

# SAFETY DATA SHEET

## TEBUCONAZOLE TECHNICAL



### 1: Identification

#### 1.1 Identification

Substance Name	:	Tebuconazole Technical
IUPAC Name	:	(RS)- 1-(4-chlorophenyl)- 4,4-dimethyl-3-(1H, 1,2,4-triazol-1-ylmethyl)pentan-3-ol
CAS No	:	107534-96-3
EC/ List No	:	403-640-2
Formula	:	C <sub>16</sub> H <sub>22</sub> ClN <sub>3</sub> O
Synonyms:	:	1-(4-Chlorophenyl)-4,4-dimethyl-3-(1H-1,2,4-triazol-1-ylmethyl)-3-pentanol Tebuconazole

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture	:	Fungicide
Relevant identified uses	:	To make its formulations for agricultural use only.
Uses advised against:	:	Not known

#### 1.3. Details of the supplier of the safety data sheet

Manufacturer / Supplier	:	NACL Industries Limited
Address	:	Plot No.12-A, 'C' Block, Lakshmi Towers, Nagarjuna Hills, Panjagutta, Hyderabad- 500082. Telangana INDIA
Email Id	:	<a href="mailto:info@naclind.com">info@naclind.com</a>
Web site address	:	<a href="http://www.naclind.com">www.naclind.com</a>
Tele Fax Number	:	T 0091 4033605264

#### 1.4. Emergency telephone Number

Emergency number	:	0091 4033605264 (Monday – Friday - 09.30 hrs to 18.00 hrs)
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### 2: Hazard(s) identification




#### GHS classification

#### 2.1: Classification of the substance or mixture

Acute toxicity	:	H302	Category 4
Reproductive toxicity	:	H361d	Category 2
Hazardous to the aquatic environment, acute hazard	:	H400	Category 1
Hazardous to the aquatic environment, long-term hazard	:	H410	Category 1

For the full text of the H-Statements mentioned in this Section, see Section 16

#### 2.2 Label elements

Hazard Pictograms	:	  
	:	GHS07    GHS 09    GHS 08
Signal word	:	Warning
Hazard Statements	:	H302: Harmful if swallowed

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Precautionary Statements :

H361d: Suspected of damaging the unborn child  
H400: Very toxic to aquatic life  
H410 Very toxic to aquatic life with long lasting effects  
P202: Do not handle until all safety precautions have been read and understood.  
P264: Wash skin thoroughly after handling.  
P270: Do not eat, drink or smoke when using this product.  
P273: Avoid release to the environment.  
P301 + P312: IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell.  
P308 + P313: IF exposed or concerned: Get medical advice/ attention.

### 2.3. Other hazards

Other hazards not contributing to the Classification: None

### 2.4. Unknown acute toxicity

Not applicable

## 3 : Composition/ Information on ingredients

### 3.1 Substance

Substance type : Mono-constituent

Name	Product Identifier	% /w/w	GHS Classification
Tebuconazole	(CAS No) 107534-96-3 (EC No) 403-640-2	95	H302, H361d H400, H 410
Related reaction products	---	5	--

Full text of the hazard classes and H-Statements: see Section 16

### 3.2 Mixture

Not applicable

## 4: First aid measures

### 4.1 Description of first aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid measures after inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell.

First-aid measures after skin contact : Remove contaminated clothes. Wash skin with plenty of water. If skin irritation or rash occurs: Get medical advice/attention.

First-aid measures after eye contact : Rinse immediately with plenty of water. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention if pain, blinking or redness persist.

First-aid measures after ingestion : Immediately make victim drink water (two glasses at most). Do NOT induce vomiting. Call a POISON CENTER or doctor/physician if you feel unwell.

### 4.2. Most important symptoms and effects, both acute and delayed

Harmful Product, prolonged exposure due to inhalation may cause anaesthetic effects and the need for immediate medical assistance.

### 4.3. Indication of any immediate medical attention and special treatment needed

In case of doubt or when symptoms of feeling unwell persist, get medical attention. Never administer anything orally to persons who are unconscious.

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### 5: Firefighting measures

The product does not present any particular risk in case of fire

#### 5.1 Extinguishing media

Suitable extinguishing media : Dry Powder / Foam/ water fog /water spray

Unsuitable extinguishing media : DO NOT use a direct stream of water to extinguish

#### 5.2. Special hazards arising from the substance or mixture

Fire can cause thick, black smoke. As a result of thermal decomposition, dangerous products can form: carbon monoxide, carbon dioxide. Exposure to combustion or decomposition products can be harmful to your health.

#### 5.3 Advice for Firefighters

Firefighting Instructions : LARGE FIRE: Water spray, fog or regular foam. Move containers from fire area if you can do it without risk. Dike fire-control water for later disposal; do not scatter the material. Use water spray or fog; do not use straight streams.  
FIRE INVOLVING TANKS OR CAR/TRAILER LOADS: Fight fire from maximum distance or use unmanned hose holders or monitor nozzles.  
Do not get water inside containers. Cool tanks/drums with water spray/remove them into safety location. Do not move the load if exposed to heat. Take account of toxic fire-fighting water. Use water moderately and if possible collect or contain it.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection

### 6: Accidental release measures

#### 6.1 Personal precautions, protective equipment and emergency procedures

##### 6.1.1 For non-emergency personnel

Protective equipment : Corrosion-proof suit. Refer "Material-Handling" to select protective clothing.

Emergency Procedures : Mark the danger area. Consider evacuation. Close doors and windows of adjacent premises. Stop nearby engines and no smoking. Keep containers closed. Wash contaminated clothes. As an immediate precautionary measure, isolate spill or leak area in all directions for at least 50 meters (150 feet) for liquids and at least 25 meters (75 feet) for solids. SPILL: Increase, in the downwind direction, as necessary, the isolation distance shown above. FIRE: If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions. (ERG, 2016)

##### 6.1.2 For emergency responders

Protective equipment : Equip cleanup crew with proper protection. Wear positive pressure self-contained breathing apparatus (SCBA). Wear chemical protective clothing that is specifically recommended by the manufacturer. It may provide little or no thermal protection. Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations where direct contact with the substance is possible. (ERG, 2016)

Emergency Procedures : Stop leak if safe to do so. Ventilate area

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### 6.2 Environmental Precautions

Prevent soil and water pollution. Prevent spreading in sewers, water bodies.

### 6.3 Methods and material for containment and cleaning up

For Containment	:	Measure the concentration of the explosive gas-air mixture. Provide equipment/receptacles with earthing. Do not use compressed air for pumping over spills.
Methods of cleaning up	:	Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Scoop spilled substance into closing containers. Clean contaminated surfaces with an excess of water. Take collected spill to manufacturer/ authorized disposal facility. Wash clothing and equipment after handling

### 6.4 Reference to other sections

No additional information available

## 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling	:	Comply with the legal requirements. Remove contaminated clothing immediately. Clean contaminated clothing. Keep the substance free from contamination. clean/dry the installation before use.
	:	Do not discharge the waste into the drain. Do not use compressed air for pumping over. Keep container tightly closed. work under local exhaust/ventilation. Exhaust gas must be neutralized.
Hygiene measures	:	Do not eat, drink or smoke when using this product. Wash contaminated clothing before reuse. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work

### 7.2. Conditions for safe storage, including any incompatibilities

Storage temperature	:	Recommended storage atmospheric Normal temperature.
Heat-ignition	:	KEEP SUBSTANCE AWAY FROM: heat sources. ignition sources.
Prohibitions on mixed storage	:	KEEP SUBSTANCE AWAY FROM: combustible materials. Reducing agents, Oxidizing agents. (strong) bases. Esters, halides.
Storage area	:	Store in a dry area. Ventilation at floor level. Keep out of direct sunlight. Meet the legal requirements.
Special rules on packaging	:	SPECIAL REQUIREMENTS: closing. dry. clean. correctly labelled. meet the legal requirements. secure fragile packaging's in liquid containers.
Packaging Materials	:	SUITABLE MATERIAL: HDPE

## 8: Exposure controls/personal protection

### 8.1 Control Parameters

ACGIH	Not listed
OSHA	Not listed
IDLH	Not listed

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### 8.2 Exposure controls

Appropriate engineering controls

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Material should be handled safely

Protective goggles. Gloves. Protective clothing. Face shield. Gas mask with filter.

Personal protective equipment



GIVE EXCELLENT RESISTANCE: butyl rubber. polyethylene/ethylene vinyl alcohol.

Materials for protective clothing

GIVE GOOD RESISTANCE: neoprene. GIVE LESS RESISTANCE: natural rubber. PVC. GIVE POOR RESISTANCE: polyethylene. PVA.

Hand protection

: Gloves.

Eye protection

: Safety glasses with side-shields conforming to EN166. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and body protection

: Complete suit protecting against chemicals.

Respiratory protection

: Use a full face particle respirator type N99 (US) or type P2 (EN 143) respirator cartridges as a backup to engineering controls. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU)

Thermal hazard protection

: None.

### 9: Physical and chemical properties

Physical States	: Solid
Appearance	: White Powder
Color	: <i>White color</i>
Odor	: Strong chemical odour
Odor threshold	: No data available
pH (20 °C)	: 6
Melting Point	: 104.4± 1°C
Freezing point	: No data available
Boiling point	: No data available
Flash Point	: Not applicable
Flammability(solid, gas)	: No data available
Vapor pressure	: 1.9077 x 10 <sup>-5</sup> Pa at 25 °C
Relative vapour density at 20 °C	: No data available
Relative density	: 1.25 g/ml
Specific gravity / density	: No data available
Molecular mass	: 307.8 g/mol
Solubility	: In water 36 mg/l In dichloromethane >200, isopropanol, toluene 50-100, hexane <0.1 (g/l at 20°C).
Partition Coefficient –Log Pow	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity Kinematic	: No data available
Viscosity dynamic	: No data available
Explosion limits	: No data available

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### 9.2 Other information

No data available

### 10: Stability and reactivity

#### 10.1 Reactivity :

Stable under normal conditions

#### 10.2 Chemical stability :

Stable under normal conditions

#### 10.3 Possibility of hazardous reactions :

No dangerous reaction known under conditions of normal use

#### 10.4 Conditions To Avoid :

Heat, flames and sparks. Extremes of temperature may decompose the products. Contact with incompatible material.

#### 10.5 Incompatible materials :

Strong oxidizing or reducing agents

#### 10.6 Hazardous decomposition products:

In the event of fire: see section 5

### 11: Toxicological information

#### 11.1 Information on toxicological effects:

Likely routes of exposure	:	Eye contact, Skin contact, Inhalation, Ingestion
Acute toxicity	:	Acute toxicity, oral Toxic if swallowed
LD <sub>50</sub> Oral toxicity	:	2000-5000 mg/kg body weight(Rat)
LD <sub>50</sub> Dermal toxicity	:	>2000 mg/kg body weight (Rat )
LC <sub>50</sub> Inhalation toxicity	:	1.89 mg/L Exposure time: 4 h (Rat)
Skin corrosion /irritation	:	Non-irritant (Rabbit)
Serious eye damage/irritation	:	Non-irritant (Rabbit)
Respiratory or skin sensitization	:	Weak Sensitizer (Guinea pigs)
Germ cell mutagenicity	:	Non mutagenic
Carcinogenicity	:	No data available
Reproductive toxicity	:	No data available
Specific target organ toxicity(single Exposure)	:	No data available
Specific target organ toxicity(repeated Exposure)	:	No data available
Aspiration hazard	:	No data available

### 12: Ecological information

#### 12.1 Toxicity

Ecology- water Highly toxic to fish and birds

Type	Kind	Test	Value
Birds	Japanese quail ( <i>Coturnix japonica</i> )	LD <sub>50</sub> (oral)	4438 mg/kg
	Bobwhite quail ( <i>Colinus virginianus</i> )	LD <sub>50</sub> (oral)	>5000 mg/kg
Fish	Rainbow trout ( <i>Oncorhynchus mykiss</i> )	LC <sub>50</sub> (96 h)	4.4 mg/l

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Aquatic invertebrates	<i>Daphnia magna</i>	EC <sub>50</sub> (48h)	2.79 mg/l
Aquatic plants	Algae ( <i>Pseudokirchneriella subcapitata</i> )	EC <sub>50</sub> (72h)	3.80 mg/l
Bees	-	LD <sub>50</sub> (Contact) (Oral)	>200 µg/bee >83 µg/bee
Worms	<i>Eisenia foetida</i>	LC <sub>50</sub> (14 d)	1381 mg/kg

### 12.2 Persistency and degradability

**Persistency and degradability** : PBT Substance (Persistent, Bioaccumulative and Toxic) and vPvB (very Persistent and very Bioaccumulative).

### 12.3 Bio-accumulative potential

**Bio-accumulative potential** : No data available

### 12.4 Mobility in soil

**Ecology-soil** : No data available

### 12.5 Other adverse effects

No relevant data found.

## 13: Disposal Considerations

### 13.1. Waste treatment methods

Waste Disposal recommendations

Dispose of product concentrate and diluted product according to local waste regulation authority. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

Containers can be rinsed and offered for recycling (authorized). Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in licensed landfill. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.

## 14: Transport information

### Marine transport(IMDG)

UN number : 3077

Proper shipping name and description : Environmentally Hazardous substance, Solid, n. o. s. (Tebuconazole)

Class : 9

Packaging group : III

Hazard identification Number : --

Marine pollutant : Yes

### Air Transport ICAO/IATA

UN number : 3077

Proper shipping name and description : Environmentally Hazardous substance, Solid, n. o. s. (Tebuconazole)

Class : 9

Packaging group : III

Hazard identification Number : --

Environmental Hazard : Yes

### Department of Transportation(DOT)

UN number : 3077

Proper shipping name : Environmentally Hazardous substance, Solid, n. o. s. (Tebuconazole)

Transport hazard class : 9

Packaging group(DOT) : III

Poison inhalation Hazard : Yes

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Hazard labels(DOT)



## 15. Regulatory Information

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

The product is not affected by the Regulation (EC) No 1005/2009 of the European Parliament and of the Council of 16 September 2009 on substances that deplete the ozone layer.

Product classification according to Annex I of Directive 2012/18/EU (SEVESO III): E1

The product is not affected by Regulation (EU) No 528/2012 concerning the making available on the market and use of biocidal products.

The product is not affected by the procedure established Regulation (EU) No 649/2012, concerning the export and import of dangerous chemicals.

## 16 : Other Information

Hazard Statements	:	H302 Harmful if swallowed
		H361d: Suspected of damaging the unborn child H400: Very toxic to aquatic life H410 Very toxic to aquatic life with long lasting effects
Precautionary Statements	:	P202: Do not handle until all safety precautions have been read and understood. P264: Wash skin thoroughly after handling. P270: Do not eat, drink or smoke when using this product. P273: Avoid release to the environment. P301 + P312: IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. P308 + P313: IF exposed or concerned: Get medical advice/ attention.
<b>NFPA Label</b>		
Diamond	Hazard	<b>Value</b> Description
	Health	2 Hazardous
	Flammability	0 Minimal-will not burn
	Instability	0 Normally stable
	Special	--

(NFPA, 2010)

NACL Industries Ltd

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