



Safety Data Sheet

Issue Date: 11/25/2015

Revision Date: N/a

Version: 1

1. Identification of the Substance/Preparation and of the Company/Undertaking

Product Identifier

Product Name: Consyst WDG

Other means of identification

EPA Pesticide Registration Number: 48234-7

Recommended use of the chemical and restrictions on use

Recommended use: Fungicide

Details of the supplier of the safety data sheet

Company

Regal Chemical Company

600 Branch Dr.,

Alpharetta, GA 30004

Emergency telephone number

Company Telephone: (770) 475-4837

Emergency Telephone: Chemtrec 1-800-262-8200

2. Hazardous Identification

Health Hazards:

Acute toxicity, oral	Category 4
Acute toxicity, inhalation	Category 3
Carcinogenicity	Category 2
Eye irritation	Category 2A
Specific target organ toxicity – Repeated exposure	Category 2

Environmental Hazards:

Hazardous to aquatic environment, acute	Category 2
Hazardous to aquatic environment, chronic	Category 2

Signal Word (OSHA): DANGER

Hazard Statements: Harmful if swallowed. Toxic if inhaled. Suspected of causing cancer. Causes serious eye irritation. May cause damage to organs (kidney, liver, and thyroid) through prolonged or repeated exposure. Toxic to aquatic life with long lasting effects.



Safety Data Sheet

Issue Date: 11/25/2015

Revision Date: N/a

Version: 1

Hazard Symbols:



Precautionary Statements: Wash hands and skin thoroughly after handling. Do not eat, drink, or smoke when using this product. Avoid breathing dust. Use only outdoors or in well-ventilated area. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves/protective clothing/eye protection/face protection. Avoid release to the environment. IF SWALLOWED: Call a poison center/doctor if you feel unwell. Rinse mouth. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor if you feel unwell.

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.

IF EXPOSED OR CONCERNED: Get medical advice/attention. Collect spillage.

Store in a well-ventilated place. Keep container tightly closed. Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

3. Composition/Information on Ingredients

Components	CAS Number	Concentration
Chlorothalonil	1897-45-6	50%
Thiophanate-methyl	23564-05-8	16.66%

*Ingredients not precisely identified are proprietary or non-hazardous. Values are not product specifications.

Synonyms: Mixture containing the fungicides Chlorothalonil and Thiophanate-methyl.

4. First Aid Measures

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.

If Inhaled: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.



Safety Data Sheet

Issue Date: 11/25/2015

Revision Date: N/a

Version: 1

If swallowed: Call a poison control center or doctor immediately for treatment advice. Do not give any liquid to the person. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.

If on Skin or Clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for several minutes. Call a poison control center or doctor for treatment advice.

Most Important symptoms/effects, acute and delayed: eye exposure may cause moderate to severe irritation.

Indication of immediate medical attention and special treatment if needed, if necessary: Respiratory distress, itchy skin, skin or eye irritation.

5. Fire-Fighting Measures

Suitable extinguishing media: Use extinguishing media suitable for surrounding materials. Dry chemical, carbon dioxide, foam, water spray or fog.

Special Fire Fighting Procedures: Firefighters should wear NIOSH/MSHA approved self-contained breathing apparatus and full fire-fighting turn out gear. Dike area to prevent runoff and contamination of water sources. Dispose of fire control water later.

Unusual Fire and Explosion Hazards: If water is used to fight fire, contain runoff, using dikes to prevent contamination of water supplies. Dispose of fire control water later.

Hazardous Decomposition Materials (Under Fire Conditions): May produce gases such as oxides of carbon and nitrogen.

6. Accidental Release Measures

Personal Precautions: Wear appropriate protective gear for the situation. See Personal Protection information in Section 8.

Environmental Precautions: Prevent material from entering public sewer systems or any waterways. Do not flush to drain. Large spills to soil or similar surfaces may necessitate remove of topsoil. The affected area should be removed and placed in an appropriate container for disposal.

Methods for Containment: Dike spill using absorbent or impervious materials such as earth, sand or clay. Collect and contain contaminated absorbent and dike material for disposal.

Methods for Cleanup and Disposal: Avoid creation of dusty conditions. Scrape up and place in appropriate closed container. Wash entire spill area with a detergent slurry, absorb and sweep into container for disposal. Decontaminate tools and equipment following cleanup. See Section 13: DISPOSAL CONSIDERATIONS for more information.

Other information: Large spills may be reportable to the National Response Center (800-424-8802) and to state and/or local agencies.



Safety Data Sheet

Issue Date: 11/25/2015

Revision Date: N/a

Version: 1

7. Handling and Storage

Handling: Do not get in eyes or on clothing or skin. Wear goggles or face-shield when handling. Wear a respirator as specified below under Personal Protection Equipment (PPE). Users should wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing/Personal Protective Equipment (PPE) immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Remove Personal Protective Equipment (PPE) immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

Conditions for safe storage, including any incompatibilities: Store in a cool, dry area in original unopened container. Store in a secured area unavailable to unauthorized persons. Do not contaminate water, food, or feed by storage or disposal.

8. Exposure Controls/Personal Protection

Engineering Controls:

Where engineering controls are indicated by specific use conditions or a potential for excessive exposure, use local exhaust ventilation at the point of generation.

Eye/Face Protection: Not normally required. To avoid contact with eyes, wear chemical goggles or shielded safety glasses. An emergency eyewash or water supply should be readily accessible to the work area.

Skin protection: To avoid contact with skin, wear long pants, long-sleeved shirt, socks and shoes. An emergency shower or water supply should be readily accessible to the work area.

Respiratory Protection: Not normally required. If vapors or mists exceed acceptable levels, wear NIOSH approved air-purifying respirator with cartridges/canisters approved for use against pesticides.

General Hygiene Considerations: Personal hygiene is an important work practice exposure control measure and the following general measures should be taken when working with or handling this material: 1) do not store, use and/or consume foods, beverages, tobacco products, or cosmetics in areas where this material is stored; 2) wash hands and face carefully before eating, drinking, using tobacco, applying cosmetics or using the toilet.

Occupational Exposure Limits:

Chemical Name	OSHA		ACGIH		Unit
	TWA	STEL	TWA	STEL	
Chlorothalonil	NE	NE	NE	NE	
Thiophanate-methyl	NE	NE	NE	NE	

NE = Not Established

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Appearance: Light bluish/gray

Odor: Slightly pungent

Odor Threshold: No data available



Safety Data Sheet

Issue Date: 11/25/2015

Revision Date: N/a

Version: 1

<u>Property</u>	<u>Values</u>
pH:	6.8 (1% w/w solution)
Melting point / Freezing Point	Not available
Boiling Point / Boiling Range	100° C
Flash Point	Not available
Flammability (solid, gas)	Not available
Flammability Limits (% in air)	Not available
Vapor Pressure	5.72 x 10 ⁻⁷ TORR @ 25°C
Vapor Density	Not available
Relative Density	Not available
Solubility(ies)	Dispersible
Partition Coefficient: n-octanol/water	Not available
Autoignition Temperature	Not available
Decomposition Temperature	Not available
Viscosity	Not available
Bulk Density	46 LBs/Cubic Ft

10. Stability and Reactivity

Reactivity: Not reactive

Chemical Stability: Stable under normal conditions

Possibility of Hazardous Reactions: Material is not known to polymerize

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

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

Hazardous Decomposition Products: N/a

11. Toxicological Information

Health effects information

Likely routes of exposure: Eye contact, skin contact.

Symptoms of exposure:

Eye Contact: Human experience indicates this product may cause mild to severe irritation, depending on degree of exposure. No evidence of permanent damage has been found.

Skin Contact: Mildly irritating to skin.

Skin Absorption: Not readily absorbed through contact with skin.

Inhalation: May cause irritation to the respiratory tract, but this is rarely observed.



Safety Data Sheet

Issue Date: 11/25/2015

Revision Date: N/a

Version: 1

Delayed, immediate and chronic effects of exposure: Repeated overexposure / prolonged exposure may cause liver and thyroid damage.

Toxicological Data:

Oral: LD50 > 5.0G/LG

Dermal: LD50 > 2.0G/KG

Inhalation: Rat 4-hr LC50: 0.066 mg/L

Eye Irritation: May cause eye damage. Human experience indicates this product may cause mild to severe irritation, depending on degree of exposure. No evidence of permanent damage has been found.

Skin Irritation: Mildly irritating to skin.

Subchronic (Target Organ) Effects: Repeated overexposure to Chlorothalonil may cause decreased body weight gains and increased liver and kidney weights. Repeated overexposure to thiophanate methyl may cause anemia and affect the liver and thyroid.

Carcinogenicity / Chronic Health Effects: Prolonged overexposure to Chlorothalonil may affect the liver and kidneys. In mice and rat studies, Chlorothalonil produced renal tubular tumors (adenomas and carcinomas) in males of each species and in female rates. The incidences of forestomach papillomas and carcinomas were observed in both species; however, this is not considered toxicologically relevant to humans. The International Agency for Research on Cancer (IARC) lists exposure to Chlorothalonil as a class 2B carcinogen (possibly carcinogenic to humans). Prolonged overexposure to thiophanate methyl may affect the liver and thyroid. Thiophanate methyl produced dose-dependent increases in benign liver tumors in mice and thyroid tumors in rats.

Reproductive Toxicity: Chlorothalonil did not demonstrate reproductive effects in animal studies. Thiophanate methyl did not cause reproductive toxicity in multi-generation studies in rats.

Developmental Toxicity: Animal tests with Chlorothalonil have not demonstrated developmental effects. In a rabbit study with thiophanate methyl, slight skeletal variations and decreased fetal weights were observed at doses that were also toxic to mother animals.

Genotoxicity: Studies indicate that Chlorothalonil did not produce genetic damage in mammalian or bacterial cell cultures or in animal studies. There have been some positive and some negative studies, but the weight of evidence is that thiophanate methyl is not mutagenic.

Assessment of Carcinogenicity:

This product contains substances that are considered to be probably or suspected human carcinogens as follows:

Chemical Name	NTP/IARC/OSHA Carcinogen
Chlorothalonil	IARC (2B)

12. Ecological Information

Environmental Hazards: This pesticide is toxic to aquatic invertebrates and wildlife.

Ecotoxicity:

Data on Chlorothalonil Technical:

96-hour LC50 Bluegill: 60 ppb

96-hour LC50 Rainbow Trout: 47 ppb

48-hour EC50 Daphnia: 68 ppb

48-hour Honey Bee Contact LD50: >181 ug/bee



Safety Data Sheet

Issue Date: 11/25/2015

Revision Date: N/a

Version: 1

Bobwhite Quail 8-day Dietary LC50: >10,000 ppm

Mallard Duck 8-day Dietary LC50: >10,000 ppm

Mallard Duck Oral LD50: >4,640 mg/kg

Data on Thiophanate Methyl Technical:

96-hour LC50 Bluegill: >41 ppm

96-hour LC50 Rainbow Trout: 8.3 ppm

48-hour EC50 Daphnia: 5.4 ppm

96-hour LC50 Mysid: 1.1 ppm

Bobwhite Quail 8-day Dietary LC50: >10,000 ppm

Mallard Duck Oral LD50: >4,640 mg/kg

Environmental Fate: Chlorothalonil is resistant to hydrolysis, photolysis and volatilization and only moderately susceptible to degradation in soil under aerobic conditions. In aerobic soils, the average half-life for chlorothalonil is from 1 to 3 months. Chlorothalonil is somewhat persistent in water when microbial activity is limited and hydrological residence times are long. Aerobic aquatic half-lives range from 2 hours to 8 days. The bioaccumulation potential of chlorothalonil is low. Thiophanate methyl degrades primarily to MBC whether on foliage, in soil or in water in a matter of days. Both photolysis and hydrolysis are important routes of degradation. MBC is microbially degraded, but stable to aqueous photodegradation, stable to hydrolysis at pH values ranging from 5 to 7 and stable to soil photolysis. Metabolism under aerobic and anaerobic conditions in both soil and water proceeds at a slow rate. Under application conditions, average half-lives are about 20-50 days, but may be as short as a few days with repeated use.

13. Disposal Considerations

Waste treatment methods

Disposal of wastes: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

Contaminated packaging: Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Completely empty bag into application equipment. Then dispose of empty in a sanitary landfill or by incineration or as allowed by State and local authorities by burning. If burned, stay out of smoke.

14. Transport Information

DOT

< 55 lbs per completed package: Non regulated

≥ 55 lbs but < 882 lbs per completed package

UN3077, Environmentally hazardous substance, solid, n.o.s, (thiophanate-methyl), 9, III, RQ

> 882 lbs per completed package

UN3077 Environmentally hazardous substance, solid, n.o.s, (thiophanate-methyl), 9, III, RQ, Marine Pollutant



Safety Data Sheet

Issue Date: 11/25/2015

Revision Date: N/a

Version: 1

IMDG

UN3077 Environmentally hazardous substance, solid, n.o.s, (thiophanate-methyl), 9, III, Marine Pollutant

IATA: Non regulated

15. Regulatory Information

This chemical is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticide chemicals. The hazard information required on the pesticide label is reproduced below. The pesticide label also includes other important information, including directions for use.

DANGER. Corrosive, causes irreversible eye damage. May be fatal if inhaled. Harmful if swallowed or absorbed through skin. May be a potential skin sensitizer. Do not get in eyes or on clothing or skin. Wear goggles or face-shield when handling. Wear a respirator as specified below under Personal Protection Equipment (PPE). Do not breathe dust or spray mist. Avoid prolonged contact with skin. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Note to User: This product may produce mild bronchial irritation and temporary irritation of the skin characterized by redness or rash on exposed skin areas. Affected persons should consult a physician.

U.S. Federal Regulations

TSCA Inventory: This product is exempted from TSCA because it is solely for FIFRA regulated use.

SARA Hazard Notification/Reporting:

Hazard Categories Under Criteria of SARA Title III Rules (40 CFR Part 370): Immediate and Delayed

Section 313 Toxic Chemical(s):

Thiophanate-methyl (CAS No. 23564-05-8) 16.66 equivalent by weight in product.

Chlorothalonil (CAS No. 1897-45-6) 50 equivalent by weight in product

Reportable Quantity (RQ) under U.S. CERCLA:

Thiophanate-methyl (CAS No. 23564-05-8) 10 pounds

RCRA Waste Code:

Under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste.

State Information:

Other state regulations may apply. Check individual state requirements.

California Proposition 65: Thiophanate-methyl is known to the state of California to cause developmental effects in males and females. Chlorothalonil is known to the state of California to cause cancer.



Safety Data Sheet

Issue Date: 11/25/2015

Revision Date: N/a

Version: 1

16. Other Information

NFPA:

Health Hazards	3
Flammability	1
Reactivity	0

Hazards Scale: 0 = minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Disclaimer: Regal Chemical Company believes that the information and recommendations contained herein (including data and statements) are accurate as of the date thereof. No warranty of fitness for any particular purpose, warranty of merchantability, or any other warranty, express or implied, is made concerning the information provided herein. The information provided herein relates to the specific product designated and may not be valid where such product is used in combination with any other materials or in any process. Further, since the conditions and methods of use of the product and of the information referred to herein are beyond the control of Regal Chemical Company, Regal Chemical Company expressly disclaims any and all liability as to any results obtained or arising from any use of the product or reliance on such information.