

# MATERIAL SAFETY DATA SHEET

## Indoxacarb 150 g/L SC

### SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

<b>Product Name:</b>	Indoxacarb 150 g/L SC
<b>Chemical Name:</b>	methyl (4aS)-7-chloro-2,5-dihydro-2-[[[(methoxycarbonyl)[4-(trifluoromethoxy)phenyl]amino]carbonyl]indeno[1,2-e][1,3,4]oxadiazine-4a(3H)-carboxylate
<b>Type:</b>	Insecticide
<b>Molecular formula:</b>	C <sub>22</sub> H <sub>17</sub> ClF <sub>3</sub> N <sub>3</sub> O <sub>7</sub>
<b>Company:</b>	UPI CROPSCIENCE CO., LTD.
<b>Address:</b>	C-312 Hi-Tech Information Plaza No.8 Huatian Road Huayuan Tianjin City 300384 P.R. China.

### SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENTS	CAS NO.	CONTENT, G/L
Indoxacarb	144171-61-9	150
Other impurities	-	850

### SECTION 3: HAZARDS IDENTIFICATION

Harmful if swallowed.

May cause sensitization by skin contact.

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

### SECTION 4: FIRST AID MEASURES

**General advice:** Never give anything by mouth to an unconscious person.

**Inhalation:** Remove person to fresh air. If signs/ symptoms continue, get medical attention.

Artificial respiration and/or oxygen may be necessary.



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**Skin contact:** Take off contaminated clothing and shoes immediately. Wash off immediately with soap and plenty of water. In the case of skin irritation or allergic reaction see a physician. Wash contaminated clothing before re-use.

**Eye contact:** Hold eye open and rinse slowly and gently with water for 15-20 minutes. If eye irritation persists, consult a specialist.

**Ingestion:** Obtain medical attention. Do not induce vomiting unless directed to do so by a physician or poison control center. If victim is conscious: Rinse mouth with water.

### SECTION 5: FIRE-FIGHTING MEASURES

**Suitable extinguishing media:** Water spray, Foam, Dry chemical, Carbon dioxide (CO<sub>2</sub>)

**Extinguishing media which shall not be used for safety reasons:** High volume water jet, (contamination risk),

**Specific hazards during firefighting:** Hazardous decomposition products formed under fire conditions. Carbon dioxide (CO<sub>2</sub>) nitrogen oxides (NO<sub>x</sub>)

**Special protective equipment for fire-fighters:** In the event of fire, wear self-contained breathing apparatus.

**Further information:** Prevent fire extinguishing water from contaminating surface water or the ground water system. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. (On small fires) If area is heavily exposed to fire and if conditions permit, let fire burn itself out since water may increase the area contaminated. Cool containers / tanks with water spray.

### SECTION 6: ACCIDENTAL RELEASE MEASURES

**Personal precautions:** Control access to area. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Ventilate spill area. Take precautionary measures against static discharges. Avoid contact with skin, eyes and clothing. Use personal protective equipment. Refer to protective measures listed in sections 7 and 8.

**Environmental precautions:** Use appropriate container to avoid environmental contamination. Prevent further leakage or spillage if safe to do so. Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system. Local authorities should be advised if significant spillages cannot be contained. If the spill area is porous, the contaminated material must be collected for subsequent treatment or disposal. If the product contaminates rivers and lakes or drains inform respective authorities.

**Methods for cleaning up:** Clean-up methods - small spillage Prevent further leakage or spillage. Soak up with inert absorbent material. Shovel into suitable container for disposal. Clean-up methods - large spillage Prevent further leakage or spillage. Contain spillage, soak up with non-combustible absorbent material, (e.g., sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13). Large spills should be collected mechanically (remove by pumping) for disposal. Collect leaking liquid in sealable (metal/plastic) containers. Collect and contain contaminated absorbent and dike material for disposal.

**Additional advice:** Never return spills in original containers for re-use. Dispose of in accordance with local regulations.

## SECTION 7: HANDLING AND STORAGE

### Handling

Advice on safe handling: Use only according to our recommendations. Wear personal protective equipment. For personal protection see section 8. Use only clean equipment. Provide adequate ventilation. Do not breathe vapors or spray mist. When opening containers, avoid breathing vapors that may be emanating. Prepare the working solution as given on the label(s) and/or the user instructions. Use prepared working solution as soon as possible - Do not store. To avoid spills during handling keep bottle on a metal tray. Wash hands before breaks and immediately after handling the product. Remove and wash contaminated clothing before re-use. Never return unused material to storage receptacle. Avoid exceeding of the given occupational exposure limits (see section 8).

Advice on protection against fire and explosion: Keep away from heat and sources of ignition.

### Storage

Requirements for storage areas and containers: Store in original container. Keep in properly labelled containers. Keep containers tightly closed in a dry, cool and well-ventilated place. Store in a place accessible by authorized persons only. Keep away from food, drink and animal feeding stuffs. Keep out of the reach of children.

Advice on common storage: No special restrictions on storage with other products.

Storage temperature: > 3°C

Other data: Protect from freezing. Stable under recommended storage conditions.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### Engineering measures

Ensure adequate ventilation, especially in confined areas. Contains no substances with occupational exposure limit values.

**Eye Protection:** Safety glasses.

**Clothing:** Long-sleeved shirt and long pants. Shoes plus socks.

**Gloves:** Chemical-resistant such as barrier laminate or Viton.

**Respirator:** When handled in an area where exposure limits may be exceeded, use a respirator with either an organic vapor removing cartridge with a profiler approved for pesticides.

**Hygiene measures:** Handle in accordance with good industrial hygiene and safety practice. Regular cleaning of equipment, work area and clothing. Keep working clothes separately. Contaminated work clothing should not be allowed out of the workplace. Wash hands before breaks and immediately after handling the product. When using do not eat, drink or smoke. Keep away from food, drink and animal feeding stuffs. Remove clothing/PPE immediately if material gets inside. For environmental protection remove and wash all contaminated protective equipment before re-use. Dispose of rinse water in accordance with local and national regulations.

**Protective measures:** The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. All chemical protective clothing should be visually inspected prior to use. Clothing and gloves should be replaced in case of chemical or physical damage or if contaminated. Only protected handlers may be in the area during application.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

**Form:** Suspension liquid which is flowable and measured volume easily.

**Flash point:** >103.3°C

**Oxidizing properties:** The product is not oxidizing.

**Explosive properties:** Not explosive.

**Density:** 1.039 g/cm<sup>3</sup> at 20°C

**Solubility/qualitative:** Dispersible

**Partition coefficient:** N-octanol/water: log Pow: 4.65

## SECTION 10: STABILITY AND REACTIVITY

**Stability:** Stable under normal, dry storage conditions. Slowly decomposed by heat and moisture.

**Conditions to avoid:** No special precautions other than good housekeeping of chemicals.

**Incompatibility:** Incompatible with oxidation materials and acids. The Product is compatible with many other pesticides when using at normal rates. However, a compatibility test is required before using with other products. Do not physically mix concentrate directly with other herbicides or pesticide concentrates; always dilute first.

**Hazardous reactions:** No dangerous reaction known under conditions of normal use. Polymerization will not occur. No decomposition if stored and applied as directed.

## SECTION 11: TOXICOLOGICAL INFORMATION

**Acute oral toxicity:** LD<sub>50</sub>/rat male: 3691 mg/kg; LD<sub>50</sub>/rat female: 751 mg/kg.

**Acute inhalation toxicity:** LC<sub>50</sub>/ 4h/ rat > 2.7 mg/L

**Acute dermal toxicity:** LD<sub>50</sub>/ rat > 5,000 mg/kg

**Skin irritation:** No skin irritation (rabbit)

**Eye irritation:** No eye irritation (rabbit)

**Sensitization:** Maximization Test guinea pig Result: Causes sensitization.

**Repeated dose toxicity:** Inhalation rat: Incoordination mortality red blood cell destruction causing abnormal decrease in number of red blood cells (anemia).

**Mutagenicity assessment:** Indoxacarb (S-Enantiomer): Tests on bacterial or mammalian cell cultures did not show mutagenic effects. Did not cause genetic damage in animals.

**Carcinogenicity assessment:** Indoxacarb (S-Enantiomer): Did not show carcinogenic effects in animal experiments.

**Toxicity to reproduction assessment indoxacarb (S-Enantiomer):** Animal testing did not show any effects on fertility.

## SECTION 12: ECOTOXICOLOGY INFORMATION

### Elimination information (persistence and degradability)

**Biodegradability:** Not readily biodegradable. Estimation based on data obtained on active ingredient.

**Bioaccumulation:** This mixture contains no substance considered to be persistent, bioaccumulating nor toxic (PBT). This mixture contains no substance considered to be very persistent nor very bioaccumulating (vPvB).

### Ecotoxicity effects

**Toxicity to fish:** LC<sub>50</sub>/ 96 h/ *Oncorhynchus mykiss* (rainbow trout): > 8 mg/L.

**Toxicity to algae:** EC<sub>50</sub>/ 72 h/ *Pseudokirchneriella subcapitata* (green algae): > 4.1mg/L.

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Toxicity to daphnia: EC<sub>50</sub>/ 48 h/ Daphnia magna (Water flea): 3.5 mg/L.

**SECTION 13: DISPOSAL CONSIDERATION**

**WASTE:** Pesticide wastes are toxic and hazardous. Dispose of in accordance with applicable and local laws and regulations. Do not discharge or pour into soil, drainage system or bodies of water.

**Contaminated packaging:** Do not re-use empty containers.

**SECTION 14: TRANSPORT INFORMATION****ADR**

Class: 9

Packaging group: III

Classification Coda: M6

HI No: 90

UN-Number: 3082

Labelling No.: 9

Proper shipping name: Environmentally hazardous substance, liquid, n. o. s. (Indoxacarb)

**IATA\_C**

Class: 9

Packaging group: III

UN-Number: 3082

Labelling No.: 9MI

Proper shipping name: Environmentally hazardous substance, liquid, n. o. s. (Indoxacarb)

**IMDG**

Class: 9

Packaging group: III

UN-Number: 3082

Labelling No.: 9

Proper shipping name: Environmentally hazardous substance, liquid, n. o. s. (Indoxacarb)

Marine pollutant: Marine pollutant

**SECTION 15: REGULATORY INFORMATION****Labelling according to EC Directives**

Symbol(s): Xn Harmful



	N	Dangerous for the environment
R-phrases(s):	R22	Harmful if swallowed.
	R43	May cause sensitization by skin contact.
	R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
S-phrases(s):	S2	Keep out of the reach of children
	S13	Keep away from food, drink and animal feeding stuffs.
	S20/21	When using do not eat, drink or smoke.
	S24	Avoid contact with skin.
	S35	This material and its container must be disposed of in a safe way.
	S37	Wear suitable gloves.
	S46	If swallowed, seek medical advice immediately and show this container or label.
	S57	Use appropriate container to avoid environmental contamination.
	SP 1	Do not contaminate water with the product or its container (Do not clean application equipment near surface water/Avoid contamination via drains from farmyards and roads).
Special labelling of certain mixtures: To avoid risks to man and the environment, comply with the instructions for use.		

## SECTION 16: OTHER INFORMATION

The information contained in the Material Safety Data Sheet is correct to the best of our knowledge at the date of issue. It is intended as a guide for the safe use, handling, disposal, storage and transportation and is not intended as a warranty or as a specification. The information relates only to the product specified and may not be suitable for combinations with other materials or in processes other than those specifically described herein.