



# Safety Data Sheet

SDS No.:  
SDS-IM/FG-P/03

Pesguard FG161

Revision: 2, 1<sup>st</sup> Issue  
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## Section 1: Identification of the Hazardous Chemical and of the Supplier

### 1.1 Product Identifier

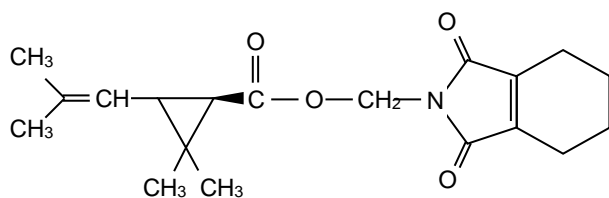
Product Name: d-Tetramethrin (Neo-Pynamin Forte) 4.4% w/w,  
Cyphenothrin (Gokilaht) 13.2% w/w EC

Trade Name: Pesguard FG161

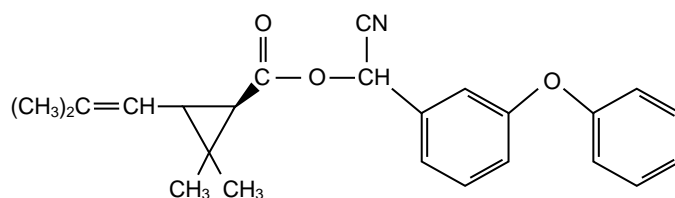
Active Ingredient: 1) d-Tetramethrin (Neo-Pynamin Forte)  
2) Cyphenothrin (Gokilaht)

CAS No. (AI): 1) 7696-12-0 (racemic)  
2) 39515-40-7 (racemic)

Structural Formula:



*d-tetramethrin*



*Cyphenothrin*

Recommended Usage: Public hygiene insecticide

### 1.2 Supplier's Information

Address: Agricultural Chemicals (M) Sdn. Bhd.  
962, Lorong Perusahaan 8  
Taman Perindustrian Perai  
13600 Perai, Pulau Pinang  
Malaysia

Tel.: +6-04-3907988


Fax: +6-04-3905703

Web: [www.agrichem.com.my](http://www.agrichem.com.my)

Emergency Phone: +6-04-3907988

## Section 2: Hazard Identification

Classification: Skin corrosion or irritation, Category 1  
Carcinogenicity, Category 2  
Reproductive Toxicity, Category 1B  
Specific Target Organ Toxicity – Single Exposure:  
Category 1 (Nervous System, Kidneys),  
Category 2 (Liver, Respiratory System),  
Category 3 (Narcotic Effects, Respiratory Tract Irritation)  
Specific Target Organ Toxicity – Repeated Exposure:  
Category 1 (Nervous System, Kidneys),  
Category 2 (Respiratory System)

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Aspiration Hazard, Category 1  
 Hazardous to the Aquatic Environment – Acute Hazard, Category 1  
 Hazardous to the Aquatic Environment – Chronic Hazard, Category 1

Pictogram:



Signal Word: Danger

Hazard Statement:

- |      |  |
|------|--|
| H314 | Causes severe skin burns and eye damage.   |
| H351 | Suspected of causing cancer.   |
| H360 | May damage fertility or the unborn child.  |
| H370 | Causes damage to nervous system or kidneys.                                      |
| H371 | May cause damage to liver or respiratory system.                                 |
| H335 | May cause respiratory irritation.  |
| H336 | May cause drowsiness or dizziness.   |
| H372 | Causes damage to nervous system or kidneys through prolonged or repeat exposure. |
| H373 | May cause damage to respiratory system through prolonged or repeat exposure.     |
| H304 | May be fatal if swallowed and enters airways.                                    |
| 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. |
| P260 | Do not breathe dust/fume/gas/mist/vapours/spray.                          |
| P264 | Wash face and hands thoroughly after handling.                            |
| P270 | Do not eat, drink, or smoke when using this product.                      |
| P271 | Use only outdoors or in a well-ventilated area.                           |
| P273 | Avoid release to the environment.   |
| P280 | Wear protective gloves/eye protection/face protection.                    |
| P281 | Use personal protective equipment as required.                            |

Response:

- |                    |  |
|--------------------|--|
| P301 + P330 + P331 | IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.   |
| P303 + P361 + P353 | IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.                       |
| P304 + P340        | IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.                                 |
| P305 + P351 + P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |



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P307 + P311  
P310  
P314  
P331  
P363  
P391

IF exposed: Call a POISON CENTER or doctor/physician.  
Immediately call a POISON CENTER or doctor/physician.  
Get medical advice/attention if you feel unwell.  
Do NOT induce vomiting.  
Wash contaminated clothing before reuse.  
Collect spillage.

#### Storage:

P403 + P233  
P405

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

#### Disposal

P501

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

### Section 3: Composition and Information of the Ingredients of the Hazardous Chemical

Component	CAS No.	Concentration, %	Hazard Code
3,4,5,6-tetrahydrophthalimidomethyl (1R)-cis,trans-chrysanthemate (ISO common name: d-tetramethrin) (Synonym: Neo-Pynamin Forte)	7696-12-0 (racemic)	4.4	-
(RS)- $\alpha$ -cyano-3-phenoxybenzyl (1R)-cis,trans-chrysanthemate (ISO common name: Cyphenothrin) (Synonym: Gokilaht)	39515-40-7 (racemic)	13.2	-
Emulsifier	-	10	-
Solvent	-	Balance	-

### Section 4: First-aid Measures

#### Inhalation:

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.

#### Skin Contact:

Pay attention to the risk of combustion by fire or other sources of ignition. 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. Wash contaminated clothing before reuse.



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Eye Contact:	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.
Ingestion:	Rinse mouth thoroughly with water and give large amounts of milk or water to people not 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. Do not give victim anything to drink if he is unconscious. Effect of exposure to substance may be delayed. Medical observation is indicated.
Symptoms:	No data available.
Notes to Physician:	Phenobarbital treatment may be effective to convulsion in the setting of acute poisoning, as palliative treatment. Published data indicate vitamin E treatment is effective to skin paresthesia.
Personal Protection for First-aid Responders:	Be aware that this product contains Carcinogen/Mutagen/Reprotoxic (CMR) material. Do not use mouth-to-mouth method; give artificial respiration with the aid of pocket mask equipped with one-way valve or other proper respiratory medical device. Be aware of own risk during rescue. Use personal protective equipment as required.

## Section 5: Fire-fighting Measures

Suitable Extinguishing Media:	Small fires: DRY chemical powder, carbon dioxide, water spray, regular foam. Large fires: Water spray, fog, regular foam.
Specific Hazard During Fire:	Will be easily ignited by ignition sources such as heat, mechanical sparks, static discharge or open flames. Vapours may form explosive mixtures with air. Vapour explosion hazard indoors, outdoors or in sewers. Containers may explode when heated. Runoff and fire-control water may pollute waters. Fire may produce toxic gases. Risk of fire and explosion on contact with incompatible material(s). Inhalation, ingestion or contact with vapours or substance may cause severe injury or death. Contact may cause burning of eyes and flow of tears. Inhalation may cause coughing, difficult breathing and nausea. Effects of contact or inhalation may be delayed.
Special Protective Equipment:	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 vapours or liquids. Wear chemical protective clothing that is specifically recommended by the manufacturer.



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## Section 6: Accidental Release Measures

Personal Precautions:	Wear appropriate protective equipment. Use personal protection recommended in Section 8: Exposure control and personal protection. Isolate spill or leak area for proper distance in all directions. Provide adequate ventilation. Keep upwind. Do not touch or walk through spilled material. Fully encapsulating, vapour protective clothing should be worn for spills and leaks with no fire. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Do not breathe dust/fume /gas/mist/vapours/spray. Wash face and hands thoroughly after handling.
Environmental Precautions:	Prevent entry spilled material and runoff from spillage control into waterways, sewers, basements or confined areas. Avoid release to the environment. Collect spillage.
Method for Cleaning Up:	Eliminate all ignition sources such as heat, sparks, open flames, hot surfaces and static discharge. Consult an expert. Use explosion proof electrical equipment and lighting. Stop leak if possible without any risk. Collect leaking and spilled liquid in sealable containers as far as possible. Use clean tools to collect absorbed material. For large spill, dike far ahead of dry sand or dry vermiculite and place into containers for later disposal. Take up with dry sand, dry vermiculite, or other dry non-combustible absorbent material and place into containers for later disposal.

## Section 7: Handling and Storage

Precautions for Safe Handling:	Eliminate all ignition sources. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static electricity such as grounding and bonding, wearing anti-static footwear and clothing, using grounded conductive floor. Use only outdoors or in a well-ventilated area. Keep upwind for handling outdoors as much as possible. Keep unauthorized personnel away. Do not subject to heating/friction/shock. Avoid contact with eyes, skin, and clothing. Prevent generation of mist. Install appropriate equipment and wear appropriate protective clothing. Use personal protective equipment as required. Wear protective gloves/eye protection/face protection. Do not eat, drink or smoke when using this product. Wash contaminated clothing before reuse.
Conditions for Safe Storage:	Keep away from heat/sparks/open flames/hot surfaces-No Smoking. Take precautionary measures against static discharges. Keep containers tightly closed. Well ventilate by proper manner according to regional, national and local regulations. Protect



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against direct sunlight. Keep away from incompatible materials. Keep away from food and feedstuffs. Keep in a cool place. Store in an area without drain or sewer access. Store locked up in a well-ventilated cool place.

Incompatibles: Strong oxidizers, strong acids, strong bases.

## Section 8: Exposure Control and Personal Protection

Exposure Limit:	No data available.
Engineering Control:	Use a system of local and/or general exhaust to maintain product vapour, mist concentrations in air below occupational exposure standards. Wear gas respirators or positive pressure self-contained breathing apparatus (SCBA) in an emergency (e.g. unavailability of adequate ventilation, generation of mist or aerosol) and in emergency procedures and cleaning for accidental release. 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. Ventilate mist generated by processes at elevated temperature. Wear personal protective equipment (PPE) for handling the product.
Individual Protection Measure:	Avoid inhalation. Wash thoroughly after handling and before eating or drinking. Contaminated work clothing should not be allowed out of the workplace. Avoid contact with skin and eyes. Prevent generation of vapour or mist. Use only outdoors or in a well-ventilated area.
Personal Protective Equipment:	
Eye Protection:	Eye protective equipment should be chosen only according to specific regulatory requirements. Chemical safety goggles or glasses and full-face shield.
Skin Protection:	Hand protective equipment should be chosen only according to specific regulatory requirements, impervious gloves and chemical resistant gloves. Personal protective equipment (PPE) should be chosen only according to specific regulatory requirements. Suitable impervious protective clothing, including protective footwear, gloves, lab coat, apron or coveralls. Use anti-static discharge work wear and footwear.
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.



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## Section 9: Physical and Chemical Properties

Appearance:	Pale yellow liquid
Odour:	Characteristic odour
Odour Threshold:	No data available
pH:	3 - 8 (10% emulsion)
Melting/Freezing Point:	No data available
Initial Boiling Point:	No data available
Boiling Range:	No data available
Flash Point:	72.5°C (Tag closed cup)
Evaporation Rate:	No data available
Flammability:	Combustible
Upper Flammability Limit:	No data available
Lower Flammability Limit:	No data available
Vapour Pressure:	No data available
Vapour Density:	No data available
Relative Density:	0.917 (20°C)
Solubility in Water:	Emulsifiable in water
Partition Coefficient $P_{o/w}$ :	Not applicable
Auto-ignition Temperature:	No data available
Decomposition Temperature:	No data available
Viscosity:	70 cPa.s

## Section 10: Stability and Reactivity

Reactivity:	No data available.
Chemical Stability:	Stable under normal conditions.
Hazardous Reaction:	Strong oxidizers, strong acids, strong bases: fire and explosion hazards. Will form explosive mixtures with air.
Condition to Avoid:	Ignition sources (open flame, spark, heat, hot surface, static discharge etc.), incompatibles, heating, accumulation of static electricity. Keep away from heat/sparks/open flames/hot surfaces/ static discharges - No smoking.
Incompatible Material:	Strong oxidizers, strong acids, strong bases.
Hazardous Decomposition Product:	Carbon monoxide, carbon dioxide, hydrocarbons, nitrogen oxides, hydrogen cyanide, soot.



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## Section 11: Toxicological Information

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### Acute Toxicity:

Oral, LD <sub>50</sub> :	
Rat	2,350 mg/kg
Dermal, LD <sub>50</sub> :	
Rat	>2,000 mg/kg
Inhalation, LC <sub>50</sub> :	
Rat (dust/mist) (4h)	>5,050 mg/m <sup>3</sup>
Skin corrosion/irritation:	
Rabbit (skin corrosion/irritation test)	Severely irritating
Serious eye damage/eye irritation:	
Rabbit (eye corrosion/irritation test)	Not irritating
Respiratory sensitizer / Skin sensitizer:	
Guinea pig skin sensitizer (Buehler test)	Practically non-sensitizer
Germ cell mutagenicity:	No data available
Carcinogenicity:	No data available
Reproductive Toxicity:	
Teratogenicity:	No data available
Reproduction:	No data available
Specific Target Organ Toxicity – Single Exposure:	No data available
Specific Target Organ Toxicity – Repeated Exposure:	No data available

### Component: Neo-Pynamin Forte

Germ cell mutagenicity:	
In vitro:	
Ames test	Negative
Gene mutation test (Chinese hamster cell)	Negative
In vivo:	
Chromosome aberration test (Mouse, intraperitoneal, bone marrow)	Negative
Carcinogenicity:	
Rat carcinogenicity study (testis)	Non-carcinogenic
Mouse carcinogenicity study	Non-carcinogenic
Reproductive Toxicity:	
Teratogenicity:	
Rabbit teratology study	Non-teratogenic
Reproduction:	
Rat 2-generation reproductive toxicity study	No effect on fertility
Specific Target Organ Toxicity – Single Exposure:	
Rat acute toxicity study	Nervous system
Specific Target Organ Toxicity – Repeated Exposure:	
Rat 28-day repeated dose toxicity study (diet)	Liver
Rat 90-day repeated dose toxicity study (Inhalation)	Liver, Kidneys





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## Component: Gokilaht

Germ cell mutagenicity:

In vitro:

Ames test (S.typhimurim & E.coli) Negative

Chromosome aberration test  
(Mammal cultured cell) Negative

Gene mutation test (Mammal cultured cell) Negative

Sister chromatid exchange assay  
(Mammal cultured cell) Negative

In vivo:

Micronucleus test  
(Mouse, oral, bone marrow) Negative

Carcinogenicity:

Rat carcinogenicity study (diet) Non-carcinogenic

Mouse carcinogenicity study (diet) Non-carcinogenic

Reproductive Toxicity:

Teratogenicity:

Rat teratology study (oral) Non-teratogenic

Rabbit teratology study (oral) Non-teratogenic

Reproduction:

Rat 2-generation reproductive toxicity study  
(diet) No effect on fertility

Specific Target Organ Toxicity – Single Exposure:

Rat acute toxicity study (oral) Nervous system

Specific Target Organ Toxicity – Repeated Exposure:

Dog 28-day repeated dose toxicity study  
(oral) Nervous system

Rat 28-day repeated dose toxicity study  
(diet) Nervous system

## Component: Ethyl Benzene

Evaluation on carcinogenicity:

IARC Group 2B

ACGIH Group A3

Reproductive Toxicity:

Teratogenicity:

Rat teratology study (oral) Teratogenic

Mouse teratology study (oral) Teratogenic

Specific Target Organ Toxicity – Single Exposure:

Rat acute toxicity study (Inhalation) Nervous system, respiratory tract irritation

Aspiration hazard:

Aspiration Toxicity (human evidence) Positive

## Component: Xylene

Reproductive Toxicity:

Teratogenicity:

Mouse teratology study (oral) Teratogenic



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Specific Target Organ Toxicity – Single Exposure:

Human evidence

Respiratory tract, liver, kidney

Specific Target Organ Toxicity – Repeated Exposure:

Human evidence

Respiratory tract, nervous system

Aspiration hazard:

Aspiration toxicity, human evidence

Positive

## Component: Mineral Oil

Specific Target Organ Toxicity – Single Exposure:

Human evidence

Kidney, respiratory tract irritation,  
narcotic effect

Specific Target Organ Toxicity – Repeated Exposure:

Human evidence

Kidney

Aspiration hazard:

Aspiration toxicity, human evidence

Positive

## Section 12: Ecological Information

If the data of this product are not available, the data of ingredients is displayed.

Ecotoxicity:

### Component: Neo-Pynamin Forte

Acute Toxicity:

LC<sub>50</sub> (96h) Rainbow Trout

10 µg/l

### Component: Gokilaht

Acute Toxicity:

LC<sub>50</sub> (96h) Rainbow Trout

0.34 µg/l

LC<sub>50</sub> (48h) Daphnia magna

0.43 µg/l

ErC<sub>50</sub> (72h) Green alga

>0.014 mg/l

Chronic Toxicity:

NOECr (0-72h) Green alga

0.0050 mg/l

Persistence and Degradability: No data available.

Bioaccumulative Potential: No data available.

Mobility in Soil: No data available.

Hazardous to the Ozone Layer: Not listed to the Montreal Protocol (substances that deplete ozone layer).

## Section 13: Disposal Information

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



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## Section 14: Transportation Information

<b>Land (ADR/RID)</b>	
Proper Shipping Name	Environmentally Hazardous Substance, Liquid, N.O.S. (tetramethrin, cyphenothrin mixture)
Hazard Class	9
Hazchem Code	-
UN number	3082
Packing Group	III
Label / Mark	9
<b>Sea (IMDG)</b>	
Proper Shipping Name	Environmentally Hazardous Substance, Liquid, N.O.S. (tetramethrin, cyphenothrin mixture)
Hazard Class	9
UN Number	3082
Packing Group	III
Marine Pollutant	Yes
Label	9
Transport Document Name	-
<b>Air (IATA)</b>	
Proper Shipping Name	Environmentally Hazardous Substance, Liquid, N.O.S. (tetramethrin, cyphenothrin mixture)
Hazard Class	9
UN number	3082
Packing Group	III
Label / Mark	9
Transport Document Name	-

### Specific Safety Measures and Conditions for Transportation:

Make sure no damage, corrosion, leaks and so on on the containers 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.

## Section 15: Regulatory Information

Occupational Safety and Health (Classification, Labelling and Safety Data Sheet of Hazardous Chemicals) Regulations 2013

Hazard Classification: Skin corrosion or irritation, Category 1  
Carcinogenicity, Category 2

