



INDOFIL CHEMICALS COMPANY
 KOLSHET, OFF SWAMI VIVEKANAND ROAD,
 AZAD NAGAR, SANDOZ BAUG P.O.,
 THANE – 400 607. MAHARASHTRA (INDIA)
 TEL. NO. : 00-91-22-6799 9100
 FAX NO. : 00-91-22-2589 83 57 / 59

MATERIAL SAFETY DATA SHEET

2-R&D-MSDS- AGRO-FP- 434

| SECTION 1. PRODUCT IDENTIFICATION | | |
|------------------------------------------|-----------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Chemical Name | Flash Quinalphos 25% EC | Company Identification INDOFIL CHEMICALS COMPANY KOLSHET, OFF SWAMI VIVEKANAND ROAD, AZAD NAGAR, SANDOZ BAUG P.O., THANE – 400 607. MAHARASHTRA (INDIA) TEL. NO. : 00-91-22-6799 9100 FAX NO. : 00-91-22-2589 83 57 / 59 |
| Trade Name | Flash 25% EC | |
| Synonyms | Quinalphos | Chemical classification: Organophosphorus Compound |
| IUPAC | O, O-diethyl-O-quinoxanil-2-yl phosphorothioate | |
| CAS Number | 13593-03-8 | |
| Formula | C ₁₁ H ₁₀ O ₃ N ₂ S | |

SECTION 2. COMPOSITION / INFORMATION OF INGREDIENTS

| COMPONENT NAME | CAS REGISTRY NO | CONCENTRATION |
|-----------------------|------------------------|----------------------|
| Quinalphos | 13593-03-8 | 25% |
| Emulsifiers | 13593-03-8 | |
| Solvent | | |

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SECTION 3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Physical state : Liquid
 Colour : Yellow colour EC
 Odor threshold : Mild odour

Harmful or fatal if swallowed - can enter lungs and cause damage
 Contact can cause eye or skin irritation

IMMEDIATE HEALTH EFFECTS

| | |
|---------------------|------------------------------------------------------------------------------------------------------------------------------|
| Eye contact | Flush eyes with plenty of water for at least 15 minutes and see a doctor |
| Skin contact | Remove contaminated clothes, wash skin with soap and water |
| Ingestion | If swallowed dilute by giving 2 glasses of water to drink and call a doctor. Never give by mouth to an unconscious person |
| Inhalation | Move subject to fresh air and rest |

DELAYED OR OTHER HEALTH EFFECTS

| | |
|---------------|-------|
| Target organs | ----- |
|---------------|-------|

An "X" in the box adjacent to the hazard title indicates OSHA Hazard classification. If no "X" is present, the product does not exhibit the hazard as defined in the OSHA Hazard Communication standard (29 CFR 1910.1200)

| | |
|-----------------------------------|-------------------------------------|
| OSHA Health Hazard Classification | OSHA Physical Hazard Classification |
|-----------------------------------|-------------------------------------|

| | | | |
|------------------------------------|---------------------------------------|-------------------------------------------------|-------------------------------------------|
| Toxic <input type="checkbox"/> | Highly Toxic <input type="checkbox"/> | Flammable <input checked="" type="checkbox"/> | Oxidizer <input type="checkbox"/> |
| Irritant <input type="checkbox"/> | Sensitizer <input type="checkbox"/> | Combustible <input checked="" type="checkbox"/> | |
| Corrosive <input type="checkbox"/> | Carcinogenic <input type="checkbox"/> | Explosive <input type="checkbox"/> | Organic Peroxide <input type="checkbox"/> |
| | | Pyrophoric <input type="checkbox"/> | unstable <input type="checkbox"/> |
| | | Organic peroxide <input type="checkbox"/> | water-reactive <input type="checkbox"/> |

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SECTION 4 : FIRST AID MEASURES

| | |
|---------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| Eye | Flush yes with plenty of water for at least 15 minutes and see doctor |
| Skin | Remove contaminated clothes, wash skin with soap and water |
| Ingestion | If swallowed dilute by giving 2 glasses of water to drink and call a doctor. Never give by mouth to an unconscious person. |
| Inhalation | Move subject to fresh air and rest. |
| Notes to physician | |

SECTION 5 : FIRE FIGHTING MEASURES

| | |
|-----------------------------------------|------------------------------------------------------------------------------------------------------------------------|
| NFPA Flammability Classification | ----- |
| NFPA RATINGS | Health: 1 Flammability:1 Reactivity: 1 |
| OSHA classification | |
| Flash point | 26°C (Open Cup) |
| Flash point | Min 43°C (Closed Cup) |
| Flammability (Explosive limits) | |
| Auto ignition Temperature | |
| Hazardous Combustion products | Produces Sulfur dioxide and trioxide |
| Extinguishing Media | Dry chemical powder, CO ₂ , Water, Water spray |
| Protection of Fire Fighters | Wear NIOSH / MSHA approved self-contained breathing apparatus and full protective clothing. |
| Special Properties | Use water spray to cool containers, wear self-contained breathing apparatus. |
| Unusual Hazards | Fire produces toxic and flammable products : Hydrogen sulfide, CS ₂ , Oxides of Sulfur, Nitrogen and Carbon |

SECTION 6 : ACCIDENTAL RELEASE MEASURES

| | |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Protective Measures | Eliminate all sources of ignition in the vicinity of the spill. If this material is released into the work area, evacuate the area immediately. |
| Spill Management | Steps to be taken: Eliminate ignition source. Ventilate area. Contain liquid spill with inert material (sand, earth, etc.). Scoop or shovel solid material into a suitable container. Keep dust to minimum. Flush cleaned area with water to a chemicals sewer. Keep spills and cleaning runoffs out of municipal sewers and open bodies of water. |

SECTION 7 : HANDLING AND STORAGE

| | |
|-----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Handling | <p>A spill can cause an immediate fire or explosion hazard. Keep containers closed and do not handle or store near heat, sparks or any other potential ignition sources. Use only with adequate ventilation and personal protection. Avoid contact with eyes, skin, and clothing. Prevent contact with food and tobacco products. Do not reuse empty bag</p> <p>When performing repairs and maintenance on contaminated equipment, Keep unnecessary persons away from area. Eliminate all potential ignition sources. Use gloves constructed of impervious materials and protective clothing if direct contact is anticipated. Provide adequate ventilation. Promptly remove contaminated clothing. Wash exposed skin thoroughly with soap and water after handling.</p> |
| Storage | <p>Store in a dry shaded, well ventilated area. Do not allow it to become wet or over heated in storage because degradation of the material may occur and fire may result. Provide plenty to ventilation to dissipate heat.</p> |

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

| | |
|--------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Engineering controls | <p>Provide exhaust ventilation or other engineering controls. An emergency eye wash station and safety shower should be located near the work-station.</p> |
| Personal Protective Equipment | <p>Eye Protection: Wear eye protection such as safety glasses, chemical goggles, or face shields if engineering controls or work practices are not adequate to prevent eye contact. Contact lenses should not be worn when working with this chemical.</p> <p>Hand protection: Avoid skin contact. Use gloves. Wash hands with plenty of mild soap and water before eating, drinking, use of toilet facilities or leaving work.</p> <p>Body protection: Avoid skin contact. Wear long-sleeved fire-retardant garments. Additional chemical-resistant protective gear may be required. This may include an apron, boots and additional facial protection.</p> <p>Respiratory Protection: Dust / mist filtering respirator or a NIOSH approved respirator.</p> <p>Work practices: users should wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Remove PPE immediately after handling this product. Wash outside of gloves before removing. As soon as possible wash thoroughly and change into clean clothing. Deluge safety shower and eye wash station should be located in work area.</p> |

Occupational exposure limits

| | | | |
|-------------|-------|--|--|
| Component | Limit | | |
| Quinalphos | NA | | |
| Emulsifiers | NA | | |
| Solvent | NA | | |

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

| | | | |
|-----------------------------------|-------------------|------------------------------|-----------------------|
| Physical state | Liquid | Appearance | Green Coloured Liquid |
| Odor | Malodorous , weak | PH | 5.0 – 6.0 |
| Specific gravity (water=1) | 0.97 – 1.0 | Solubility in water | Emulsifiable |
| Vapor pressure @ (mm Hg) | -- | Vapor density (air=1) | > 1 |
| Viscosity | -- | Boiling point (°C) | 156-232 |
| Melting point | No data | | |

SECTION 10: STABILITY AND REACTIVITY

| | |
|-----------------------------------------|---------------------------------------------------------|
| Chemical stability | Stable |
| Conditions to Avoid | Keep dry and avoid excessive heat and ignition sources. |
| Material Incompatibility | Oxidizing material |
| Hazardous Decomposition Products | Data not available |
| Hazardous Polymerization | Data not available |

SECTION 11: TOXICOLOGICAL INFORMATION

| | |
|---------------------------------------------------------------------------------------------------------------------|-----------------------------|
| Acute Oral toxicity | LD 50 (Oral-Rat) – 71 mg/Kg |
| Acute Dermal toxicity | |
| Acute Inhalation toxicity | |
| Eye irritation: This material is irritating to the eyes Skin irritation: This material is irritating to the skin | |

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SECTION 12: ECOLOGICAL INFORMATION

| | |
|---------------------------|------------------------------------------------------------------------------|
| Ecotoxicity | Contamination of both terrestrial and marine environments should be avoided. |
| Environmental fate | No data |

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Method : Incinerate in approved equipment in accordance with local regulations.

SECTION 14 : TRANSPORT INFORMATION

| | |
|-----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | Not regulated as a hazardous material by any mode of transportation. It is not a marine pollutant. Export water (IMO) : Not regulated Air (ICAO / IATA) : Not regulated |
| DOT Shipping Name | Not regulated |
| DOT Hazard class | Not regulated |
| DOT identification number | No data |
| DOT packing Group | No data |
| DOT additional information | No data |

SECTION 15: REGULATORY INFORMATION

| | |
|-------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TSCA Inventory | No data |
| SARA 311/312 Hazard Identification | Immediate (acute) health effects: yes Delayed (chronic) health effects: yes Reactive: yes This product contains the substances subject to the reporting requirements of SARA title 3, section 313 and 40 CFR part 372. |
| SARA 302/304 Emergency planning and notification | No data |
| SARA 313 Toxic chemical notification and Release reporting | This product contains the following components in concentrations above that are listed as toxic chemicals in 40 CFR part 372 pursuant to the requirements of section 313 of SARA. |
| CERCLA | No data |
| Clean air act (CAA) | Not applicable |

SECTION 16: OTHER INFORMATION

| | | | |
|---------------------|---------------------------------------------------|-----------------|---------------|
| NFPA RATINGS | Health : 1 | Flammability :1 | Reactivity :1 |
| HMIS RATINGS | Health : 1 | Flammability :1 | Reactivity :1 |
| | 0 = Least 1= slight 2= Moderate 3= High 4=Extreme | | |

ABBREVIATIONS

| | |
|-------|---------------------------------------------------------|
| STEL | Short term exposure limit |
| ACGIH | American conference of Government Industrial Hygienists |
| NIOSH | National institute of safety and health |
| SARA | Super fund Amendments and Reauthorization Act |
| TWA | Time weighted average |
| OSHA | Occupational safety and health |
| NFPA | National Fire protection agency |
| HMIS | Hazardous Materials information system |
| RCRA | Resource conservation Recovery act |
| TSCA | Toxic substance Control Act |
| WHMIS | Work place Hazardous Materials information system |
| IRAC | International Agency for Research on Cancer |

MANUFACTURE'S / SUPPLIER'S DATA

| | | | | |
|-----------------------------------------------------------------------------------------------------|--------------------|---------------------------------------------------------|----------------------|------------------------------------------|
| Name of Firm : INDOFIL CHEMICALS COMPANY | | | | |
| Mailing Address : Kolshet, Off Swami Vivekanand Road, Azad nagar, Sandoz Baug P.O. Thane – 400 607. | | Gat No. 194, Village – Gahunje, Tal. Maval, Dist. Pune. | | S-26 (T), MIDC, Bhosari, Pune – 411 026. |
| Telephone 6799 9100 | Telex | | Telephone 22767 5084 | Telephone 22712 2302 |
| Fax 2589 8357 | Telegraphic Code | | Fax 22767 5083 | Fax 22712 9242 |
| Local Bodies Involved | Collector of Thane | | | |

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