Safety Data Sheet

Date: 3/3/2020
Product Number: 51-0033-01 Revision: B
Product Name: Ink, Wet Chilled Bottle Black

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, Wet Chilled Bottle Black
Product Code: 51-0033-01

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 2A
Specific Target Organ Toxicity (single exposure), Category 3

2.2 Label elements

Signal word: Danger

Hazard statements:

H225 - Highly flammable liquid and vapor.
H319 - Causes serious eye irritation.
H335 - May cause respiratory irritation.
H336 - May cause drowsiness or dizziness.
HUS2 - May form combustible dust concentrations in air.

Precautionary statements:

P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P240 - Ground/bond container and receiving equipment.
P241 - Use explosion-proof electrical/ventilating/lighting/.../ equipment.
P242 - Use only non-sparking tools.
P243 - Take precautionary measures against static discharge.
P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.
P264 - Wash hands thoroughly after handling.
P271 - Use only outdoors or in a well-ventilated area.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P235 - Keep cool.
P303+361+353 - IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+351+338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312 - Call a POISON CENTER or doctor/physician if you feel unwell.
P337+313 - If eye irritation persists, get medical advice/attention.
P370+378 - In case of fire, use ... to extinguish.
P403+233 - Store container tightly closed in well-ventilated place.
P405 - Store locked up.
P501 - Dispose of contents/in accordance with local regulations

2.3 Other Hazards

Chronic: Prolonged or repeated skin contact may cause defatting and dermatitis.
May cause reproductive and fetal effects. Laboratory experiments have shown mutagenic effects. Animal studies have reported the development of tumors. Prolonged exposure may cause liver, kidney, and heart damage.

Inhalation: Inhalation of high concentrations may cause central nervous system effects characterized

by nausea, headache, dizziness, unconsciousness and coma. Causes respiratory tract irritation. May cause narcotic effects in high concentration. Causes upper respiratory tract irritation. Inhalation of vapors may cause drowsiness and dizziness.

Skin Contact: Causes moderate skin irritation. May cause cyanosis of the extremities. May cause irritation with pain and stinging, especially if the skin is abraded. Isopropanol has a low potential to cause allergic skin reactions; however, rare cases of allergic contact dermatitis have been reported. Dermal absorption has been considered toxicologically insignificant. The cases of deep coma associated with skin contact are thought to be a consequence of gross isopropanol vapor inhalation in rooms with inadequate ventilation, rather than being attributable to percutaneous absorption of isopropanol per se.

Eye Contact: Causes severe eye irritation. May cause painful sensitization to light. May cause chemical conjunctivitis and corneal damage. Produces irritation, characterized by a burning sensation, redness, tearing, inflammation, and possible corneal injury. May cause transient corneal injury.

Ingestion: May cause systemic toxicity with acidosis. May cause central nervous system depression, characterized by excitement, followed by headache, dizziness, drowsiness, and nausea. Advanced stages may cause collapse, unconsciousness, coma and possible death due to respiratory failure. Causes gastrointestinal irritation with nausea, vomiting and diarrhea. May cause kidney damage. Aspiration of material into the lungs may cause chemical pneumonitis, which may be fatal. The probable oral lethal dose in humans is 240 ml (2696 mg/kg), but ingestion of only 20 ml (224 mg/kg) has, but in gestion of only 20 ml (224 mg/kg) has caused poisoning.

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	50.0 – 80.0%	Flam. Liq. 2: H225; Eye Irrit. 2: H319; STOT SE 3: H336;
64-17-5	200-578-6 603-002-00-5	Ethyl alcohol	5.0 -15.0 %	Flam. Liq. 2: H225
67-63-0	200-661-7 603-117-00-0	Isopropyl alcohol	0.05 -1.0 %	Flam. Liq. 2: H225 Eye Damage 2: H319 STOT (SE) 3: H335 H336

Section 4: First Aid Measures

4.1 Description of first aid measures

Inhalation Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid. Do NOT use mouth-to-mouth resuscitation. If breathed in, move person into fresh air. Consult a physician.

Eyes: Get medical aid. Gently lift eyelids and flush continuously with water. In case of contact, immediately flush eyes with plenty of water for a t least 15 minutes. Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

Skin: Wash clothing before reuse. In case of contact, flush skin with plenty of water. Remove contaminated clothing and shoes. Get medical aid if irritation develops and persists. Wash off with soap and plenty of water. Consult a physician.

Ingestion: If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Potential for aspiration if swallowed. Get medical aid immediately. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs naturally, have victim lean forward. Do NOT induce vomiting. Rinse mouth with water. Consult a physician.

4.2 Most Important symptoms and effects, both acute and delayed

Inhalation No Data Available
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: Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.
Treat symptomatically and supportively. Persons with skin or eye disorders or liver, kidney, chronic respiratory diseases, or central and peripheral nervous system diseases may be at increased risk from exposure to this substance.

Antidote: Replace fluid and electrolytes. Urine acetone test may be helpful in diagnosis.

Hemodialysis should be considered in severe intoxication.

Section 5: Fire Fighting Measures

5.1 Extinguishing media

For small fires, use dry chemical, carbon dioxide, water spray or alcohol-resistant foam.
Water may be ineffective. Do NOT use straight streams of water. For small fires, use carbon dioxide, dry chemical, dry sand, or alcohol-resistant foam. Cool containers with flooding quantities of water until well after fire is out. Use water spray, dry chemical, arbon dioxide, or alcohol-resistant foam.

5.2 Special hazards arising from the substance or mixture

Carbon oxides, Flash back possible over considerable distance. Container explosion may occur under fire conditions.

5.3 Advice for firefighters

Replace fluid and electrolytes. As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Vapors may form explosive mixtures with air. Vapors can travel to a source of ignition and flash back. Will burn if involved in a fire. Can release vapors that form explosive mixtures at temperatures above the flashpoint. Use water spray to keep fire-exposed containers cool. Flammable liquid and vapor. May form explosive peroxides. 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. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas. F
or personal protection see section 8.

6.2 Environmental Precautions

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. Remove all sources of ignition. Use a spark-proof tool. Provide ventilation. A vapor suppressing foam may be used to reduce vapors. Use water spray to dilute spill to a non-flammable mixture.

6.3.2 Clean up and disposal of spill:

Clean up spills immediately, observing precautions in the Protective Equipment section. Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13).

Section 7: Handling and storage

7.1 Precautions for safe handling

Wash thoroughly after handling. Use only in a well-ventilated area. 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. Avoid ingestion and inhalation. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames. Remove contaminated clothing and wash before reuse. Take precautionary measures against static discharges. Avoid breathing dust, mist, or vapor. Do not allow to evaporate to near dryness. Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Use explosion-proof equipment. Keep away from sources of ignition - No smoking. Take measures to prevent the buildup of electrostatic charge. For precautions see section 2.

7.2 Conditions for safe storage, including any compatibilities

Keep away from heat, sparks and flame. Keep away from sources of ignition. Store in a tightly closed container. Keep from contact with oxidizing materials. Store in a cool, dry, well-ventilated area away from incompatible substances. Flammables-area. Do not store near perchlorates, peroxides, chromic acid or nitric acid. Do not store in direct sunlight. After opening, purge container with nitrogen before reclosing. Periodically test for peroxide formation on long-term storage. Addition of water or appropriate reducing materials will lessen peroxide formation. Store protected from moisture. Containers should be dated when opened and tested periodically for the presence of peroxides. Should crystals form in a peroxidizable liquid, peroxidation may have occurred and the product should be considered extremely dangerous. In this instance, the container should only be opened remotely by professionals. All peroxidizable substances should be stored away from heat and light and be protected from ignition sources. Store under inert gas. 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. Hygroscopic. Storage class 510)

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)
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: ()
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)

CAS #	Hazardous components	Belgium OEL	California, USA	Ontario, CA
78-93-3	Methyl Ethyl Ketone	TWA: 600 mg/m3 (200 ppm) STEL: 900 mg/m3 (300 ppm)	TWA: 590 mg/m3 (200 ppm) STEL: 885 mg/m3 (300 ppm)	TWA: 200 ppm STEL: 300 ppm
64-17-5	Ethyl alcohol	TWA: 1907 mg/m3 (1000 ppm)	TWA: 1900 mg/m3 (1000 ppm)	STEL: 1000 ppm
67-63-0	Isopropyl alcohol	TWA: 500 mg/m3 (200 ppm) STEL: 1000 mg/m3 (400 ppm)	TWA: 980 mg/m3 (400 ppm) STEL: 1225 mg/m3 (500 ppm)	TWA: 200 ppm STEL: 400 ppm

CAS #	Hazardous components	China	Québec, CA	German AGS
78-93-3	Methyl Ethyl Ketone	TWA: 300 mg/m3 STEL: 600 mg/m3 (15 min)	TWA: 150 mg/m3 (50 ppm) STEL: 300 mg/m3 (100 ppm)	TWA: 600 mg/m3 (200 ppm) STEL: 600 mg/m3 (200 ppm) (15 min)
64-17-5	Ethyl alcohol		TWA: 1880 mg/m3 (1000 ppm)	TWA: 960 mg/m3 (500 ppm) STEL: 1920 mg/m3 (1000 ppm) (15 min)

67-63-0	Isopropyl alcohol	TWA: 350 mg/m3 STEL: 700 mg/m3 (15 min)	TWA: 983 mg/m3 (400 ppm) STEL: 1230 mg/m3 (500 ppm)	TWA: 500 mg/m3 (200 ppm) STEL: 1000 mg/m3 (400 ppm) (15 min)

CAS #	**Hazardous components**	**Germany MAK/TRK**	**Denmark OEL**	**Spain OEL**
78-93-3	Methyl Ethyl Ketone	TWA: 295 mg/m3 (100 ppm) STEL: 600 mg/m3 (200 ppm) (30min) (4x)	TWA: 145 mg/m3 (50 ppm) STEL: 290 mg/m3 (100 ppm)	TWA: 600 mg/m3 (200 ppm) STEL: 900 mg/m3 (300 ppm)
64-17-5	Ethyl alcohol	TWA: 1900 mg/m3 (1000 ppm) STEL: 3800 mg/m3 (2000 ppm) (60min) (3x) TWA: 960 mg/m3 (500 ppm)	TWA: 1900 mg/m3 (1000 ppm) STEL: 3800 mg/m3 (2000 ppm)	STEL: 1910 mg/m3 (1000 ppm)
67-63-0	Isopropyl alcohol	TWA: 500 mg/m3 (200 ppm) STEL: 2000 mg/m3 (15/30min)(4x) (800 ppm (15/30min) (4x))	TWA: 500 mg/m3 (200 ppm) STEL: 980 mg/m3 (400 ppm)	TWA: 500 mg/m3 (200 ppm) STEL: 1000 mg/m3 (400 ppm)

CAS #	**Hazardous components**	**Europe**	**Finland OEL**	**France VL**
78-93-3	Methyl Ethyl Ketone	TWA: 600 mg/m3 (200 ppm) STEL: 900 mg/m3 (300 ppm)	STEL: 300 mg/m3 (100 ppm) (15 min)	TWA: 600 mg/m3 (200 ppm) STEL: 900 mg/m3 (300 ppm)
64-17-5	Ethyl alcohol		TWA: 1900 mg/m3 (1000 ppm) STEL: 2500 mg/m3 (1300 ppm) (15 min)	TWA: 1900 mg/m3 (1000 ppm) STEL: 9500 mg/m3 (5000 ppm)
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)

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)	
67-63-0	Isopropyl alcohol	TWA: 500 mg/m3 STEL: 2000 mg/m3	TWA: 200 ppm STEL: 400 ppm (15 min)	

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: 590 mg/m3 (200 ppm) STEL: 885 mg/m3 (300 ppm)
64-17-5	Ethyl alcohol	TWA: 1900 mg/m3 (1000 ppm)	TWA: 1000 mg/m3	TWA: 1900 mg/m3 (1000 ppm) STEL: ()
67-63-0	Isopropyl alcohol	TWA: 480 mg/m3 (200 ppm) STEL: 980 mg/m3 (400 ppm)	TWA: 350 mg/m3 STEL: 600 mg/m3 (15 min)	TWA: 980 mg/m3 (400 ppm) STEL: 1225 mg/m3 (500 ppm)

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	TWA: 1880 mg/m3 (1000 ppm)	TWA: 1900 mg/m3 (1000 ppm)	TWA: 260 mg/m3 STEL: 1900 mg/m3
67-63-0	Isopropyl alcohol	TWA: 983 mg/m3 (400 ppm)	TWA: 980 mg/m3 (400 ppm) STEL: 1225 mg/m3 (500 ppm)	

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)	PEL: 200 ppm	TWA: 450 mg/m3 STEL: 900 mg/m3
64-17-5	Ethyl alcohol	TWA: 1880 mg/m3 (1000 ppm)	PEL: 1000 ppm	TWA: 1900 mg/m3

67-63-0	Isopropyl alcohol	TWA: 983 mg/m3 (400 ppm) STEL: 1230 mg/m3 (500 ppm)	PEL: 400 ppm	TWA: 900 mg/m3 STEL: 1200 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: ()
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 mg/m3 (500 ppm)

CAS #	Hazardous components	Switzerland OEL	Japan OEL	
78-93-3	Methyl Ethyl Ketone			
64-17-5	Ethyl alcohol			
67-63-0	Isopropyl alcohol	TWA: 500 mg/m3 (200 ppm) STEL: 1000 mg/m3 (400 ppm)		

8.2 Exposure controls:

8.2.1 Appropriate engineering controls:

Use explosion-proof ventilation equipment. 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. Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

8.2.2 Individual protection measures, such as personal protective equipment

Wear appropriate protective clothing to prevent skin exposure. Impervious clothing. Flame retardant antistatic protective clothing.

Eye/Face protection: 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. Wear chemical splash goggles. Face shield and safety glasses.

Skin protection: Wear appropriate protective gloves to prevent skin exposure. Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.
Splash contact:
Material: butyl-rubber Minimum layer thickness: 0.3 mm Break through time: 292 min.
If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario. Material: butyl-rubber Minimum layer thickness: 0.3 mm Break through time: 113 min.

Respiratory protection: A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use. 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:**	-114.10 C - -84.00 C
Boiling range:	76.50 C - 82.00 C	**Flash point:**	-2.99 C
Evaporation rate:		**Upper Explosive Limit:**	No data available
		Lower Explosive Limit:	No data available
Flammability:	No data available	**Vapor Pressure:**	No data available
Vapor density:	> Air	**Relative Density:**	0.869 (H2O = 1 @ 20 °C)
Solubility(ies):	Miscible	**Partition coefficient n-octanol/water:**	No data available
Auto-ignition temperature:	>350.00 C	**Decomposition temperature:**	No data available
Viscosity:	3.17		No data available
Explosive properties:	> 73.0% Volatile by volume.		
Oxidizing properties:	No data available		

9.2 Other information:

Miscibility:	No data available	**VOC:**	No data available

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

Will not occur

10.4 Conditions to avoid:

Incompatible materials, ignition sources, Excess heat, Light, Exposure to moisture. Heat, flames and sparks.

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10.5 Incompatible materials:

Strong oxidizing agents, acids, Alkali metals, Ammonia, hydrazine, Peroxides, Sodium, Acid anhydrides, calcium hypochlorite, chromyl chloride, nitrosyl perchlorate, bromine pentafluoride, Perchloric acid, silver nitrate, mercuric nitrate, potassium tert-butoxide, magnesium perchlorate, Acid chlorides, platinum, uranium hexafluoride, silver oxide, iodine heptafluoride, acetyl bromide, disulfuryl difluoride, tetrachlorosilane + water, acetyl chloride, permanganic acid, ruthenium (VIII) oxide, uranyl perchlorate, Strong acids, Amines, ethylene oxide, isocyanates, acetaldehyde, chlorine, phosgene, Attacks some forms of plastics, rubbers, and coatings. aluminum at high temperatures. Oxidizing agents, Strong reducing agents, Strong oxidizing agents.

10.6 Hazardous decomposition products

Carbon monoxide, 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 corrosion/irritation. Result: Tumorigenic: Tumors at site or application. No skin irritation. (OECD Test Guideline 404) Serious eye damage/eye irritation Eyes -Rabbit) Irritating to eyes. Result: Mild skin irritation (OECD Test Guideline 404) Serious eye damage/eye irritation Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3).
Serious eye damage/irritation:	No data available
Respiratory or skin sensitization:	No data available
Germ cell mutagenicity:	Mutagenic effects have occurred in experimental animals.
Carcinogenicity:	
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:

When released to the atmosphere it will photodegrade in hours (polluted urban atmosphere) to an estimated range of 4 to 6 days in less polluted areas. Rainout should be significant.
Physical: No information available.
Ecotoxicity: Fish: Fathead Minnow: 1000 ppm; 96h; LC50Daphnia: 1000 ppm; 96h;
LC50Fish: Gold orfe: 8970-9280 ppm; 48h; LC50 IPA has a high biochemical oxygen demand and a potential to cause oxygen depletion in aqueous systems, a low potential to affect aquatic organisms, a low potential to affect secondary waste treatment microbial metabolism, a low potential to affect the germination of some plants, a high potential to biodegrade (low persistence) with unacclimated microorganisms from activated sludge. No information available.

Physical: THOD: 2.40 g oxygen/gCOD: 2.23 g oxygen/gBOD-5: 1.19-1.72 g oxygen/g.
Other: No information available.

12.2 Persistence and degradability:

No data available

12.3 Bioaccumulative potential:

No data available. Bioaccumulation: other fish - -3.

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

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: 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. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Contaminated packaging.

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	

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
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
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
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	No	Listed	Listed
67-63-0	Isopropyl alcohol	No	Yes - 1219	Listed

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
67-63-0	Isopropyl alcohol	Listed	Listed	Yes - 2-207

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
67-63-0	Isopropyl alcohol	Yes - 2-(8)-319	Yes KE-29363	Listed

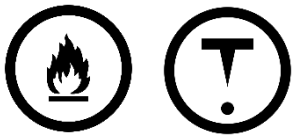
CAS #	Hazardous components	Taiwan TCSCA	Singapore HSL	Israel HSL:
78-93-3	Methyl Ethyl Ketone	Listed	No	No
64-17-5	Ethyl alcohol	Listed	No	Yes -Cat
67-63-0	Isopropyl alcohol	Listed	No	Yes - Cat

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
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
67-63-0	Isopropyl alcohol	Yes - (R), (P)	No	No

CAS #	Hazardous components	Stockholm		
78-93-3	Methyl Ethyl Ketone	No		
64-17-5	Ethyl alcohol	No		
67-63-0	Isopropyl alcohol	No		

Canadian WHMIS Classification:



CLASS B, DIVISION 2: Flammable Liquids
CLASS D, DIVISION 2, SUBDIVISION A: Very Toxic Materials (carcinogens, reproductive toxicity, etc.)

15.2 Chemical safety assessment

Section 16: Other information

Revision Date: **3/3/2020**
Revision Notes: Revision B: Format updated to (EU) 2015/830.
Additional Information:

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