

## MATERIAL SAFETY DATA SHEET

### 1. PRODUCT IDENTIFICATION

CHEMICAL NAME: CHLOROTHALONIL 98% TECH

CHEMICAL FORMULATION: C<sub>8</sub>CL<sub>4</sub>N<sub>2</sub>

COMPANY: NANJING BESTGREEN CHEMICAL CO., LTD

TEL: 86-25-58630266 58630255 58630198

### 2. COMPOSITION AND INGREDIENT INFORMATION

CHLOROTHALONIL 98% TECH

Ingredients not precisely identified are proprietary or non hazardous.

Values are not product specifications.

### 3. HEALTH HAZARD INFORMATION

Physical hazards: None

Health hazards:

Irritant (eye, skin, respiratory passages, skin sensitizer).

### 4. FIRST AID MEASURES

IF IN EYES:

Check for and remove contact lenses. Immediately flush with plenty of water for at least 15 minutes. Hold the eyelids apart during the flushing to ensure rinsing of the entire surface of the eye and lids with water. Obtain immediate medical attention.

IF ON SKIN:

Wash material off the skin with plenty of soap and water. Remove contaminated clothing and footwear. Wash contaminated clothing and decontaminate footwear before reuse. If irritation persists, get medical attention.

IF SWALLOWED:

Do not induce vomiting. If spontaneous vomiting occurs, have victim lean forward with head down to avoid breathing in of vomitus, rinse mouth and administer water. Never give anything by mouth to an unconscious person. Obtain medical attention.

IF INHALED:

Remove victim to fresh air. Until adequate ventilation or other control measures are restored, employ proper respiratory protection. If symptoms develop, seek medical attention.

MEDICAL ADVICE:

Persons having a temporary allergic reaction may respond to treatment with antihistamines or steroid creams and/or systemic steroids.

## **5. FIRE AND EXPLOSION INFORMATION**

Flash point : Nonflammable

Autoignition temperature : Not applicable

Flammable limits (STP) : Noncombustible

EXTINGUISHING MEDIA:

Foam, carbon dioxide, water or dry chemical.

PROTECTIVE EQUIPMENT:

Self-contained breathing apparatus with full facepiece and protective clothing

NFPA RATING

Health 0

Fire 0

Reactivity 0

HMIS RATING

Health 2

Fire 0

Reactivity 0

PPE

Unusual fire and explosion hazards:

May decompose under fire conditions emitting gases and vapors (e.g., hydrogen chloride) which may be toxic and irritating to the respiratory tract.

## **6. ACCIDENTAL RELEASE MEASURES**

PERSONAL PRECAUTIONS:

Wear suitable protective clothing.

ENVIRONMENTAL PRECAUTIONS:

Keep out of lakes, streams or ponds. Do not contaminate waterways by cleaning of equipment or by disposal of wastes.

METHODS FOR CLEANING UP:

Contain spill. Keep out of sewers and drains. Remove as much as possible by absorbing with inert material. Remove any contaminated soil. Place in closed, labeled containers and store in a safe place to await disposal.

## **7. HANDLING AND STORAGE**

REQUIREMENTS FOR STORAGE ROOMS:

Containers should be stored in a cool, dry, well-ventilated area away from flammable materials and sources of heat or flame.

ADDITIONAL INFORMATION:

Do not store near feed, food, or within the reach of children. Open dumping is prohibited.

## **8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

Occupational exposure limits

TLV or suggested control value:

No TLV assigned.

VENTILATION:

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value.

EYE PROTECTION:

Wear eye/face protection.

BODY PROTECTION:

Applicators and other handlers must wear: Long-sleeved shirt and long pants, waterproof gloves and shoes plus socks. Clean clothing on a routine basis. Remove contaminated clothing and wash before rewearing.

RESPIRATORY PROTECTION:

Use MSHA-NIOSH approved respirator for pesticides.

GENERAL PERSONAL PROTECTION:

Persons exposed routinely to this product should shower after completing work each day.

Worker Protection Standard:

Restricted Entry Interval (REI): 48 hours

PPE for early entry: Coveralls, waterproof gloves, shoes plus socks, protective eyewear.

See label for more detailed information.

## **9. PHYSICAL AND CHEMICAL PROPERTIES**

Form : liquid

Physical state : Suspension Concentrate

Color : light gray

Odor : slight

Boiling point : 100 °C

(lowest boiling component)

Melting point : Not applicable

Freezing temperature : -5 °C

Vapor Pressure : 5.72E-07 Torr at 25 °C

Vapour density : Not determined

Bulk density : 10.3 lb/gal

Specific gravity : 1.24

(water = 1)

Solubility : Dispersible in water.

0.6 .. 1.2 ppm

pH-value (quant.) : 6 .. 8

Volatile by volume: : 56 % (v/v)

Evaporation rate : Not determined

## **10. STABILITY AND REACTIVITY INFORMATION**

### HAZARDOUS REACTIONS (CONDITIONS TO AVOID)

Stability: Stable under normal conditions.

Incompatibility: Unstable under highly alkaline conditions.

Hazardous polymerization: None known.

### HAZARDOUS DECOMPOSITION PRODUCTS

May decompose under fire conditions emitting gases and vapors (e.g., hydrogen chloride) which may be toxic or irritating to the respiratory tract.

## **11. TOXICOLOGICAL INFORMATION**

Additional inform. : May cause irritation of the gastrointestinal tract following ingestion of large amounts.

Additional inform. : May cause skin irritation. May be a potential skin sensitizer. On overexposed skin, may cause moderate irritation, redness and flaky rash. Skin rash is seldom observed if the recommended safeguards outlined are followed.

Additional inform. : May be irritant to the respiratory tract. This is rarely observed.

### Skin absorption

Additional inform. : Not readily absorbed through intact skin.

Additional inform. : No evidence of permanent damage has been found.

### Other effects of overexposure:

Studies on rats and mice have suggested that technical chlorothalonil(97%), when fed at high levels in the diet, may have oncogenic potential to these laboratory animals. However, neither chlorothalonil nor its metabolites interact with DNA and thus are not mutagenic. Tumor formation has been related to a non-genotoxic mechanism of action for which threshold levels have been established in rats and mice. Comprehensive dietary and worker exposure studies have shown exposure levels for humans to be well below these threshold levels. In addition, surveillance of chlorothalonil plant workers for over twenty years has not demonstrated any increase in oncogenic potential to humans.

## **12. ECOLOGICAL INFORMATION**

ADDITIONAL INFORMATION ABOUT ECOLOGY NON- Toxic to fish.

## **13. DISPOSAL CONSIDERATIONS**

Disposal Method:

Improper disposal of excess pesticide, pesticide spray or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA regional office for guidance.

Container disposal:

Empty container retains product residue. Triple rinse, or equivalent, empty container, return rinse water to dilution mixture, and dispose of dilution mixture as a hazardous waste if it cannot be disposed of by use according to label instructions. Do not reuse container. Offer it for recycling or reconditioning, or puncture and dispose of in properly permitted landfill. If burned, stay out of smoke.

#### 14. TRANSPORT INFORMATION

ADAPT TO SEA TRANSPORTATION

CHLOROTHALONIL WP ( $\geq 75\%$ )

CLASS: 6.1

UN NO.: 2588

PACKAGING GROUP III

#### 15. REGULATORY INFORMATION

Other regulations, restrictions and prohibitions TSCA (Toxic Substances Control Act) Regulations, 40CFR 710:

This material is listed on the Toxic Substances Control Act Inventory.

SARA 312 Hazards Classification: Acute and chronic health

California Proposition 65: WARNING. This product contains a chemical known to the State of California to cause cancer.

SARA 313 Inventory Ingredients: Chlorothalonil (40.4%)

Regulated under the jurisdiction of the Pest Control Products (PCP) Act:

## 16. OTHER INFORMATION

We assigned NFPA and HMIS ratings to this product based on the hazards of its ingredient(s). Because the customer is most aware of the application of the product, he must ensure that the proper personal protective equipment (PPE) is provided consistent with information contained in the product MSDS.

This information is intended solely for the use of individuals trained in the particular hazard rating system. The information contained herein is offered only as a guide to the handling of this specific material and has been prepared in good faith by technically knowledgeable personnel. It is not intended to be all-inclusive and the manner and conditions of use and handling may involve other and additional considerations. No warranty of any kind is given or implied and we will not be liable for any damages, losses, injuries or consequential damages which may result from the use of or reliance on any information contained herein. This Material Safety Data Sheet is valid for three years. This product is under the jurisdiction of the Pest Control Products Act and is exempt from the requirements for a WHMIS compliant MSDS. Hazardous properties of all ingredients have been considered in the preparation of this MSDS.