

1. Identification

Product identifier DACTHAL[®] FLOWABLE HERBICIDE

Other means of identification

SDS number 298

Product registration number 5481-487

Recommended use Herbicide.

Recommended restrictions No other uses are advised.
Keep out of the Reach of Children!

EPA Registration number EPA: 5481-487

Manufacturer/Importer/Supplier/Distributor information

Company Name AMVAC Chemical Corporation

Address 4695 MacArthur Court
Suite 1200
Newport Beach, CA 92660
United States

Telephone

AMVAC Chemical Corp 949-260-1200

AMVAC Chemical Corp 949-260-6270(FAX)

Product Use 888-462-6822

Website www.amvac.com

E-mail CustServ@amvac.com

Emergency phone number

Medical 888-681-4261

CHEMTREC[®] 800-424-9300

(USA+Canada)
CHEMTREC[®] (Outside USA) +1-703-527-3887

2. Hazard(s) identification

Physical hazards Not classified.

Health hazards Not classified.

Environmental hazards Hazardous to the aquatic environment, acute hazard Category 3

Hazardous to the aquatic environment, long-term hazard Category 2

OSHA defined hazards Not classified.

Label elements



Signal word Warning

Hazard statement Harmful to aquatic life. Toxic to aquatic life with long lasting effects.

Precautionary statement

Prevention Avoid release to the environment.

Response Collect spillage.

Storage Store away from incompatible materials.

Disposal Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC)

None known.

Supplemental information

This is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticide chemicals. The hazard information required on the pesticide label is reproduced in section 15. The pesticide label also includes other important information, including directions for use.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Chlorthal-dimethyl	1,4-Dimethyl 2,3,5,6-tetrachlorobenzene-1,4-dicarboxylate DCPA DACTHAL	1861-32-1	54.9

Additional components

Chemical name	Common name and synonyms	CAS number	%
Hexachlorobenzene	HCB	118-74-1	<10 ppm

4. First-aid measures

Inhalation

Remove victim to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Get medical attention if symptoms occur.

Skin contact

Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention if irritation develops and persists.

Eye contact

Rinse with water about 15-20 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

Ingestion

Rinse mouth. Do not induce vomiting without advice from poison control center. Never give anything by mouth to a victim who is unconscious or is having convulsions. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed

Direct contact with eyes may cause temporary irritation.

Indication of immediate medical attention and special treatment needed

Provide general supportive measures and treat symptomatically. In case of shortness of breath, give oxygen.

General information

Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

5. Fire-fighting measures

Suitable extinguishing media

Water spray. Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).

Unsuitable extinguishing media

None known.

Specific hazards arising from the chemical

During fire, gases hazardous to health may be formed. Hydrogen chloride, carbon oxides and unidentified organic compounds may be formed when it is heated excessively or burned.

Special protective equipment and precautions for firefighters

Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire fighting equipment/instructions

In the event of fire, cool tanks with water spray. Water runoff can cause environmental damage.

Specific methods

In the event of fire and/or explosion do not breathe fumes. Cool containers exposed to flames with water until well after the fire is out.

General fire hazards

No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate personal protective equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up	Stop the flow of material, if this is without risk. Collect spillage. After cleaning, flush away traces with water. Prevent entry into waterways, sewer, basements or confined areas.
Environmental precautions	Avoid release to the environment. Contact local authorities in case of spillage to drain/aquatic environment. Prevent further leakage or spillage if safe to do so. Do not contaminate water. Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling	Keep out of the reach of children. Wear appropriate personal protective equipment recommended in section 8. Observe good industrial hygiene practices. Avoid contact with eyes. Avoid release to the environment. Do not empty into drains. Wash thoroughly after handling.
Conditions for safe storage, including any incompatibilities	Keep out of the reach of children. Keep container tightly closed. Store in a cool, dry place out of direct sunlight.

8. Exposure controls/personal protection

Occupational exposure limits

US. ACGIH Threshold Limit Values (TLV)

Additional components	Type	Value
Hexachlorobenzene (CAS 118-74-1)	TWA	0.002 mg/m3

US. OARS. Workplace Environmental Exposure Level (WEEL) Guide

Components	Type	Value	Form
TRADE SECRET	TWA	10 mg/m3	Aerosol.

Biological limit values No biological exposure limits noted for the ingredient(s).

Exposure guidelines Dust exposure limit.

US - California OELs: Skin designation

Hexachlorobenzene (CAS 118-74-1) Can be absorbed through the skin.

US - Minnesota Haz Subs: Skin designation applies

Hexachlorobenzene (CAS 118-74-1) Skin designation applies.

US ACGIH Threshold Limit Values: Skin designation

Hexachlorobenzene (CAS 118-74-1) Danger of cutaneous absorption

Appropriate engineering controls Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin protection

Hand protection Wear chemical resistant gloves (preferably nitrile).

Other Wear appropriate chemical resistant clothing. Long-sleeved shirt and long pants or coveralls, socks and closed toe shoes are recommended. Use of an impervious apron is recommended.

Respiratory protection In case of insufficient ventilation, wear suitable respiratory equipment. Chemical respirator with organic vapor cartridge, full facepiece, dust and mist filter.

Thermal hazards Not applicable.

General hygiene considerations Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance	Gray opaque viscous liquid suspension
Physical state	Liquid.
Form	Liquid suspension.
Color	Gray opaque
Odor	Slightly aromatic odor.
Odor threshold	Not available
pH	6.5 - 8.5
Melting point/freezing point	23 °F (-5 °C)
Initial boiling point and boiling range	>212 °F (>100 °C)

Flash point	Not available.
Evaporation rate	Not determined
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	0.21 mPa (2.5 x 10 ⁻⁶ torr) @ 25°C (gas saturation method)
Vapor density	Heavier than air
Relative density	1.32
Relative density temperature	68 °F (20 °C)
Solubility(ies)	
Solubility (water)	Disperses
Solubility (solvents)	The active ingredient in this product is soluble in aromatic hydrocarbons, chlorinated hydrocarbons, ketones, and esters.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Bulk density	11 lb/gal @ 20 °C

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions. It will decompose at elevated temperatures (360-370 °C).
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents. Strong acids. Strong bases. Strong acids and bases will decompose the ester functions of DACTHAL®.
Hazardous decomposition products	This product may emit hazardous fumes of hydrogen chloride, carbon oxides, and unidentified organic compounds when it is heated excessively or burned. WEAR SELF-CONTAINED BREATHING APPARATUS when these conditions are present. It will decompose at elevated temperatures (360-370 °C).

11. Toxicological information

Information on likely routes of exposure

Inhalation	Prolonged inhalation may be harmful.
Skin contact	Slight skin irritant.
Eye contact	Slight irritant.
Ingestion	May cause discomfort if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics	Direct contact with eyes may cause temporary irritation.
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Information on toxicological effects

Acute toxicity

Product	Species	Test Results
DACTHAL® FLOWABLE HERBICIDE		
<u>acute</u>		
dermal		
LD50	Rabbit	> 2000 mg/kg
oral		
LD50	Rat	> 5000 mg/kg
Skin corrosion/irritation	Slightly irritating.	
Serious eye damage/eye irritation	Slight irritant.	

Respiratory or skin sensitization**Respiratory sensitization** Not classified.**Skin sensitization** Not sensitizing.**Germ cell mutagenicity** No evidence of mutagenicity has been observed in animal testing.**Carcinogenicity** None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, or OSHA, as a carcinogen. Chlorthal-Dimethyl has been classified by EPA as a Group C, possible human carcinogen.**IARC Monographs. Overall Evaluation of Carcinogenicity**

Hexachlorobenzene (CAS 118-74-1) 2B Possibly carcinogenic to humans.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

US. National Toxicology Program (NTP) Report on Carcinogens

Hexachlorobenzene (CAS 118-74-1) Reasonably Anticipated to be a Human Carcinogen.

Reproductive toxicity Active ingredient: Repeat oral dosing in the pregnant rat showed decreases in fetal thyroid hormone levels, in a Comparative Thyroid Assay.**Specific target organ toxicity - single exposure** Not classified.**Specific target organ toxicity - repeated exposure** Not classified.**Aspiration hazard** Not an aspiration hazard.**12. Ecological information****Ecotoxicity** Harmful to aquatic life. Very toxic to aquatic life with long lasting effects.

Components		Species	Test Results
Chlorthal-dimethyl (CAS 1861-32-1)			
Aquatic			
Acute			
Crustacea	EC50	Water flea (Daphnia magna)	20 - 35 mg/l, 48 hours
Fish	LC50	Bluegill (Lepomis macrochirus)	> 100 mg/l, 96 hours
Chronic			
Crustacea	NOEC	Daphnia magna	0.246 mg/l, 21 d
Fish	NOEC	Oncorhynchus mykiss	0.098 mg/l, 28 d

Persistence and degradability Active Ingredient (a.i.): Chlorthal-Dimethyl is generally not persistent. Laboratory studies indicate a half-life of 18-37 days.**Bioaccumulative potential** Active ingredient (a.i.): The octanol water partitioning ratio and fish studies indicate that the compound is capable of bioaccumulation.**Partition coefficient n-octanol / water (log Kow)**

Chlorthal-dimethyl 4.28, @ 25 °C

Mobility in soil Active Ingredient (a.i.): Chlorthal-Dimethyl itself is not prone to leaching, Koc>1000.**Other adverse effects** Tetrachloroterephthalic acid, a breakdown product of Chlorthal-Dimethyl, is known to leach through soil as a result of agricultural and turf uses and has been found in groundwater which may be used for drinking water. Users of formulated products are advised not to apply Chlorthal-Dimethyl to sand and loamy sand soils where the water table (groundwater) is close to the surface and where these soils are very permeable, i.e., well drained. Your local agricultural agencies can provide further information on the type of soil in your area and the location of groundwater used for drinking water.**13. Disposal considerations****Disposal instructions** Collect and reclaim or dispose in sealed containers at licensed waste disposal site according to all applicable regulations. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with all applicable local/regional/national/international regulations.**Hazardous waste code** The waste code should be assigned in discussion between the user, the producer and the waste disposal company.**Waste from residues / unused products** Dispose of in accordance with all applicable regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal methods/information).

Contaminated packaging

Empty containers should be taken to an approved waste handling site for recycling or disposal according to all applicable regulations. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information**DOT**

Not regulated as dangerous goods.

IATA

UN number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s. (Chlorthal-dimethyl)
Transport hazard class(es)	
Class	9
Subsidiary hazard	-
Packing group	III
Environmental hazards	Yes
ERG Code	9L
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling. Read safety instructions, SDS and emergency procedures before handling.

Other information

Passenger and cargo aircraft Allowed with restrictions.

Cargo aircraft only Allowed with restrictions.

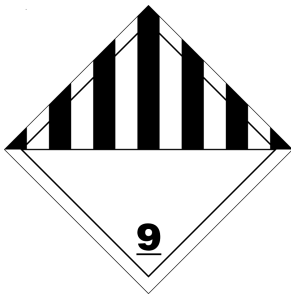
Read safety instructions, SDS and emergency procedures before handling. Read safety instructions, SDS and emergency procedures before handling.

IMDG

UN number	UN3082
UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Chlorthal-dimethyl), MARINE POLLUTANT
Transport hazard class(es)	
Class	9
Subsidiary hazard	-
Packing group	III
Environmental hazards	
Marine pollutant	Yes
EmS	F-A, S-F
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling. Read safety instructions, SDS and emergency procedures before handling.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable.

IATA; IMDG**Marine pollutant****General information**

IMDG Regulated Marine Pollutant.

15. Regulatory information

US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

This product is registered under EPA/FIFRA Regulations. It is a violation of Federal Law to use this product in any manner inconsistent with its labeling. Read and follow all label directions. This product is excluded from listing requirements under EPA/TSCA.

This is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticide chemicals. The hazard information required on the pesticide label is reproduced below. The pesticide label also includes other important information, including directions for use.

HAZARD TO HUMANS AND DOMESTIC ANIMALS.

CAUTION! Causes moderate eye irritation. Avoid contact with eyes, skin, or clothing. Wash thoroughly with soap and water after handling.

ENVIRONMENTAL HAZARDS

Do not apply directly to water, or to areas where surface water is present (except for application to cranberry bogs) or to intertidal areas below the mean high water mark. Do not allow this material to drift onto neighboring crops or non crop areas or use in a manner or at a time other than in accordance with label directions because animal, plant or crop injury, illegal residues, or other undesirable results may occur.

Toxic Substances Control Act (TSCA)

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Hexachlorobenzene (CAS 118-74-1) Listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
Hexachlorobenzene	118-74-1	<10 ppm

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Hexachlorobenzene (CAS 118-74-1)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations

California Proposition 65



WARNING: This product can expose you to Hexachlorobenzene, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

California Proposition 65 - CRT: Listed date/Carcinogenic substance

Hexachlorobenzene (CAS 118-74-1) Listed: October 1, 1987

California Proposition 65 - CRT: Listed date/Developmental toxin

Hexachlorobenzene (CAS 118-74-1) Listed: January 1, 1989

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	No
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	No

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date May-11-2015

Revision date Nov-09-2023

Version # 3.0

HMIS® ratings Health: 0
Flammability: 1
Physical hazard: 0

NFPA ratings Health: 0
Flammability: 1
Instability: 0

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Revision information This document has undergone significant changes and should be reviewed in its entirety.