

**MATERIAL SAFETY DATA SHEET**  
**CARBODAN 10 G**

**1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING**

Product name : Carbodan 10 G  
 Chemical name of active ingredient(s) : 2,3-Dihydro-2,2-dimethylbenzofuran-7-yl methylcarbamate  
 Chemical formula : C<sub>12</sub>H<sub>15</sub>NO<sub>3</sub>  
 Code no. : R-4234.G  
 Manufacturer : **Makhteshim Chemical Works**  
 P.O Box 60  
 Beer-Sheva  
 84100  
 Telephone nr: 09972 86296662  
 Subscription no: 36789 (MAKHTESHIM)

**2. COMPOSITION/INFORMATION ON INGREDIENTS**

Substance/preparation : Preparation

Information on hazardous ingredients \*

Common name	CAS No	%	EC number	Symbol	R-Phrases
Carbofuran	1563-66-2	100 g/kg	216-353-0	T+	R26/28

\* Occupational Exposure Limit(s), if available are listed in section 8

**3. HAZARDS IDENTIFICATION**

Most important hazards : **THIS COMPUND INHIBITS CHOLINESTERASE**  
 Physical/chemical hazards : Prevent heating of material  
 Human health hazards : Very toxic by inhalation and if swallowed  
 : Toxic in contact with skin  
 Environmental hazards : Very toxic to aquatic organisms. Toxic to soil organisms. Toxic to bees

**4. FIRST-AID MEASURES**

Effects and symptoms : Exposure may result in systemic poisoning: excessive sweating, salivation, abdominal pain, nausea, diarrhoea, bradycardia, tachycardia, bronchorrhea, small pupils, tremor and convulsions.

Inhalation : May result in systemic poisoning

Ingestion : May result in systemic poisoning

Skin contact : May result in systemic poisoning

First aid measures

Inhalation : Remove victim to fresh air. Keep victim warm and at rest  
 If breathing is difficult: give oxygen  
 If not breathing: apply artificial respiration  
 Immediately get medical attention

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#### 4. FIRST-AID MEASURES (continued)

Ingestion	: Induce vomiting only if victim is conscious. Never give anything by mouth to an unconscious person. Wash out mouth with water
	: If breathing is difficult: give oxygen
	: If not breathing: apply artificial respiration
	: Immediately get medical attention
Skin contact	: Remove contaminated clothing. Wash off with plenty of water and soap
	: Get medical attention
Eye contact	: Wash off with plenty of water for at least 15 minutes. Get medical attention and consult an eye specialist
Notes to physician	: Carbodan is a potent, rapidly reversible cholinesterase inhibiting Pesticide.
	: Antidote: Atropine sulphate in repeated doses. Watch for lung oedema which may develop in serious cases of poisoning even after 12 hours

#### 5. FIRE FIGHTING MEASURES

##### Extinguishing media:

Suitable	: If involved in fire;
	: In case of a small fire: dry chemical, carbon dioxide
	: In case of a large fire: water spray or alcohol resistant foam
Special fire-fighting procedures	: Fight fires from a protected location
	Dike fire control water for later disposal. Keep container cool by spraying with water
Hazardous thermal (de) composition products	: Emits toxic fumes
Protection of fire fighters	: Wear suitable protective clothing. Self-contained breathing apparatus

#### 6. ACCIDENTAL RELEASE MEASURES

Personal precautions	: Use appropriate protection (see section 8)
Environmental precautions	: Dispose of this material and its container at hazardous or special waste collection point, in accordance with national and regional regulations
	If the product has contaminated surface water, inform the appropriate authorities
Methods for cleaning up	: Collect spilled material with shovel, place into a clean container and cover container loosely
	: Wash away remainder with plenty of water

#### 7. HANDLING AND STORAGE

Handling	: Do not ingest
	: Avoid exposure by inhalation
	: Avoid contact with eyes
	: Avoid clothing and skin contamination
Storage	: Keep away from food, drink and animal feedstuffs. Keep in a cool, dry place. Keep away from sources of ignition – No smoking

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#### 8. EXPOSURE CONTROL / PERSONAL PROTECTION

Engineering measures	: Ventilation required. Facilities storing or utilizing this material should be equipped with an eyewash facility and safety shower
Hygiene measures	: Wash hands thoroughly after handling. Wash clothing separately before re-use.
Occupational exposure limits	: No occupational exposure limits have been established
<u>Personal protective equipment</u>	
Skin and body	: Wear suitable protective clothing
Hands	: Wear suitable gloves
Eyes	: Safety goggles or face shield

#### 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	: Free flowing granules
Colour	: Blue coloured
Odour	: Odourless to faint phenolic odour
Molecular weight	: 221.28
Density	: 135 – 140 g / 100 ml at 20 degrees Celsius
Vapour pressure	: $2 \times 10^{-5}$ mm Hg at a temperature of 30 degrees Celsius
Specific gravity (H <sub>2</sub> O = 1)	: 1.180 at a temperature of 20 degrees Celsius
Solubility in water	: 700 mg / lt at a temperature of 25 degrees Celsius
Flash point	: Not applicable
Explosion properties	: May be explosive after prolonged heating above 75 degrees celsius

#### 10. STABILITY AND REACTIVITY

Stability	: Stable under normal conditions : Decomposes at elevated temperatures
Conditions to avoid	: heat, moisture
Materials to avoid	: Strong oxidizing agents, strong acids, strong bases
Hazardous reactions	: Hazardous polymerization will not occur
Hazardous decomposition products	: CO <sub>2</sub> , CO, methyl amine, methyl isocyanate, NO <sub>x</sub>

#### 11. TOXICOLOGICAL INFORMATION

Acute toxicity - Oral	: LD <sub>50</sub> 8 mg / kg (rat)
Acute toxicity – Dermal	: LD <sub>50</sub> > 2000 mg / kg (rat)
Acute toxicity – Inhalation	: LC <sub>50</sub> = 4.2 ug / lt , 4 hours (rat)
Skin irritation	: Not irritating to skin (rabbit)
Eye irritation	: Not irritating to eyes (rabbit)
Sensitisation	: Non sensitizer (guinea-pig)
Carcinogenicity	: Not carcinogenic
Mutagenicity	: Not mutagenic
Reproduction toxicity	: Not teratogenic in animal experiments. No adverse reproductive effects noted up to 30 ppm dietary levels

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**12. ECOLOGICAL INFORMATION**

Mobility	: May be mobile in soil
Persistence/degradability	:
Bioaccumulative potential	: The product is not expected to bioaccumulate
<u>Common name</u>	: Carbofuran
Persistence/degradability	: Half-life time (t <sup>1/2</sup> ) = 30 – 60 days (soil)
Ecotoxicity	: <u>Birds</u> : LD <sub>50</sub> = 2.5-5 mg / kg
	: <u>Fish</u> : LC <sub>50</sub> = 0.28 mg / lt, 96 hours (rainbow trout)
	: <u>Daphnia</u> : EC <sub>50</sub> (48h) 0,4 g / lt (adult immobilization test)
	: <u>Earthworms</u> : Toxic to all species
	: <u>Bees</u> : Toxic

**13. DISPOSAL CONSIDERATIONS**

Contaminated absorbents, used containers, surplus product etc should be incinerated at 1000 °C at a pesticide incinerator or buried in a designated landfill. Small quantities can be hydrolysed under alkaline conditions with sodium hydroxide. Dilution water should be disposed of where it will not contaminate food, feed or water sources. Always comply with local legislation applying to waste disposal.

**14 TRANSPORT INFORMATION**

International transport regulations

Un number:	2757
<u>Land-Road / Railway</u>	
Proper shipping name	Carbamate pesticide, Solid, Toxic, Carbofuran
ADR/IRD Class	6.1
ADR/RID item number	73 (a)
Packaging group	II
Hazard identification number	66
<u>Inland waterways</u>	2757
Proper shipping name	Carbamate pesticide, Solid, Toxic, Carbofuran
<u>Sea</u>	
Proper shipping name	Carbamate pesticide, Solid, Toxic, Carbofuran
IMDG Class	6.1
IMDG page number	6221
Packaging group	II
Medical first aid guide (MFAG)	505
Emergency schedules (EmS)	6.1-04
<u>Air</u>	
Proper shipping name	Carbamate pesticide, Solid, Toxic, Carbofuran
UN/ID number	2757

National transport regulations

No additional national regulations are known to the supplier

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15. REGULATORY INFORMATION

Classification : EU classification (67/548/EEC-88/379/EEC):

Hazards symbol (s) : T +



**Very toxic**

Risk phrases : R26/28: Very toxic by inhalation and if swallowed  
Safety phrases : S36/37: Wear suitable protective clothing and gloves  
: S 45: In case of accidental contact or if you feel unwell, seek medical advice  
immediately (show the label where possible)  
Contains : Carbofuran 100 g / kg

16. OTHER INFORMATION

Recommended use : Insecticide

The information contained in the 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.

**HISTORY**

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