

1. IDENTIFICATION

Product name: **MAYHEM**
 Chemical name of active ingredient(s): Novaluron: 1-[3-chloro-4-(1,1,2-trifluoro-2-trifluoro-methoxyethoxy) phenyl]-3-(2,6-difluorobenzoyl)urea
 Manufacturer: Makhteshim Agan of North America, Inc.
 3120 Highwoods Blvd, Suite 100
 Raleigh, NC 27604
 Phone: 919-256-9300
 For fire, spill, and/or leak emergencies, contact Infotrac: Phone: 1-800-535-5053
 For medical emergencies and health and safety inquiries, contact Prosar: Phone: 1-877-250-9291

2. COMPOSITION/INFORMATION ON INGREDIENTS

COMMON NAME	CAS NO.	%	OSHA PEL	ACGIH TLV	OTHER	NTP/IARC/OSHA (Carcinogen)
Novaluron	116714-46-6	9.3	NE	NE	NA	NA
N-Methyl-2-pyrrolidone	872-50-4	40-50	NE	NE	NE	NA

NE=not established

NA=not available

3. HAZARDS IDENTIFICATIONS**PHYSICAL PROPERTIES**

Appearance: Light yellow liquid

Odor: Faint odor - Characteristic

EMERGENCY OVERVIEW: WARNING. Causes substantial but temporary eye injury. Do not get in eyes or on clothing. Harmful if absorbed through skin. Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

ROUTES OF ENTRY: Ingestion, Inhalation, Eye contact, Skin Absorption

HAZARDOUS DECOMPOSITION PRODUCTS: CO, CO₂, NO_x, Chlorides and Fluorides.

MEDICAL CONDITIONS LIKELY TO BE AGGRAVATED BY EXPOSURE: None known.

4. FIRST AID MEASURES

FIRST AID	
IF IN EYES:	<ul style="list-style-type: none"> Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.
IF ON SKIN OR CLOTHING:	<ul style="list-style-type: none"> Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.
IF SWALLOWED:	<ul style="list-style-type: none"> Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.
IF INHALED:	<ul style="list-style-type: none"> Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.

Emergency Assistance: Have the product container or label with you when calling a poison control center or doctor or going for treatment.
FOR EMERGENCY MEDICAL HELP, CALL PROSAR AT 1-877-250-9291, 24 HOURS. Transportation
Emergency: (INFOTRAC) 1-800-535-5053
NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage.

5. FIRE FIGHTING MEASURES

FLASH POINT: 102°C (216°F)(Closed cup)

FLAMMABLE LIMITS

LFL: Not established

UFL: Not established

EXTINGUISHING MEDIA: Dry chemical, carbon dioxide, water spray, fog or foam.

HAZARDOUS DECOMPOSITION PRODUCTS: CO, CO₂, NO_x, Chlorides and Fluorides.

FIRE-FIGHTING PROCEDURES: Fight fires from a protected location. Dike fire control water for later disposal. Wear suitable protective clothing. Self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

ACTION TO TAKE FOR SPILLS/LEAKS: For minor spills, leaks, etc., follow all precautions indicated on this product's label and clean up immediately. Take special care to avoid contamination of equipment and facilities during cleanup and disposal of wastes.

Personal Precautions: Keep unauthorized people away. Avoid contact with spilled product or contaminated surfaces. Isolate hazard area. Use appropriate protection (see section 8).

Methods for Cleaning Up: In the event of minor spillage: Absorb in sand or other inert material. Use appropriate containment to avoid environmental contamination. In the event of major spillage: Collect and contain as much free liquid as possible. Dike spills using absorbent or impervious materials such as sand or clay for later disposal. Do not empty into drains.

7. HANDLING AND STORAGE

Do not contaminate water, food, or feed by storage or disposal or cleaning of equipment. Open dumping is prohibited.

PRECAUTIONS TO BE TAKEN IN HANDLING: Handle and open container in a manner as to prevent spillage. Do not breathe vapor.

PRECAUTIONS TO BE TAKEN IN STORAGE: Store in a clean, well-ventilated and dry location. Store in original container only. Keep above freezing.

STORAGE TEMPERATURE (MIN/MAX): Store above 0°C (32°F).

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

THE FOLLOWING RECOMMENDATIONS FOR EXPOSURE CONTROLS/PERSONAL PROTECTION ARE INTENDED FOR THE MANUFACTURE, FORMULATION, PACKAGING AND USE OF THIS PRODUCT.

FOR COMMERCIAL APPLICATIONS AND/OR ON-FARM APPLICATIONS CONSULT THE PRODUCT LABEL.

SKIN PROTECTION: Long sleeved shirt, long pants, shoes plus socks

HAND PROTECTION: Chemical-resistant gloves such as barrier laminate, butyl rubber, neoprene rubber, or Viton.

EYE PROTECTION: Protective eyewear.

ADDITIONAL PROTECTIVE MEASURES: Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

USER SAFETY RECOMMENDATIONS:**Users should:**

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

EXPOSURE GUIDELINES: Refer to Section 2.**ENGINEERING CONTROLS:** Refer to product label.**9. PHYSICAL AND CHEMICAL PROPERTIES****APPEARANCE:** Light yellow liquid**ODOR:** Faint odor - Characteristic**FLASH POINT:** > 102°C (216°F)**RELATIVE DENSITY:** 1.08 g/cm³**pH:** 2.9 (1% w/v)**10. STABILITY AND REACTIVITY****STABILITY:** Stable under normal use and storage conditions.**MATERIALS TO AVOID:** Strong bases and acids.**HAZARDOUS POLYMERIZATION:** Will not occur.**INSTABILITY CONDITIONS :** Protect from (sun)light, open flame and sources of heat.**11. TOXICOLOGICAL INFORMATION****ACUTE TOXICITY/IRRITATION STUDIES: (FINISHED PRODUCT)**

Acute Oral LD50 (Rat): > 5,000 mg/kg

Acute Dermal LD50 (Rabbit): > 2,000 mg/kg

Acute Inhalation LC50 (Rat): > 5.15 mg/L (Novaluron technical) (4-hours male/female)

Eye Irritation (Rabbit): Irritating

Skin Irritation (Rabbit): Slightly irritating

Dermal Sensitization (Guinea pig): A skin contact sensitizer. However, the field-use dilution (0.1% in distilled water) does not cause skin sensitization.

Carcinogenicity: Not carcinogenic.**Mutagenicity:** No evidence of genotoxicity**Reproduction toxicity:** Not teratogenic in animal experiments.**12. ECOLOGICAL INFORMATION**

ENVIRONMENTAL HAZARDS: This pesticide may be toxic to fish and invertebrates. Do not apply directly to water, 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 water adjacent to treated areas. Do not contaminate water when disposing of equipment wash waters or rinsate. This product may contaminate water through drift of spray in wind. This product has a potential for runoff for several days to weeks after application. Poorly draining soil with shallow water tables is more prone to produce runoff. A level, well maintained vegetative (grass) buffer strip between areas to which this product is applied and the surface water features such as ponds, streams, and springs will reduce the potential for contamination of water from rainfall runoff. Runoff of this product will be reduced by avoiding applications when rainfall is forecasted to occur within 48 hours. Sound erosion control practices will reduce this product's contribution to surface water contamination.

Persistence/degradability (Novaluron): Half-life time (t_{1/2}): 68-76 days, soil.**Ecotoxicity :**Birds: LD₅₀ > 2000 mg/kg.Fish: LC₅₀ = 62.4 mg/l, 96 hours (rainbow trout).Daphnia magna: EC₅₀ = 4.22 µg/l, 48 hours.

Daphnia magna: NOEC = 1.25 µg/l, 48 hours.

Algae: NOEC = 27.2 mg/l, 72 hours (growth rate).

Algae: NOEC = 10.2 mg/l, 72 hours (biomass).

13. DISPOSAL CONSIDERATIONS

END USERS MUST DISPOSE OF ANY UNUSED PRODUCT AS PER THE LABEL RECOMMENDATIONS.

PESTICIDE DISPOSAL: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

CONTAINER DISPOSAL: Dispose of product containers, waste containers, and residues according to label instructions and local, state, and federal health and environmental regulations.

14. TRANSPORT INFORMATION

DOT CLASSIFICATION:

Not regulated

INTERNATIONAL TRANSPORTATION:

IMO (vessel): UN3082, Environmentally Hazardous Substance, liquid, N.O.S. (novaluron), 9, PGIII, Marine pollutant

IATA (air): UN3082, Environmentally Hazardous Substance, liquid, N.O.S. (novaluron), 9, PGIII, Marine pollutant

15. REGULATORY INFORMATION

SARA TITLE III CLASSIFICATION:

Section 302: Not applicable.

Section 311/312: Acute health hazard (immediate)

Section 313: N-Methyl-2-pyrrolidone (40-50%) CAS #:872-50-4

CA PROPOSITION 65: This material contains a substance (n-methyl-2-pyrrolidone) known to the State of California to cause development toxicity.

CERCLA RQ: Not applicable

RCRA CLASSIFICATION: Under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste.

TSCA STATUS: The ingredients of this product are listed on the TSCA inventory or are exempt.

16. OTHER INFORMATION

NFPA HAZARD RATINGS	NFPA	HMIS		
HEALTH:	2	2	0	MINIMAL
FLAMMABILITY:	2	2	1	SLIGHT
REACTIVITY:	0	0	2	MODERATE
			3	HIGH
			4	SEVERE

MSDS DATE: 5-23-12.

The information herein is given in good faith, but no warrant, express or implied, is made. Consult Makhteshim Agan of North America, Inc. for further information.