

Material Safety Data Sheet



220551

Chloramphenicol

1. Product and company identification

Supplier/Manufacturer	: EMD Chemicals, Inc. 10394 Pacific Center Court San Diego, CA 92121 (858)450-5558/(800)854-3417 FAX: (858)453-3552	In case of emergency	Call Chemtrec® (800)424-9300 (within U.S.A.) (703)527-3887 (outside U.S.A.)
Responsible name	: Company Not available.		
Synonym	: acetamide, 2,2-dichloro-n-(2-hydroxy-1-(hydroxymethyl)-2-(4-nitrophenyl)ethyl)-,; alficetyn; ambofen; amphenicol; amphicol; amseclor; aquamycetin; austracil; austracol; biocetin; biophenicol; caf; cam; cap; catilan; chemicetin; chemicetina; chlomin; chlo mycol; chloramex; chloramphenicol; d-chloramphenicol; d-threo-chloramphenicol; d-(-)-threo-chloramphenicol; chloramsaar; chlorasol; chlora-tabs; chloricol; chloroamphenicol; chlorocaps; chlorocid; chlorocide; chlorocidin c; chlorocidin c tetran; chloroco l; chloromycetin; chloronitrin; chloroptic; chloro-25 vetag; cidocetine; ciplamycetin; cloramficin; cloramicol; cloramidina; cloroamfenicolo (italian); clorocyn; cloromisan; clorosintex; comycetin; cph; cylphenicol; desphen; detreomycine; dextromycetin; d-(-)-threo-2-dichloroacetamido-1-p-nitrophenyl-1,3-propanediol; d-threo-n-dichloroacetyl-1-p-nitrophenyl-2-amino-1,3-propanediol; d-(-)-threo-2,2-dichloro-n-(beta-hydroxy-alpha-(hydroxymethyl))-p-nitrophenethylacetamide; d-threo-n-(1,1'-dihydroxy-1-p-nitrophenylisopropyl)dichloroacetamide; doctamicina; econochlor; embacetin; emetren; enicol; enteromycetin; erbaplast; ertilen; farmicetina; fenicol; globenicol; glorious; halomycetin; hortfenicol; i 337a; intramycetin; isicetin; ismicetina; isophenicol; is opto fenicol; juvamycetin; kamaver; kemiketina; kemiketina; klorita; klorocid s; leukomyan; leukomycin; levomicetina; levomycetin; loromisan; loromisin; mastiphen; mediamycetine; micloretin; micochlorine; micochlorina; microcetina; mychel; mycinol; nci-c5 5709; d-(-)-threo-1-p-nitrophenyl-2-dichloracetamido-1,3-propanediol; d-threo-1-(p-nitrophenyl)-2-(dichloroacetyl-amino)-1,3-propanediol; normimycin v; novochlorocap; novomycetin; novophenicol; nsc 3069; oftalent; oleomycetin; oplor; opelor; ophthochlor; ophthochlor; otachron; otophen; pantovernil; paraxin; pentamycetin; quemicetina; rivomycin; romphenil; septicol; sificetina; sintomicetina; sintomicetine r; stanomycetin; synthomycetin; synthomycetine; synthomycine; tevcocin; tevcosin; tifomycin; tifomyc ine; treomicetina; u-6062; unimycetin; veticol		
Product name	: Chloramphenicol		
Material uses	: Other non-specified industry: Analytical reagent		
Validation date	: 4/3/2008.		
Print date	: 4/3/2008.		

2. Hazards identification

Physical state	: Solid. (Crystalline solid.)
OSHA/HCS status	: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Emergency overview	: Warning! CANCER HAZARD. CAN CAUSE CANCER. MAY CAUSE ALLERGIC RESPIRATORY AND SKIN REACTION. CAUSES DAMAGE TO THE FOLLOWING ORGANS: BLOOD, NERVOUS SYSTEM, LIVER, BONE MARROW. Avoid contact with skin and clothing. Do not breathe dust. Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling. Risk of cancer depends on duration and level of exposure.

2 . Hazards identification

Routes of entry : Dermal contact. Inhalation.

Potential acute health effects

Eyes : No known significant effects or critical hazards.

Skin : May cause sensitization by skin contact.

Inhalation : May cause sensitization by inhalation.

Ingestion : Practically non-toxic if swallowed.

Potential chronic health effects : **CARCINOGENIC EFFECTS** Classified 2A (Probable for human.) by IARC, 2 (Reasonably anticipated to be human carcinogens.) by NTP.

MUTAGENIC EFFECTS Not available.

TERATOGENIC EFFECTS Not available.

Medical conditions aggravated by over-exposure : Repeated or prolonged exposure to the substance can produce target organs damage.

See toxicological information (section 11)

3 . Composition/information on ingredients

United States

<u>Name</u>	<u>CAS number</u>	<u>%</u>
acetamide, 2,2-dichloro-n-(beta-hydroxy-alpha-(hydroxymethyl)-p-nitrophenethyl)-,d-(-)-threo-	56-75-7	100

4 . First aid measures

Eye contact : Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

Skin contact : Flush contaminated skin with plenty of water. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing or wear gloves. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Inhalation : Get medical attention immediately. Move exposed person to fresh air. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In the event of any complaints or symptoms, avoid further exposure.

Ingestion : Get medical attention immediately. Wash out mouth with water. Remove dentures if any. Move exposed person to fresh air. Keep person warm and at rest. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. 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. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

5 . Fire-fighting measures

- Flammability of the product** : May be combustible at high temperature.
- Products of combustion** : These products are carbon oxides (CO, CO₂), nitrogen oxides (NO, NO₂ etc.), halogenated compounds, hydrogen chloride.
- Extinguishing media**
- Suitable** : Use an extinguishing agent suitable for the surrounding fire.
 - Not suitable** : None known.
- Special exposure hazards** : No specific hazard.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6 . Accidental release measures

- Personal precautions** : Immediately contact emergency personnel. Keep unnecessary personnel away. Use suitable protective equipment.
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.
- Methods for cleaning up** : If emergency personnel are unavailable, vacuum or carefully scoop up spilled material and place in an appropriate container for disposal by incineration. Avoid creating dusty conditions and prevent wind dispersal.

7 . Handling and storage

- Handling** : Avoid prolonged or repeated contact with skin. Keep container closed. Use only with adequate ventilation. Do not breathe dust. Wash thoroughly after handling.
- Storage** : Keep container tightly closed. Keep container in a cool, well-ventilated area.

8 . Exposure controls/personal protection

Product name

Exposure limits

United States

acetamide, 2,2-dichloro-n-(beta-hydroxy-alpha-(hydroxymethyl)-p-nitrophenethyl)-,d-(-)-threo-

AIHA WEEL (United States, 2002).

TWA: 0.5 mg/m³ 8 hour/hours.

Consult local authorities for acceptable exposure limits.

- Engineering measures** : Use only with adequate ventilation. If user operations generate dust, fumes, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Personal protection

- Eyes** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts.
- Skin** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory** : Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
- Hands** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

9 . Physical and chemical properties

Component	: Not available.
Physical state	: Solid. (Crystalline solid.)
Color	: Grayish white.
Molecular weight	: 323.1 g/mole
Molecular formula	: C ₁₁ H ₁₂ Cl ₂ N ₂ O ₅
Melting/freezing point	: 149 to 154°C (300.2 to 309.2°F)
Dispersibility properties	: See solubility in water, methanol.
Solubility	: Easily soluble in cold water, methanol.

10 . Stability and reactivity

Stability and reactivity	: The product is stable.
Hazardous decomposition products	: These products are halogenated compounds, hydrogen chloride.

11 . Toxicological information

Toxicity data

United States

<u>Product/ingredient name</u>	<u>Test</u>	<u>Result</u>	<u>Route</u>	<u>Species</u>
acetamide, 2,2-dichloro-n-(beta-hydroxy-alpha-(hydroxymethyl)-p-nitrophenethyl)-,d-(-)-threo-	LD50	2500 mg/kg	Oral	Rat
	LD50	1500 mg/kg	Oral	Mouse
	LD50	500 mg/kg	Oral	Guinea pig
	LDLo	400 mg/kg	Oral	woman

Chronic effects on humans : **CARCINOGENIC EFFECTS** Classified 2A (Probable for human.) by IARC, 2 (Reasonably anticipated to be human carcinogens.) by NTP. Causes damage to the following organs: blood, the nervous system, liver, bone marrow.

Other toxic effects on humans : Hazardous in case of skin contact (sensitizer), of inhalation (lung sensitizer).

Specific effects

Carcinogenic effects : Can cause cancer. Risk of cancer depends on duration and level of exposure.

Mutagenic effects : No known significant effects or critical hazards.

Teratogenicity / Reproductive toxicity : No known significant effects or critical hazards.

Sensitization

Ingestion : No known significant effects or critical hazards.

Inhalation : May cause sensitization by inhalation.

Eyes : No known significant effects or critical hazards.

Skin : May cause sensitization by skin contact.

12 . Ecological information

Ecotoxicity data

United States

<u>Product/ingredient name</u>	<u>Species</u>	<u>Period</u>	<u>Result</u>
acetamide, 2,2-dichloro-n-(beta-hydroxy-alpha-(hydroxymethyl)-p-nitrophenethyl)-,d-(-)-threo-	Daphnia magna (EC50)	48 hour/hours	345 mg/l

Environmental precautions : No known significant effects or critical hazards.

Products of degradation : These products are carbon oxides (CO, CO₂) and water, nitrogen oxides (NO, NO₂ etc.), halogenated compounds.

Toxicity of the products of biodegradation : The products of degradation are more toxic than the product itself.

13 . Disposal considerations

Waste disposal : The generation of waste should be avoided or minimized wherever possible. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.

Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.

The information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

14 . Transport information

Regulatory information	UN number	Proper shipping name	Class	PG*	Label	Additional information
DOT Classification	Not regulated.	-	-	-		-
TDG Classification	Not regulated.	-	-	-		-
ADR/RID Class	Not regulated.	-	-	-		-
IATA-DGR Class	Not regulated.	-	-	-		-

PG* : Packing group

15 . Regulatory information

United States

HCS Classification : Sensitizing material
Carcinogen
Target organ effects

U.S. Federal regulations : TSCA 8(b) inventory: acetamide, 2,2-dichloro-n-(beta-hydroxy-alpha-(hydroxymethyl)-p-nitrophenethyl)-,d-(-)-threo-
SARA 302/304/311/312 extremely hazardous substances: No products were found.
SARA 302/304 emergency planning and notification: No products were found.
SARA 302/304/311/312 hazardous chemicals: acetamide, 2,2-dichloro-n-(beta-hydroxy-alpha-(hydroxymethyl)-p-nitrophenethyl)-,d-(-)-threo-
SARA 311/312 MSDS distribution - chemical inventory - hazard identification: acetamide, 2,2-dichloro-n-(beta-hydroxy-alpha-(hydroxymethyl)-p-nitrophenethyl)-,d-(-)-threo-:
Delayed (chronic) health hazard
Clean Water Act (CWA) 307: No products were found.
Clean Water Act (CWA) 311: No products were found.
Clean Air Act (CAA) 112 accidental release prevention: No products were found.
Clean Air Act (CAA) 112 regulated flammable substances: No products were found.
Clean Air Act (CAA) 112 regulated toxic substances: No products were found.

State regulations : Pennsylvania RTK: acetamide, 2,2-dichloro-n-(beta-hydroxy-alpha-(hydroxymethyl)-p-nitrophenethyl)-,d-(-)-threo-: (special hazard, generic environmental hazard)
Massachusetts RTK: acetamide, 2,2-dichloro-n-(beta-hydroxy-alpha-(hydroxymethyl)-p-nitrophenethyl)-,d-(-)-threo-
New Jersey: acetamide, 2,2-dichloro-n-(beta-hydroxy-alpha-(hydroxymethyl)-p-nitrophenethyl)-,d-(-)-threo-

15 . Regulatory information

WARNING: This product contains a chemical known to the State of California to cause cancer.

<u>Ingredient name</u>	<u>Cancer</u>	<u>Reproductive</u>	<u>No significant risk level</u>	<u>Maximum acceptable dosage level</u>
acetamide, 2,2-dichloro-n-(beta-hydroxy-alpha-(hydroxymethyl)-p-nitrophenethyl)-,d-(-)-threo-	Yes.	No.	No.	No.

Canada

WHMIS (Canada) : Class D-2A: Material causing other toxic effects (Very toxic).
CEPA DSL: acetamide, 2,2-dichloro-n-(beta-hydroxy-alpha-(hydroxymethyl)-p-nitrophenethyl)-,d-(-)-threo-

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

Mexico

Classification :



EU regulations

Hazard symbol/symbols : 

Risk phrases : R45- May cause cancer.

Safety phrases : S45- In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).S53- Avoid exposure - obtain special instructions before use.S36- Wear suitable protective clothing.

International regulations

International lists :

Australia (NICNAS): acetamide, 2,2-dichloro-n-(beta-hydroxy-alpha-(hydroxymethyl)-p-nitrophenethyl)-,d-(-)-threo-

China: acetamide, 2,2-dichloro-n-(beta-hydroxy-alpha-(hydroxymethyl)-p-nitrophenethyl)-,d-(-)-threo-

Japan (MOL): acetamide, 2,2-dichloro-n-(beta-hydroxy-alpha-(hydroxymethyl)-p-nitrophenethyl)-,d-(-)-threo-

Korea (TCCL): acetamide, 2,2-dichloro-n-(beta-hydroxy-alpha-(hydroxymethyl)-p-nitrophenethyl)-,d-(-)-threo-

Philippines (RA6969): acetamide, 2,2-dichloro-n-(beta-hydroxy-alpha-(hydroxymethyl)-p-nitrophenethyl)-,d-(-)-threo-

16 . Other information

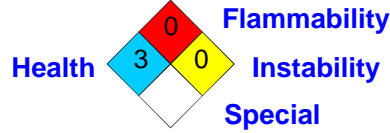
Label requirements : CANCER HAZARD.
CAN CAUSE CANCER.
MAY CAUSE ALLERGIC RESPIRATORY AND SKIN REACTION.
CAUSES DAMAGE TO THE FOLLOWING ORGANS: BLOOD, NERVOUS SYSTEM, LIVER, BONE MARROW.

16 . Other information

Hazardous Material Information System (U.S.A.) :

Health	*	3
Fire hazard		0
Reactivity		0
Personal protection		C

National Fire Protection Association (U.S.A.) :



Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.