

Create Date: 2025-11-04 00:00:00/ Revision Date: 2025-11-04 00:00:00/ Print Date: 2025-11-10

SECTION 1: COMPANY AND PRODUCT INFORMATION

1.1 Product identifiers

Product name : Chloramphenicol Solution, 50mg/mL in Ethanol, Sterile
Product code : 40110067
CAS number : Not available
Synonyms : Not available

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : For research and laboratory use only.

1.3 Details of the supplier of the safety data sheet

Address : Genelix International Inc, dba bioWORLD
4150 Tuller Rd. Suite 228
Dublin, OH 43017
Email : tech@bio-world.com
Phone : 614-792-8680

1.4 Emergency telephone number

CHEMTREC USA : 1-800-424-9300
CHEMTREC International : +1-703-537-3887

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of substance or mixture

Flammable liquids (Category 2), H225
Serious eye damage (Category 1), H318
Carcinogenicity (Category 2), H351
Reproductive toxicity (Category 2), H361

2.2 GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Flammable liquids (Category 2), H225
Serious eye damage (Category 1), H318
Carcinogenicity (Category 2), H351
Reproductive toxicity (Category 2), H361

2.3 Label elements and precautionary statements

Pictogram : 

Signal word : Danger

Hazard statement(s) : H225 - Highly flammable liquid and vapor.
H318 - Causes serious eye damage.
H351 - Suspected of causing cancer.
H361 - Suspected of damaging fertility or the unborn child.

Precautionary statement(s) : P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P233 - Keep container tightly closed.
P240 - Ground/bond container and receiving equipment.
P241 - Use explosion-proof electrical/ventilating/lighting/equipment.
P242 - Use only non-sparking tools.
P243 - Take precautionary measures against static discharge.
P264 - Wash skin thoroughly after handling.
P280 - Wear protective gloves/eye protection/face protection.
P303+361+353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305+351+338+310 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.
P308+313 - If exposed or concerned: Get medical advice/attention.
P337+313 - If eye irritation persists: Get medical advice/attention.
P370+378 - In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.
P403+235 - Store in a well-ventilated place. Keep cool.
P405 - Store locked up.
P501 - Dispose of contents/container to an approved waste disposal plant.

2.4 Hazards not otherwise classified (HNOC) or not covered by GHS

No unclassified hazards known.

2.5 NFPA Rating

Health hazard : 2
Fire hazard : 3
Reactivity hazard : 0

2.6 HMIS Rating

Health hazard : 2
Chronic health hazard : *
Reactivity hazard : 0
Flammability : 3
Physical hazard : 0

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Substance	CAS#	EC#	Concentration
Ethanol M.F: C ₂ H ₆ O M.W: 46.07 g/mol	64-17-5	200-578-6	95%
Chloramphenicol M.F: C ₁₁ H ₁₂ Cl ₂ N ₂ O ₅ M.W: 323.13 g/mol	56-75-7	200-827-4	5%

3.2 Hazardous components & classification

Flam. Liq. 2; Eye Dam. 1; Carc. 2; Repr. 2; H225, H318, H351, H361

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

General advice

Consult a physician if symptoms are severe or persistent. Provide this data sheet to medical personnel. If product is spilled or leaked, evacuate area.

In case of inhalation

If inhaled, move person to fresh air and monitor breathing. If not breathing, give artificial ventilation. Consult a physician if symptoms are severe or persistent.

In case of skin contact

Immediately wash with excess soap and water. If spilled on clothing, remove all affected clothing. Consult a physician if symptoms are severe or persistent.

In case of eye contact

Flush eyes with water or eye wash solution as a precaution for 15 minutes. Consult a physician if symptoms are severe or persistent.

In case of ingestion

Only induce vomiting if recommended by medical personnel. If subject is unconscious, do not give anything by mouth. If conscious, rinse mouth with water. Consult a physician if symptoms are severe or persistent.

4.2 Most important symptoms and effects, both acute and delayed

All known important symptoms are described in Section 2 and/or Section 11. No other important symptoms to report.

4.3 Indication of any immediate medical attention and special treatment needed

No special treatment indicated. Provide treatment in accordance with exhibited systems.

SECTION 5: FIREFIGHTING MEASURES

5.1 Suitable extinguishing media

Water spray, alcohol-resistant foam, dry chemical, and carbon dioxide extinguishers are suitable.

5.2 Unsuitable extinguishing media

No known unsuitable extinguishing media.

5.3 Special hazards arising from the substance

Carbon oxides, nitrogen oxides, and Hydrogen chloride gas may be released under fire conditions.

5.4 Advice for firefighters

Wear protective gear, such as self-contained breathing apparatus, if necessary

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Provide suitable ventilation. Use any necessary personal protective equipment. Avoid contact with skin and eyes, and avoid creation and inhalation of vapor or dust. Keep all unnecessary personnel away.

For personal protection see section 8

6.2 Environmental precautions

Prevent product from entering public sewers and waterways.

6.3 Methods and material for containment and cleaning up

Use inert absorbent material to absorb any spilled or leaked product and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

For proper disposal see section 13

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Provide suitable ventilation. Wear any necessary personal protective equipment.

For precautions see section 2

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions : Store upright, closed container in arid, ventilated environment.
Storage class (TRGS 510): Flammable liquids.
Storage temperature: -20°C

Incompatible materials : Alkali metals, oxidizing agents, acids, acid chlorides, anhydrides, and peroxides are incompatible with this product.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Ethanol, CAS No.: 64-17-5

TWA: 1,000.000000 ppm. Basis: USA. ACGIH Threshold Limit Values (TLV). Remarks: Upper Respiratory Tract irritation, confirmed animal carcinogen with unknown relevance to humans.
TWA: 1,000 ppm, 1,900 mg/m³. Basis: USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000.

TWA: 1,000 ppm, 1,900 mg/m³. Basis: USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants. Remarks: The value in mg/m³ is approximate.

TWA: 1,000.000000 ppm, 1,900.000000 mg/m³. Basis: USA. NIOSH Recommended Exposure Limits.

STEL: 1,000.000000 ppm. Basis: USA. ACGIH Threshold Limit Values (TLV). Remarks: Upper Respiratory Tract irritation, confirmed animal carcinogen with unknown relevance to humans.

Chloramphenicol, CAS No.: 56-75-7

TWA: 0.500000 mg/m³. Basis: USA. Workplace Environment Exposure Levels (WEEL).

8.2 Engineering controls

Follow good industrial hygiene and safety practices when handling product.

8.3 Personal protective equipment

Eye/face protection : Use only government-approved safety glasses with side-shields.

Skin protection	: Use gloves when handling product. Inspect gloves before use to ensure suitability for use. Remove without exposing skin to the gloves outer surface. Discard used gloves according to all pertinent laws and/or current good practices (cGXP). Wash hands with soap and water.
Body protection	: Wear appropriate clothing. Ensure clothing is in good condition, with no holes or tears. When selecting clothing, consider the concentration and amount of substance to be handled.
Respiratory protection	: Use only approved respirators and components which comply with CDC and NIOSH (US) or CEN (EU) regulations. Required only when vapors or aerosols are created.
Control of environmental exposure	: Prevent product from entering the environment, especially through public sewers or waterways.
General hygiene considerations	: Comply with general industrial hygiene practice guidelines.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

a)	Appearance	: Clear to light yellow
b)	Physical states	: Liquid
c)	Odor	: Not available
d)	Odor threshold	: Not available
e)	Melting point	: -114°C
f)	Boiling point range	: 78.0°C
g)	pH	: Not available
h)	Density	: Not available
i)	Flash point	: 14.0°C - closed cup
j)	Evaporation rate	: Not available
k)	Flammability	: Not available
l)	Upper/lower flammability or explosive limits:	: Upper explosion limit: 19 %(V) Lower explosion limit: 3.3 %(V)
m)	Vapor pressure	: 59.5 hPa (44.6 mmHg) @ 20.0°C
n)	Vapor density	: Not available
o)	Relative density	: 0.789 g/mL @ 25°C
p)	Water solubility	: Completely soluble
q)	Partition coefficient:n-octanol/water	: log Pow: -0.349 at 24°C
r)	Autoignition temperature	: 363.0°C
s)	Decomposition temperature	: Not available
t)	Kinematic viscosity	: Not available
u)	Explosive properties	: Not available

- v) Oxidizing properties : Not available
w) Solubility in other solvents : Not available
x) Surface tension : Not available

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

No special reactivity is known.

10.2 Chemical stability

Product is stable when stored and used as recommended.

10.3 Stability note(s)

Avoid heat, flames, and sparks around the product.

10.4 Polymerization

No known polymerization.

10.5 Possibility of hazardous reactions

Vapors may form an explosive mixture with air.

10.6 Incompatible materials

Alkali metals, oxidizing agents, acids, acid chlorides, anhydrides, and peroxides are incompatible with this product.

10.7 Hazardous decomposition products

Carbon oxides, nitrogen oxides, and Hydrogen Chloride gas can form in case of fire.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Acute toxicity

LD50 Oral : Ethanol: Rat - 10,470 mg/kg
Chloramphenicol: Rat - 2500 mg/kg

LD50 Dermal : Ethanol: Rabbit - 15,800 mg/kg

LC50 Inhalation : Ethanol: Rat - 30,000 mg/L (4 hours)

11.2 Skin corrosion/irritation

Ethanol: Causes no skin irritation (Rabbit)

11.3 Serious eye damage/eye irritation

Ethanol: Causes moderate eye irritation (Rabbit)

11.4 Respiratory or skin sensitization

No sensitization data available.

11.5 Germ cell mutagenicity

No mutagenicity data available.

11.6 Carcinogenicity

IARC : Chloramphenicol: 2A: Probably carcinogenic to humans.

ACGIH : Product and components are not regulated by the ACGIH.

NTP : Chloramphenicol: RAHC - Reasonably anticipated to be a human carcinogen.

OSHA : Product and components are not regulated by OSHA.

11.7 Reproductive toxicity

Ethanol:

Human - female - Oral

Effects on Newborn: Apgar score (human only).

Effects on Newborn: Other neonatal measures or effects.

Effects on Newborn: Drug dependence.

11.8 Specific target organ toxicity – single exposure

No specific organ toxicity data available.

11.9 Specific target organ toxicity – repeated exposure

No specific organ toxicity data available.

11.10 Aspiration hazard

No aspiration hazard data available.

11.11 Additional Information

RTECS: KQ6300000 (Ethanol), AB6825000 (Chloramphenicol)

This product can cause: nausea, headache, vomiting, central nervous system depression, narcosis, and damage to the heart.

Stomach - Irregularities - Based on Human Evidence

Liver - Irregularities - Based on Human Evidence

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

No ecological toxicity data available.

12.2 Aquatic toxicity

Ethanol:

Species: Fathead Minnow (*Pimephales promelas*). Exposure: 96 hours. Result: LC50 14,200 mg/L

Species: Water Flea (*Ceriodaphnia dubia*). Exposure: 48 hours. Result: LC50 5,012 mg/L

Species: Water Flea (*Daphnia magna*). Exposure: 9 days. Result: NOEC 9.6 mg/L

Species: Fresh Water Algae (*Chlorella vulgaris*). Exposure: 72 hours. Result: EC50 275 mg/L

Chloramphenicol:

Water Flea (*Daphnia magna*). Exposure: 8 hours. Result: EC50 345 mg/L

12.3 Persistence and degradability

Ethanol: Biodegradability Result: 95 % - Readily biodegradable

12.4 Bioaccumulative potential

Due to the distribution coefficient n-octanol/water, accumulation in organisms is not expected.

12.5 Mobility in soil

No soil mobility data available.

12.6 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment is not required/was not conducted.

12.7 Other adverse effect

No other adverse effect data available.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Product

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult and adhere to local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

13.2 Packaging

Packaging should be disposed of in the same manner as unused product.

13.3 Recommendation

Disposal must be made according to official regulations.

SECTION 14: TRANSPORTATION INFORMATION

14.1 DOT (US)

UN#1170

Class: 3

Packing group: II

Proper shipping name: Ethanol

Poison Inhalation Hazard: No

14.2 IMDG

UN#1170

Class: 3

Packing group: II

EMS-No: F-E, S-D

Proper shipping name: Ethanol

14.3 IATA

UN#1170

Class: 3

Packing group: II

Proper shipping name: Ethanol

SECTION 15: REGULATORY INFORMATION

15.1 SARA

SARA 302: This product and components are not subject to the reporting requirements of SARA Title III, Section 302.

SARA 313: This product does not contain any components with known CAS numbers that exceed the threshold reporting levels established by SARA Title III, Section 313.

SARA 311/312: Fire Hazard, Acute Health Hazard, Chronic Health Hazard

15.2 Clean water act (CWA)

No chemicals are present in this product that are subject to regulation under the Clean Water Act.

15.3 Right to know components

Massachusetts : No chemicals are present which require disclosure under the Massachusetts Right to Know Act.

Pennsylvania	: Ethanol CAS No.: 64-17-5 Chloramphenicol CAS No.: 56-75-7
New Jersey	: No chemicals are present which require disclosure under the New Jersey Right to Know Act.
California proposition 65 components	: This product contains no chemicals which are known to the State of California to cause cancer, or birth defects or other reproductive harm.

SECTION 16: OTHER INFORMATION

16.1 Disclaimer

This product is offered by bioWORLD for research, laboratory or further manufacturing use. Not for human use or consumption. The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchant-ability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall bio-WORLD.com be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if bio-WORLD.com has been advised of the possibility of such damages.

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16.2 Preparation Information

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