m3 (1000 ppm)	TWA: 1920 mg/m3 (1000 ppm) STEL: ()
107-98-2	Propylene glycol monomethyl ether			
34590-94-8	Dipropylene glycol monomethyl ether			
71-36-3	1-Butanol			
67-63-0	Isopropyl alcohol	TWA: 350 mg/m3 (150 ppm) STEL: 600 mg/m3 (250 ppm) (15 min)	TWA: 983 mg/m3 (400 ppm) STEL: 1230 mg/m3 (500 ppm)	TWA: 999 mg/m3 (400 ppm) STEL: 1250
109-60-4	n-Propyl acetate			

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CAS #	Hazardous components	Switzerland OEL	Japan OEL	
78-93-3	Methyl ethyl ketone			
64-17-5	Ethyl alcohol			
107-98-2	Propylene glycol monomethyl ether			
34590-94-8	Dipropylene glycol monomethyl ether			
71-36-3	1-Butanol			
67-63-0	Isopropyl alcohol	TWA: 500 mg/m ³ (200 ppm) STEL: 1000 mg/m ³ (400 ppm)		
109-60-4	n-Propyl acetate			

8.2 Exposure controls:

8.2.1 Appropriate engineering controls:

Provide a good standard of general ventilation. Natural ventilation is from doors, windows etc. Controlled ventilation means air is supplied or removed by a powered fan. Users are advised to consider national Occupational Exposure Limits or other equivalent values. In case of insufficient ventilation, wear suitable respiratory equipment.

8.2.2 Individual protection measures, such as personal protective equipment

Eye/Face protection: Wear safety glasses with side shields (or goggles). If splashes are likely to occur. Wear suitable face shield. Ensure that eyewash stations and safety showers are close to the workstation location.

Skin protection: Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact. Chemical resistant protective gloves. Suitable materials also with prolonged, direct contact (Recommended: Protective index 6, corresponding >480 minutes of permeation time): eg. nitrile rubber (0.4 mm), chloroprene rubber (0.5 mm), polyvinylchloride (0.7 mm) and other Supplementary note: The specifications are based on tests, literature data and information of glove manufacturers. Taking into account the varying conditions, the practical usage of a chemical-protective glove in practice may be much shorter than the permeation time determined through testing. Due to different glove types, the manufacturer's directions for use should be observed. Replace gloves immediately when torn or any change in appearance is noticed such as dimension, color, flexibility.



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Respiratory protection: If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Respiratory protection must be provided in accordance with current local regulations. Selection of air-purifying or positive-pressure supplied-air will depend on the specific operation and the potential airborne concentration of the material.

Hygienic Practices: Handle in accordance with good industrial hygiene and safety practice. Wash hands before eating, drinking or smoking. Wash contaminated clothing before reuse. Avoid contact with eyes, skin and clothing. Wear suitable gloves and eye/face protection. Regular cleaning of equipment, work area and clothing is recommended.

Section 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance:	Colored Liquid		
Odor:	-	Odor threshold:	-
pH:	-	Melting point:	-
Boiling range:	> 56 °C / 133 °F	Flash point:	-9 °C / 16 °F
Evaporation rate:	-	Upper Explosive Limit:	-
		Lower Explosive Limit:	-
Flammability:	-	Vapor Pressure:	-
Vapor density:	-	Relative Density:	0.85
Solubility(ies):	-	Partition coefficient n-octanol/water:	-
Auto-ignition temperature:	-	Decomposition temperature:	-
Viscosity:	-		
Explosive properties:	-		
Oxidizing properties:	-		

9.2 Other information:

Miscibility:	-	VOC:	78.83 % by weight 5.6 lbs/gal 671.31 gram/liter
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Section 10: Stability and reactivity

10.1 Reactivity

No information available.



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10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

None under normal processing.

10.4 Conditions to avoid:

Keep away from open flames, hot surfaces and sources of ignition.

10.5 Incompatible materials:

Strong acids. Strong bases. Strong oxidizing agents. Reducing agent.

10.6 Hazardous decomposition products

Thermal decomposition can lead to release of irritating gases and vapors. Carbon dioxide (CO₂). Carbon monoxide.

Section 11: Toxicological information

11.1 Information on Toxicological effects

Acute toxicity:

Skin corrosion/irritation:

Specific test data for the substance or mixture is not available. Causes severe burns. (based on components).

Serious eye damage/irritation:

Specific test data for the substance or mixture is not available. Causes severe eye damage. (based on components).

Respiratory or skin sensitization:

Specific test data for the substance or mixture is not available.

Germ cell mutagenicity:

Specific test data for the substance or mixture is not available.

Carcinogenicity:

Specific test data for the substance or mixture is not available.

Reproductive toxicity:

Specific test data for the substance or mixture is not available.

STOT-single exposure:

Specific test data for the substance or mixture is not available. May cause drowsiness or dizziness. (based on components).

STOT-repeated exposure:

Specific test data for the substance or mixture is not available.

Aspiration hazard

Specific test data for the substance or mixture is not available.

11.1.1 Hazard Class information:

11.1.2 Mixture toxicity:

CAS #	Component	Oral LD50 (Rat)	Dermal LD50 (Rabbit)	Inhalation LC50 (Rat)
78-93-3	Methyl ethyl ketone	2483 mg/kg	5000 mg/kg	11700 ppm 4 h
64-17-5	Ethyl alcohol	7060 mg/kg		124.7 mg/L 4 h
107-98-2	Propylene glycol monomethyl ether	5000 mg/kg	13 g/kg	> 7559 ppm 6 h

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34590-94-8	Dipropylene glycol monomethyl ether	5.35 g/kg	9500 mg/kg	
71-36-3	1-Butanol	700 mg/kg	3402 mg/kg (> 8000 ppm 4 h
67-63-0	Isopropyl alcohol	1870 mg/kg	4059 mg/kg	72600 mg/m ³ 4 h
109-60-4	n-Propyl acetate	8700 mg/kg	> 17756 mg/kg	

11.1.3 Critical studies:

11.1.4 Non-compliance hazard class:

11.1.5 Information on likely routes of exposure:

Specific test data for the substance or mixture is not available.

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

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

11.1.8 Interactive effects:

11.1.9 Absence of specific data:

11.1.10 Mixtures:

11.1.11 Mixture vs Substance information:

11.1.12 Other information:

Section 12: Ecological information

- 12.1 Toxicity:** Specific test data for the substance or mixture is not available. Very toxic to aquatic life. (based on components). Toxic to aquatic life with long lasting effects.

0.01 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

Methyl Ethyl Ketone – 78-93-3

Fish

96h LC50 Pimephales promelas: 3130 - 3320 mg/L
(flow-through)

Crustacea

48h EC50 Daphnia magna: = 5091 mg/L
48h EC50 Daphnia magna: > 520 mg/L
48h EC50 Daphnia magna: 4025 - 6440 mg/L Static

Ethyl Alcohol – 64-17-05

Fish

96h LC50 Oncorhynchus mykiss: 12.0 - 16.0 mL/L (static)
96h LC50 Pimephales promelas: 13400 - 15100 mg/L
(flow-through)
96h LC50 Pimephales promelas: > 100 mg/L (static)

Crustacea

48h LC50 Daphnia magna: 9268 - 14221 mg/L
48h EC50 Daphnia magna: = 2 mg/L Static

Propylene glycol monomethyl ether 107-98-2

Fish

96h LC50 Pimephales promelas: = 20.8 g/L (static)

Crustacea

48h EC50 Daphnia magna: = 23300 mg/L

Dipropylene glycol monomethyl ether 34590-94-8

Fish

96h LC50 Pimephales promelas: > 10000 mg/L (static)

Crustacea

48h LC50 Daphnia magna: = 1919 mg/L

n-Propyl acetate – 109-60-4

Fish

96h LC50 Pimephales promelas: 56 - 64 mg/L (flow-through)
96h LC50 Pimephales promelas: 56 - 64 mg/L (static)

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1-Butanol – 71-36-3

Algae/aquatic plants

96h EC50 Desmodesmus subspicatus: > 500 mg/L

72h EC50 Desmodesmus subspicatus: > 500 mg/L

Fish

96h LC50 Pimephales promelas: 1730 - 1910 mg/L (static)

96h LC50 Pimephales promelas: = 1740 mg/L (flow-through)

96h LC50 Lepomis macrochirus: 100000 - 500000 µg/L (static)

96h LC50 Pimephales promelas: = 1910000 µg/L (static)

Crustacea

48h EC50 Daphnia magna: 1897 - 2072 mg/L Static

48h EC50 Daphnia magna: = 1983 mg/L

Isopropyl alcohol – 67-63-0

Algae/aquatic plants

72h EC50 Desmodesmus subspicatus: > 1000 mg/L

96h EC50 Desmodesmus subspicatus: > 1000 mg/L

Fish

96h LC50 Pimephales promelas: = 9640 mg/L (flow-through)

96h LC50 Lepomis macrochirus: > 1400000 µg/L

96h LC50 Pimephales promelas: = 11130 mg/L (static)

Crustacea

48h EC50 Daphnia magna: = 13299 mg/L

12.2 Persistence and degradability: Not determined

12.3 Bioaccumulative potential:

Methyl Ethyl Ketone – 78-93-3	Partition coefficient	0.3
Ethyl Alcohol – 64-17-05	Partition coefficient	-0.32
Propylene glycol monomethyl ether - 107-98-2	Partition coefficient	0.437
Dipropylene glycol monomethyl ether - 34590-94-8	Partition coefficient	-.064
1-Butanol – 71-36-3	Partition coefficient	0.785
Isopropyl alcohol – 67-63-0	Partition coefficient	0.05

12.4 Mobility in soil: Not determined

12.5 Results of PBT and vPvB assessment: Not determined

12.6 Other adverse effects: Not determined



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Section 13: Disposal considerations

13.1 Waste treatment methods:

Contain and dispose of waste according to local regulations.

Empty containers should be taken to an approved waste handling site for recycling or disposal.

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
64-17-5	Ethyl alcohol	No	No	No
109-60-4	n-Propyl acetate			
71-36-3	1-Butanol	No	Yes 5000 LB	Yes
67-63-0	Isopropyl alcohol	No	No	Yes

CAS #	Hazardous components	Canadian NPRI	Canadian Toxic	Canadian DSL
78-93-3	Methyl ethyl ketone	Yes	No	Yes
64-17-5	Ethyl alcohol	Yes	No	Yes
109-60-4	n-Propyl acetate	Yes		
71-36-3	1-Butanol	Yes	No	Yes
67-63-0	Isopropyl alcohol	Yes	No	Yes

CAS #	Hazardous components	CAA HAP, ODC	CWA NPDES	TSCA
78-93-3	Methyl ethyl ketone	No	No	Yes - Inv
64-17-5	Ethyl alcohol	No	No	Yes - Inv
109-60-4	n-Propyl acetate			
71-36-3	1-Butanol	No	No	Yes-Inv
67-63-0	Isopropyl alcohol	No	No	Yes-Inv

CAS #	Hazardous components	CA Prop 65	Mexico INSQ	Australia ICS
78-93-3	Methyl ethyl ketone	No	Yes - 1193	Listed
64-17-5	Ethyl alcohol	Carcinogen Developmental	Listed	Listed
109-60-4	n-Propyl acetate			
71-36-3	1-Butanol	No	Yes	Yes
67-63-0	Isopropyl alcohol	No	Yes – 1219	Yes

CAS #	Hazardous components	New Zealand IOC	China IECSC	Japan ENCS
78-93-3	Methyl ethyl ketone	Listed	Listed	Yes - 2-542
64-17-5	Ethyl alcohol	Listed	Listed	Yes - 5-153
109-60-4	n-Propyl acetate			
71-36-3	1-Butanol	Yes	Yes	Yes 7-321

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67-63-0	Isopropyl alcohol	Yes	Yes	Yes 2-207
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CAS #	Hazardous components	Japan ISHL	Korea ECL	Philippines
78-93-3	Methyl ethyl ketone	Listed	Yes KE-24094	Listed
64-17-5	Ethyl alcohol	No	Yes KE-13217	Listed
109-60-4	n-Propyl acetate			
71-36-3	1-Butanol	Yes 2-(8)-299	Yes KE-03867	Yes
67-63-0	Isopropyl alcohol	Yes - 2-(8)-319;	Yes - KE-29363	Yes

CAS #	Hazardous components	Taiwan TCSCA	Singapore HSL	Israel HSL:
78-93-3	Methyl ethyl ketone	Listed	No	No
64-17-5	Ethyl alcohol	Listed	No	Yes -Cat
109-60-4	n-Propyl acetate			
71-36-3	1-Butanol	Yes	No	Yes Cat
67-63-0	Isopropyl alcohol	Yes	No	Yes Cat

CAS #	Hazardous components	Germany WHCS	Switzerland Giftliste 1	Switzerland INNS
78-93-3	Methyl ethyl ketone	Yes – 150	Yes G-2429	No
64-17-5	Ethyl alcohol	Yes – 96	Yes G-1158	No
109-60-4	n-Propyl acetate			
71-36-3	1-Butanol	Yes – 39	Yes G-1321	No
67-63-0	Isopropyl alcohol	Yes - 135	Yes G-1712	No

CAS #	Hazardous components	REACH	Kyoto GHG	Rotterdam
78-93-3	Methyl ethyl ketone	Yes - (R), (P)	No	No
64-17-5	Ethyl alcohol	Yes - (R), (P)	No	No
109-60-4	n-Propyl acetate			
71-36-3	1-Butanol	REACH: Yes - (R), (P);	No	No
67-63-0	Isopropyl alcohol	REACH: Yes - (R), (P);	No	No

CAS #	Hazardous components	Stockholm		
78-93-3	Methyl ethyl ketone	No		
64-17-5	Ethyl alcohol	No		
109-60-4	n-Propyl acetate			
71-36-3	1-Butanol	No		



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67-63-0	Isopropyl alcohol	No		
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Canadian WHMIS Classification:

NA

15.2 Chemical safety assessment

Section 16: Other information

Revision Date: 6/16/2020

Revision Notes: Updated to new format. Rev B

Additional Information:

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