

# **Material Safety Data Sheet**

NFPA	HMIS	WHMIS	TDG	DOT
Health 2 1 Instability Special	Health 2 Flammability 2 Physical hazards 1 Suggested PPE H		See Section 14	See Section 14

Product name	oduct name 5113570 Dimethoate 480 Insecticide 4-4L					
Synonym	PCP# 12864	MSDS prepared by the Environment, Health & Safety Department on:	2/25/2013.			
Material uses	Insecticide	Version	4.03			
		In Case of Emer	gency			
MSDS Number	5113570	Transportation: 1-80 Medical: 1-877-6				
Manufacturer	Agrium Advanced Technologies, Inc. 2915 Rocky Mountain Avenue, Suite 400 Loveland, CO. 80538	For more information on Agrium AT please go to: http://www.agriumat.com or contact us at Toll-Free:800-461-6	,			

## 2. Hazards Identification

Physical state Liquid.

Odor mercaptan [Slight]

OSHA/HCS status This material is considered hazardous by the OSHA Hazard Communication

Standard (29 CFR 1910.1200).

Emergency overview WARNING!

HARMFUL IF SWALLOWED. CONTAINS MATERIAL THAT MAY CAUSE TARGET

ORGAN DAMAGE, BASED ON ANIMAL DATA.

Harmful if swallowed. Do not breathe vapor or mist. Do not ingest. Avoid contact with eyes, skin and clothing. Contains material that may cause target organ damage,

based on animal data. Wash thoroughly after handling.

Potential acute health effects

**Inhalation** Exposure to decomposition products may cause a health hazard. Serious effects

may be delayed following exposure.

**Ingestion** Toxic if swallowed.

**Skin** Harmful if absorbed through the skin.

**Eyes** May irritate the eyes upon contact.

Potential chronic health effects

**Chronic effects**Contains material that may cause target organ damage, based on animal data.

**Carcinogenicity** No known significant effects or critical hazards.

**Mutagenicity** No known significant effects or critical hazards.

**Teratogenicity** No known significant effects or critical hazards.

### 2. Hazards Identification

**Developmental effects** No known significant effects or critical hazards.

**Fertility effects** No known significant effects or critical hazards.

**Target organs** Contains material which may cause damage to the following organs: kidneys, liver,

mucous membranes, upper respiratory tract, skin, eyes, central nervous system

(CNS).

#### Over-exposure signs/symptoms

InhalationNo specific data.IngestionNo specific data.SkinNo specific data.EyesNo specific data.

Medical conditions

aggravated by overexposure Pre-existing disorders involving any target organs mentioned in this MSDS as being

at risk may be aggravated by over-exposure to this product.

See toxicological information (Section 11)

# 3. Composition / Information on Ingredients

### **United States**

 Name
 CAS number
 %

 dimethoate (ISO)
 60-51-5
 48.7

 cyclohexanone
 108-94-1
 15 - 40

 Solvent naphtha (petroleum), light arom.
 64742-95-6
 10 - 30

Canada

 Name
 CAS number
 %

 dimethoate (ISO)
 60-51-5
 48.7

 cyclohexanone
 108-94-1
 15 - 40

 solvent naphtha (petroleum), light arom.
 64742-95-6
 10 - 30

Mexico Classification

<u>Name</u>	CAS number	<u>r UN numbe</u>	<u>r %</u>	<u>IDLH</u>	<u>H</u>	<u>F</u>	<u>R</u>	<u>Special</u>
cyclohexanone	108-94-1	Not available.	15 - 40	700 ppm	1	2	0	
dimethoate (ISO)	60-51-5	UN2811	48.7	-	2	2	0	
Solvent naphtha (petroleum), light arom.	64742-95-6	Not available.	10 - 30	-	1	0	0	

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

# 4. First Aid Measures

**Eye contact** Check for and remove any contact lenses. Immediately flush eyes with plenty of water

for at least 15 minutes, occasionally lifting the upper and lower eyelids. Seek medical

advice if symptoms or conditions persist.

**Skin contact** In case of contact, immediately flush skin with plenty of water for at least 15 minutes

while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Seek medical advice if irritation or symptoms persist.

### 4. First Aid Measures

Inhalation If inhalation occurs, remove individual(s) to fresh air. Loosen restrictive clothing items if

necessary. If individual has irregular or difficulty breathing or is under respiratory arrest seek medical attention immediately. If other conditions or symptoms develop contact a

physician.

**Ingestion** If ingestion occurs, rinse mouth with copious amounts of water. Do Not induce vomiting

unless directed to do so by trained medical personnel. Do Not give anything by mouth to

unconcious individuals. Seek immediate medical attention.

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. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

Notes to physician

In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours. This product is an organophosphate (cholinesterese inhibiting) insecticide. Atropine is antodotal and should be administered only if symptoms of cholinesterese inhibition are present.

# 5. Fire-fighting Measures

Flammability of the

product

Suitable

In a fire or if heated, a pressure increase will occur and the container may burst.

**Extinguishing media** 

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Use an extinguishing agent suitable for the surrounding fire.

Not suitable None known.

Special exposure

hazards

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous thermal decomposition products

Decomposition products may include the following materials:

carbon dioxide carbon monoxide nitrogen oxides sulfur oxides phosphorus oxides

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**No action shall be taken involving any personal risk or without suitable training.

Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is

inadequate. Put on appropriate personal protective equipment (see Section 8).

Environmental precautions

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

### 6. Accidental Release Measures

### Methods for cleaning up

Small spill Stop leak if without risk. Move containers from spill area. Dilute with water and mop

up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste

disposal contractor.

Large spill Stop leak if without risk. Move containers from spill area. Approach release from

upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste

disposal.

# 7. Handling and Storage

**Handling** Put on appropriate personal protective equipment (see Section 8). Eating, drinking

and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Avoid release to the environment. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse

container.

Storage Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry cool and well-ventilated area, away from incompatible materials

direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. Keep out of reach of children.

# 8. Exposure Controls / Personal Protection

#### **United States**

Ingredient	Exposure limits
cyclohexanone	ACGIH TLV (United States, 1/2008). Absorbed through skin. TWA: 20 ppm 8 hour(s). STEL: 50 ppm 8 hour(s). NIOSH REL (United States, 6/2008). Absorbed through skin. TWA: 25 ppm 10 hour(s). TWA: 100 mg/m³ 10 hour(s).

#### **Canada**

Occupational exposure limits		TWA (8 hours)		STEL (15 mins)		Ceiling					
Ingredient	List name	ppm	mg/m³	Other	ppm	mg/m³	Other	ppm	mg/m³	Other	Notations
cyclohexanone	US ACGIH 1/2008 AB 6/2008	20 25	-	- 100	50	-	-	-	-	-	[1] [1]
	DC 6/2008 ON 6/2008 QC 6/2008	20 20 25	- - -	- - 100	50 50 -	- - -	- - -	- - -	- - -	- - -	[1] [1] [1]

[1]Absorbed through skin.

#### Mexico

Ingredient	Exposure limits

# 8. Exposure Controls / Personal Protection

cyclohexanone ACGIH TLV (United States, 1/2008). Absorbed through skin.

TWA: 20 ppm 8 hour(s). STEL: 50 ppm 8 hour(s).

### Consult local authorities for acceptable exposure limits.

Recommended monitoring procedures

If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

**Engineering measures** 

No special ventilation requirements. Good general ventilation should be sufficient to control worker exposure to airborne contaminants. If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.

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.

### **Personal protection**

**Respiratory** Use a properly fitted, air-purifying or air-fed 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.

**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 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.

Personal protective equipment (Pictograms)







# Environmental exposure controls

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

# 9. Physical and Chemical Properties

Physical state Liquid.

Color Amber. [Light]

Odor mercaptan [Slight]

**pH** 3.6

**VOC** 27.5 % (w/w)

#### **Physical and Chemical Properties** 9.

# 10. Stability and Reactivity

**Chemical stability** The product is stable.

Possibility of hazardous

reactions

Under normal conditions of storage and use, hazardous reactions will not occur.

Hazardous polymerization Under normal conditions of storage and use, hazardous polymerization will not occur.

Conditions to avoid No specific data. Materials to avoid No specific data.

Hazardous Under normal conditions of storage and use, hazardous decomposition products

should not be produced. decomposition products

11 . Toxicological Info	rmation			
<u>United States</u>				
Acute toxicity				
Product/ingredient name cyclohexanone	Result LD50 Oral LD50 Oral LC50 Inhalation Gas.	<b>Species</b> Rat Rat Rat	<b>Dose</b> 1800 mg/kg 1620 uL/kg 8000 ppm	Exposure 4 hours
dimethoate (ISO)	LD50 Dermal LD50 Oral	Rat Rat	353 mg/kg 60 mg/kg	-
Classification				
Product/ingredient name cyclohexanone	ACGIH IARC A3 3	EPA -	NIOSH NT	P OSHA
<u>Canada</u>				
Canada Acute toxicity				
<del></del>	Result LD50 Oral LD50 Oral LC50 Inhalation	Species Rat Rat Rat	<b>Dose</b> 1800 mg/kg 1620 uL/kg 8000 ppm	Exposure 4 hours
Acute toxicity Product/ingredient name	LD50 Oral LD50 Oral	Rat Rat	1800 mg/kg 1620 uL/kg	- <sup>*</sup>

11 . Toxicological I	nformation			
Classification				
Product/ingredient name cyclohexanone	ACGIH IARC A3 3	EPA -	NIOSH NT	P OSHA -
Mexico				
Acute toxicity				
Product/ingredient name cyclohexanone	Result LD50 Oral LD50 Oral LC50 Inhalation Gas.	Species Rat Rat Rat	<b>Dose</b> 1800 mg/kg 1620 uL/kg 8000 ppm	Exposure - - 4 hours
dimethoate (ISO)	LD50 Dermal LD50 Oral	Rat Rat	353 mg/kg 60 mg/kg	-
Classification				
Product/ingredient name cyclohexanone	ACGIH IARC A3 3	EPA -	NIOSH N'	TP OSHA

12 . Ecological Information							
Environmental effects	Water polluting material. quantities.	May be harmful to the e	nvironment if relea	sed in large			
United States							
Aquatic ecotoxicity							
Product/ingredient name cyclohexanone	Test -	Result Acute LC50 630000 ug/L Fresh water	Species Fish - Fathead minnow - Pimephales promelas - 0.12 g	<b>Exposure</b> 96 hours			
dimethoate (ISO)	-	Acute LC50 0.5 mg/L Fresh water	Fish - Minnow - Phoxinus phoxinus	96 hours			
	-	Acute LC50 580 ug/L Fresh water	Daphnia - Water	48 hours			
<u>Canada</u>							
Aquatic ecotoxicity							

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12 . Ecological Info	rmation			
Product/ingredient name cyclohexanone	Test -	Result Acute LC50 630000 ug/L Fresh water	Species Fish - Fathead minnow - Pimephales promelas - 0.12 g	<b>Exposure</b> 96 hours
dimethoate (ISO)	-	Acute LC50 0.5 mg/L Fresh water Acute LC50 580 ug/L Fresh water	Fish - Minnow - Phoxinus phoxinus Daphnia - Water	96 hours 48 hours
Mexico  Aquatic ecotoxicity				
Product/ingredient name cyclohexanone	Test -	Result Acute LC50 630000 ug/L Fresh water	Species Fish - Fathead minnow - Pimephales promelas - 0.12 g	<b>Exposure</b> 96 hours
dimethoate (ISO)	-	Acute LC50 0.5 mg/L Fresh water Acute LC50 580 ug/L Fresh water	Fish - Minnow - Phoxinus phoxinus Daphnia - Water	96 hours 48 hours

# 13. Disposal Considerations

#### Waste disposal

The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. 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. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

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

14. Transp	ort Infor	mation				
Regulatory information	UN number	Shipping name	Classes	PG*	Label	Additional information
DOT Classification	3017	Organophosphorous pesticide, Liquid, Toxic, Flammable (solvent naphtha (petroleum), light arom., dimethoate (ISO)). Marine Pollutant(dimethoate (ISO))	6.1(3)	III	POBON 6	
TDG Classification	3017	Organophosphorous pesticide, Liquid, Toxic, Flammable (dimethoate (ISO)) Marine Pollutant	6.1(3)	III		Considered 'Limited Quantity' when container is less than, or equal to 1 liter.
Mexico Classification	3017	Organophosphorous pesticide, Liquid, Toxic, Flammable (dimethoate (ISO))	6.1(3)	III	3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	-
			PG*	: Packir	ng group	

# **Regulatory Information**

#### **United States**

U.S. Federal regulations

**HCS Classification** Toxic material Target organ effects

TSCA 8(a) IUR Exempt/Partial exemption: Partial exemption

**United States inventory (TSCA 8b)**: All components are listed or exempted.

SARA 302/304/311/312 extremely hazardous substances: dimethoate (ISO) SARA 302/304 emergency planning and notification: dimethoate (ISO)

SARA 302/304/311/312 hazardous chemicals: dimethoate (ISO); cyclohexanone SARA 311/312 MSDS distribution - chemical inventory - hazard identification: dimethoate (ISO): Fire hazard, Immediate (acute) health hazard, Delayed (chronic)

health hazard; cyclohexanone: Fire hazard, Immediate (acute) health hazard, Delayed

(chronic) health hazard

Clean Air Act (CAA) 112 accidental release prevention: No products were found.

15. Regulatory Information

Clean Air Act Section 112(b) Hazardous Air **Pollutants (HAPs)** 

Not listed

Clean Air Act Section 602

Not listed

Class I Substances

Clean Air Act Section 602

Not listed

Class II Substances

**DEA List I Chemicals** (Precursor Chemicals) Not listed

**DEA List II Chemicals** (Essential Chemicals) Not listed

**SARA 313** 

Form R - Reporting requirements

Concentration Product name CAS number dimethoate (ISO)

60-51-5 48.7

dimethoate (ISO) 60-51-5 48.7

Supplier notification

SARA 313 notifications must not be detached from the MSDS and any copying and redistribution of the MSDS shall include copying and redistribution of the notice attached to copies of the MSDS subsequently redistributed.

Connecticut Carcinogen Reporting: None of the components are listed. State regulations

Connecticut Hazardous Material Survey: None of the components are listed.

Florida substances: None of the components are listed.

Illinois Chemical Safety Act: None of the components are listed.

Illinois Toxic Substances Disclosure to Employee Act: None of the components

are listed.

**Louisiana Reporting**: None of the components are listed. Louisiana Spill: None of the components are listed. Massachusetts Spill: None of the components are listed.

Massachusetts Substances: The following components are listed:

CYCLOHEXANONE; DIMETHOATE

Michigan Critical Material: None of the components are listed.

Minnesota Hazardous Substances: None of the components are listed. New Jersey Hazardous Substances: The following components are listed:

CYCLOHEXANONE; DIMETHOATE

New Jersey Spill: None of the components are listed.

New Jersey Toxic Catastrophe Prevention Act: None of the components are listed. New York Acutely Hazardous Substances: The following components are listed:

Cyclohexanone: Dimethoate

New York Toxic Chemical Release Reporting: None of the components are listed. Pennsylvania RTK Hazardous Substances: The following components are listed:

CYCLOHEXANONE; DIMETHOATE

Rhode Island Hazardous Substances: None of the components are listed.

**United States inventory** (TSCA 8b)

All components are listed or exempted.

Canada

WHMIS (Canada) Class D-1B: Material causing immediate and serious toxic effects (Toxic).

Class D-2B: Material causing other toxic effects (Toxic).

## 15. Regulatory Information

Canadian lists CEPA Toxic substances: None of the components are listed.

Canadian ARET: None of the components are listed.

Canadian NPRI: The following components are listed: Light aromatic solvent naphtha

Alberta Designated Substances: None of the components are listed.

Ontario Designated Substances: None of the components are listed.

Quebec Designated Substances: None of the components are listed.

Canada inventory At least one component is not listed in DSL but all such components are listed in

NDSL.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

#### **Mexico**

Classification



### **EU regulations**

Hazard symbol or symbols



**Risk phrases** R45- May cause cancer.

R20/21/22- Also harmful by inhalation, in contact with skin and if swallowed.

Safety phrases S53- Avoid exposure - obtain special instructions before use.

S2- Keep out of the reach of children.

S36/37- Wear suitable protective clothing and gloves.

S46- If swallowed, seek medical advice immediately and show this container or label.

### **International regulations**

International lists Australia inventory (AICS): All components are listed or exempted.

China inventory (IECSC): All components are listed or exempted.

Japan inventory: Not determined.

Korea inventory: All components are listed or exempted.

New Zealand Inventory of Chemicals (NZIoC): Not determined.

Philippines inventory (PICCS): Not determined.

Chemical Weapons
Convention List
Schedule I Chemicals

Not listed

Chemical Weapons
Convention List
Schedule II Chemicals

Not listed

Chemical Weapons
Convention List

Not listed

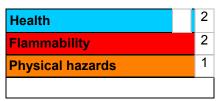
Schedule III Chemicals

# 16. Other information

Label requirements

HARMFUL IF SWALLOWED. CONTAINS MATERIAL THAT MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA.

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



Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material. Suggested protective clothing might not be adequate. Consult a specialist before handling this product.

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



**Date of issue** 2/25/2013.

Version 4.03

Indicates information that has changed from previously issued version.

#### **Notice to Reader:**

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