

### MATERIAL SAFETY DATA SHEET

PRODUCT : Quinalphos 25% EC

PRODUCT DESIGNATION : Insecticide

#### **Section 1. Product & Company Identification**

Common Name : Quinalphos  
Grade : Formulation  
Active Ingredient : Quinalphos  
Chemical Name of Active Ingredient (IUPAC) : O,O-diethyl O-quinoxalin-2-yl phosphorothioate.  
Chemical Family of A. I. : organothiophosphate insecticide  
Molecular Formula of A. I. :  $C_{12}H_{15}N_2O_3PS$   
Molecular Mass of A. I. : **298.30 g/mol**  
Manufacturer & Supplier : **M/s United Chemicals**  
**Head Office:** B-371, 1<sup>st</sup> Floor, Meera Bagh, New Delhi, India  
**Factory:** 15/1, 15/2, 15/3, industrial Area, Vidisha, M.P.  
Telephone Number : +91-11-25258770

#### **Section 2. Composition / Information on Ingredients**

Name of the Component	Concentration % w/w
Quinalphos a.i	25.00% w/w
Other Ingredients	75.00% w/w
<b>Total</b>	<b>100 % w/w</b>

#### **Section 3. Hazards Identification**

##### **Emergency Overview**

**Appearance and odour :** Reddish brown clear liquid, with typical phosphate ester odour

**Warning Statements :** Keep out of reach of children

### Potential Health Effects

Likely Routs of Exposure : Skin contact, Inhalation and Ingestion

**Eye Contact** :Unlikely to cause irritation to eye

**Skin contact** :Not irritating to skin Ingestion :If swallowed, this substance is considered to be toxic and likely to Cause damages to internal organ

**Inhalation** : Repeated exposure may cause cholinesterase inhibition.

**Environmental Hazards** : The product is an organophosphate insecticide

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### Section 4. First Aid Measures

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**If in Eyes** : Immediately flush with plenty of clean water for 15-20 minutes. Remove contact lenses if present after 5 minutes of washing. Get medical attention

**If on Skin** : Take off contaminated clothing, rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control centre or a doctor

**If Inhaled** : Remove person to fresh air, if required give artificial respiration. Call doctor or poison control centre

**If Swallowed** : Call doctor or poison control centre immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control centre or doctor. Do not give anything by mouth to an unconscious person

**Note to Physician** : Diagnosis can be confirmed estimating cholinesterase activity of blood plasma. Treat symptomatically.

**Antidote** : Administer Atropine Sulfate intravenously in dose of 2-4 mg for an Adult. Administer 2 PAM 1000-2000 mg IM or IV for adult or 15 mg/Kg body weight for children.

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### Section 5. Fire Fighting Measures

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**Hazardous product of Combustion** : On decomposition it may give Ethyl sulphide, Diethyl sulphide and Nitrogen oxides

**Extinguishing Media** : Foam, Dry chemical powder, CO2 type fire extinguisher or Flood with water.

**Unusual Fire and Explosion Hazards** : Exothermic decomposition and violent rupture of containers due to over pressurisation may occur.

**Fire Fighting Equipment :** Evacuate area and fight fire from a safe distance. Approach from upwind to avoid hazardous vapours and decomposition products. Use self-contained breathing apparatus. Used equipments should be thoroughly decontaminated.

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### Section 6. Accidental Release Measures

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**Personal Protection :** Observe all protection and safety precautions. Depending on the magnitude of the spill, use of eye protection, gloves and boots when cleaning up spills are recommended. For PPE see Section 8

**Steps to be taken in case of a spill :** It is recommended to have a predetermined plan / SOP for the handling of spills. Stop the source of the spill immediately, if safe to do so. Contain the spill to prevent any further contamination of soil or water. Keep all bystanders away. Wear full-length clothing and PVC gloves. Shovel and collect the spilled material / contaminated absorbent and place in suitable containers. Thoroughly scrub the floor or other impervious surfaces with a strong industrial detergent and rinse with water.

**Spills in water** should be contained as much as possible by isolation of the contaminated water. The contaminated water must be collected and removed for treatment or disposal through incineration.

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### Section 7. Handling & Storage

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**Handling:** General Handling: Avoid contact with eyes, skin, and clothing. Wash thoroughly with soap and water after handling. Do not swallow. Avoid breathing vapor. Use with adequate ventilation. Wear chemical protective equipment when handling. Keep away from heat, sparks and flame.

**Storage:** The product is stable under normal conditions of warehouse storage. Keep container lids tightly closed. Store below 45 °C. Store in a cool, dry, well- ventilated place away from foodstuffs, animal feed under lock & key.

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### Section 8. Exposure Control, Personal Protection

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**Exposure Limit Values** : Not known

**Personal Protection** : When used in a closed / automated system, personal protection equipment may not be required. When closed system is not possible in case of maintenance, repair, sampling etc, systems must be made nonhazardous before opening

**Respiratory Protection** : The product is likely to pose inhalation exposure concern during normal handling. In the event of an accidental discharge of the material during manufacture or handling which produces a vapours or mist, workers should put on respiratory protection equipment with a universal filter

**Protective Gloves** : Wear heavy duty natural rubber gloves **Eye Protection** : Wear goggles, face shield or safety glasses. It is recommended to have an eye wash fountain available in the work area.

**Skin Protection** : Wear appropriate protective clothing to prevent direct skin contact

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### Section 9. Physical and Chemical Properties

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Appearance / state	: liquid
Colour	: Reddish brown
Odour	: Phosphate ester odour
Boiling point	: 142°C
Vapour pressure	: 0.346 mPa at 20°C
Ph	: NA
Flash Point	: -19°C
Density	: 0.79 g/cm <sup>3</sup>
Water Solubility	: Fully Miscible

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### Section 10. Stability & Reactivity

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**Chemical Stability** : Product is stable under ambient conditions of storage. Always store below 45 °C. **Materials to Avoid** : Avoid contact with alkaline metals.

**Hazardous Decomposition Product** : Refer to section no. 5

**Hazardous Polymerisation** : Do not occur

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### Section 11. Toxicological Information

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<b>Acute Oral Toxicity- LD<sub>50</sub></b>	Rat >71mg/kg
<b>Acute Dermal Toxicity- LD<sub>50</sub></b>	Rabbit: >1750 mg/kg
<b>Acute Inhalation - LC<sub>50</sub></b>	Rat 0.45mg/l (4h)
<b>Eye irritation</b>	Slight Irritating to eyes ( Rabbit)
<b>Skin Irritation</b>	No irritating ( Rabbit)
<b>Skin Sensitization</b>	Non skin sensitizer

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### Section 12. Ecological Information

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<b>Acute Oral Toxicity in Birds</b>	: LD50 Japanese quail 4.3 mg/kg body wt, LD50 mallard duck 37 mg/kg body wt.
<b>Acute Toxicity in Fish</b>	(96 hrs LC50) : LC50 (96 hr) carp 3.63 mg/l, LC50 rainbow trout 0.005 mg/l
<b>Toxicity Honey bees</b>	: LD50 oral 0.07 ug/bee, tropical 0.17 ug/bee

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### Section 13. Disposal Consideration

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If wastes and/or containers cannot be disposed of according to the product label directions, disposal of this material must be in accordance with your local or area regulatory authorities. This information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. If the material as supplied becomes a waste, follow all applicable regional, national and local laws.

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### Section 14. Transport Information

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#### IMDG Classification

Shipping name : Organophosphorous pesticide, liquid, toxic, flammable,

	flash point not less than 23°C
Class	: 6
Packing group	: III
UN number	: 3017
Marine Pollutant	Yes

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### Section 15. Regulatory Information

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<b>Hazards Symbol</b>	: Xn
<b>Risk phrases</b>	: R10,R20/22,R43, R51/53 and R57
<b>Safety phrases</b>	: S1/2, S13, S20/21, S36/37/39,S29/5

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### Section 16. Other Information

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All information and instructions provided in this Material Safety Data Sheet (MSDS) are based on the current state of scientific and technical knowledge at the date indicated on the present MSDS and are resented in good faith and believed to be correct. This information applies to the product as such. In case of new formulations or mixes, it is necessary to ascertain that a new danger will not appear. It is the responsibility of persons on receipt of this MSDS to ensure that the information contained herein is properly read and understood by all people who may use, handle, dispose or in any way come in contact with the product. If the recipient subsequently produces formulations containing this product, it is the recipient's sole responsibility to ensure the transfer of all relevant information from this MSDS to their own MSDS. Accordingly, no guarantee or warrantee expressed or implied is made by UNITED CHEMICALS, as to the results to be obtained based upon the user's use of the information, nor does UNITED CHEMICALS, assume any liability arising out of user's use of the information.

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