

According to Regulation (EC) No. 1907/2006 as amended by (ED) No. 1272/2008

Section 1: Identification of the Substance/Mixture and of the Company/Undertaking

1.1 Product Code: 51-0007-01

Product Name: Ink, MEK Flex Plus Black

1.2 Relevant Identified uses of the substance or mixture and uses advised against:

1.3 Details of the Supplier of the Safety Data Sheet

Company Name BestCode

Address 3034 SE Loop 820
Fort Worth, Texas, 76149

Website www.bestcode.co

Phone 817-349-8555

Email info@bestcode.co

Fax 817-349-8480

1.4 Emergency Telephone Number

Emergency Contact Chemtel

Toll Free: 1-800-255-3924

International: 01-813-248-0585

Section 2: Hazards Identification

2.1 Classification of the Substance or Mixture:

2.1.1 Classification according to Regulation (EC) No 1272/2008 [CLP]:

Flammable Liquids, Category 2

Serious Eye Damage/Eye Irritation, Category 2A

Specific Target Organ Toxicity (single exposure), Category 3

2.2 Label Elements:

2.2.1 Labeling according to Regulation (EC) No 1272/2008 [CLP]:



GHS Signal Word: **Danger**

GHS Hazard Phrases:

H225 - Highly flammable liquid and vapor.

H226 - Flammable liquid and vapor.

H318 - Causes serious eye damage.

H319 - Causes serious eye irritation.

H335 - May cause respiratory irritation.

H336 - May cause drowsiness or dizziness.

GHS Precaution Phrases:

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.

P271 - Use only outdoors or in a well-ventilated area.

P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.

Safety Data Sheet

Part Number: 51-0007-01

Name: Ink, MEK Flex Plus Black

Date: 7/30/15

GHS Response Phrases:

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.

P309+311 - Call a POISON CENTER or doctor/physician if exposed or you feel unwell.

P304+340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

GHS Storage and Disposal Phrases:

P403+235 - Store in cool/well-ventilated place.

P501 - Dispose of contents/container to

P405 - Store locked up.

P403+233 - Store container tightly closed in well-ventilated place - if product is as volatile as to generate hazardous atmosphere.

2.3 Adverse Human Health Effects and Symptoms:

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

2.3.1 Inhalation:

Causes respiratory tract irritation. Inhalation of vapors may cause drowsiness and dizziness. May cause central nervous system effects such as nausea and headache. Neurobehavioural effects of exposure to MEK (200 ppm for 4 hrs) were studied with 137 volunteers. There were no statistically significant effects observed in biochemical, psychomotor, sensorimotor and psychological tests. May be harmful if inhaled.

2.3.2 Skin Contact:

May be absorbed through the skin in harmful amounts. Repeated or prolonged exposure may cause drying and cracking of the skin. Only one human case of skin sensitization was located. Negative results were obtained in an animal test; MEK did not produce skin sensitization in the mouse ear thickness test. May be harmful if absorbed through the skin. Causes skin irritation.

2.3.3 Eye Contact:

Causes eye irritation. Vapors may cause eye irritation. Animal evidence suggests that MEK is a moderate to severe eye irritant.

2.3.4 Ingestion:

May cause irritation of the digestive tract. Possible aspiration hazard. May cause central nervous system depression. Animal evidence suggests that MEK can be aspirated (inhaled) into the lungs during ingestion or vomiting. May be harmful if swallowed.

Section 3. Composition/Information on Ingredients

CAS #	Hazard components (Chemical Name)/ Reach Registration No.	Concentration	EC No./ EC Index No.	GHS Classification
78-93-3	Methyl ethyl ketone	60.0 -90.0 %	201-159-0 606-002-00-3	Flam. Liq. 2: H225 Eye Damage 2A: H319 TOST (SE) 3: H335 H336
97-64-3	Propanoic acid, 2-Hydroxy-, ethyl ester	1.0 -5.0 %	202-598-0 607-129-00-7	Flam. Liq. 3: H226 Eye Damage 1: H318 TOST (SE) 3: H335 H336

Section 4. First Aid Measures

4.1 Description of First Aid Measures:

In Case of Inhalation:

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid. If breathed in, move person into fresh air. If not breathing give artificial respiration.

In Case of Skin

Contact:

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

In Case of Eye

Contact:

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical aid. Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

In Case of Ingestion: Potential for aspiration if swallowed. Get medical aid immediately. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If vomiting occurs naturally, have victim lean forward. Do NOT induce vomiting. Rinse mouth with water. Consult a physician.

4.2 Important Symptoms and Effects, Both Acute and Delayed:

Note for the Doctor: Treat symptomatically and supportively. 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 Suitable Extinguishing Media:** In case of fire, use carbon dioxide, dry chemical powder or appropriate foam. Water may be ineffective because it will not cool material below its flash point. For 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. 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.
- 5.2 Flammable Properties and Hazards:**
- | | | | |
|----------------------------|-----------|---------------------|------------|
| Flash Point: | -7 C | Method Used: | Estimate |
| Explosive Limits: | LEL: 1.9% | | UEL: 10.0% |
| Autoignition Point: | 404 C | | |
- 5.3 Fire Fighting Instructions:** As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Extremely flammable liquid and vapor. Vapor may cause flash fire. Wear self-contained breathing apparatus for firefighting if necessary.
- Further information.
 Use water spray to cool unopened containers.
- 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.

Section 6. Accidental Release Measures

- 6.1 Protective Precautions, Protective Equipment and Emergency Procedures:** Use proper personal protective equipment as indicated in Section 8.
- 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:** Spills/Leaks: 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 to be taken when 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 buildup of electrostatic charge.
- 7.2 Precautions to be Taken in Storing:** 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.

Section 8. Exposure Controls/Personal Protection

8.1 Exposure Parameters

CAS#	Partial Chemical Name	Britain EH40	France VL	Europe
78-93-3	Methyl Ethyl Ketone	TWA: 600 mg/m3 (200ppm) STEL: 899 mg/m3 (300ppm)	TWA: 600 mg/m3 (200ppm) STEL: 900 mg/m3 (300ppm)	TWA: 600mg/m3 STEL: 900 mg/m3 (300ppm)
97-64-3	Propanoic acid, 2-Hydroxy-, ethyl ester			

CAS#	Partial Chemical Name	OSHA TWA	ACGIH TWA	Other Limits
78-93-3	Methyl Ethyl Ketone	PEL: 200 ppm	200PPM STEL: 350ppm	
97-64-3	Propanoic acid, 2-Hydroxy-, ethyl ester			

8.2 Exposure Controls

- 8.2.1 Engineering Controls: (Ventilation etc.):** 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 Personal Protection Equipment:**
Eye Protection: Eye bath, safety shower
Protective Gloves: Wear chemical splash goggles. Face shield and safety glasses.
Other Protective Clothing: 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 Equipment (Specify Type): Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced. Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).
- 8.2.3 Hygienic Practices** DO NOT SMOKE IN WORK AREA! Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Section 9. Physical and Chemical Properties

9.1 Information on Basic Physical and Chemical Properties

Physical States:	<input type="checkbox"/> Gas	<input checked="" type="checkbox"/> Liquid	<input type="checkbox"/> Solid
Appearance and Odor:	Black, Solvent Odor		
Melting Point:	-86.00 C		
Boiling Point:	80.00 C		
Flash Pt:	-7.0 C	Method Used:	Estimate
Evaporation Rate:			
Explosive Limits:	LEL: 1.9%		UEL: 10.0%
Vapor Pressure (vs. Air or mm Hg):			
Vapor Density (vs. Air = 1):	> Air		
Specific Gravity (Water = 1):			
Density:	0.8137 G/CM3		
Solubility in Water:			
Autoignition Pt:	404 C		

9.2 Other Information

Percent Volatile:

Section 10. Stability and Reactivity

10.1	Reactivity	
10.2	Stability	Unstable [] Stable [X]
10.3	Conditions To Avoid - Hazardous Reactions:	
	Possibility of Hazardous Reactions:	Will occur [] Will not occur [X]
10.4	Conditions to Avoid - Instability	Vapors may form explosive mixture with air. Ignition sources, Excess heat, Heat, flames and sparks.
10.5	Incompatibility – Materials to Avoid	Strong oxidizing agents, Strong acids, 2-propanol, Strong oxidizing agents.
10.6	Hazardous Decomposition or Byproducts:	Carbon monoxide, Carbon dioxide, formed under fire conditions. Carbon oxides.

Section 11. Toxicological Information

11.1	Acute Data	
	EYE IRRITATION:	EYE CONTACT: Irritant to eyes
	SKIN IRRITATION:	SKIN CONTACT: Irritant to skin
	ORAL LD50:	Unknown
	DERMAL LD50:	Unknown
	INHALATION LD50:	Unknown
11.2	Chronic Data	
	TOXICITY STUDIES:	Not Determined
	MUTAGENICITY DATA:	Not Determined
	REPRODUCTIVE/TERATOLOGY DATA:	Not Determined
	CARCINOGENICITY DATA:	CAS# 78-93-3: Not listed by ACGIH, IARC, NTP, or CA Prop 65. Carcinogenicity. 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.
	Carcinogenicity:	NTP? No IARC Monographs? No OSHA Regulated? No

Section 12. Ecological Information

12.1	Toxicity:	No Data
12.2	Persistence and Degradability:	Substance photodegrades in air with T1/2 = 2.3 days. Oxidizes rapidly by photo-chemical reactions in air. Readily biodegradable meeting the 10 day window criterion. Not expected to bioaccumulate significantly.
12.3	Bioaccumulative Potential:	Substance evaporates in water with T1/2= 3D (rivers) to 12D (lakes). Substance is not expected to bioconcentrate in marine life.
12.4	Mobility in Soil:	
12.5	Results of PBT and vPvB assessment:	

Section 13. Disposal Considerations

- 13.1 Waste Disposal Method:** 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

GHS Classification Flammable Liquids, Category 2 - Danger! Highly flammable liquid and vapor
 Serious Eye Damage/Eye Irritation, Category 2A - Warning! Causes serious eye irritation
 Specific Target Organ Toxicity (single exposure), Category 3 - Warning! May cause respiratory irritation, or may cause drowsiness and dizziness

14.1 LAND TRANSPORT (US DOT):

DOT Proper Shipping Name: Printing ink, [flammable or] Printing ink related material [(including printing ink thinning or reducing compound), flammable]

DOT Hazard Class: 3 FLAMMABLE LIQUID
UN/NA Number: UN 1210 **Packing Group:** II

14.2 LAND TRANSPORT (Canadian TDG):

Printing ink, [flammable or] Printing ink related material [(including printing ink thinning or reducing compound), flammable]

UN Number 1210 **Packing Group:** II
Hazard Class 3 – FLAMMABLE LIQUID **TDG Classification:**

14.3 LAND TRANSPORT (European ADR/RID):

ADR/RID Shipping Name:
UN Number 1210 **Packing Group:** II
Hazard Class 3 – FLAMMABLE LIQUID

14.4 AIR TRANSPORT (ICAO/IATA):

ICAO/IATA Shipping Name: Printing ink, [flammable or] Printing ink related material [(including printing ink thinning or reducing compound), flammable]

Section 15. Regulatory Information

Canadian WHMIS Classification:

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

Section 16. Other Information

Revision Date: 7/31/15

**Additional Information About
this Product:**

Company Policy or Disclaimer

The information and recommendations contained herein are, to the best of BestCode's knowledge and belief, accurate and reliable as of the date issued. Because many factors may affect processing or application/use, BestCode recommend that you make tests to determine the suitability of a product for your particular purpose prior to use. It is the user's responsibility to satisfy itself that the product is suitable for the intended use. If buyer repackages this product, it is the user's responsibility to insure proper health, safety and other necessary information is included with and/or on the container. Appropriate warnings and safe handling procedures should be provided to handlers and users. Alteration of this document is strictly prohibited. Except to the extent required by law, re-publication or retransmission of this document, in whole or in part, is not permitted. In no case shall the descriptions, information, data or designs provided be considered a part of our terms and conditions of sale. Further, you expressly understand and agree that the descriptions, designs, data and information furnished by BestCode hereunder are given gratis and BestCode assumes no obligation or liability for the description, designs, data and information given or results obtained. All such being given and accepted at your risk.