

MATERIAL SAFETY DATA SHEET

Introductory Details

Page 1 of total 6

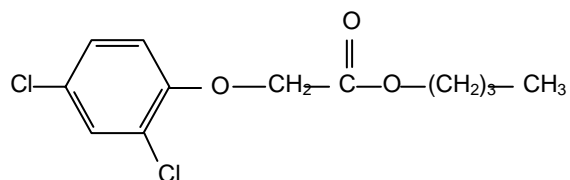
Date of preparation : 13 April 2004

Date revised 11 June 2008

SECTION 1 : CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

1.1 Product Details

Product Name : 2,4-D BE 45% WP
Trade Name : RUMPUTOX
Chemical Name : Butyl ester of 2,4-dichlorophenoxyacetic acid
Chemical Formula : $C_{12}H_{14}Cl_2O_3$
Molar Mass : 277.1
Chemical Family : Chlorinated phenoxy compound
Manufacturer's Code : -
Use : Herbicide
Structural Formula :



2,4-D Butyl Ester

1.2 Company Identification

Manufacturer

Name and Address : Agricultural Chemical (M) Sdn. Bhd.
962, Lorong Perusahaan 8, Taman Perindustrian Perai,
13600 Perai, Pulau Pinang, Malaysia.
Telephone Number : 604-390 7988
Emergency Telephone Number : 604-390 7988

1.3 Contact Point

Designation : Ms. Cheong Wai Ching, Product Support Manager /
En. Ahmad Labib bin Yusof, Administrative Assistant
Tel. No. : 604-390 7988

MATERIAL SAFETY DATA SHEET

Introductory Details

Page 2 of total 6

Date of preparation : 13 April 2004

Date revised 11 June 2008

SECTION 2 : COMPOSITION/INFORMATION ON INGREDIENT

Chemical Name	CAS No.	Proportion	Exposure Limit	Toxicity Data
Butyl ester of 2,4-dichloro phenoxyacetic acid	94-80-4	45%	Refer to Section 9	Refer to Section 11
Surfactant	-	< 5%		
Others	-	Balance		

SECTION 3 : PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: Pinkish red powder
Odour	: Characteristic odour
Solubility	: Dispersible in water
Boiling Point	: Not applicable
Melting Point	: Not applicable
Vapour Pressure	: No data available
Percentage Volatiles	: No data available
Evaporation Rate	: No data available
Vapour Density	: No data available
Specific Gravity	: 0.3 - 0.5 g/cm ³ Bulk Density
Flash Point	: Not applicable
Autoignition Temperature	: No data available
Flammable Limit (%)	: No data available

SECTION 4 : HAZARD IDENTIFICATION

Harmful if swallowed
May cause sensitisation by skin contact
Irritating to eyes and skin

SECTION 5 : FIRST AID MEASURES

Ingestion	: Get prompt medical attention.
Eye Contact	: Immediately flush with plenty of water.
Skin Contact	: Remove contaminated clothing and wash skin thoroughly with soap and water.
Inhalation	: Remove patient to fresh air. Keep warm and at rest. Get medical attention.
Notes to Physician	:
Poisoning Symptoms	: Headache, weakness, nausea, loss of appetite, vomiting and diarrhoea.

MATERIAL SAFETY DATA SHEET

Introductory Details

Page 3 of total 6

Date of preparation : 13 April 2004

Date revised 11 June 2008

Medical Treatment : Treatment is symptomatic. If ingested and patient is not vomiting, gastric lavage should be performed. For emergency measures, give activated carbon followed by emesis and gastric lavage.

SECTION 6 : FIRE FIGHTING MEASURES

Extinguishing Media : Foam, CO₂, dry chemical.

Fire Fighting Instruction : Fire fighters should wear full-faced self contained breathing apparatus and protective clothing.

Special Hazards : Technical produces toxic fumes on decomposition in a fire.

SECTION 7 : ACCIDENTAL RELEASE MEASURE

Leak and/or Spill :

Wear protective clothing as indicated in Section 8. Evacuate non essential personnel. Collect the spill into waste container for disposal. Wash the contaminated area with a little water and detergent. Adsorb with inert material such as clay or earth. Collect into the same container for disposal. Prevent the spillage from entering local drainage system.

SECTION 8 : HANDLING AND STORAGE

Handling : Read the label before use. Wear pesticide respiratory masks, protective gloves and clothing while handling. After handling, wash thoroughly with soap and water before eating and change to clean clothing.

Storage : Keep in original container, tightly closed, out of reach of children. Keep away from food, drink and animal feeding stuffs. Protect container against physical damage.

SECTION 9 : EXPOSURE CONTROL AND PERSONAL PROTECTION

Exposure Limit (2,4-D Acid) :

NIOSH REL	: TWA 10 mg/m ³
OSHA PEL	: TWA 10 mg/m ³
ACGIH TLV	: TWA 10 mg/m ³
IDLH	: 10 mg/m ³

MATERIAL SAFETY DATA SHEET

Introductory Details

Page 4 of total 6

Date of preparation : 13 April 2004

Date revised 11 June 2008

Air / TLV	: 10 mg/m ³
ADI (FAO/WHO)	: 0.3 mg/kg body weight/day
Short Term Exposure Limit	: 20 mg/m ³ (Tentative)
Engineering Measures	: Local exhaust ventilation
Personal Protection	:
Respiratory Protection	: Wear pesticide respiratory masks
Eye Protection	: Goggles if there is risk of contact
Skin Protection	: Protective gloves and clothing.

SECTION 10 : STABILITY AND REACTIVITY

Conditions to Avoid	: Direct sunlight, heat and extreme temperature
Incompatible	: No data available
Decomposition Products	: Technical produces toxic fumes on decomposition in a fire.
Hazardous Polymerization	: None
Stability	: Stable under normal conditions.

SECTION 11 : TOXICOLOGICAL INFORMATION

Toxicity Data :

Acute Oral LD ₅₀	: (Rat) male	2,399.56 mg/kg
	female	2,231.93 mg/kg
Acute Dermal LD ₅₀	: (Rat)	> 2,000 mg/kg

Technical Material

Acute Oral LD ₅₀	: (Rabbit)	424 mg/kg
	(Guinea pig)	848 mg/kg
No Effect Level	: (Rat, FAO/WHO)	31 mg/kg body weight/day
Carcinogenicity	: No data available	
Reproductive Effect	: No data available	
Effects of Overexposure	:	
Eye Irritation	: Irritant (under CPL Regulations)	
Skin Irritation	: Irritant (under CPL Regulations)	
Sensitizing Effect	: May be sensitizing (under CPL Regulations)	
Chronic Effects	: No data available	
Target Organs	: No data available	
Medical Conditions Generally Aggravated by Exposure	: No data available	

SECTION 12 : ECOLOGICAL INFORMATION

MATERIAL SAFETY DATA SHEET

Introductory Details

Page 5 of total 6

Date of preparation : 13 April 2004

Date revised 11 June 2008

Mobility & Bioaccumulation : No data available
Biodegradability : No data available
Aquatic Toxicity : No data available

Phenoxy herbicides at normal use rate appear to have hardly any direct effect on insects. However when these herbicides are sprayed on plants at flowering stage, it is likely that bees and other honey-sucking insects may received more effect.

SECTION 13 : DISPOSAL INFORMATION

Dispose of according to local regulation.

SECTION 14 : TRANSPORT INFORMATION

Follow the precaution indicated in Section 8. Follow all regulations in your country.

SECTION 15 : REGULATORY INFORMATION

Pesticides Act :
Class : III
CPL Regulations :
Class : Harmful
Risk Phrase : R22 Harmful if swallowed
R43 May cause sensitisation by skin contact
R36/38 Irritating to eyes and skin
Safety Phrase : S2 Keep out of reach of children
S24 Avoid contact with skin
S36/39 Wear suitable protective clothing, eye/face protection

SECTION 16 : OTHER INFORMATION

Reference :

- a. MSDS – Rumputox / Meritox, date : 23-5-1998
Agricultural Chemicals (M) Sdn. Bhd.
- b. MSDS - ACM 2,4-D BE, date : 31 December 2007
Agricultural Chemicals (M) Sdn. Bhd.
- c. Guidelines for The Classification of Hazardous Chemicals, DOSH 1997

MATERIAL SAFETY DATA SHEET

Introductory Details

Page 6 of total 6

Date of preparation : 13 April 2004

Date revised 11 June 2008

- d. Guidelines for The Formulation of A Chemical Safety Data Sheet, DOSH 1997
- e. Guidelines for Labelling of Hazardous Chemicals, DOSH 1997
- f. Study Report: Acute Oral Toxicity Study, from IIBAT
- g. Study Report: Acute Dermal Toxicity Study, from IIBAT

To the best of our knowledge, the information contained herein is accurate. However, we cannot assume any liability whatsoever for the accuracy or completeness of the information contained herein.