



# SAFETY DATA SHEET

## KARAMATE DRY FLO NEOTEC

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Issued: 27/09/2012  
Revision date: 01/02/2013  
Ref: IIL/MCZ/03750/10  
Safety Data Sheet according to  
Regulation (EC) No. 1907/2006

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

- 1.1. **Product identifier** **KARAMATE DRY FLO NEOTEC**
- 1.2. **Relevant identified uses of the substance or mixture and uses advised against** Fungicide
- 1.3. **Details of the supplier of the safety data sheet** Indofil Industries Limited  
Kalpataru Square, 4th Floor,  
Kondivita Road, Off. Andheri Kurla Road,  
Andheri (E), Mumbai 400 059, Maharashtra, India  
Tel : 0091 22 66637373  
Fax: 0091 22 28322275  
E-mail: [mkt-icc@modi.com](mailto:mkt-icc@modi.com)  
Representative Office address: Via Filippo Turati 6 -20121 Milan, Italy
- 1.4. **Emergency telephone number** +44(0)1235 239670 / +44 (0) 1865 407333

### SECTION 2: Hazards identification

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

##### Classification according to Directive 67/548/EEC [DSD]

**Indications of danger :** Harmful, Dangerous for the environment

**R-phrases:** R63: Possible risk of harm to the unborn child  
R43: May cause sensitisation by skin contact  
R50: Very toxic to aquatic organisms

##### Classification according to Regulation (EC) No 1272/2008[CLP/GHS]

**Hazard categories:** Respiratory/skin sensitization: Skin Sens. 1

**Reproductive toxicity:** Repr. 2

**Hazardous to the aquatic environment:** Aquatic Acute 1

**Hazard Statements:** H317: May cause an allergic skin reaction.  
H361d : Suspected of damaging the unborn child.  
H400: Very toxic to aquatic life.

**Precautionary Statements:** Prevention:  
P201 Obtain special instructions before use.  
P202: Do not handle until all safety precautions have been read and understood  
P261: Avoid breathing dust.  
P273 Avoid release to the environment.  
P272: Contaminated work clothing should not be allowed out of the workplace  
P281 Use personal protective equipment as required.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.

Response:  
P308 + P313 If exposed or concerned: Get medical advice/attention.  
P302 + P352: IF ON SKIN: Wash with plenty of soap and water  
P333 + P313: If skin irritation or rash occurs: Get medical advice/attention  
P363: Wash contaminated clothing before reuse.  
P391 Collect spillage.



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Storage:  
P405: Store locked up.

Disposal:  
P501 Dispose of contents/container to State, Local and Federal Regulations

### 2.2 Label elements

#### Label elements according to Directive 67/548/EEC [DSD]

**Classification:** Repr. Cat. 3, Dangerous for the environment

**Symbols:**



**Risk phrases:**  
R63: Possible risk of harm to the unborn child  
R43: May cause sensitisation by skin contact  
R50: Very toxic to aquatic organisms

**Safety phrases:**  
S2: Keep out of the reach of children  
S35: This material and its container must be disposed of in a safe way.  
S36/37: Wear suitable protective clothing and gloves.  
S46: If swallowed, seek medical advice immediately and show this container or label.  
S57: Use appropriate containment to avoid environmental contamination.  
S61: Avoid release to the environment. Refer to special instructions/safety data sheet

#### Label elements according to Regulation (EC) No 1272/2008[CLP/GHS]

**Signal word:** Warning

**Pictograms:** GHS07-GHS08-GHS09



**Hazard statements:**  
H317: May cause an allergic skin reaction.  
H361d : Suspected of damaging the unborn child.  
H400: Very toxic to aquatic life.

**Precautionary statements:**  
P201: Obtain special instructions before use.  
P202: Do not handle until all safety precautions have been read and understood.  
P261: Avoid breathing dust.  
P273: Avoid release to the environment.  
P280: Wear protective gloves/protective clothing/eye protection/face protection.  
P302+P352: IF ON SKIN: Wash with plenty of soap and water.  
P308+P313: IF exposed or concerned: Get medical advice/attention.  
P405: Store locked up.  
P501: Dispose of contents/container to in accordance with local and national regulations



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**2.3 Other hazards:** Risk of dust explosion

### SECTION 3: Composition/information on ingredients

#### Hazardous ingredients

Chemical name	%	CAS	ELINECS	Index Nr. Regulation (EC) No1272/2008 Annex VI	Classification 67/548/EEC [DSD]	Classification Regulation (EC) No 1272/2008 [CLP]
Mancozeb active ingredient content	75	8018-01-7	--	006-076-00-1	[Xn]: Repr. Cat.3 N: R63-43-50	Repr. 2, Skin Sens. 1, Aquatic Acute 1; H361d - H317 -H400
Inert ingredient	25		--	--	--	

*For the complete text of R phrases and H statements, please refer to section 16.*

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

##### In general

Never give fluids or induce vomiting if patient is unconscious or is having convulsions.

##### After Ingestion

Do not induce vomiting. Provided the patient is conscious. wash mouth with water and give plenty of water to drink. Consult a physician. The decision of whether to induce vomiting or not should be made by a physician.

##### After eye contact

Flush eyes thoroughly with water for several minutes. Remove contact lenses after initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist.

##### After skin contact

Immediately wash skin with soap and plenty of water. Consult a physician if irritation develops.

##### After Inhalation

Remove to fresh air. Consult a physician if irritation develops

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

##### Skin contact

There may be mild irritation at the site of contact

##### Eye contact

There may be irritation and redness. The vision may become blurred

##### Ingestion

There may be soreness and redness of the mouth and throat

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

Supportive care. Treatment based on judgement of physician In response to symptoms of patient

#### Emergency Personnel Protection

If potential for exposure exists refer to Section 8 for specific personal protective equipment. First Aid responders should pay attention to self-protection and use the recommended protective clothing.



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#### SECTION 5: Fire-fighting measures

- 5.1. Extinguishing media**  
**Suitable extinguishing media** Water spray. Carbon dioxide. Dry chemical powder. Alcohol or polymer foam  
**Unsuitable extinguishing media:** None or Full water jet.
- 5.2. Special hazards arising from the substance or mixture** During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/ or irritating. Combustion products include: Hydrogen sulphide. Carbon disulphide. Nitrogen oxides. Sulphur oxides. Carbon oxides
- 5.3. Advice for fire-fighters** Wear protective clothing and self-contained breathing apparatus. Run-off from fire control may be a pollution hazard. If area is not too heavily exposed to fire, and if conditions permit, let fire burn itself out, since water may increase the contamination hazard.

#### Additional Information

Do not permit dust to accumulate. Dust layers can be ignited by spontaneous combustion or other ignition sources. When suspended in air dust can pose an explosion hazard. Keep containers cool by spraying with water. Contain runoff to prevent entry into water or drainage systems. Avoid breathing smoke. Work upwind of any spill.

#### SECTION 6: Accidental release measures

- 6.1. Personal precautions, protective equipment and emergency procedures** Eliminate all sources of ignition. Do not create dust. Wear appropriate safety clothing and eye/face protection (see Section 8). Remove contaminated clothing immediately, wash skin area with soap and water, and launder clothing before reuse or dispose of properly.
- 6.2. Environmental precautions** Do not discharge into drains or rivers. Contain the spillage using bunding. Advise water authority if spillage has entered water course or drainage system.
- 6.3. Methods and material for containment and cleaning up** Spills should be cleaned up immediately using care to minimise generation of airborne dust. Do not use equipment in clean-up procedure which may produce sparks. Collect all waste material and place in closable marked containers. For large spills, barricade area and consult manufacturer. Transfer to a closable, labeled salvage container for disposal by an appropriate method.
- 6.4. Reference to other sections** See Section 1 for emergency contact information  
See Section 8 for information on appropriate personal protective equipment.  
See Section 13 for additional waste treatment information

#### SECTION 7: Handling and storage

- 7.1. Precautions for safe handling** Use good personal hygiene. Do not consume or store food in the work area. Proper ventilation is recommended to control dust formation. Transfer equipment should be grounded and bonded to avoid static charge and spark-proof equipment should be used. Wash hands and exposed skin before eating, drinking or smoking and after work.
- 7.2. Conditions for safe storage, including any incompatibilities** Product should be stored in compliance with local regulations. Store in a cool, dry, well-ventilated place in the original container. This product is combustible and should not be exposed to flames or other ignition sources. Do not allow material to become wet or overheated in storage; decomposition, impaired



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activity or fire may result. Do not store near food, drink, animal feeding stuffs, pharmaceuticals, cosmetics or fertilisers. Keep out of reach of children

**7.3. Specific end uses** Used as an agricultural/horticultural fungicide.

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

#### 8.2. Exposure control

##### General measures

##### Control of professional exposure

##### Respiratory protection

Wear dual cartridge respirator for dusts and mists. For most conditions, no respiratory protection should be needed. However, when airborne exposure guidelines and/or comfort levels may be exceeded use an approved air-purifying respirator. For emergency conditions, use an approved positive-pressure self-contained breathing apparatus.

##### Hand /Skin protection

For brief contact, no precautions other than clean body-covering clothing and chemical resistant gloves should be needed. Use chemical resistant gloves classified under standard EN 374: Protective gloves against chemicals and micro-organisms. Examples of preferred glove barrier materials include: Nitrile. Polyvinyl chloride ("PVC" or "vinyl"). Neoprene.

When prolonged or frequently repeated contact may occur, a glove with a protection class of 5 or higher (breakthrough time greater than 240 minutes according to EN 374) is recommended. When only brief contact is expected, a glove with a protection class of 3 or higher (breakthrough time greater than 60 minutes according to EN 374) is recommended.

NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all requisite workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), as well as the instructions/specifications provided by the glove supplier.

When prolonged or frequently repeated contact could occur, use protective clothing impervious to this material. For emergency conditions: Use protective clothing impervious to this material. Selection of specific items will depend on operation

##### Eyes/Face protection

Safety glasses should be sufficient for most operations; however, for dusty operations wear chemical goggles

##### Control of environment exposure

### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

<b>Appearance:</b>	Granules
<b>Colour</b>	Greenish yellow to light yellow
<b>Odour</b>	Sulphurous



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<b>Odour threshold</b>	no data available
<b>pH-value</b>	no data available
<b>Melting/Decomposition temp</b>	Not applicable/decomposes 192-204 deg.C
<b>Boiling point</b>	no data available
<b>Flash Point</b>	no data available
<b>Evaporation rate</b>	no data available
<b>Flammability</b>	not applicable
<b>Upper/lower flammability or explosive limits</b>	no data available
<b>Vapour pressure</b>	negligible
<b>Relative density</b>	no data available
<b>Solubility in water</b>	Dispersible
<b>Partition coefficient: n-octanol/water</b>	no data available
<b>Auto-ignition temperature</b>	no data available
<b>Viscosity</b>	no data available
<b>Explosive properties</b>	no data available
<b>Oxidising properties</b>	no data available
<b>9.2. Other information</b>	

### SECTION 10: Stability and reactivity

<b>10.1. Reactivity</b>	No data available
<b>10.2. Chemical stability</b>	Stable under normal conditions
<b>10.3. Possibility of hazardous reactions</b>	Acids and moisture (in storage). Excessive heat. Open flames
<b>10.4. Conditions to avoid</b>	Acids and moisture (in storage). Excessive heat. Open flames
<b>10.5. Incompatible materials</b>	
<b>10.6. Hazardous decomposition products</b>	None under normal conditions of storage and use. Thermal decomposition products include Hydrogen sulphide. Carbon di Sulphide

### SECTION 11: Toxicological information

<b>Hazard classes<sup>1</sup></b>	
<b>Hazardous ingredients</b>	Assessment largely or completely based on data for active substance.
<b>Acute toxicity</b>	
<b>by ingestion (rat)</b>	Low toxicity if swallowed. The oral LD50 for rats is >5000 mg/kg
<b>by skin contact (rat)</b>	The dermal LD50 for rats is >5000 mg/kg. Prolonged skin contact is unlikely to result in absorption of harmful amounts
<b>by inhalation (rat)</b>	No adverse <i>effects</i> anticipated by this route of exposure incidental to proper handling. The LC50 for inhalation in rats is >5.14 mg/L.
<b>Skin irritation (rabbit)</b>	Essentially non-irritating to the skin.
<b>Eye irritation (rabbit)</b>	May cause eye irritation
<b>Skin sensitization (guinea-pig)</b>	Sensitising to guinea pig skin.
<b>Subchronic toxicity</b>	No data available
<b>Chronic toxicity</b>	
<b>Carcinogenicity</b>	Not classified as: Carcinogenic.

<sup>1</sup> As defined in Regulation (EC) 1272/2008



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**Teratology**  
**Toxicity to reproduction**  
**Mutagenicity effects**

Not classified as: Teratogenic.  
No data available  
Not classified as: Mutagenic.

**Other**

### SECTION 12: Ecological information

#### 12.1. Toxicity: Assessment largely or completely based on data for active ingredient

Aquatic organisms	Fishes	Acute (96h)	Material is toxic to fish on an acute basis (1mg/L < LC <sub>50</sub> < 10mg/L).
	Daphnids	Acute (48h)	Material is toxic to aquatic invertebrates on an acute basis (1mg/L < EC <sub>50</sub> < 10g/L).
	Algae	Acute (72h)	Material is very toxic to algae (IC <sub>50</sub> < 1.0 mg/L).
Terrestrial organisms	Birds	Acute	Material is practically non-toxic to birds on an acute basis (LD <sub>50</sub> > 2000 mg)

#### 12.2. Persistence and degradability

Half-life in soils is dependent on soil type and conditions and is approximately 6-15 days

#### 12.3. Bioaccumulative potential

No data available

#### 12.4. Mobility in soil

No data available

#### 12.5. Results of PBT and vPvB assessment

According to Directive 1907/2006/EC (REACH) none of the substances, contained in this product is a PBT-substance

#### 12.6. Other adverse effects

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

Very toxic to aquatic organisms. Do not contaminate water, food or feed by disposal. Wastes resulting from the use of this product may be disposed of at an approved waste disposal facility  
The user's attention is drawn to the possible existence of regional or national regulations regarding disposal

#### Product/packaging

Dispose of in a regulated landfill site or other method for hazardous or toxic wastes

### SECTION 14: Transport information

#### Land transport (ADR/RID):

UN number 3077  
Transport hazard class(es): 9



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**UN proper shipping name**  
**Packing group:**

Environmentally hazardous substance, solid, n.o.s. Mancozeb (ISO))  
III

Hazard label: 9



Classification code: M1 /  
Limited quantity: 5 kg  
Transport category: 3  
Hazard No: 90  
Tunnel restriction code: E

**Inland waterways transport:**

**UN number:**  
**Transport hazard class(es):**  
**UN proper shipping name**  
**Packing group:**

3077  
9  
Environmentally hazardous substance, solid, n.o.s. Mancozeb (ISO))  
III  
Hazard label:



Classification code: M7

Limited quantity: LQ27

**Marine transport**

**UN number:**  
**Transport hazard class(es):**  
**UN proper shipping name**  
**Packing group:**

3077  
9  
Environmentally hazardous substance, solid, n.o.s. Mancozeb (ISO))  
III  
Hazard label: 9



Classification code: M/  
Limited quantity: 5 kg / 30 kg  
EmS: F-A, S-F

**Air transport**

**UN number:**  
**Transport hazard class(es):**  
**UN proper shipping name**  
**Packing group:**

3077  
9  
Environmentally hazardous substance, solid, n.o.s. Mancozeb (ISO))  
III  
Hazard label: 9







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Limited quantity Passenger: Y956 / 30 kg G  
IATA-packing instructions - Passenger: 956  
IATA-max. quantity – Passenger: 400 kg  
IATA-packing instructions - Cargo: 956  
IATA-max. quantity - Cargo: 400 kg

### SECTION 15: Regulatory information

**15.1. Safety, health and environmental regulations / legislation specific for the substance or mixture**  
1999/13/EC (VOC): 0%

**Employment restrictions:** Observe employment restrictions for young people. Observe employment restrictions for child bearing mothers and nursing  
**Water: contaminating class (D): 2**  
**Other prescriptions** water contaminating  
To avoid risks to man and the environment, comply with the instructions for use.  
For proper and safe use of this product, please refer to the approval conditions laid down on the product label.

**15.2. Chemical safety assessment**

### SECTION 16: Other information

**Risk phrases used in s.2:** Repr. Cat. 3: Category 3 reproductive toxins  
R63: Possible risk of harm to the unborn child  
R43: May cause sensitisation by skin contact  
R50: Very toxic to aquatic organisms

**H-Statements :**  
H317 May cause an allergic skin reaction.  
H361d Suspected of damaging the unborn child.  
H400 Very toxic to aquatic life

**Legal disclaimer:** The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The company, Indofil Industries Limited shall not be held liable for any damage resulting from handling or from contact with the above product.