INTI EVERSPRING

SAFETY DATA SHEET

CHLORPYRIFOS 21% + BPMC 10.5% EC

SDS No	:	SDS – 206A
Revision	:	0
Date of Issue	:	08 Maret 2019

SECTION 1 - IDENTIFICATION

Product Name	:	CHLORPYRIFOS 21% + BPMC 10.5% EC
Active Ingredients	:	Chlorpyrifos + BPMC
Synonim Chlorpyrifos	:	*O,O-diethyl O-3,5,6-trichloro-2-pyridyl phosphorothioate*
Synonim BPMC	:	*2-sec-butylphenyl methylcarbamate*
Recommended use and restrictions on use	:	Insecticide
Company Identification	:	PT Inti Everspring Indonesia Wisma UIC 4th floor, JL. Gatot Subroto Kav. 6-7 Jakarta 12930, Indonesia Tel. 62-21-57905245 ; Fax. 62-21-57905244
Emergency Telephone Number	:	62-254-5750064 / 62-254-5750049

SECTION 2 - HAZARDS IDENTIFICATION

GHS Classification :

Acute Toxicity (Oral)	Category 4
Acute Toxicity (Dermal)	Category 4
Acute Toxicity (Inhalation)	Category 2
Chronic Aquatic Toxicity	Category 1
Serious Eye Damage / Eye Irritation	Category 2A
Skin Corrosion / Irritation	Category 3
Specific Target Organ Toxicity (Single Exposure)	Category 1
Specific Target Organ Toxicity (Repeated Exposure) – Nervous system, Adrenal gland	Category 1
Specific Target Organ Toxicity (Repeated Exposure) - Eye	Category 2

GHS Labelling Symbol (s) :

Signal Word : Danger

Hazard statements

H302	Harmful if swallowed
H312	Harmful in contact with skin
H330	Fatal if inhaled
H410	Very toxic to aquatic life with long lasting effects
H316	Causes mild skin irritation
H319	Causes serious eye irritation
H370	Causes damage to organs (nervous system)
H372	Cause damage to organs through prolonged or repeated exposure (nervous system, adrenal gland)
H373	May cause damage to organs through prolonged or repeated exposure (eye)

Precautionary Statements	**Prevention**	
	P260	Do not breathe dust/fume/gas/mist/vapours/spray
	P264	Wash thoroughly after handling
	P270	Do not eat, drink, or smoke when using this product
	P271	Use only outdoors or in well ventilated area
	P273	Avoid release to the environment
	P280	Wear protective gloves/protective clothing/eye protection/face protection
	P284	(In case of inadequate ventilation) wear respiratory protection
Precautionary Statements	**Respons**	
	P301+P312	IF SWALLOWED: Call a poison center/doctor if you feel unwell
	P321	Specific treatment (see on this label)
	P330	Rinse mouth
	P312	Call a poison center/doctor if you fell unwell
	P302+P352	IF ON SKIN : Wash with plenty of water
	P304+P340	If inhaled: Remove person to fresh air and keep comfortable for breathing
	P310	Immediately call a poison center/doctor
	P320	Specific treatment is urgent (see on this label)
	P391	Collect spillage
	P305+P351 +P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	P332+P313	If skin irritation occurs: Get medical advice/attention
	P337+P313	If eye irritation persists: Get medical advice/attention
	P308+P311	IF exposed or concerned: Call a POISON CENTER or doctor.
	P314	Get medical advice/attention if you fell unwell
	P362+P364	Take off contaminated clothing and wash it before reuse
Precautionary Statements	**Storage**	
	P405	Store locked up
	P403+P233	Store in welll ventilated place. Keep container tightly closed.
	Disposal	
	P501	Dispose of contents/container in accordance with local regulations / regional / national / international
	Other Hazard	
	-	

SECTION 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CHEMICAL NAME	CAS NO	CONCENTRATION (%)
O,O-diethyl O-3,5,6-trichloro-2-pyridyl phosphorothioate	2921-88-2	21
2-sec-butylphenyl methylcarbamate	3766-81-2	10.5
Others	-	68.5

SECTION 4 - FIRST- AID MEASURES

Eye	:	If concentrate is splashed in eyes, flush with running water for at least 15 minutes. Take to hospital without delay.
Skin	:	If spilt on the skin, remove contaminated clothing and wash affected areas of skin immediately. DO NOT Scrub the skin. Remove and wash contaminated clothing before re-use.
Ingestion	:	If swallowed DO NOT induce vomiting. For advice, contact the National Poisons Centre or a doctor immediately.
Inhalation	:	If inhaled, remove from exposure and have patient lie down and keep quiet. If patient is not breathing, start artificial respiration immediately. Never give anything by mouth to an unconscious person. Call a physician if necessary.

SECTION 5 - FIRE FIGHTING MEASURES

General Information	:	Firefighters must consider the nature of the product and use the poison face shields, full breathing apparatus and flame resistant clothing.
Extinguishing Media	:	Dry powder, CO_2 or foam.
Specific Hazard of Fire	:	Nitrogen Oxides, Carbon, Sulfur, and Phosphorus

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Wear protective clothing. Eliminate ignition source. Ventilate area. Absorb spills with inert material such as clay, sand, earth, sawdust and collect in a drum. Cover up the contaminated area with household detergent and small amount of water. Brush the slurry and spread inert absorbents on the slurry liquid and collect the absorbed material in a drum. Seal drum and dispose of as a toxic waste in accordance with local / national regulations. Do not contaminate water resources.

SECTION 7 - HANDLING AND STORAGE

Handling	:	Do not breathe vapour or mist. This product causes skin and eye irritation, do not get in eyes or skin. Wash thoroughly after handling. Wash clothing after use. Do not store or consume food, drink or tobacco in areas where they may become contaminated with this material. This product must be under the control of an approved handler at all times. This product must be tracked.
Storage	:	Do not store near sources of sparks, flame or heat. Keep under lock and keep out of reach of unauthorised persons, children and animals. Store in its original labeled container in isolated, dry, cool and well-ventilated area. Do not expose sealed container to temperatures above 50°C. Not to be stored next to foodstuffs and water supplies. Local regulations should be complied with.

SECTION 8 - EXPOSURE CONTROL / PERSONAL PROTECTION

Engineering control	:	Use only with adequate ventilation. If needed use local exhaust to keep minimum exposures.
Exposure Control	:	0.1 mg/m^3 (TLV-TWA ACGIH 2005)

Personal Protective Equipment

Eye Protection	:	Safety googles or full faceshields
Gloves	:	Rubber gloves with chemical resistant
Clothing Protection	:	Long-sleeved clothing, long pants, shoes with socks
Respiratory Protection	:	Mask, in case of inadequate ventilation wear respiratory protection that recommended by NIOSH

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

1	Physical Appearance	:	Liquid
2	Color	:	Clear brownish yellow liquid
3	Odor	:	Slightly smelt of mercaptan

4	Odor Threshold	:	Not available
5	pH (1%)	:	4.5 – 7.0
6	Melting Point (technical)	:	Not available
7	Freezing Point	:	Not available
8	Boiling Point (technical)	:	Not available
9	Flash Point (technical)	:	Not available
10	The rate of Evaporation	:	Not available
11	Flammability	:	Not available
12	Upper/lower flammability	:	Not available
13	Vapour Pressure (technical material)	:	Not available
14	Molecular weight	:	Not available
15	Decomposition temperature	:	Not available
16	Autoignition temperature	:	Not available
17	Viscocity	:	Not available
18	Specific Gravity	:	Not available
19	Density relative	:	Not available
20	Water Solubility	:	Not available
21	Koefisien partition : n-octanol/water	:	Not available

SECTION 10 - STABILITY AND REACTIVITY

Reactivity	:	Not available
Stability	:	Stable at normal temperatures and storage conditions, unstable to increase pH
Hazardous Reaction under Specific Condition	:	Not available
Condition to Avoid	:	Avoid temperature >50^{0}C , Heat and extreme temperature trigger decomposition that can increase the pressure in a closed system.
Incompatible material to avoid	:	Oxidizing agents, bases, copper and metals
Hazardous Product of Decomposition	:	Nitrogen Oxides, Carbon, Sulfur, and Phosphorus
Hazardous Polymerization	:	Will not occur

SECTION 11 - TOXICOLOGICAL INFORMATION

Data Toxicity Mixtures

Acute Toxicity (oral) LD_{50}	:	436 mg/kg (ATEmix)
Acute Toxicity (dermal) LD_{50}	:	1177 mg/kg (ATEmix)
Acute Toxicity (inhalation) LC_{50}	:	0.58 mg/l (ATEmix)

Data Toxicity Chlorpyrifos Technical

Acute Toxicity (oral) LD_{50}	:	153 - 163 mg/kg for rats
Acute Toxicity (dermal) LD_{50}	:	>2000 mg/kg for rabbits
Acute Toxicity (inhalation) LC_{50}	:	>0.2 mg/l
Specific Target Organ Toxicity (Single Exposure) - Technical Material	:	The effects resulting from inhibition of cholinesterase activity and the symptoms suggesting the effects on the nervous system were observed in the oral administration tests using rats (NITE-CHRIP, 2006).
Specific Target Organ Toxicity (Repeated Exposure) - Technical Material	:	Since in the oral study using rat, paralysis of both legs and a tail, the decrease in activity of brain cholinesterase and adrenal zona fasciculata fatty vacuolization were observed within the given dose. In the oral study using mouse, acute or subacute keratitis were observed within the given

		dose (NITE-CHRIP, 2006).
Subchronic toxicity (90 days) - Technical Material	:	Not available
Chronic Toxicity (2 years) -Technical Material	:	Not available
Mutagenicity in germ cells	:	No mutagenicity
Carcinogenicity	:	No carcinogenic activity
Eye Irritation (rabbit)	:	Moderate irritating
Skin Irritation (rabbit)	:	Mild irritating

Data Toxicity BPMC Technical

Acute Toxicity (oral) LD_{50}	:	623 mg/kg for male rate and 657 mg/kg for female rat. Clonic convulsions were observed at the dosage within the guidance values for Category 1, in an oral administration test using rats (Agricultural Chemical Abstracts), so it was judged that the target organ was the nervous system (NITE, 2006).
Acute Toxicity (dermal) LD_{50}	:	250 mg/kg for female rat
Acute Toxicity (inhalation) LC_{50}	:	>0.366 mg/l for rat 4 hours
Subchronic toxicity (90 days)	:	No data available
Chronic Toxicity(2 years)	:	Chronic effect for 2 years observed 4.1 mg/kg for rat with diet/day 100 mg/kg
Mutagenicity in germ cells	:	No mutagenicity
Carcinogenicity	:	No carcinogenic activity
Eye Irritation	:	Mild eye irritation
Skin irritation	:	Mild eye irritation

SECTION 12 - ECOLOGICAL INFORMATION

Acute Toxicity Chlorpyrifos Technical

Fish - *Rainbow trout* (LC_{50} 96 h)	:	0.07-0.51 mg/l
- *Bluegill Sunfish* (LC_{50} 96 h)	:	0.002-0.010 mg/l
Daphnia - *Daphnia Magna* (EC_{50} 48 h)	:	1.7 µg/l
Alga - *Selenastrum capricornutum* (NOEC)	:	>0.4 mg/l
Bird - *Mallard Ducks* (LD_{50})	:	490 mg/kg
Bees LD_{50} (oral 120 h)	:	360 ng/bee (toxic for bees)
Bio accumulation	:	No bioaccumulation
Persistence and degradation by environment	:	Short persistence in animals, plants, water and soil. In soil, Chlorpyrifos is moderately degraded (Koc 1250-12600).
Soil Mobility	:	Relatively immovable in the soil, it does not significantly interfere with soil elements
Others adverse effect	:	Toxic for bees

Acute Toxicity BPMC Technical

Fish	- *Crap* LC50 96 hours	:	25.4 mg/l
Invertebrate	- *Daphnia* LC50 48 hours	:	0.0103 mg/l
Bird	- *Mallard Duck* LD50 5 days	:	224 mg/kg
Potential bioaccumulation		:	No data available
Persistence and degradation by environment		:	No data available
Soil Mobility		:	No data available
Others adverse effect		:	Very toxic for bees

SECTION 13 - DISPOSAL CONSIDERATIONS

Disposal, storage or cleaning equipment should not be used to contaminate food, animal feed or water. Read extermination instructions listed on the product label. Products are very toxic to aquatic organisms with long lasting effects. Do not contaminate domestic water or other water sources.
Disposal Containers / Packaging: Destroy empty container and dispose of / destroyed in accordance with local regulations. Never use second-hand containers for any purpose.

SECTION 14 - TRANSPORT INFORMATION

DOT (US)

Proper shipping name	:	PESTICIDE, LIQUID, TOXIC, N.O.S. (Chlorpyrifos, BPMC)
Class Danger Transport	:	6.1
UN Number	:	UN 2902
Packing Group	:	II

IMDG (INTERNATIONAL MARITIME DANGEROUS GOODS)

UN Number	:	UN 2902
Class and Packing group	:	6.1 and II
Proper shipping name	:	PESTICIDE, LIQUID, TOXIC, N.O.S. (Chlorpyrifos, BPMC)
Marine Pollutant	:	Yes (Chlorpyrifos, BPMC)

IATA (INTERNATIONAL AIR TRANSPORT ASSOCIATION)

UN Number	:	UN 2902
Class and Packing group	:	6.1 and II
Proper shipping name	:	PESTICIDE, LIQUID, TOXIC, N.O.S. (Chlorpyrifos, BPMC)

SECTION 15 - REGULATORY INFORMATION

Safety Data Sheet / Safety Data Sheet meets the regulations :

1. Regulation of the Minister of Industry of the Republic of Indonesian number 23 / M-INDPER / 4/2013
2. Minister of Indonesian Labour Decree No. Kep. 187/MEN/1999 about Hazardous Chemicals Control in the Workplace
3. Building Blocks sixth revised edition of the GHS

SECTION 16 - OTHER INFORMATION

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein.

Reference:

1. Building Blocks sixth revised edition of the GHS
2. Regulation of the Minister of Industry of the Republic of Indonesian number 23 / M-INDPER / 4/2013
3. CDS Tomlin. 2009. Manual Pesticide fifteenth Edition. BCPC
4. National Institute of Technology and Evaluation (NITE). 2006. Chlorpyrifos. Japan
5. National Institute of Technology and Evaluation (NITE). 2006. Fenobucarb. Japan