

# SAFETY DATA SHEET

## 1 PRODUCT AND COMPANY IDENTIFICATION

**Product name:** SUMI-8 Technical Grade

**Synonyms:** SUMIEIGHT Technical Grade, Diniconazole-M Technical Grade

**Limitations on use:** Active ingredient for crop protection fungicide

**Supplier:**  
**Company Name:** SUMITOMO CHEMICAL COMPANY, LIMITED  
**Contact Department / Section:** Crop Protection Division-International Marketing Dept.  
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USA (International call; collect calls accepted): +1-703-527-3887 (CHEMTREC, USA)

## 2 HAZARDS IDENTIFICATION

### GHS classification:

<b>Physical hazards</b>	Explosives	Not applicable
	Flammable gases	Not applicable
	Flammable aerosols	Not applicable
	Oxidizing gases	Not applicable
	Gases under pressure	Not applicable
	Flammable liquids	Not applicable
	Flammable solids	Classification not possible
	Self-reactive substances and mixtures	Not applicable
	Pyrophoric liquids	Not applicable
	Pyrophoric solids	Not classified
	Self-heating substances and mixtures	Classification not possible
	Substances and mixtures, which in contact with water, emit flammable gases	Not applicable
	Oxidizing liquids	Not applicable
	Oxidizing solids	Not applicable
	Organic peroxides	Not applicable
	Corrosive to metals	Classification not possible
<b>Health hazards</b>	Acute toxicity (Oral)	Category 4
	Acute toxicity (Dermal)	Not classified
	Acute toxicity (Inhalation - gas)	Not applicable
	Acute toxicity (Inhalation - vapour)	Not applicable
	Acute toxicity (Inhalation - dust and mist)	Classification not possible
	Skin corrosion/irritation	Not classified
	Serious eye damage/eye irritation	Not classified
	Respiratory sensitizer	Classification not possible
	Skin sensitizer	Not classified

	Germ cell mutagenicity	Not classified
	Carcinogenicity	Not classified
	Toxic to reproduction	Category 2
	Specific target organ toxicity - single exposure	Category 1 (Systemic Toxicity)
	Specific target organ toxicity - repeated exposure	Category 2 (Liver)
	Aspiration hazard	Classification not possible
<b>Environmental hazards</b>	Acute hazards to the aquatic environment	Category 1
	Chronic hazards to the aquatic environment	Category 1
	Hazardous to the ozone layer	Not classified

## GHS label elements

### Symbol(s):



### Signal words:

Danger

### Hazard Statement(s):

H302: Harmful if swallowed.  
H361: Suspected of damaging fertility or the unborn child.  
H370: Causes damage to systemic toxicity.  
H373: May cause damage to liver through prolonged or repeated exposure.  
H400: Very toxic to aquatic life.  
H410: Very toxic to aquatic life with long lasting effects.

### Precautionary statement

#### Prevention:

P201: Obtain special instructions before use.  
P202: Do not handle until all safety precautions have been read and understood.  
P270: Do not eat, drink or smoke when using this product.  
P260: Do not breathe dust/fume/gas/mist/vapours/spray.  
P273: Avoid release to the environment.  
P264: Wash face and hands thoroughly after handling.  
P281: Use personal protective equipment as required.

#### Response:

P391: Collect spillage.  
P330: Rinse mouth.  
P307+P308+P311+P313: IF exposed or concerned: Get medical advice/attention.  
P301+P312+P314: Get medical advice/attention if you feel unwell.

#### Storage:

P405: Store locked up.

#### Disposal:

P501: Dispose of contents/container appropriately in accordance with local/regional/national/international regulations.

## 3 COMPOSITION / INFORMATION ON INGREDIENTS

Substance or Preparation: Substance

Chemical name	CAS-No.	Concentration
(E)-(R)-1-(2,4-dichlorophenyl)-4,4-dimethyl-2-(1H-1,2,4-triazol-1-yl)pent-1-en-3-ol (ISO common name : diniconazole-M)	83657-18-5	>=74.5%

## 4 FIRST AID MEASURES

<b>Inhalation:</b>	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Administer oxygen if breathing is difficult. Apply artificial respiration if victim is not breathing. Do not use mouth-to-mouth method. Keep victim warm with a blanket etc. Get immediate medical advice/attention. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Effect of exposure to substance may be delayed. Medical observation is indicated.
<b>Skin contact:</b>	Remove/Take off immediately contaminated clothing and shoes. Gently wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention.
<b>Eye contact:</b>	Do not rub eye. Hold eyelids apart. Begin to rinse with water as soon as possible and rinse cautiously for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical advice/attention.
<b>Ingestion</b>	Rinse mouth. Try to induce vomiting by having affected person touch back of the throat with his finger or by giving him syrup of ipecac as directed on the package. Do not give victim anything to drink if he is unconscious. Remove victim to fresh air and keep at rest in a position comfortable for breathing. Keep victim warm with a blanket etc. Get immediate medical advice/attention. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Administer oxygen if breathing is difficult. Apply artificial respiration if victim is not breathing. Effect of exposure to substance may be delayed. Medical observation is indicated.
<b>Personal Protection for First-aid Responders:</b>	Be aware that this product contains Reprotoxic material. Use personal protective equipment as required.

## 5 FIRE-FIGHTING MEASURES

<b>Extinguishing media:</b>	Small fires: Dry chemical powder, carbon dioxide, water spray Large fires: Water spray, fog, dry chemical powder, carbon dioxide, regular foam
<b>Unsuitable extinguishing media:</b>	High pressure water streams
<b>Unusual Fire &amp; Explosion Hazards:</b>	May decompose upon heat or flame and will produce harmful gases (See "10. Stability and reactivity") and fumes. Contact may cause burns to skin and eyes. Effects of contact or inhalation may be delayed. Contact may cause burning of eyes and flow of tears. Inhalation may cause coughing, difficult breathing and nausea. When heated, vapors may form harmful and explosive mixtures with air (See "10. Stability and reactivity") : indoors, outdoors sewers explosion hazards. Containers may explode when heated. Will be easily ignited by ignition sources such as heat, mechanical sparks, static discharge or open flames. Risk of fire and explosion on contact with incompatible material(s). Fine powder, dusts or fumes may form explosive mixtures in air. Runoff and fire-control water may pollute waters.
<b>Special Fire Fighting Procedures:</b>	Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Keep upwind. Keep unauthorized personnel away. If possible, remove containers exposed to heat or cool with water. Dike fire water for later disposal; do not spread the material. Cool containers with flooding quantities of water until well after fire is out.
<b>Protective Measures:</b>	Wear regional, national, and local standards approved fire fighting turnout gear and positive pressure self-contained breathing apparatus (SCBA). Structural firefighters' protective clothing will only provide limited protection from heat, and may not provide adequate protection from the harmful vapors or liquids.

## 6 ACCIDENTAL RELEASE MEASURES

<b>Personal precautions:</b>	Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Use personal protection recommended in "8. Exposure control/personal protection". Isolate spill or leak area for proper distance in all directions. Provide adequate ventilation. Keep upwind. Do not eat, drink or smoke when using this product. Do not breathe dust/fume/gas/mist/vapours/spray. Wash face and hands thoroughly after handling.
<b>Emergency procedures:</b>	Keep all unauthorized personnel upwind away. Consult an expert. Warn habitants surroundings. Navigation lock on waterways. Form large safety zone.
<b>Environmental precautions:</b>	Prevent entry spilled material and runoff from spillage control into waterways, sewers, basements or confined areas. Avoid release to the environment. Collect spillage.
<b>Clean-up methods and materials and containment measures:</b>	ELIMINATE all ignition sources such as heat/sparks/open flames/hot surfaces/static discharges. Stop leak if possible without any risk. Collect scattered product into sealable containers. Moist particle solid at first to prevent scattering if appropriate. Collect fine substance by dust explosion-proof cleaner to prevent scatter. Collect remaining dust and transfer from danger area for later disposal. Use clean non-sparking tools. See "13. Disposal considerations".
<b>Prevention of secondary hazards:</b>	Prevent heat and contact with hot surface. Prepare appropriate extinguishing agent. (See "5. Fire-fighting measures") For large spill, consider initial downwind evacuation for proper distance. Prevent dust cloud or/and dust accumulation.

## 7 HANDLING AND STORAGE

<b>Handling:</b>	
<b>Technical measures:</b>	Use only outdoors or in a well-ventilated area. Keep upwind for handling outdoors as much as possible. Keep unauthorized personnel away. Use only non-sparking tools. Avoid mechanical shock to the cylinder or the vessel. Do not subject to heating/ friction/ shock. Avoid contact with eyes, skin, and clothing. ELIMINATE all ignition sources. Prevent dust cloud and dust accumulation. Take precautionary measures against static electricity such as grounding and bonding, wearing anti-static footwear and clothing, using grounded conductive floor. Do not use low conductive material to equipments and containers including plastic lining, bags and filters. Use dust explosion-proof electrical/ventilating/lighting/equipment. Inerting by nitrogen gas, etc., and explosion pressure venting of confined spaces are requested as dust explosion precautions. If above mentioned precautions are impossible, consult an expert of a specialized company.
<b>Exhausting, Ventilation:</b>	Ventilate by appropriate method. (See "8. Exposure control/personal protection")
<b>Notes:</b>	Install appropriate equipment and wear appropriate protective clothing. (See "8. Exposure control/personal protection")
<b>Safety measures:</b>	Wash hands and face thoroughly after handling. Eating, drinking and smoking in work areas is prohibited. Contaminated work clothing should not be allowed out of the workplace. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust/fume/gas/mist/vapours/spray.

**Storage:**

**Technical measures:** Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep containers tightly closed.

**Conditions:** Well ventilate by proper manner according to regional, national and local regulations. Keep in a fire-proof designed place. Provision to contain effluent from fire extinguishing. Store locked up. Store in a dry place. Protect against direct sunlight. Keep away from incompatible materials. Keep away from food and feedstuffs. Store in an area without drain or sewer access. See "10. Stability and reactivity".

**Packaging materials:** No information.

## 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

**Appropriate engineering controls:** Use a system of local and/or general exhaust to maintain product vapor, mist concentrations in air below occupational exposure standards. Personal protective equipment (PPE) should be chosen only according to specific regulatory requirements. Maintain eye wash fountain and quick-drench facilities in work area. Take precautionary measures against static electricity such as grounding and bonding, wearing anti-static footwear and clothing, using grounded conductive floor.

**Exposure limits:** Not applicable

**Personal protective equipment (PPE):**

**Respiratory Protection:** Breathing protective equipment should be chosen only according to specific regulatory requirements. Wear positive pressure self-contained breathing apparatus (SCBA) in circumstance above occupational exposure standards for dust including emergency procedures and cleaning for accidental release.

**Hand protection:** Hand protective equipment should be chosen only according to specific regulatory requirements. Impervious gloves

**Eye protection:** Eye protective equipment should be chosen only according to specific regulatory requirements. Chemical safety goggles

**Skin protection:** Suitable impervious protective clothing, including protective footwear, gloves, lab coat, apron or coveralls.

**Specific Hygiene Measures:** Avoid inhalation. Avoid contact with skin and eyes. Do not eat, drink or smoke during work. Wash thoroughly after handling and before eating or drinking. Contaminated work clothing should not be allowed out of the workplace. PREVENT GENERATION OF DUST.

## 9 PHYSICAL AND CHEMICAL PROPERTIES

**Physical State:** Crystals and crystalline powder

**Color:** Pale yellowish white

**Odor:** Odorless

**pH:** 5.6 (1%w/v, 20°C)

**Melting Point:** 152.8°C

**Boiling Point:** No data available.

**Flash Point:** No data available.

<b>Autoignition Temperature:</b>	340°C
<b>Flammability Limit - Upper (%)–:</b>	No data available.
<b>Flammability Limit - Lower (%)–:</b>	Particulate explosive lower limit; 120 g/m <sup>3</sup> (< 75 µm)
<b>Vapor pressure:</b>	1.54 × 10 <sup>-6</sup> Pa (25°C)
<b>Vapor density (air=1):</b>	No data available.
<b>Relative density:</b>	No data available.
<b>Density:</b>	1.32 g/mL (20°C)
<b>Solubility in Water:</b>	3.455 mg/l (20°C)
<b>Solubility (other):</b>	<i>n</i> -Hexane: 0.6 g/l (20°C) Methanol: 97 g/l (20°C) Acetone: 96 g/l (20°C) Xylene: 15 g/l (20°C)
<b>Partition coefficient (n-octanol/water):</b>	Log Pow=4.3 (20°C)
<b>Decomposition Temperature:</b>	No data available.
<b>Evaporation Rate:</b>	No data available.

## 10 STABILITY AND REACTIVITY

<b>Stability:</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions:</b>	Strong oxidizers, strong acids, strong bases : fire and explosion hazards.
<b>Conditions to avoid:</b>	Ignition sources (open flame, spark, heat, hot surface, static discharge etc.) incompatibles, heating accumulation of static electricity
<b>Incompatible materials:</b>	Strong oxidizers, strong acids, strong bases
<b>Hazardous decomposition products:</b>	Carbon monoxide, carbon dioxide, hydrocarbons, nitrogen oxides, hydrogen chloride, phosgene, chloride compounds, soot

## 11 TOXICOLOGICAL INFORMATION

<b>Acute Toxicity:</b>	
<b>Oral:</b>	Rat : LD <sub>50</sub> 474 mg/kg Mouse : LD <sub>50</sub> 907 mg/kg
<b>Dermal:</b>	Rat: LD <sub>50</sub> > 5,000 mg/kg Mouse: LD <sub>50</sub> > 5,000 mg/kg
<b>Inhalation:</b>	Dust/Mist: Rat : LC <sub>50</sub> (4 h) > 2.77 mg/l
<b>Skin corrosion/irritation:</b>	Rabbit (skin irritation/corrosion test) : Not irritating
<b>Serious eye damage/eye irritation:</b>	Rabbit (eye irritation test) : Minimally irritating

<b>Respiratory sensitizer/Skin sensitizer:</b>	Guinea pig skin sensitizer (Buehler test) : non-sensitizer
<b>Germ cell mutagenicity:</b>	
<b>in vitro:</b>	Ames test ( <i>S. typhimurium</i> and <i>E. coli</i> ) : negative DNA repair assay ( <i>Bacillus subtilis</i> ) : negative
<b>in vivo:</b>	Chromosome aberration test (Rat, bone marrow) : negative Micronucleus test (Mouse, bone marrow) : negative
<b>Carcinogenicity:</b>	Rat carcinogenicity study (diet) : carcinogenic (thyroid gland) Mouse carcinogenicity study (diet) : carcinogenic (Liver) These types of the tumor in rat or mouse are considered not to be relevant to human cancer.
<b>Reproductive toxicity:</b>	
<b>Teratogenicity:</b>	Rat teratology study (oral) : teratogenic Rabbit teratology study (oral) : teratogenic
<b>Reproduction:</b>	Rat reproductive toxicity study : No effect on reproduction
<b>Specific target organ toxicity - single exposure:</b>	Rat acute toxicity study (oral) : systemic toxicity Mouse acute toxicity study (oral) : systemic toxicity Rat acute toxicity study (dermal) : systemic toxicity
<b>Specific target organ toxicity - repeated exposure:</b>	Rat 90-day repeated dose toxicity study (in diet) : liver - histopathological changes
<b>Aspiration hazard:</b>	No data available.
<b>Other Effects:</b>	No data available.

## 12 ECOLOGICAL INFORMATION

<b>Ecotoxicity:</b>	
<b>Aquatic Organisms:</b>	
<b>Acute toxicity:</b>	
<b>Fish:</b>	Common carp : LC <sub>50</sub> (96 h) 4.0 mg/l Rainbow trout : LC <sub>50</sub> (96 h) 1.58 mg/l
<b>Crustacea:</b>	<i>Daphnia magna</i> : LC <sub>50</sub> (48 h) 7.4 mg/l
<b>Alga:</b>	Green algae : ErC <sub>50</sub> (0-72 h) 0.55 mg/l
<b>Chronic Toxicity:</b>	
<b>Fish:</b>	No data available
<b>Crustacea:</b>	No data available
<b>Alga:</b>	Green algae : NOEC (0 - 72 h) 0.10 mg/l
<b>Others:</b>	No data available.
<b>Biodegradation:</b>	No data available.
<b>Bioaccumulation:</b>	No data available.
<b>Mobility in soil:</b>	No data available.
<b>Hazardous to the ozone layer:</b>	Montreal Protocol. Substances that Deplete the Ozone Layer, as amended not listed to the Montreal Protocol

## 13 DISPOSAL CONSIDERATIONS

<b>Disposal Methods:</b>	Dispose of contents/container appropriately in accordance with local/regional/national/international regulations.
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## 14 TRANSPORT INFORMATION

### International standards:

#### IMDG - International Maritime Dangerous Goods Code:

UN number	UN3077
Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (diniconazole-M)
Class	9
Packing group	III
Subsidiary risk label	-
Marine Pollutant	Yes
EmS No.	F-A; S-F

#### IATA

UN number	UN3077
Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (diniconazole-M)
Class	9
Packing group	III
Subsidiary risk label	-

**Domestic Standard:** In compliance with domestic law.

#### Specific Safety Measures and Conditions for Transportation:

Make sure no damage, corrosion, leaks, and so on on the container(s) before transportation. Load not to fall, drop, damage the product, and make sure to take measures to secure the loaded products. Equip in automobile or ship for transportation with protective equipment (gloves, eyeglasses, mask, etc), and fire extinguisher, tools necessary for emergency.

## 15 REGULATORY INFORMATION

Please follow local regulations.

## 16 OTHER INFORMATION

#### Disclaimer:

The provided information is based on currently available law, materials, information, and data; however, information regarding concentration, physical and chemical properties, and hazard identification is not guaranteed. Precautions for safe handling are intended for a normal condition. In case of specific condition, please handle a product with appropriate safety measures that are compatible to the product usage.