

Safety Data Sheet

Product Number: 51-0016-01 Date: 3/14/18
Product Name: Ink, Food Grade Blue 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, Food Grade Blue**
Product Code: **51-0016-01**

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



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Hazard statements:

- H225 - Highly flammable liquid and vapor.
- H301 - Moderately toxic if swallowed
- H317 – May cause an allergic skin reaction
- H319 - Causes serious eye irritation.
- H333 – May be harmful if inhaled
- H336 - May cause drowsiness and dizziness
- H351 – Suspected of Causing Cancer
- H360 – May cause damage fertility or the unborn child
- H402 – Harmful to aquatic life

Precautionary statements:

2.3 Other Hazards

Highly flammable liquid and vapor. Irritating to eyes and respiratory system. Suspected of causing cancer. Harmful by inhalation, in contact with skin and if swallowed.
Poison, may be fatal or cause blindness if swallowed. Vapor harmful. Cannot be made non-poisonous.
Possible risk of irreversible effects through inhalation, contact with skin and if swallowed.
Harmful to aquatic life.
Target Organ(s): Eyes, Nervous System

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	Ethanol	55-75%	Flammable Liquids: Category 2 Serious Eye damage/Irritation: Category 2A F;R11
1336-21-6	215-647-6	Ammonium Hydroxide	0 - 3	Acute Tox. 4; Skin Corr. 1A;



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				Eye Dam. 1; Aquatic Acute 1; Aquatic Chronic 1; H302, H314, H410
57-55-6	200-338-0	Propylene Glycol	0 - 5	Eye Irritation Category 2A: Target Organ Toxicity (Central nervous system) Acute Toxicity Oral: Category 5

Section 4: First Aid Measures

4.1 Description of first aid measures

Inhalation: Remove to fresh air. Restore breathing. Get medical attention.
 Eyes: Flush immediately with water for 15 minutes. Get medical attention.
 Skin: Wash with soap and water. Remove contaminated clothing. Consult a physician if irritation persists. Do not re-use clothing until cleaned.
 Ingestion: Do not give liquids if victim is unconscious or drowsy. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Call a Poison Control Center or physician.

4.2 Most Important symptoms and effects, both acute and delayed

4.3 Indication of any immediate medical attention and special treatment needed

Notes to doctor:

Section 5: Fire Fighting Measures

5.1 Extinguishing media

Alcohol foam, CO2, dry chemical, water fog. DO NOT use a direct stream of water. Product will float and can be re-ignited on surface of water.



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5.2 Special hazards arising from the substance or mixture

5.3 Advice for firefighters

Clear fire of unprotected personnel. Do not enter confined fire space without using contaminated breathing apparatus and protective clothing. Keep run-off water out of sewers and water sources. If risk of water pollution occurs, notify appropriate authorities.

Container exposed to intense heat from fires should be cooled with water to prevent vapor pressure buildup that could result in container rupture; Vapors are heavier than air and may spread near ground to sources of ignition. May explode when heated or when exposed to flames or sparks. May form explosive or toxic mixtures with air.

Fire creates toxic gases/vapors/fumes of carbon monoxide (CO). Carbon Dioxide (CO₂)

Section 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

6.1.1 For non-emergency personnel

Avoid eye or skin contact.

6.1.2 For emergency responders

Avoid eye or skin contact.

6.2 Environmental Precautions

Avoid run-off into storm sewers and ditches that lead to natural waterways. All cleanup and disposal should be carried out in accordance with federal, state and local regulations. If required, state and local authorities should be notified.

6.3 Methods and material for containment and cleaning up

6.3.1 For Containment:

Place leaking containers in well-ventilated area. Eliminate ignition sources. If fire potential exists, blanket spill with foam or use water spray to disperse vapors. Contain spill to minimize contaminated area and facilitate salvage disposal.

6.3.2 Clean up and disposal of spill:

To clean spill, flush area sparingly with water or use an absorbent. All cleanup and disposal should be carried out in accordance with federal, state and local regulations. If required, state and local authorities should be notified.



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Recovered liquids may be sent to a licensed reclaimer or incineration facility. Contaminated materials must be disposed of in a permitted waste management facility. Consult federal, State, or local disposal authorities for approved procedures.

Section 7: Handling and storage

7.1 Precautions for safe handling

Use non-sparking type tools and equipment, including explosion proof ventilation. Containers of this material may be hazardous when empty since they retain product residues (vapors, liquids); observe all warnings and precautions listed for the product. Do not attempt to clean empty containers since residue is difficult to remove. Do not pressurize, cut, and weld, Braze, solder, drill, grind, or expose such containers to heat, sparks, flame, static electricity or other sources of ignition: they may explode and cause injury or death.

Keep liquid away from heat, sparks, and open flames. Surfaces that are sufficiently hot may ignite even liquid Product in the absence of spark or flame. Extinguish pilot lights, cigarettes, and turns off other sources of Ignition prior to use and until all vapors are gone. Vapors may accumulate and travel to ignition sources distant from handling point flash fire can result. Static electricity may accumulate and create a fire hazard. Ground fixed equipment. Bond and ground transfer high temperatures.

Wash with soap and water before eating, drinking, smoking. Or using toilet facilities. Launder contaminated clothing before re-use.

7.2 Conditions for safe storage, including any compatibilities

Protected against physical damage. Store in a cool, dry well-ventilated location, away from anywhere the fire hazard may be acute. Outside or detached storage is preferred. Separate from in compatible materials. Containers should be bonded and grounded for transfers to avoid static sparks. Storage and use should be no Smoking areas. Keep containers tightly closed when not in use, use adequate ventilation. Containers, even those that have been emptied, can contain explosive vapors. Do not cut, drill, grind, weld, or perform similar operations on or Near the containers.

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	Ethanol	1000ppm		
1336-21-6	Ammonium Hydroxide			
57-55-6	Propylene Glycol			

CAS #	Hazardous components	Belgium OEL	California, USA PELs	Ontario, CA
64-17-5	Ethanol			
1336-21-6	Ammonium Hydroxide			
57-55-6	Propylene Glycol			

CAS #	Hazardous components	China	Québec, CA	German AGS
64-17-5	Ethanol			
1336-21-6	Ammonium Hydroxide			
57-55-6	Propylene Glycol			

CAS #	Hazardous components	Germany MAK/TRK	Denmark OEL	Spain OEL
64-17-5	Ethanol			
1336-21-6	Ammonium Hydroxide			
57-55-6	Propylene Glycol			

CAS #	Hazardous components	Europe	Finland OEL	France VL
64-17-5	Ethanol			
1336-21-6	Ammonium Hydroxide			
57-55-6	Propylene Glycol			

CAS #	Hazardous components	Hungary OEL	Ireland OEL	Italy OEL
64-17-5	Ethanol			
1336-21-6	Ammonium Hydroxide			
57-55-6	Propylene Glycol			



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CAS #	Hazardous components	South Korea	Latvia OEL	Mexico OEL
64-17-5	Ethanol			
1336-21-6	Ammonium Hydroxide			
57-55-6	Propylene Glycol			

CAS #	Hazardous components	Malaysia OEL	NIOSH	Netherlands OEL
64-17-5	Ethanol			
1336-21-6	Ammonium Hydroxide			
57-55-6	Propylene Glycol			

CAS #	Hazardous components	New Zealand	OSHA PELs	Poland
64-17-5	Ethanol		1000ppm (1920mg/m3)	
1336-21-6	Ammonium Hydroxide			
57-55-6	Propylene Glycol			

CAS #	Hazardous components	Sweden OEL	Singapore	Britain EH40
64-17-5	Ethanol			
1336-21-6	Ammonium Hydroxide			
57-55-6	Propylene Glycol			

8.2 Exposure controls:

8.2.1 Appropriate engineering controls:

Ensure adequate ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

8.2.2 Individual protection measures, such as personal protective equipment

Eye/Face protection: Use approved safety goggles or splash shields when exposed to liquid splashes, mists, gases or dust.

Skin protection: Wear appropriate protective clothing to prevent skin exposure.

Respiratory protection: Use an air purifying or air fed respirator if exposure will result in exposure in excess of allowable limits. Ensure that the respirator's safe working rating exceed the expected exposure.



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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:	Blue Liquid		
Odor:	Alcohol	Odor threshold:	
pH:		Melting point:	
Boiling range:	78°C	Flash point:	9°C
Evaporation rate:	5.7 (n.Bu.Acet.=1)	Upper Explosive Limit:	3.3%
		Lower Explosive Limit:	24.5%
Flammability:	100% Volatile	Vapor Pressure:	45 mmHg @ 20°C
Vapor density:	2.5	Relative Density:	0.785
Solubility(ies):		Partition coefficient n-octanol/water:	
Auto-ignition temperature:		Decomposition temperature:	
Viscosity:	3.4cP		
Explosive properties:			
Oxidizing properties:			

9.2 Other information:

Miscibility:	Negligible in Water	VOC:	295 grams / liter
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Section 10: Stability and reactivity

10.1 Reactivity

10.2 Chemical stability

Stable

10.3 Possibility of hazardous reactions

Will not occur



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10.4 Conditions to avoid:

Heat, flames, and sparks

10.5 Incompatible materials:

None

10.6 Hazardous decomposition products

Hazardous decomposition products should not be produced under normal conditions. Fire creates toxic Gases and vapors of Carbon Monoxide (CO) & Carbon Dioxide (CO₂).

Section 11: Toxicological information

11.1 Information on Toxicological effects

Acute toxicity:	No Data Available
Skin corrosion/irritation:	Causes mild irritation. Repeated exposure may cause skin cracking or dryness.
Serious eye damage/irritation:	Causes serious eye damage.
Respiratory or skin sensitization:	Not classified. No known significant effects or critical hazards.
Germ cell mutagenicity:	Not classified. No known significant effects or critical hazards.
Carcinogenicity:	Ethanol is a known human carcinogen
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:

11.1.2 Mixture toxicity:

Ethanol

LC50 Inhalation Gas, Rat, 20000 ppm over 10 hours.

LD50 Oral, Rabbit, 6300 mg/kg

LD50 Oral, Rat, 7060mg/kg

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Ammonium Hydroxide

LD50 Oral, Rat, 350 mg/kg
Dermal, Rabbit, No Data Available
Skin, Rabbit, No Data Available
Respiratory, Rabbit, No Data Available
Eyes, Rabbit, No Data Available

Propylene Glycol

LD50 Oral, Rat, 20 gm/kg 20800 over 24 hours (Mild)
LD50 Dermal, Rabbit, 20800 mg/Kg
Draize test Eye, Rabbit, 500mg

11.1.3 Critical studies:

11.1.4 Non-compliance hazard class:

11.1.5 Information on likely routes of exposure:

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

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

Inhalation of vapors in high concentration may cause irritation of the respiratory system. Concentration above the permissible limits in the workplace may cause dizziness, mild intoxication, and headache. Symptoms include headache, dizziness, fatigue, muscular weakness, and drowsiness. In extreme cases loss of consciousness may occur.

11.1.8 Interactive effects:

11.1.9 Absence of specific data:

11.1.10 Mixtures:

11.1.11 Mixture vs Substance information:

11.1.12 Other information:



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Target Organs

Blood, Central Nervous System, Eyes, Liver, Reproductive System, Respiratory System, Skin

Section 12: Ecological information

12.1 Toxicity:

Ethanol

Acute EC50 < 10000 ppm Fresh Water, Algae-Heterosigma akashiwo, 96 hours
Acute LC50 3715000 ug/L Fresh Water, Crustacians-Cerioaphnia Dubia Neonate, 48 hours
Acute LC50 5680 mg/L Fresh Water, Daphnia magna Neonate, 48 hours
Acute LC50 > 10000 ug/L Fresh Water, < 24h Fish Pimephales Promelas Juvenile (Fledging, hatching, weanling), 96 hours
Chronic NOEC 0.375 ul/L Fresh Water, 0.2 to 0.5g Fish Gambusia Holbrookii Larvae 3 days, 12 weeks

Ammonium Hydroxide

mortality NOEC - Oncorhynchus tshawytscha - 3.5 mg/l - 3.0 d, Fish, 3 days
LC50 Daphnia 32 mg/l, Daphnia magna (Water flea) -, 50 hours

Propylene Glycol

LC50 5000 mg/L, Goldfish, 24 hours
LC50 > 1000 mg/L, Guppy, 48 hours
EC50 > 10000 mg/L, Daphnia Magna, 48 hours

12.2 Persistence and degradability:

12.3 Bioaccumulative potential:

12.4 Mobility in soil:

12.5 Results of PBT and vPvB assessment:

12.6 Other adverse effects:



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Section 13: Disposal considerations

13.1 Waste treatment methods:

Dispose of the waste according to local regulations. Waste should not be released into the environment. Waste can be incinerated or disposed of in a landfill when in accordance with local regulations. This material, as supplied, is a hazardous waste according to Federal regulations (40 CFR 261). Dispose of surplus and non-recyclable product via a licensed waste disposal contractor.

Dispose of in accordance with local regulations. Empty containers should be taken for local recycling, recovery or waste disposal.

Section 14: Transport information

14.1	UN number:	1210
14.2	Proper shipping name:	
	US DOT:	Printing Ink Related Material.
	Canadian TDG:	Printing ink, [flammable or] Printing ink related material [(including printing ink thinning or reducing compound), flammable]
	European ADR/RID:	Printing ink, [flammable or] Printing ink related material [(including printing ink thinning or reducing compound), flammable]
	IMDG/IMO:	Printing ink, [flammable or] Printing ink related material [(including printing ink thinning or reducing compound), flammable]
	ICAO/IATA:	Printing ink, [flammable or] Printing ink related material [(including printing ink thinning or reducing compound), flammable]
14.3	Transport hazard class(es) :	3 - FLAMMABLE LIQUID
14.4	Packing group:	II
14.5	Environmental hazards:	N/A
14.6	Special precautions for user:	N/A
14.7	Transport in bulk according to Annex II of Marpol and the IBC Code:	
		N/A



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Section 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:

EPA SARA (Superfund Amendments and Reauthorization Act of 1986) Lists				
CAS #	Hazardous components	S. 302 (EHS)	S. 304 RQ	S. 313 (TRI)
1336-21-6	Ammonium Hydroxide			Yes

CAS #	Hazardous components	Canadian NPRI	Canadian Toxic	Canadian DSL

CAS #	Hazardous components	CAA HAP, ODC	CWA NPDES	TSCA

CAS #	Hazardous components	CA Prop 65	Mexico INSQ	Australia ICS
1336-21-6	Ammonium Hydroxide	Developmental		

CAS #	Hazardous components	New Zealand IOC	China IECSC	Japan ENCS

CAS #	Hazardous components	Japan ISHL	Korea ECL	Philippines

CAS #	Hazardous components	Taiwan TCSCA	Singapore HSL	Israel HSL:

CAS #	Hazardous components	Germany WHCS	Switzerland Giftliste 1	Switzerland INNS



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CAS #	Hazardous components	REACH	Kyoto GHG	Rotterdam

CAS #	Hazardous components	Stockholm		

Canadian WHMIS Classification:

15.2 Chemical safety assessment

Section 16: Other information

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Revision Notes: Updated to new SDS format. No chemical changes.

Additional Information:

Company 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, date 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.