

Product Number: 51-0026-01
Product Name: Ink, Super Flex Black

Date: 11/23/2020
Revision: B

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, Super Flex Black
Product Code: 51-0026-01

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
Specific Target Organ Toxicity (single exposure), Category 3

2.2 Label elements



Signal word: Danger

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Hazard statements:

H225 - Highly flammable liquid and vapor.
H318 - Causes serious eye damage.
H335 - May cause respiratory irritation.
EUH066 - Repeated exposure may cause skin dryness or cracking.

Precautionary statements:

P264 - Wash hands thoroughly after handling. P233 - Keep container tightly closed.
P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P240 - Ground/bond container and receiving equipment.
P241 - Use explosion-proof electrical/ventilating/lighting/.../ equipment.
P243 - Take precautionary measures against static discharge.
P242 - Use only non-sparking tools.
P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.
P271 - Use only outdoors or in a well-ventilated area.
P370+378 - In case of fire, use dry chemical, carbon dioxide, water spray or alcohol-resistant 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.
P310 - Immediately call a POISON CENTER/doctor/...
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.
P403+235 - Store in cool/well-ventilated place.
P501 - Dispose of contents/container to ...
P403+233 - Store container tightly closed in well-ventilated place.
P405 - Store locked up.

2.3 Other Hazards

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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
64-17-5	200-578-6 603-002-00-5	Ethyl alcohol	14.25-38.0%	Flam. Liq. 2: H225;
67-63-0	200-661-7 603-117-00-0	Isopropyl alcohol	0.75-2.0%	Flam. Liq. 2: H225 Eye Damage 2: H319 STOT (SE) 3: H335 H336
67-64-1	200-662-2 606-001-00-8	Acetone	40.0 -70.0 %	Flam. Liq. 2: H225 Eye Damage 2: H319 STOT (SE) 3: H336 EUH066
23-92-2	204-662-3 607-130-00-2	Iso-Amyl acetate	1.0 -5.0 %	Flam. Liq. 3: H226 EUH066
97-64-3	202-598-0 607-129-00-7	Propanoic acid, 2-Hydroxy-, ethyl ester	1.0 -5.0 %	Flam. Liq. 3: H226 Eye Damage 1: H318 STOT (SE) 3: H335

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 inhaled, remove to fresh air. Get medical aid if cough or other symptoms appear. If breathed in, move person into fresh air. If not breathing give artificial respiration.
- Eyes:** Get medical aid. Gently lift eyelids and flush continuously with water. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. If irritation develops, get medical aid. 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. 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.

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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. Get medical aid. 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: 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. Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

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 dry chemical, carbon dioxide, or appropriate foam. Water may be ineffective because it will not cool material below its flash point. Use water spray, dry chemical, carbon dioxide, or chemical foam. 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.

5.2 Special hazards arising from the substance or mixture

No data available

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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. If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. 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. Containers may explode in the heat of a fire. Wear self contained breathing apparatus for fire fighting if necessary.

Further information.
Use water spray to cool unopened containers.

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

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

6.2 Environmental Precautions

Do not let product enter drains.
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). Keep in suitable, closed containers for disposal.

6.3 Methods and material for containment and cleaning up

6.3.1 For Containment:

Covering of drains.

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6.3.2 Clean up and disposal of spill:

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. Clean up spills immediately, observing precautions in the Protective Equipment section. Avoid runoff into storm sewers and ditches which lead to waterways. Wear appropriate protective clothing to minimize contact with skin. Water spray may reduce vapor but may not prevent ignition in closed spaces. Use only non-sparking tools and equipment. Do not let this chemical enter the environment.

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. Use only with adequate ventilation. Avoid breathing vapor. Avoid inhalation of vapor or mist. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

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 in a cool, dry place. Keep container tightly closed in a dry and well-ventilated place. Store in cool 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.

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Section 8: Exposure control/personal protection

8.1 Control parameters

CAS #	Hazardous components	ACGIH TLV	Australia	Austria
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)
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)
67-64-1	Acetone	TLV: 500 ppm STEL: 750 ppm	TWA: 1200 mg/m3 (500 ppm) STEL: 4800 mg/m3 (2000 ppm)	TWA: 1185 mg/m3 (500 ppm) STEL: 2375 mg/m3 (1000 ppm)
123-92-2	Iso-Amyl acetate	TLV: 50 ppm STEL: 100 ppm	TWA: 270 mg/m3 (50 ppm) STEL: 541 mg/m3 (100 ppm)	TWA: 270 mg/m3 (50 ppm) STEL: 541 mg/m3 (100 ppm)
97-64-3	Propanoic acid, 2-Hydroxy-, ethyl ester			

CAS #	Hazardous components	Belgium OEL	California, USA	Ontario, CA
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
67-64-1	Acetone	TWA: 1210 mg/m3 (500 ppm) STEL: 2420 mg/m3 (1000 ppm)	TWA: 1200 mg/m3 (500 ppm) STEL: 1780 mg/m3 (750 ppm) CEIL: 3000 ppm	TWA: 500 ppm STEL: 750 ppm
123-92-2	Iso-Amyl acetate	TWA: 270 mg/m3 (50 ppm) STEL: 540 mg/m3 (100 ppm)	TWA: 266 mg/m3 (50 ppm) STEL: 532 mg/m3 (100 ppm)	TWA: 50 ppm STEL: 100 ppm
97-64-3	Propanoic acid, 2-Hydroxy-, ethyl ester			

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CAS #	Hazardous components	China	Québec, CA	German AGS
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)
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)
67-64-1	Acetone	TWA: 300 mg/m ³ STEL: 450 mg/m ³ (15 min)	TWA: 1190 mg/m ³ (500 ppm) STEL: 2380 mg/m ³ (1000 ppm)	
123-92-2	Iso-Amyl acetate	TWA: 100 mg/m ³ STEL: 200 mg/m ³ (15 min)	TWA: 266 mg/m ³ (50 ppm) STEL: 532 mg/m ³ (100 ppm)	TWA: 270 mg/m ³ (50 ppm) STEL: 270 mg/m ³ (50 ppm) (15 min)
97-64-3	Propanoic acid, 2-Hydroxy-, ethyl ester			

CAS #	Hazardous components	Germany MAK/TRK	Denmark OEL	Spain OEL
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)
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 (400ppm)
67-64-1	Acetone	TWA: 1200 mg/m ³ (500 ppm) STEL: 4800 m ³ /m ³ (15min) (4x) (2000 ppm (15min)(4x))	TWA: 600 mg/m ³ (250 ppm) STEL: 1200 mg/m ³ (500 ppm)	TWA: 1210 mg/m ³ (500 ppm)
123-92-2	Iso-Amyl acetate	TWA: 270 mg/m ³ (50 ppm) STEL: 540 mg/m ³ (100 ppm) (15min) (4x)	TWA: 266 mg/m ³ (50 ppm) STEL: 532 mg/m ³ (100 ppm)	TWA: 270 mg/m ³ (50 ppm) STEL: 540 mg/m ³ (100 ppm)



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97-64-3	Propanoic acid, 2-Hydroxy-, ethyl ester		TWA: 10 (Provisional) CELL: 25 mg/m ³ (5 ppm)	
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CAS #	Hazardous components	Europe	Finland OEL	France VL
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)
67-63-0	Isopropyl alcohol		TWA: 500 mg/m ³ (200 ppm) STEL: 620 mg/m ³ (250 ppm) (15 min)	STEL: 980 mg/m ³ (400 ppm)
67-64-1	Acetone	TWA: 1210 mg/m ³ (500 ppm)		TWA: 1210 mg/m ³ (500 ppm) STEL: 2420 mg/m ³ (1000 ppm)
123-92-2	Iso-Amyl acetate	TWA: 270 mg/m ³ (50 ppm) STEL: 540 mg/m ³ (100 ppm)	TWA: 270 mg/m ³ (50 ppm) STEL: 540 mg/m ³ (100 ppm) (15 min)	TWA: 270 mg/m ³ (50 ppm) STEL: 540 mg/m ³ (100 ppm)
97-64-3	Propanoic acid, 2-Hydroxy-, ethyl ester		TWA: 25 mg/m ³ (5 ppm) STEL: 49 mg/m ³ (10 ppm) (15 min)	

CAS #	Hazardous components	Hungary OEL	Ireland OEL	Italy OEL
64-17-5	Ethyl alcohol	TWA: 1900 mg/m ³ STEL: 7600 mg/m ³	STEL: 1000 ppm (15 min)	
67-63-0	Isopropyl alcohol	TWA: 500 mg/m ³ STEL: 2000 mg/m ³	TWA: 200 ppm STEL: 400 ppm (15 min)	
67-64-1	Acetone	TWA: 1210 mg/m ³ STEL: 2420 mg/m ³	TWA: 1210 mg/m ³ (500 ppm)	TWA: 1210 mg/m ³ (500 ppm)
123-92-2	Iso-Amyl acetate	TWA: 270 mg/m ³ STEL: 540 mg/m ³	TWA: 260 mg/m ³ (50 ppm) STEL: 520 mg/m ³ (100 ppm) (15 min)	TWA: 270 mg/m ³ (50 ppm) STEL: 540 mg/m ³ (100 ppm)
97-64-3	Propanoic acid, 2-Hydroxy-, ethyl ester			



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CAS #	Hazardous components	South Korea	Latvia OEL	Mexico OEL
64-17-5	Ethyl alcohol	TWA: 1900 mg/m3 (1000 ppm)	TWA: 1000 mg/m3	TWA: 1900 mg/m3 (1000 ppm)
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)
67-64-1	Acetone	TWA: 1188 mg/m3 (500 ppm) STEL: 1782 mg/m3 (750 ppm)	TWA: 1210 mg/m3 (500 ppm)	TWA: 2400 mg/m3 (1000 ppm) STEL: 3000 mg/m3 (1260 ppm)
123-92-2	Iso-Amyl acetate	TWA: 260 mg/m3 (50 ppm) STEL: 520 mg/m3 (100 ppm)	TWA: 270 mg/m3 (50 ppm) STEL: 540 mg/m3 (100 ppm)	TWA: 525 mg/m3 (100 ppm) STEL: 655 mg/m3 (125 ppm)
97-64-3	Propanoic acid, 2-Hydroxy-, ethyl ester			

CAS #	Hazardous components	Malaysia OEL	NIOSH	Netherlands OEL
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)	
67-64-1	Acetone	TWA: 1187 mg/m3 (500 ppm)	TWA: 250 ppm	TWA: 1210 mg/m3 STEL: 2420 mg/m3
123-92-2	Iso-Amyl acetate	TWA: 532 mg/m3 (100 ppm)	TWA: 525 mg/m3 (100 ppm)	STEL: 530 mg/m3
97-64-3	Propanoic acid, 2-Hydroxy-, ethyl ester			

CAS #	Hazardous components	New Zealand	OSHA PELs	Poland
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
67-64-1	Acetone	TWA: 1185 mg/m3 (500 ppm)	PEL: 1000 ppm	TWA: 600 mg/m3 STEL: 1800 mg/m3



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		STEL: 2375 mg/m3 (1000 ppm)		
123-92-2	Iso-Amyl acetate	TWA: 532 mg/m3 (100 ppm)	PEL: 100 ppm	TWA: 250 mg/m3 STEL: 500 mg/m3
97-64-3	Propanoic acid, 2-Hydroxy-, ethyl ester			

CAS #	Hazardous components	Sweden OEL	Singapore	Britain EH40
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)
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)
67-64-1	Acetone	TWA: 600 mg/m3 (250 ppm) STEL: 1200 mg/m3 (500 ppm) (15 min)	TWA: 1780 mg/m3 (750 ppm) STEL: 2380 mg/m3 (1000 ppm)	TWA: 1210 mg/m3 (500 ppm) STEL: 3620 mg/m3 (1500 ppm)
123-92-2	Iso-Amyl acetate	TWA: 500 mg/m3 (100 ppm) STEL: 800 mg/m3 (150 ppm)	TWA: 532 mg/m3 (100 ppm)	TWA: 270 mg/m3 (50 ppm) STEL: 541 mg/m3 (100 ppm)
97-64-3	Propanoic acid, 2-Hydroxy-, ethyl ester	TWA: 25 mg/m3 (5 ppm) STEL: 50 mg/m3 (10 ppm) (15 min)		

CAS #	Hazardous components	Switzerland OEL	Japan OEL	
64-17-5	Ethyl alcohol			
67-63-0	Isopropyl alcohol	TWA: 500 mg/m3 (200 ppm) STEL: 1000 mg/m3 (400 ppm)		
67-64-1	Acetone	TWA: 1200 mg/m3 (500 ppm) STEL: 2400 mg/m3 (1000 ppm)	TWA: 750 ppm	
123-92-2	Iso-Amyl acetate	TWA: 260 mg/m3 (50 ppm)	TWA: 100 ppm	



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		STEL: 260 mg/m ³ (50 ppm)		
97-64-3	Propanoic acid, 2-Hydroxy-, ethyl ester			

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. Ventilation fans and other electrical service must be non-sparking and have an explosion-proof design. Use adequate ventilation to keep airborne concentrations low.

8.2.2 Individual protection measures, such as personal protective equipment

- 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. Wear butyl rubber gloves, apron, and/or clothing. 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 work place.
- 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. A NIOSH/MSHA approved or European Standard EN 149 air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected. 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.

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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:		Melting point:	-114.10 C - 15.00 C
Boiling range:	56.50 C - 154.00 C	Flash point:	> -20.00 C
Evaporation rate:	3.8 (BuAC=1)	Upper Explosive Limit:	
		Lower Explosive Limit:	
Flammability:	No data available	Vapor Pressure:	44 MM_HG
Vapor density:	> Air	Relative Density:	0.8227
Solubility(ies):	Miscible	Partition coefficient n-octanol/water:	No data available
Auto-ignition temperature:	>350 C	Decomposition temperature:	No data available
Viscosity:	No data available		
Explosive properties:	> 74.0 % volatile by volume.		
Oxidizing properties:	None		

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

10.3 Possibility of hazardous reactions

Vapors may form explosive mixture with air.

10.4 Conditions to avoid:

Incompatible materials, ignition sources, Excess heat, Light, High temperatures, confined spaces, Heat, flames and sparks.

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,

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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. Strong reducing agents, Strong bases, Nitric acid, hexachloromelamine, sulfur dichloride, Reducing agents, Strong oxidizing agents.

10.6 Hazardous decomposition products

Carbon monoxide, irritating and toxic fumes and gases, formed under fire conditions. Carbon oxides.

Section 11: Toxicological information

11.1 Information on Toxicological effects

Acute toxicity: No data available.

Skin No data available.

corrosion/irritation:

Serious eye No data available.

damage/irritation:

Respiratory or skin No data available.

sensitization:

Germ cell No data available.

mutagenicity:

Carcinogenicity:

CAS# 64-17-5: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

CAS# 67-63-0: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

CAS# 67-64-1: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

CAS# 123-92-2: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

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.

Reproductive toxicity: No data available.

STOT-single exposure: No data available.

STOT-repeated No data available.

exposure:

Aspiration hazard No data available.

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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;



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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.

Physical: THOD: 2.40 g oxygen/gCOD: 2.23 g oxygen/gBOD-5: 1.19-1.72 g oxygen/g.
Other: No information available. Environmental: Volatilizes, leeches, and biodegrades when released to soil.

TERRESTRIAL FATE: If released on soil, acetone will both volatilize and leach into the ground. Acetone readily biodegrades and there is evidence suggesting that it biodegrades fairly rapidly in soils.

AQUATIC FATE: If released into water, acetone will probably biodegrade. It is readily biodegradable in screening tests, although data from natural water are lacking. It will also be lost due to volatilization (estimated half-life 20 hr from a model river). Adsorption to sediment should not be significant.

Physical: ATMOSPHERIC FATE: In the atmosphere, acetone will be lost by photolysis and reaction with photochemically produced hydroxyl radicals. Half-life estimates from these combined processes are 79 and 13 days in January and June, respectively, for an overall annual average of 22 days. Therefore considerable dispersion should occur. Being miscible in water, wash out by rain should be an important removal process. This process has been confirmed around Lake Shinsei-ko in Japan. There acetone was found in the air and rain as well as the lake.

12.2 Persistence and degradability:

No data available

12.3 Bioaccumulative potential:

No data available

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: None listed. RCRA U-Series:

CAS# 67-64-1: waste number U002 (Ignitable waste).: waste number U154. Product.
This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber.
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:	

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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)
64-17-5	Ethyl alcohol	No	No	No
67-63-0	Isopropyl alcohol	No	No	Yes
67-64-1	Acetone	No	Yes 5000 LB	No
123-92-2	Iso-Amyl acetate	No	Yes 5000 LB	No
97-64-3	Propanoic acid, 2-Hydroxy-, ethyl ester	No	No	No

CAS #	Hazardous components	Canadian NPRI	Canadian Toxic	Canadian DSL
64-17-5	Ethyl alcohol	Yes	No	Yes
67-63-0	Isopropyl alcohol	Yes	No	Yes
67-64-1	Acetone	No	No	Yes
123-92-2	Iso-Amyl acetate	No	No	Yes
97-64-3	Propanoic acid, 2-Hydroxy-, ethyl ester	No	No	Yes

CAS #	Hazardous components	CAA HAP, ODC	CWA NPDES	TSCA
64-17-5	Ethyl alcohol	No	No	Yes - Inv
67-63-0	Isopropyl alcohol	No	No	Yes - Inv
67-64-1	Acetone	No	No	Yes - Inv
123-92-2	Iso-Amyl acetate	No	No	Yes - Inv
97-64-3	Propanoic acid, 2-Hydroxy-, ethyl ester	No	No	Yes - Inv

CAS #	Hazardous components	CA Prop 65	Mexico INSQ	Australia ICS
64-17-5	Ethyl alcohol	No	Yes	Yes
67-63-0	Isopropyl alcohol	No	Yes 1219	Yes
67-64-1	Acetone	No	Yes	Yes
123-92-2	Iso-Amyl acetate	No	Yes	Yes
97-64-3	Propanoic acid, 2-Hydroxy-, ethyl ester	No	Yes 1192	Yes

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CAS #	Hazardous components	New Zealand IOC	China IECSC	Japan ENCS
64-17-5	Ethyl alcohol	Yes	Yes	Yes 5-153
67-63-0	Isopropyl alcohol	Yes	Yes	Yes 2-207
67-64-1	Acetone	Yes	Yes	Yes 2-542
123-92-2	Iso-Amyl acetate	Yes	Yes	Yes 2-735
97-64-3	Propanoic acid, 2-Hydroxy-, ethyl ester	Yes	Yes	Yes 2-1371

CAS #	Hazardous components	Japan ISHL	Korea ECL	Philippines
64-17-5	Ethyl alcohol	No	Yes KE-13217	Yes
67-63-0	Isopropyl alcohol	Yes -2-(8)-319	Yes KE-29363	Yes
67-64-1	Acetone	No	Yes KE-29367	Yes
123-92-2	Iso-Amyl acetate	Yes 2-(6)-201	Yes KE-23580	Yes
97-64-3	Propanoic acid, 2-Hydroxy-, ethyl ester	No	Yes KE-20855	Yes

CAS #	Hazardous components	Taiwan TCSCA	Singapore HSL	Israel HSL:
64-17-5	Ethyl alcohol	Yes	No	Yes-Cat.
67-63-0	Isopropyl alcohol	Yes	No	Yes - Cat
67-64-1	Acetone	Yes	No	No
123-92-2	Iso-Amyl acetate	Yes	No	No
97-64-3	Propanoic acid, 2-Hydroxy-, ethyl ester	Yes	No	No

CAS #	Hazardous components	Germany WHCS	Switzerland Giftliste 1	Switzerland INNS
64-17-5	Ethyl alcohol	Yes 96	Yes G-1158	No
67-63-0	Isopropyl alcohol	Yes - 135	Yes G-1712	No
67-64-1	Acetone	Yes - 6	Yes G-1031	No
123-92-2	Iso-Amyl acetate	Yes -1653	Yes G-1124	No
97-64-3	Propanoic acid, 2-Hydroxy-, ethyl ester	Yes -5040	Yes G-1189	No

CAS #	Hazardous components	REACH	Kyoto GHG	Rotterdam
64-17-5	Ethyl alcohol	Yes - (R),(P)	No	No
67-63-0	Isopropyl alcohol	Yes - (R),(P)	No	No
67-64-1	Acetone	Yes - (R),(P)	No	No
123-92-2	Iso-Amyl acetate	Yes - (R),(P)	No	No
97-64-3	Propanoic acid, 2-Hydroxy-, ethyl ester	Yes - (P)	No	No

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CAS #	Hazardous components	Stockholm		
64-17-5	Ethyl alcohol	No		
67-63-0	Isopropyl alcohol	No		
67-64-1	Acetone	No		
123-92-2	Iso-Amyl acetate	No		
97-64-3	Propanoic acid, 2-Hydroxy-, ethyl ester	No		

Canadian WHMIS Classification:



CLASS B, DIVISION 2: Flammable Liquids

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

Section 16: Other information

Revision Date: 11/23/2020

Revision Notes: Rev B: Format updated to (EU) 2015/830.

Additional Information:

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