

Safety Data Sheet

Product Number: 51-0081-01
Product Name: Ink, FastDry Black

Date: 5/30/2018
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, FastDry Black
Product Code: 51-0081-01

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

2.2 Label elements



Signal word: Danger

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Hazard statements:

H225 - Highly flammable liquid and vapor.
H319 - Causes serious eye irritation.

Precautionary statements:

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.
P264 - Wash hands thoroughly after handling.
P370+378 - In case of fire, use ... to extinguish.
P303+361+353 - IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.
P305+351+338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+313 - If eye irritation persists, get medical advice/attention.
P403+235 - Store in cool/well-ventilated place.
P501 - Dispose of contents/container to ...

2.3 Other Hazards

Chronic: Animal studies have reported the development of tumors.
Inhalation: The toxicological properties of this substance have not been fully investigated.
Skin Contact: May cause skin irritation.
Eye Contact: May cause eye irritation.
Ingestion: May cause irritation of the digestive tract. The toxicological properties of this substance have not been fully investigated.

Section 3: Composition/information on ingredients

3.1 Substances:

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3.2 Mixtures:

| CAS # | EC # | Hazardous components / REACH Registration No. | Concentration | GHS Classification |
|---------|---------------------------|---|---------------|--|
| 78-93-3 | 201-159-0 | Methyl Ethyl Ketone | 50.0 – 75.0% | 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 |
| 67-64-1 | 200-662-2 606-001-00-8 | Acetone | 1.0 -5.0 % | Flam. Liq. 2: H225 Eye Damage 2: H319 STOT (SE) 3: H336 EUH066 |
| 67-63-0 | 200-661-7 603-117-00-0 | Isopropyl alcohol | 1.0 -5.0 % | 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.

Eyes: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

Skin: Get medical aid. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.

Ingestion: Never give anything by mouth to an unconscious person. Get medical aid. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water.

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.

Section 5: Fire Fighting Measures

5.1 Extinguishing media

Use water spray, dry chemical, carbon dioxide, or appropriate foam.

5.2 Special hazards arising from the substance or mixture

During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

5.3 Advice for firefighters

As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear.

Section 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

6.1.1 For non-emergency personnel

Use proper personal protective equipment as indicated in Section 8.

6.1.2 For emergency responders

Use proper personal protective equipment as indicated in Section 8.

6.2 Environmental Precautions

Advise local authorities if large spills cannot be contained. Do not allow product to enter drains. Prevent further spillage if safe.

6.3 Methods and material for containment and cleaning up

6.3.1 For Containment:

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.



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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. Clean up spills immediately, observing precautions in the Protective Equipment section. Remove all sources of ignition. Use a spark-proof tool. Provide ventilation.

Section 7: Handling and storage

7.1 Precautions for safe handling

Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Ground and bond containers when transferring material. Use spark-proof tools and explosion proof equipment. Avoid contact with eyes, skin, and clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep container tightly closed. Keep away from heat, sparks and flame. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames. Use only with adequate ventilation. Avoid breathing vapor. 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 sources of ignition. Store in a cool, dry, well-ventilated area away from incompatible substances. Flammables-area. 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.

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: () |
| 67-64-1 | Acetone | TLV: 500 ppm STEL: 750 ppm | TWA: 1200 mg/m3 (500 ppm) | TWA: 1185 mg/m3 (500 ppm) |

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| | | | | |
|---------|-------------------|-------------------------------|--|--|
| | | | STEL: 4800 mg/m3 (2000 ppm) | STEL: 2375 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) |

| 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 |
| 67-64-1 | 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) CEL: 3000 ppm | TWA: 500 ppm STEL: 750 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) |
| 67-64-1 | Acetone | TWA: 300 mg/m3 STEL: 450 mg/m3 (15 min) | TWA: 1190 mg/m3 (500 ppm) STEL: 2380 mg/m3 (1000 ppm) | |
| 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) | TWA: 1900 mg/m3 (1000 ppm) | STEL: 1910 mg/m3 (1000 ppm) |

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|---------|-------------------|---|--|--|
| | | STEL: 3800 mg/m3 (2000 ppm) (60min) (3x) TWA: 960 mg/m3 (500 ppm) | STEL: 3800 mg/m3 (2000 ppm) | |
| 67-64-1 | Acetone | TWA: 1200 mg/m3 (500 ppm) STEL: 4800 m3/m3 (15min) (4x) (2000 ppm (15min)(4x)) | TWA: 600 mg/m3 (250 ppm) STEL: 1200 mg/m3 (500 ppm) | TWA: 1210 mg/m3 (500 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) |
| 67-64-1 | Acetone | TWA: 1210 mg/m3 (500 ppm) | | TWA: 1210 mg/m3 (500 ppm) STEL: 2420 mg/m3 (1000 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) | |
| 67-64-1 | Acetone | TWA: 1210 mg/m3 STEL: 2420 mg/m3 | TWA: 1210 mg/m3 (500 ppm) | TWA: 1210 mg/m3 (500 ppm) |
| 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) | TWA: 590 mg/m3 (200 ppm) STEL: 885 mg/m3 (300 ppm) |

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|---------|-------------------|---|--|---|
| | | ppm) | STEL: 900 mg/m3 (300 ppm) (15 min) | ppm) |
| 64-17-5 | Ethyl alcohol | TWA: 1900 mg/m3 (1000 ppm) | TWA: 1000 mg/m3 | TWA: 1900 mg/m3 (1000 ppm) STEL: () |
| 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) |
| 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 |
| 67-64-1 | Acetone | TWA: 1187 mg/m3 (500 ppm) | TWA: 250 ppm | TWA: 1210 mg/m3 STEL: 2420 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 |
| 67-64-1 | Acetone | TWA: 1185 mg/m3 (500 ppm) STEL: 2375 mg/m3 (1000 ppm) | PEL: 1000 ppm | TWA: 600 mg/m3 STEL: 1800 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) | TWA: 1880 mg/m3 (1000 ppm) | TWA: 1920 mg/m3 (1000 ppm) STEL: () |



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| | | | | |
|---------|-------------------|---|--|--|
| | | STEL: 1900 mg/m3 (1000 ppm) (15 min) | | |
| 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) |
| 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 | | | |
| 67-64-1 | Acetone | TWA: 1200 mg/m3 (500 ppm) STEL: 2400 mg/m3 (1000 ppm) | TWA: 750 ppm | |
| 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:

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.

8.2.2 Individual protection measures, such as personal protective equipment

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.

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

Skin protection: Wear appropriate protective gloves to prevent skin exposure. Handle with gloves.

Respiratory protection: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.



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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: | No data available | Melting point: | -114.10 C - -88.00 C |
| Boiling range: | 78.00 C - 83.00 C | Flash point: | -7°C |
| Evaporation rate: | 3.8 (BuAC=1) | Upper Explosive Limit: | No data available |
| | | Lower Explosive Limit: | No data available |
| Flammability: | No data available | Vapor Pressure: | ~ 70 MM_HG at 20.0 C |
| Vapor density: | > Air | Relative Density: | 0.875 (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: | No data available | | No data available |
| Explosive properties: | > 78.0% 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:

ignition sources, Excess heat, Heat, flames and sparks, dust generation.

10.5 Incompatible materials:

Strong oxidizing agents.

10.6 Hazardous decomposition products

Nitrogen oxides, Carbon monoxide.

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:

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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 No data available

corrosion/irritation:

Serious eye No data available

damage/irritation:

Respiratory or skin No data available

sensitization:

Germ cell Mutagenic effects have occurred in experimental animals.

mutagenicity:

Carcinogenicity: CAS# 122-66-7: ACGIH: Not listed.

California: carcinogen, initial date 1/1/88.

NTP: Suspect carcinogen.

IARC: Not listed.

Reproductive No data available

toxicity:

STOT-single No data available

exposure:

STOT-repeated No data available

exposure:

Aspiration hazard No data available

11.1.1 Hazard Class information:

No data available

11.1.2 Mixture toxicity:

No data available

11.1.3 Critical studies:

No data available

11.1.4 Non-compliance hazard class:

No data available

11.1.5 Information on likely routes of exposure:

No data available

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

No data available

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

No data available

11.1.8 Interactive effects:

No data available

11.1.9 Absence of specific data:

No data available

11.1.10 Mixtures:

No data available

11.1.11 Mixture vs Substance information:

No data available

11.1.12 Other information:

No data available

Section 12: Ecological information

12.1 Toxicity:

Environmental: Terrestrial: Expected to rapidly and reversibly oxidize to azobenzene by air or cations in the soil. Aquatic: Undergoes rapid reversible oxidation in solution in the presence of dissolved oxygen and environmentally common cations (e.g. copper(II) and Fe(III)) to azobenzene; thus conversion to azobenzene in well-aerated waters should be a major fate process for this compound. Atmospheric: Should exist in both the vapor and particulate phases in the ambient atmosphere. Half-life = 5 hours.
Physical: Will biodegrade and bioconcentrate.

12.2 Persistence and degradability:

No data available

12.3 Bioaccumulative potential:

No data available



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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:

CAS# 78-93-3: waste number U159 (Ignitable waste, Toxic waste). 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] |

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| | |
|---|--|
| 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 |
| 67-64-1 | Acetone | No | Yes 5000LB | 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 |
| 67-64-1 | Acetone | No | 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 |
| 67-64-1 | Acetone | No | No | Yes - Inv |
| 67-63-0 | Isopropyl alcohol | No | No | Yes - Inv |

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| 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 |
| 67-64-1 | Acetone | 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 |
| 67-64-1 | Acetone | Listed | Listed | Yes - 2-542 |
| 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 |
| 67-64-1 | Acetone | No | Yes KE-29367 | 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 |
| 67-64-1 | Acetone | Listed | No | No |
| 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 |
| 67-64-1 | Acetone | Yes - 6 | Yes G-1031 | 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 |

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| | | | | |
|---------|-------------------|----------------|----|----|
| 64-17-5 | Ethyl alcohol | Yes - (R), (P) | No | No |
| 67-64-1 | Acetone | 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 | | |
| 67-64-1 | Acetone | 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: 5/30/2018

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

Additional Information:

Company Disclaimer:

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