



SAFETY DATA SHEET

1. Identification

Product identifier	DACTHAL W-75 Herbicide	
Other means of identification		
SDS number	291	
Product registration number	8963	
Recommended use	Agricultural Herbicide.	
Recommended restrictions	Keep out of the Reach of Children!	
Manufacturer/Importer/Supplier/Distributor information		
Manufacturer		
Company name	AMVAC Chemical Corporation	
Address	4685 MacArthur Court Suite 1200 Newport Beach, CA 92660	
Telephone	AMVAC Chemical Corp	949-260-1200
	AMVAC Chemical Corp	949-260-6270(FAX)
Website	www.Amvac-Chemical.com	
E-mail	CustServ@Amvac-Chemical.com	
Emergency phone number	Medical	888-681-4261
	CHEMTREC® (USA+Canada)	800-424-9300
	Product Use	888-462-6822
	CHEMTREC® (Outside USA)	+1-703-527-3887
Supplier	Not available.	

2. Hazard identification

Physical hazards	Not classified.
Health hazards	Not classified.
Environmental hazards	Not classified.
Label elements	
Hazard symbol	None.
Signal word	None.
Hazard statement	Harmful to aquatic life.
Precautionary statement	
Prevention	Do not handle until all safety precautions have been read and understood. Avoid breathing dust/fume/gas/mist/vapors/spray. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection.
Response	If on skin: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. Wash contaminated clothing before reuse. Collect spillage.
Storage	Store locked up. Store away from incompatible materials.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Other hazards	Harmful to aquatic life with long lasting effects.

Supplemental information

This is a pesticide product registered in Canada under the Pest Control Products Act and is subject to certain labeling requirements. These requirements differ from the classification criteria and hazard information required for GHS compliant 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	2,3,5,6-Tetrachloro-1,4-benzenedicarboxylic acid, Dimethyl ester DCPA DACTHAL	1861-32-1	75

4. First-aid measures

Inhalation

Avoid breathing dust. Move to fresh air. Call a physician if symptoms develop or persist.

Skin contact

Wash off immediately with soap and plenty of water. Take off contaminated clothing and wash before reuse. Get medical attention if irritation develops and persists.

Eye contact

Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

Ingestion

Rinse mouth. Get medical attention if symptoms occur. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Have person sip a glass of water if able to swallow.

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.

General information

IF exposed or concerned: Get medical advice/attention. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.

5. Fire-fighting measures

Suitable extinguishing media

Water fog. Foam. Dry chemical powder. Carbon dioxide (CO₂). Use fire-extinguishing media appropriate for surrounding materials.

Unsuitable extinguishing media

None known.

Specific hazards arising from the chemical

During fire, gases hazardous to health may be formed.

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

Use standard firefighting procedures and consider the hazards of other involved materials.

Specific methods

Use standard firefighting procedures and consider the hazards of other involved materials.

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 upwind. Wear appropriate protective equipment and clothing during clean-up. For personal protection, see section 8 of the SDS. Ensure adequate ventilation.

Methods and materials for containment and cleaning up

Avoid dust formation. Vacuum up or use a scoop to transfer the spilled material to containers for reuse or disposal. Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use.

Environmental precautions

Avoid discharge into drains, water courses or onto the ground. Inform appropriate managerial or supervisory personnel of all environmental releases.

7. Handling and storage

Precautions for safe handling

Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. When using, do not eat, drink or smoke. Wear appropriate personal protective equipment. Wash thoroughly after handling. Avoid release to the environment.

Conditions for safe storage, including any incompatibilities

Store locked up. Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. ACGIH Threshold Limit Values

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

Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

Additional components	Type	Value	Form
Hexachlorobenzene (CAS 118-74-1)	TWA	0.002 mg/m3	
Nuisance Dust	TWA	3 mg/m3	Respirable particles.
		10 mg/m3	Total particulate.

Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

Additional components	Type	Value	Form
Hexachlorobenzene (CAS 118-74-1)	TWA	0.002 mg/m3	
Nuisance Dust	TWA	3 mg/m3	Respirable fraction.
		10 mg/m3	Total dust.

Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act)

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

Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)

Components	Type	Value
Chlorthal-dimethyl (CAS 1861-32-1)	TWA	5 mg/m3

Additional components	Type	Value	Form
Hexachlorobenzene (CAS 118-74-1)	TWA	0.002 mg/m3	
Nuisance Dust	TWA	3 mg/m3	Respirable fraction.
		10 mg/m3	Inhalable fraction.

Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety)

Additional components	Type	Value	Form
Hexachlorobenzene (CAS 118-74-1)	TWA	0.025 mg/m3	
Nuisance Dust	TWA	10 mg/m3	Total dust.

Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21)

Additional components	Type	Value	Form
Hexachlorobenzene (CAS 118-74-1)	15 minute	0.006 mg/m3	
	8 hour	0.002 mg/m3	
Nuisance Dust	15 minute	6 mg/m3	Respirable fraction.
		20 mg/m3	Inhalable fraction.
	8 hour	3 mg/m3	Respirable fraction.

Additional components	Type	Value	Form
		10 mg/m3	Inhalable fraction.
Biological limit values	No biological exposure limits noted for the ingredient(s).		
Exposure guidelines			
Canada - Alberta OELs: Skin designation			
Hexachlorobenzene (CAS 118-74-1)	Can be absorbed through the skin.		
Canada - British Columbia OELs: Skin designation			
Hexachlorobenzene (CAS 118-74-1)	Can be absorbed through the skin.		
Canada - Manitoba OELs: Skin designation			
Hexachlorobenzene (CAS 118-74-1)	Can be absorbed through the skin.		
Canada - Ontario OELs: Skin designation			
Hexachlorobenzene (CAS 118-74-1)	Can be absorbed through the skin.		
Canada - Quebec OELs: Skin designation			
Hexachlorobenzene (CAS 118-74-1)	Can be absorbed through the skin.		
Canada - Saskatchewan OELs: Skin designation			
Hexachlorobenzene (CAS 118-74-1)	Can be absorbed through the skin.		
US ACGIH Threshold Limit Values: Skin designation			
Hexachlorobenzene (CAS 118-74-1)	Can be absorbed through the skin.		
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 appropriate chemical resistant gloves.		
Other	Avoid contact with the skin. Long-sleeved shirt and long pants or coveralls, socks and closed toe shoes are required.		
Respiratory protection	When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.		
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. Contaminated work clothing should not be allowed out of the workplace.		
9. Physical and chemical properties			
Appearance	Fine off-white (gray) to tan powder		
Physical state	Solid.		
Form	Solid. Powder.		
Color	Off-white (gray) to tan		
Odor	Slightly aromatic odor		
Odor threshold	Not available		
pH	Not available.		
Melting point/freezing point	312.8 °F (156 °C)		
Initial boiling point and boiling range	A.I. decomposes at 360-370°C		
Flash point	Not available.		
Evaporation rate	Not available.		
Flammability (solid, gas)	Not available.		
Upper/lower flammability or explosive limits			
Flammability limit - lower (%)	Not available.		

Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not available.
Vapor density	Heavier than air
Relative density	Not available.
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	0.25 g/cm ³
Percent volatile	Not applicable
pH in aqueous solution	7 - 8

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.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use. Hazardous polymerization does not occur.
Conditions to avoid	Contact with incompatible materials.
Incompatible materials	Strong acids. Strong bases.
Hazardous decomposition products	No hazardous decomposition products are known. 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.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Dust may irritate respiratory system.
Skin contact	No adverse effects due to skin contact are expected.
Eye contact	Direct contact with eyes may cause temporary irritation.
Ingestion	Expected to be a low ingestion hazard.

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

Information on toxicological effects

Acute toxicity

Product	Species	Test Results
DACTHAL W-75 Herbicide		
<u>acute</u>		
dermal		
LD50	rabbit	> 10000 mg/kg
inhalation		
LC50	rat	> 5.7 mg/L
oral		
LD50	rat	> 10000 mg/kg

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation Prolonged skin contact may cause temporary irritation.

Serious eye damage/eye irritation	Direct contact with eyes may cause temporary irritation.
Respiratory or skin sensitization	
Respiratory sensitization	Due to partial or complete lack of data the classification is not possible. Not a respiratory sensitizer.
Skin sensitization	Not a sensitizer.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	A micro-contaminant in Dacthal, Hexachlorobenzene (HCB), has been found to be carcinogenic in several studies conducted for IARC and NTP. Chlorthal-Dimethyl has been classified by EPA as a Group C, possible human carcinogen.
ACGIH Carcinogens	
Hexachlorobenzene (CAS 118-74-1)	A3 Confirmed animal carcinogen with unknown relevance to humans.
Canada - Manitoba OELs: carcinogenicity	
Hexachlorobenzene (CAS 118-74-1)	Confirmed animal carcinogen with unknown relevance to humans.
Canada - Quebec OELs: Carcinogen category	
Hexachlorobenzene (CAS 118-74-1)	Detected carcinogenic effect in animals.
IARC Monographs. Overall Evaluation of Carcinogenicity	
Hexachlorobenzene (CAS 118-74-1)	2B Possibly carcinogenic to humans.
US. National Toxicology Program (NTP) Report on Carcinogens	
Hexachlorobenzene (CAS 118-74-1)	Reasonably Anticipated to be a Human Carcinogen.
Reproductive toxicity	Not classified. This product is not expected to cause reproductive or developmental effects. Due to partial or complete lack of data the classification is not possible.
Specific target organ toxicity - single exposure	Not classified.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not an aspiration hazard.
Chronic effects	Not expected to be hazardous by WHMIS criteria. Hazardous by OSHA criteria. Causes damage to organs through prolonged or repeated exposure. Prolonged inhalation may be harmful.

12. Ecological information

Ecotoxicity	Very toxic to aquatic life. Harmful to aquatic life with long lasting effects. Expected to be harmful to aquatic organisms. May cause long-term adverse effects in the environment. Contains a substance which causes risk of hazardous effects to the environment. The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment. Harmful to aquatic life.
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Components	Species	Test Results
Chlorthal-dimethyl (CAS 1861-32-1)		
Aquatic		
Crustacea	EC50	Water flea (Daphnia magna) 20 - 35 mg/l, 48 hours
Fish	LC50	Bluegill (Lepomis macrochirus) > 100 mg/l, 96 hours

Persistence and degradability	No data is available on the degradability of this product.
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Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)	
Chlorthal-dimethyl	4.28

Mobility in soil	No data available. This product is slightly water soluble and may disperse in soil.
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Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.
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13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. 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 local/regional/national/international regulations.
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Local disposal regulations	Dispose in accordance with all applicable regulations.
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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	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). Dispose of container and residues in accordance with all applicable regulations.
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

TDG

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

15. Regulatory information

Canadian regulations

CANADIAN REGULATIONS: This product is registered under the Pest Control Product Act of Canada. It is a violation of Canadian Law to use this product in any manner inconsistent with its labeling. Read and follow all label directions. This product has been classified according to the hazard criteria of the CPR and the SDS contains all the information required by the CPR.

This chemical is a pest control product registered [or regulated] by Health Canada Pest Management Regulatory Agency and is subject to certain labelling requirements under the Pest Control Products Act. These requirements differ from the classification criteria and hazard information required for GHS-consistent safety data sheets. The following is the hazard information required on the pest control product label.

PCP: 8963

CAUTION
Keep Out of Reach Of Children.

Read the label, authorized under the Pest Control Products Act, prior to using or handling the pest control product.

Symbols Required:
None known.

"There are Canada-specific environmental requirements for handling, use, and disposal of this pest control product that are indicated on the label.

Controlled Drugs and Substances Act

Not regulated.

Export Control List (CEPA 1999, Schedule 3)

Hexachlorobenzene (CAS 118-74-1) Substance subject to notification or consent.

Greenhouse Gases

Not listed.

Ontario. Toxic Substances. Toxic Reduction Act, 2009. Regulation 455/09 (July 1, 2011)

Hexachlorobenzene (CAS 118-74-1)

Precursor Control Regulations

Not regulated.

International regulations

Stockholm Convention

Hexachlorobenzene (CAS 118-74-1) A Elimination Special exemptions apply - see text of regulation.
C Unintentional production

Rotterdam Convention

Hexachlorobenzene (CAS 118-74-1) Pesticide

Kyoto protocol

Not applicable.

Montreal Protocol

Not applicable.

Basel Convention

Not applicable.

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
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

Issue date Oct-18-2016

Revision date Nov-21-2018

Version # 2.0

References

ACGIH
 ACGIH Documentation of the Threshold Limit Values and Biological Exposure Indices
 EPA: ACQUIRE database
 HSDB® - Hazardous Substances Data Bank
 IARC Monographs. Overall Evaluation of Carcinogenicity
 National Toxicology Program (NTP) Report on Carcinogens
 NLM: Hazardous Substances Data Base
 US. IARC Monographs on Occupational Exposures to Chemical Agents
 ACGIH®: American Conference of Governmental Industrial Hygienists
 CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act
 EPA: Environmental Protection Agency
 FIFRA: Federal Insecticide, Fungicide, and Rodenticide Act
 IARC: International Agency for Research on Cancer
 NTP: National Toxicology Program
 OSHA: Occupational Safety and Health Agency
 SARA: Superfund Amendments and Reauthorization Act
 TSCA: Toxic Substances Control Act
 DOT: Department of Transportation
 IMDG: International Maritime Dangerous Goods
 IATA: International Air Transport Association

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Revision information

Product and Company Identification: Product Registration Numbers
Identification: Recommended restrictions
Hazard identification: Hazard statement
Hazard identification: Supplemental information
Composition / Information on Ingredients: Additional Components
Ecological information: Ecotoxicity
Transport information: IMDG classification
Transport information: IATA classification
Regulatory information: California Prop 65
Regulatory information: Canadian regulations
Other information: Disclaimer
GHS: Classification