

SAFETY DATA SHEET

Issue Date 29-May-2017 Revision Date 29-May-2017 Version 1

1. IDENTIFICATION

Product identifier

Product Name ReTurn XL™

Other means of identification

Product Code 83100-52-83979 UN/ID no UN2991 **Synonyms**

Registration Number(s) 83100-52-83979

Recommended use of the chemical and restrictions on use

None

Recommended Use Insecticide Miticide Uses advised against Consumer use

Details of the supplier of the safety data sheet

Manufacturer Address Rotam North America, Inc. 4900 Koger Blvd., Suite 140 Greensboro, NC 27407 Website: msds@rotam.com

Emergency telephone number

Company Phone Number 1-866-927-6826 (toll free)

1-336-346-8802

Emergency Telephone CHEMTREC: 800-424-9300

CHEMTREC: 703-527-3887

POISON CONTROL CENTER: 800-222-1222

NPIC: 1-800-858-7378

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Oral	Category 2
Acute toxicity - Inhalation (Dusts/Mists)	Category 2
Carcinogenicity	Category 1B
Specific target organ toxicity (single exposure)	Category 1
Flammable liquids	Category 3

Label elements

Emergency Overview

Danger

Hazard statements

Fatal if swallowed Fatal if inhaled May cause cancer Causes damage to organs Flammable liquid and vapor



Appearance clear liquid Physical state liquid Odor Pungent

Precautionary Statements - Prevention

Obtain special instructions before use

Do not handle until all safety precautions have been read and understood

Use personal protective equipment as required

Wash face, hands and any exposed skin thoroughly after handling

Do not eat, drink or smoke when using this product

Do not breathe dust/fume/gas/mist/vapors/spray

Use only outdoors or in a well-ventilated area

Wear respiratory protection

Keep away from heat/sparks/open flames/hot surfaces. - No smoking

Keep container tightly closed

Ground/bond container and receiving equipment

Use explosion-proof electrical/ ventilating/ lighting/ equipment

Use only non-sparking tools

Take precautionary measures against static discharge

Keep cool

Precautionary Statements - Response

Specific treatment is urgent (see instructions on this label)

IF exposed: Call a POISON CENTER or doctor/physician

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

Immediately call a POISON CENTER or doctor/physician

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician

Rinse mouth

In case of fire: Use CO2, dry chemical, or foam for extinction

Precautionary Statements - Storage

Store locked up

Store in a well-ventilated place. Keep container tightly closed

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

Not applicable

Other Information

May be harmful in contact with skin. Toxic to aquatic life with long lasting effects.

Unknown acute toxicity

0% of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance

Not applicable

Mixture

Chemical Name	CAS No	Weight-%
Oxamyl	23135-22-0	42.0
Other ingredients	Proprietary	23.0
Methyl alcohol *	67-56-1	10 - 30
Propylene carbonate *	108-32-7	10 - 30

^{*}The exact percentage (concentration) of composition has been withheld as a trade secret. If CAS number is "proprietary", the specific chemical identity and percentage of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

Description of first aid measures

General advice Call a poison control center or doctor for treatment advice. Have the product containers or

label with you when calling a poison control center or doctor, or going for treatment.

Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.

Remove contact lenses, if present and easy to do. Continue rinsing. Call a poison control

center or doctor for treatment advice.

Skin contactWash off immediately with soap and plenty of water while removing all contaminated

clothes and shoes. Wash contaminated clothing before reuse. If skin irritation persists, call

a physician. Call a poison control center or doctor for treatment advice.

Inhalation Move victim to fresh air. If breathing is irregular or stopped, administer artificial respiration.

Call a physician or poison control center immediately. Call a poison control center or

doctor for treatment advice.

Ingestion Call a physician or poison control center immediately. Drink 1 or 2 glasses of water. Do not

induce vomiting without medical advice. Never give anything by mouth to an unconscious

person.

Self-protection of the first aider Ensure that medical personnel are aware of the material(s) involved and take precautions

to protect themselves.

Most important symptoms and effects, both acute and delayed

Symptoms Oxamyl poisoning produces effects associated with anticholinesterase activity which may

include weakness, blurred vision, headache, nausea, abdominal cramps, discomfort in the chest, constriction of pupils, sweating, slow pulse, muscle tremors. Methanol may cause

blindness.

Indication of any immediate medical attention and special treatment needed

Note to physicians ATROPINE IS AN ANTIDOTE: SEEK MEDICAL ATTENTION AT ONCE IN ALL CASES

OF SUSPECTED POISONING.

TREATMENT: Atropine sulfate should be used for treatment. Administer repeated doses, 1.2 to 2.0 mg intravenously every 10 to 30 minutes until full atropinization is achieved. Maintain atropinization until the patient recovers. Artificial respiration or oxygen may be necessary. Allow no further exposure to any cholinesterase inhibitor until recovery is assured. Do not use 2-PAM for exposure to Oxamyl 24% SL alone. However, for exposure to combinations of Oxamyl 24% SL and organophosphorous insecticides, 2-PAM may be used as required to supplement the atropine sulfate treatment. Do not use morphine.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Dry chemical, CO2, water spray or regular foam. Move containers from fire area if you can do it without risk. Dike fire-control water for later disposal. Water spray, fog or regular foam.

Unsuitable extinguishing media None.

Specific hazards arising from the chemical

Thermal decomposition can lead to release of irritating and toxic gases and vapors. Runoff may pollute waterways.

Hazardous combustion products Carbon oxides. Nitrogen oxides (NOx). Oxides of sulfur.

Explosion data

Sensitivity to Mechanical Impact None. Sensitivity to Static Discharge None.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Cool containers / tanks with water spray.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Evacuate personnel to safe areas. Ensure adequate ventilation, especially in confined

areas. Use personal protective equipment as required. Keep people away from and upwind

of spill/leak. Remove all sources of ignition.

For emergency responders

Use personal protection recommended in Section 8. Ventilate the area.

Environmental precautions

Environmental precautions Prevent entry into waterways, sewers, basements or confined areas.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Cover liquid spill with sand, earth or other non-combustible absorbent material. Sweep up

and shovel into suitable containers for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

Do not eat, drink or smoke when using this product. Do not breathe

dust/fume/gas/mist/vapors/spray. Avoid contact with skin, eyes or clothing. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static

electricity).

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of

children. Keep away from food, drink and animal feeding stuffs. Keep in properly labeled

containers. Keep away from sources of ignition - No smoking.

Packaging materials Do not reuse container.

Incompatible materials Strong oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Methyl alcohol	STEL: 250 ppm	TWA: 200 ppm	IDLH: 6000 ppm
67-56-1	TWA: 200 ppm	TWA: 260 mg/m ³	TWA: 200 ppm
	S*	_	TWA: 260 mg/m ³
			STEL: 250 ppm
			STEL: 325 mg/m ³

Legend

S* - Skin Absorber

NIOSH IDLH Immediately Dangerous to Life or Health

Appropriate engineering controls

Engineering Controls Ensure adequate ventilation, especially in confined areas. And. Showers. Eyewash

stations. Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin and body protection Wear suitable protective clothing. Wear protective butyl rubber gloves. Protective shoes or

boots.

Respiratory protection Ensure adequate ventilation, especially in confined areas. If exposure limits are exceeded

> or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local

regulations.

General Hygiene Considerations When using do not eat, drink or smoke. Regular cleaning of equipment, work area and

> clothing is recommended. Avoid contact with skin, eyes or clothing. Wash hands thoroughly after handling. Keep away from food, drink and animal feeding stuffs. Wash contaminated

> > Seta Closed Cup

clothing before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state liquid

Appearance Odor clear liquid Pungent

Color **Odor threshold** No information available blue

Remarks • Method Property Values

No information available

4.48 solution (1 %)

Melting point / freezing point No information available

Boiling point / boiling range No information available Flash point 32.5 °C / 90.5 °F

Evaporation rate No information available

Flammability (solid, gas) No information available Flammability Limit in Air

Lower flammability limit:

Upper flammability limit: No information available

Vapor pressure ~17 mmHa @ 20 °C

No information available Vapor density

Relative density 1.07 g/cm3 Water solubility Miscible in water

Solubility in other solvents No information available **Partition coefficient** No information available **Autoignition temperature** No information available **Decomposition temperature** No information available

Kinematic viscosity 2.9 mm2/s @ 40 °C Dynamic viscosity 3.1 mPas @ 40 °C

Explosive properties Not an explosive **Oxidizing properties** Not applicable

Other Information

Softening point No information available Molecular weight No information available **VOC Content (%)** No information available **Density** No information available **Bulk density** No information available

10. STABILITY AND REACTIVITY

Reactivity

No data available

Chemical stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

Conditions to avoid

Elevated Temperature. Storage near to reactive materials.

Incompatible materials

Strong oxidizing agents.

Hazardous Decomposition Products

Thermal decomposition can lead to release of irritating and toxic gases and vapors. Nitrogen oxides (NOx). Carbon oxides.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information Acute Oral LD50 (rat): 12.32 mg/kg

Acute Dermal LD50 (rabbit): > 2000 mg/kg Eye Irritation (rabbit): Not an irritant. Skin Irritation (rabbit): Not an irritant. Inhalation LC50 (rat): 0.24 mg/L (4 HR) Skin Sensitization (guinea pig): Not a sensitizer

Inhalation Poison - may be fatal if inhaled.

Based on available data, the classification criteria are not met. Inhalation, ingestion, or skin Eve contact

absorption of methanol can cause blindness.

Skin contact May be absorbed through the skin in harmful amounts.

Ingestion May be fatal if swallowed.

Component Information Inhalation, ingestion, or skin absorption of methanol can cause blindness

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50

Oxamyl 23135-22-0	= 2.5 mg/kg (Rat) = 5.4 mg/kg (Rat)	> 1200 mg/kg (Rat) = 1200 mg/kg (Rat) = 740 mg/kg (Rabbit)	= 170 mg/m ³ (Rat) 1 h
Other ingredients	> 90 mL/kg (Rat)	- (Nat) = 740 mg/kg (Nabbit)	-
Methyl alcohol 67-56-1	= 6200 mg/kg (Rat)	= 15800 mg/kg (Rabbit)	= 22500 ppm (Rat) 8 h = 64000 ppm (Rat) 4 h
Propylene carbonate 108-32-7	= 29000 mg/kg (Rat)	> 20 mL/kg (Rabbit)	-

Information on toxicological effects

Symptoms Oxamyl poisoning produces effects associated with anticholinesterase activity which may

include weakness, blurred vision, headache, nausea, abdominal cramps, discomfort in the chest, constriction of pupils, sweating, slow pulse, muscle tremors. Methanol may cause

blindness.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

SensitizationBased on available data, the classification criteria are not met. **Germ cell mutagenicity**Based on available data, the classification criteria are not met.

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Oxamyl	-	Group 2A	-	X
23135-22-0				

IARC (International Agency for Research on Cancer)

Group 2A - Probably Carcinogenic to Humans

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

X - Present

Reproductive toxicity Based on available data, the classification criteria are not met.

STOT - single exposure Specific target organ toxicity (STOT) - single exposure, category 1. Target Organs. Eyes.

Central nervous system.

STOT - repeated exposureBased on available data, the classification criteria are not met.

Target Organ Effects Central nervous system, Eyes, Gastrointestinal tract (GI), Respiratory system, Skin.

Aspiration hazard Based on available data, the classification criteria are not met.

Numerical measures of toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document ...

ATEmix (oral) 20.00 mg/kg
ATEmix (dermal) 1,125.00 mg/kg
ATEmix (inhalation-dust/mist) 0.19 mg/l

12. ECOLOGICAL INFORMATION

Ecotoxicity

Toxic to aquatic life with long lasting effects

This pesticide is toxic to aquatic organisms (fish and invertebrates) and extremely toxic to birds and mammals. Cover or disc spill areas. Birds and mammals in treated areas may be killed. Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Drift and runoff may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when cleaning equipment or disposing of equipment waste waters.

This product can contaminate surface water through ground spray applications. Under some conditions, it may also have a high potential for runoff into surface water after application. These include poorly draining or wet soils with readily visible slopes toward adjacent surface waters, frequently flooded areas, area overlaying extremely shallow ground water, areas with in-field canals or ditches that drain to surface water, areas not separated from adjacent surface waters with vegetated filter strips, and areas overlaying tile drainage systems that drain to surface water. This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow to drift to blooming crops or weeds if bees are visiting the treatment area

18 % of the mixture consists of components(s) of unknown hazards to the aquatic environment

Chemical Name	Algae/aquatic plants	Fish	Crustacea

Oxamyl	-	4.2: 96 h Oncorhynchus mykiss	_
23135-22-0		mg/L LC50 5.6: 96 h Lepomis	
		macrochirus mg/L LC50 8.3: 96 h	
		Pimephales promelas mg/L LC50	
		flow-through	
Methyl alcohol	-	100: 96 h Pimephales promelas	-
67-56-1		mg/L LC50 static 28200: 96 h	
		Pimephales promelas mg/L LC50	
		flow-through 19500 - 20700: 96 h	
		Oncorhynchus mykiss mg/L LC50	
		flow-through 13500 - 17600: 96 h	
		Lepomis macrochirus mg/L LC50	
		flow-through 18 - 20: 96 h	
		Oncorhynchus mykiss mL/L LC50	
		static	
Propylene carbonate	500: 72 h Desmodesmus	1000: 96 h Cyprinus carpio mg/L	500: 48 h Daphnia magna mg/L
108-32-7	subspicatus mg/L EC50	LC50 semi-static 5300: 96 h	EC50
		Leuciscus idus mg/L LC50 static	

Persistence and degradability

Not readily biodegradable.

Bioaccumulation

Not likely to bioaccumulate.

Chemical Name	Partition coefficient
Methyl alcohol 67-56-1	-0.77
Propylene carbonate 108-32-7	0.48

Other adverse effects

This mixture contains no substance considered to be persistent, bioaccumulating nor toxic (PBT)

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes

Pesticide wastes may be acutely hazardous. Improper disposal is a violation of federal law. Disposal should be in accordance with applicable regional, national and local laws and regulations. Contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance on proper disposal of waste product.

Contaminated packaging

Disposal should be in accordance with applicable regional, national and local laws and regulations. Consult product label for additional information. Do not reuse container.

US EPA Waste Number D001 U154 P194

Chemical Name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Oxamyl	P194	=	=	-
23135-22-0				
Methyl alcohol	-	Included in waste stream:	=	U154
67-56-1		F039		

Chemical Name	RCRA - Halogenated Organic Compounds	RCRA - P Series Wastes	RCRA - F Series Wastes	RCRA - K Series Wastes
Oxamyl 23135-22-0	-	P194	-	-

Chemical Name	California Hazardous Waste Status
Oxamyl 23135-22-0	Toxic
Methyl alcohol 67-56-1	Toxic Ignitable

14. TRANSPORT INFORMATION

DOT For containers with a net quantity of 238 lbs. or more, an RQ designation ("RQ (Oxamyl)")

must be added before or after the shipping description on the shipping papers.

Bulk packages (those with a maximum net mass greater than 400 kg (882 lbs.)) are also considered marine pollutants by DOT and must be marked accordingly and designated as

such on shipping papers.

UN/ID no UN2991

Proper shipping name Carbamate pesticides, liquid, toxic, flammable

Hazard Class 6.1 Subsidiary class 3 Packing Group II

Special Provisions IB2, T11, TP2, TP13, TP27

Description UN2991, Carbamate pesticides, liquid, toxic, flammable, 6.1 (3), II

Emergency Response Guide

Number

<u>TDG</u>

UN2991

Proper shipping name Carbamate pesticide, liquid, toxic, flammable

Hazard Class 6.1 Subsidiary class 3 Packing Group II

Description UN2991, Carbamate pesticide, liquid, toxic, flammable (Oxamyl, Methyl alcohol), 6.1 (3), II

IATA

UN/ID no UN2991

Proper shipping name Carbamate pesticide, liquid, toxic, flammable

Hazard Class 6.1

Subsidiary hazard class 3

Packing Group II

ERG Code 6F

Special Provisions A3, A4

Description UN2991, Carbamate pesticide, liquid, toxic, flammable (Oxamyl, Methyl alcohol), 6.1 (3), II

IMDG

UN/ID no UN2991

Proper shipping nameCarbamate pesticide, liquid, toxic, flammable

Hazard Class 6.1
Subsidiary hazard class 3
Packing Group II
EmS-No F-E, S-D
Special Provisions 61, 274

Description UN2991, Carbamate pesticide, liquid, toxic, flammable (Oxamyl, Methyl alcohol), 6.1 (3), II,

(32.5°C c.c.) - Marine Pollutant

15. REGULATORY INFORMATION

International Inventories
TSCA Complies
DSL/NDSL Complies
EINECS/ELINCS Complies
IECSC Complies
KECL Complies
PICCS Complies
AICS Complies

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	SARA 313 - Threshold Values %
Methyl alcohol - 67-56-1	1.0
SARA 311/312 Hazard Categories	
Acute health hazard	Yes
Chronic Health Hazard	Yes
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Oxamyl	100 lb	100 lb	RQ 100 lb final RQ
23135-22-0			RQ 45.4 kg final RQ
Methyl alcohol	5000 lb	-	RQ 5000 lb final RQ
67-56-1			RQ 2270 kg final RQ

US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals

Chemical Name	California Proposition 65	
Methyl alcohol - 67-56-1	Developmental	

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Oxamyl 23135-22-0	X	X	Х
Other ingredients	-	-	X
Methyl alcohol 67-56-1	X	X	Х

U.S. EPA Label Information

EPA Pesticide Registration Number 83100-XX

EPA Statement

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

Difference between SDS and EPA Pesticide label

DANGER/POISON (Skull & Crossbones): Fatal if swallowed. May be fatal if inhaled. Do not breathe vapor or spray mist. Harmful if absorbed through the skin. Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse. Contains methanol which may cause blindness.

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

NFPA Health hazards 3 Flammability 2 Instability 0 Physical and Chemical

Properties -

HMIS Health hazards 3* Flammability 2 Physical hazards 0 Personal protection X

Chronic Hazard Star Legend *= Chronic Health Hazard

 Issue Date
 29-May-2017

 Revision Date
 29-May-2017

Revision Note

No information available

Disclaimer

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet