

## SAFETY DATA SHEET

### Section 1: IDENTIFICATION

**Product Name:** THIOVIT JET  
**Design Code:** A8456E  
**Recommended Use:** Fungicide  
**Company Details:** Syngenta Crop Protection Limited  
**Address:** Tower II, Level 7, 110 Symonds Street  
Private Bag 92618,  
Symonds Street  
AUCKLAND  
NEW ZEALAND

**Telephone number:** (weekdays) 09 306 1500  
**Emergency Telephone number:** (24 Hours) 0800 734 607  
**National Poisons & Hazchem Information Centre :** 0800 POISON (0800 764 766)

### Section 2: HAZARDS IDENTIFICATION

**Hazard classification:** 9.1D  
**Priority Identifier:** Not required  
**Secondary Identifiers:** 9.1D = Harmful to aquatic organisms.

### Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

**Mixture:**

**Chemical Identity of ingredients:**

Ingredient	CAS no.	Content (% w/w)
Sulfur	7704-34-9	80
Other ingredients determined not to be hazardous	-	to 100%

### Section 4: FIRST AID MEASURES

**Description of First Aid measures:**

**General Advice:** For advice contact the National Poisons Centre on 0800 POISON (0800 764 766) or a doctor immediately. Begin artificial respiration if the victim is not breathing. Use mouth to nose rather than mouth to mouth. Obtain medical attention.

**If inhaled:** Move the victim to fresh air.  
If breathing is irregular or stopped, administer artificial respiration.  
Keep patient warm and at rest.  
Call a Doctor or the National Poisons Centre immediately.

**In case of skin contact:** Take off all contaminated clothing immediately.  
Wash off immediately with plenty of water.  
If skin irritation persists, call a doctor.  
Wash contaminated clothing before re-use.

**In case of eye contact:** Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.  
Remove contact lenses (if present).  
Immediate medical attention is required.

**If swallowed:** If swallowed seek medical advice immediately and show the container or label.  
DO NOT induce vomiting.

**Important symptoms and effects, both acute and delayed:**  
**Symptoms:** Nonspecific  
No symptoms known or expected.

**Indication of any immediate medical attention and special treatment needed:**  
There is no specific antidote available.  
Treat symptomatically.

## Section 5: FIRE-FIGHTING MEASURES

**Extinguishing media:**  
**Suitable extinguishing media:** Small fires:  
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.  
Large Fires:  
Alcohol resistant foam or water spray.  
**Unsuitable extinguishing media:** Do not use a solid water stream as it may scatter and spread fire.

**Special hazards arising from the substance or mixture:**  
**Specific hazards during fire-fighting:** As the product contains combustible organic components, fire will produce dense black smoke containing hazardous products of combustion (see section 10)  
Exposure to decomposition products may be a hazard to health.

**Advice for firefighters:**  
**Special protective equipment for firefighters:** Wear full protective clothing and self-contained breathing apparatus.  
**Further information:** Do not allow run-off from fire fighting to enter drains or water courses.  
Cool closed containers exposed to fire with water spray.

## Section 6: ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures**  
Refer to protective measures listed in Sections 7 and 8.  
Avoid dust formation.

**Environmental Precautions:**  
Do not flush into surface water or sanitary sewer system.  
If the product contaminates rivers and lakes or drains inform respective authorities.

**Methods and material for containment and cleaning up:**  
Contain spillage, pick up with an electrically protected vacuum cleaner or by wet-brushing and transfer to a container for disposal according to local regulations (see section 13).  
Do not create a powder cloud by using a brush or compressed air.  
Clean contaminated surface thoroughly.

**Reference to other sections:** Refer to disposal considerations listed in Section 13.  
Refer to protective measures listed in sections 7 and 8.

## Section 7: HANDLING AND STORAGE

### **Precautions for Safe handling:**

#### **Advice on safe handling:**

This material is capable of forming flammable dust clouds in air, which, if ignited, can produce a dust cloud explosion.

Flames, hot surfaces, mechanical sparks and electrostatic discharges can serve as ignition sources for this material.

Electrical equipment should be compatible with the flammability characteristics of this material. The flammability characteristics will be made worse if the material contains traces of flammable solvents or is handled in the presence of flammable solvents.

In general personnel handling this material and all conducting equipment should be electrically earthed or grounded.

Consideration should be given to avoiding the use of insulating plastics.

Bulk bags (FIBC) used to contain this material should be Type C or Type D. Type C bags must be electrically grounded before powder is charged to or discharged from the bag. Bag filters used to scavenge dust from material handling processes should be conductive and electrically grounded during use. If metal or fibre drums are used to contain this product, make certain that the metal parts are bonded to the filling equipment and grounded.

Explosion protection is unlikely to be possible due to the increased violence of the dust cloud explosion.

This material could become charged under certain conditions such as pneumatic conveying.

Avoid contact with skin and eyes.

When using do not eat, drink or smoke.

For personal protection see section 8.

### **Conditions for safe storage, including any incompatibilities:**

#### **Requirements for storage area and containers:**

Keep containers tightly closed in a dry, cool and well-ventilated place.

Keep out of the reach of children. Keep away from food, drink and animal feedingstuffs.

### **Specific end use(s)**

#### **Specific use(s)**

For proper and safe use of this product, please refer to the approval conditions laid down on the product label.

## Section 8: EXPOSURE CONTROL / PERSONAL PROTECTION

### **Control Parameters**

#### **Occupational Exposure Limits:**

Contains no substances with occupational exposure limit values.

### **Exposure controls**

#### **Engineering measures:**

Containment and/or segregation is the most reliable technical protection measure if exposure cannot be eliminated.

The extent of these protection measures depends on the actual risks in use.

Maintain air concentrations below occupational exposure standards.

Where necessary, seek additional occupational hygiene advice.

**Personal Protective Protection:**

<b>Eye protection:</b>	No special protective equipment required.
<b>Hand protection:</b>	
<b>Material:</b>	Waterproof gloves
<b>Skin and body protection:</b>	Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place. Remove and wash contaminated clothing before re-use. Wear as appropriate: Cotton overalls.
<b>Respiratory protection:</b>	No personal respiratory protective equipment normally required. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
<b>Protective measures:</b>	The use of technical measures should always have priority over the use of personal protective equipment. When selecting personal protective equipment, seek appropriate professional advice. Personal protective equipment should be certified to appropriate standards.

## Section 9: PHYSICAL AND CHEMICAL PROPERTIES

**Information on basic physical and chemical properties:**

<b>Appearance:</b>	Granules
<b>Colour:</b>	Light brown to dark brown
<b>Odour:</b>	Characteristic
<b>Odour threshold:</b>	No data
<b>pH value</b>	7 - 12, concentration: 1% w/v
<b>Melting point / freezing point:</b>	No data
<b>Initial boiling point and boiling range:</b>	No data
<b>Flash point:</b>	No data
<b>Flammability (solid, gas):</b>	May form combustible dust concentrations in air.
<b>Upper flammability / explosive limits:</b>	No data
<b>Lower flammability / explosive limits:</b>	No data
<b>Vapour pressure:</b>	No data
<b>Vapour Density:</b>	No data
<b>Density:</b>	No data
<b>Bulk density:</b>	1.026 g/cm <sup>3</sup>
<b>Solubility in other solvents:</b>	No data
<b>Partition co-efficient: n-octanol / water:</b>	log Pow: 5.68 (20°C)
<b>Autoignition temperature</b>	> 140°C
<b>Decomposition temperature:</b>	No data
<b>Dynamic viscosity:</b>	No data
<b>Explosive properties:</b>	Not explosive
<b>Oxidising properties:</b>	Not oxidising
<b>Surface tension:</b>	54.8 mN/m (20°C)
<b>Self-heating substances:</b>	The substance or mixture is not classified as self heating

## Section 10: STABILITY AND REACTIVITY

<b>Reactivity:</b> See Section: "Possibility of Hazardous Reactions".
<b>Chemical Stability:</b> The product is stable when used in normal conditions.
<b>Possibility of Hazardous Reactions:</b> No hazardous reactions by normal handling and storage according to provisions.
<b>Conditions to Avoid</b> No decomposition if used as directed.
<b>Incompatible Materials:</b> No substances are known which lead to the formation of hazardous substances or thermal reactions.
<b>Hazardous Decomposition Products:</b> Combustion or thermal decomposition will evolve toxic and irritant vapours. Hazardous combustion products: sulfur oxides, carbon dioxide, carbon monoxide.

## Section 11: TOXICOLOGICAL INFORMATION

<b>HSNO Classifications:</b>
None set

<b>Acute toxicity (product)</b>	
Swallowed:	LD <sub>50</sub> >5000 mg/kg (rat, male and female)
Dermal absorption:	LD <sub>50</sub> >2000 mg/kg (rat, male and female)
Inhaled:	LC <sub>50</sub> (4 h) >2.247 mg/L (rat, male and female)
Aspiration hazard:	<b>Not classified</b>
Respiratory irritation:	<b>Not classified</b>
Skin corrosion / irritation:	<b>NON-IRRITANT</b> (rabbit)
Eye damage / irritation:	<b>IRRITANT</b> (rabbit)
Respiratory or Skin Sensitisation:	<b>NOT A SKIN SENSITISER</b> (guinea pigs - Buehler test)
<b>Chronic / Long Term Effects (active ingredient)</b>	
Germ cell mutagenicity:	Animal testing did not show any mutagenic effects.
Carcinogenicity:	Weight of evidence does not support classification as a carcinogen, In a two-year feeding study of mice, an oncogenic effect was seen in the livers of males and females. The observed tumors do not appear to be relevant for humans.
Reproductive toxicity:	No toxicity to reproduction.
Specific Organ toxicity:	<i>Single exposure:</i> The substance or mixture is not classified as specific target organ toxicant single exposure. <i>Repeated exposure:</i> The substance or mixture is classified as specific target organ toxicant, repeated exposure, Class 6.9B. May cause organ damage from repeated oral exposure at high doses.
Narcotic Effects:	Not classified.

## Section 12: ECOLOGICAL INFORMATION

<b>HSNO Classifications:</b>	
9.1D = Harmful to aquatic organisms	
<b>Ecotoxicity Effects - product</b>	
<b>Acute toxicity to fish:</b>	LC <sub>50</sub> (96 h) = >5000 mg/L ( <i>Cyprinus carpio</i> (Carp))
<b>Toxicity to daphnia and other aquatic invertebrates:</b>	EC <sub>50</sub> (48h) = >1000 mg/L ( <i>Daphnia magna</i> (water flea))
<b>Toxicity to algae:</b>	EC <sub>50</sub> (72 h)= 0.091 mg/L ( <i>Ankistrodesmus bibraianus</i> (green algae))
<b>Ecotoxicity Effects -</b>	
<b>Toxicity to Birds:</b>	LD <sub>50</sub> = >5620 mg/kg diet (bobwhite quail) (product - 95% WP)
<b>Toxicity to soil dwelling organisms:</b>	LC <sub>50</sub> (14 days) = >2000 mg/kg (earthworms) (product)
<b>Toxicity to Bees:</b>	LD <sub>50</sub> (oral) = >100 µg/bee (similar product)
<b>Persistence and degradability:</b>	
<b>Biodegradability:</b>	Not readily biodegradable.
<b>Stability in water:</b>	No data.
<b>Bioaccumulative potential:</b>	
<b>Bioaccumulation:</b>	Does not bioaccumulate.
<b>Mobility in soil:</b>	
<b>Distribution among environmental compartments:</b>	Moderately mobile in soils.
<b>Stability in soil:</b>	Not persistent in soil.
<b>Other adverse effects:</b>	
<b>Results of PBT and vPvB assessment (product):</b>	This substance is not considered to be persistent, bioaccumulating and toxic (PBT).. This substance is not considered to be very persistent and very bioaccumulating (vPvB).

## Section 13: DISPOSAL CONSIDERATIONS

<b>Product Disposal:</b>	DO NOT contaminate ponds, waterways or ditches with chemical or used containers. DO NOT dispose of waste into sewer. Dispose of this product only by using according to the label. Otherwise, dispose of waste at an approved landfill or other approved facility that will ensure the substance does not exceed the tolerable exposure limit (TEL) or environmental exposure limit (EEL), where relevant, or will treat the substance so that it is rendered no longer hazardous.
<b>Container Disposal:</b>	Ensure the container is empty. Triple rinse empty container and add rinsate to the spray tank. Recycle empty container through Agrecovery (0800 247 326, <a href="http://www.agrecovery.co.nz">www.agrecovery.co.nz</a> ). Otherwise crush and bury in a suitable landfill. DO NOT reuse this container for any other purpose.

## Section 14: TRANSPORT INFORMATION

<b>Rail / Road (NZS 5433)</b>	Not classified as a dangerous good.
<b>Sea (IMDG-Code)</b>	Not classified as a dangerous good.
<b>Air (IATA)</b>	Not classified as a dangerous good.

## Section 15: REGULATORY INFORMATION

<b>HSNO Approval Number:</b>	HSR000816
<b>Tolerable Exposure Limit or Environmental Exposure Limit:</b>	No TEL or EEL values are set for this substance at this time
<b>Required Regulatory Controls:</b>	
<b>Certified handler:</b>	No
<b>Tracking:</b>	No
<b>Record Keeping:</b>	No
<b>ACVM Registration:</b>	P5819
<b>ACVM Controls:</b>	See <a href="http://www.foodsafety.govt.nz/industry/acvm">www.foodsafety.govt.nz/industry/acvm</a> for registration conditions.
<b>International Agreements related to the substance (eg, Montreal Protocol, Stockholm Convention or Rotterdam Convention):</b>	Not applicable

## Section 16: OTHER INFORMATION

<b>Date of SDS Preparation / Review:</b>	6 March 2018
<b>Version number of SDS:</b>	5
<b>Key / Legend to abbreviations and acronyms used:</b>	
<p>AICS - Australian Inventory of Chemical Substances;          ANTT - National Agency for Transport by Land of Brazil;          ASTM - American Society for the Testing of Materials;          bw - Body weight;          CMR -Carcinogen, Mutagen or Reproductive Toxicant;          CPR - Controlled Products Regulations;          DIN - Standard of the German Institute for Standardisation;          DSL - Domestic Substances List (Canada);          ECx - Concentration associated with x% response;          ELx - Loading rate associated with x% response;          EmS - Emergency Schedule;          ENCS - Existing and New Chemical Substances (Japan);          ErCx - Concentration associated with x% growth rate response;          ERG - Emergency Response Guide;          GHS - Globally Harmonized System;          GLP - Good Laboratory Practice;          IARC - International Agency for Research on Cancer;          IATA - International Air Transport Association;          IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk;          IC50 - Half maximal inhibitory concentration;          ICAO - International Civil Aviation Organization;          IECSC - Inventory of Existing Chemical Substances in China;          IMDG - International Maritime Dangerous Goods;          IMO - International Maritime Organization;          ISHL - Industrial Safety and Health Law (Japan);          ISO - International Organisation for Standardization;          KECl - Korea Existing Chemicals Inventory;          LC50 - Lethal Concentration to 50 % of a test population;          LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose);</p>	<p>MARPOL - International Convention for the Prevention of Pollution from Ships;          N.O.S. - Not Otherwise Specified;          Nch - Chilean Norm;          NO(A)EC - No Observed (Adverse) Effect Concentration;          NO(A)EL - No Observed (Adverse) Effect Level;          NOELR - No Observable Effect Loading Rate;          NOM - Official Mexican Norm;          NTP - National Toxicology Program;          NZIoC - New Zealand Inventory of Chemicals;          OECD - Organization for Economic Co-operation and Development;          OPPTS - Office of Chemical Safety and Pollution Prevention;          PBT - Persistent, Bioaccumulative and Toxic substance;          PICCS - Philippines Inventory of Chemicals and Chemical Substances;          (Q)SAR - (Quantitative) Structure ActivityRelationship;          REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals;          SADT - Self-Accelerating Decomposition Temperature;          SDS - Safety Data Sheet;          TCSI - Taiwan Chemical Substance Inventory;          TDG - Transportation of Dangerous Goods;          TSCA - Toxic Substances Control Act (United States);          UN - United Nations;          UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods;          vPvB - Very Persistent and Very Bioaccumulative;          WES - Workplace Exposure Standard (Worksafe NZ);          WHMIS - Workplace Hazardous Materials Information System</p>

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the test.

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