

MATERIAL SAFETY DATA SHEET

Revision date: June 14, 2010

Section 1. Product Identification and Company Identification

Product Name: Mite-Away Quick Strip™

Synonyms: MAQS, NOD Formic Acid Strip

Chemical Name: (Active Ingredient) hydrogen carboxylic acid

Common Name: Formic Acid

Chemical family: (Active Ingredient) organic acid

Material Use: Acaricide, hive cleanser

Supplier/Manufacturer: NOD Apiary Products Ltd.

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In Case of Emergency: 866-483-2929 or 613-398-8422

For Transport Emergency or After Hours call **CANUTEC 613-996-6666**

Section 2: Composition/Information on Ingredients

Composition:

Name	Synonyms	CAS #	% by weight
Formic acid	methanoic acid	64-18-6	46.7
Inert Ingredients		n/a	53.3

Section 3: Hazard Identification

Emergency overview: corrosive

Primary Routes of Exposure

Routes of entry include eye and skin contact, inhalation (vapours from product) and ingestion.

Potential Acute Health Effects:

Hazardous in case of skin contact.

Risk of serious damage to eyes.

Harmful if swallowed. Ingestion may cause gastric disturbances.

Inhalation of vapour may cause nasal, respiratory tract irritation.

Potential Chronic Health Effect:

Repeated or prolonged contact with solid product or vapour from product may produce chronic eye irritation with injury to the cornea, nasal and respiratory tract irritation and/or severe skin irritation.

Carcinogenic effects: none of the ingredients are considered to be carcinogenic.

Mutagenic effects: not available, no mutagenic effects expected.

Teratogenic effects: not available, no mutagenic effects expected.

Developmental toxicity: not available, no mutagenic effects expected.

Section 4: First Aid Measures

Eye:

Immediately flush eyes with plenty of low pressure water for at least 15 minutes. Remove contact lenses, if present. Hold eyelids apart when flushing. Get immediate medical attention.

Skin:

Immediately rinse area. Wash thoroughly with soap and water. Remove contaminated clothing. Thoroughly wash clothing before reuse. Get medical help if irritation persists.

Inhalation:

Remove to fresh air. Treat any irritation symptomatically. Get medical attention if nasal, throat or lung irritation develops.

Ingestion:

If conscious, drink large quantities of water. Do not induce vomiting. Get immediate medical attention. NEVER give anything by mouth and NEVER INDUCE vomiting in an unconscious person.

Section 5: Fire and Explosion Information

Flammability of Product: Non-flammable

Auto-ignition Temperature: 375°C

Flashpoint: 146°C

Hazardous Combustion Products: If heated to decomposition, the following substances may be formed: carbon dioxide, carbon monoxide and smoke.

Fire Fighting Measures:**Extinguishing Media:**

Dry Chemical, carbon dioxide, water spray, or alcohol resistant foam may be used on fires involving this product.

Fire Extinguishing Procedures:

Wear self-contained breathing apparatus, pressure demand, MSHA/NIOSH approved (or equivalent) and full protective gear when fighting fires containing this product. Cool containers with water to prevent rupture.

Section 6: Accidental Release Measures

For all spills:

Wear appropriate PPE (refer to Section 8). Pick up any spilled product and place in a sealable High Density Polyethylene (HDPE) container for disposal.

Section 7: Handling and Storage

General Measures:

STORAGE: Store in original container in a cool, dry, and well-ventilated area away from sulphuric acid, oxidizing agents, and sources of ignition and away from the reach of children. Avoid heat, sparks, and open flames. Do not eat, drink or smoke in areas of use or storage. Use caution when opening the container, especially in warm weather, i.e.: open outdoors and stay upwind.

Section 8: Exposure Controls/Personal Protection

Work Practices:

Keep away from ignition sources. Keep water handy for eye wash and rinsing should skin contact occur. Work outdoors upwind of the product or provide adequate ventilation. Product is highly corrosive to most metals, avoid contact with metals.

General Hygiene Practices:

Avoid contact with eyes, skin and clothing. Do not wear contact lenses. Avoid breathing vapours. Do not swallow. Wash thoroughly after handling and before eating, drinking or smoking. Avoid contamination of food, beverages, or smoking materials. Remove contaminated clothing promptly and clean thoroughly before reuse.

Vapour Exposure Limits:

NIOSH REL: Formic acid TWA 5 ppm (9 mg/m³) per 8 hour working day

OSHA PEL: Formic acid TWA 5 ppm (9 mg/m³) per 8 hour working day

ACGIH: Formic acid STEL 10 ppm – 15 minutes.

IDLH: Formic acid 30 ppm

Personal Protection Equipment (PPE):

Wear coveralls over a long-sleeved shirt, long pants, socks and shoes, acid resistant gloves (PVC, neoprene or nitrile), and protective eyewear.

If working indoors wear a respirator with an organic-vapor removing cartridge with a pre-filter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C), or a canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G), or a NIOSH approved respirator with an organic vapor (OV) cartridge or canister with any N, R, P or HE pre-filter.

Section 9: Physical and Chemical Properties

Physical State: Solid/semi-solid containing corrosive formic acid

Color: white to yellow

Odor: vapor has a pungent, penetrating odor.

Molecular Weight: Not Applicable

Boiling Point: Not Applicable

Melting Point: Not Applicable

Specific Gravity (Water =1): Not Applicable

Formic Acid Vapor Pressure: > 44.80 mbar at 20⁰ C

Vapour Density: Heavier than air.

Solubility: Formic Acid miscible in water, other components non soluble.

pH value: 2

Freezing Point: - 17° C

Section 10: Stability and Reactivity

General stability considerations:

Stable under recommended handling and storage conditions.

Incompatible materials:

Reacts with amines, alkalies, oxidizing agents and sulfuric acid.

Hazardous decomposition products:

Not anticipated under normal or recommended handling and storage conditions
Carbon dioxide and carbon monoxide may form when heated to decomposition.

Hazardous Polymerization:

Will Not Occur

Conditions to avoid:

Heat, flame, other sources of ignition

Section 11: Toxicological Information

The data on toxicology refers to the active ingredient, Formic Acid. All other ingredients are considered non-toxic.

Acute toxicity: Formic Acid**Oral**

Rat- LD₅₀: 730 mg/kg

Inhalation

Rat LC₅₀: 15 g/m³ /15 min

Skin irritation

Rabbit: corrosive

Eye irritation data

Rabbit: severe

Chronic toxicity: Formic Acid

Repeated or prolonged contact with solid product or vapour from product may produce chronic eye irritation with injury to the cornea, nasal and/or respiratory tract irritation and/or severe skin irritation.

Carcinogenic effects: ingredients are not considered to be carcinogenic.

Mutagenic effects: not available

Teratogenic effects: not available

Developmental toxicity: not available.

Section 12: Ecological Information

No ecological studies have been carried out with this product. Use site is the interior of honey bee hives. No negative ecological impact is expected. Components do not bio-accumulate, all components are biodegradable.

Section 13: Disposal Considerations

Waste disposal

Disposal should be in accordance with applicable federal, provincial, State and local regulations.

Section 14: Transport Information

Canada and the U.S.A.

Product is classified as a Consumer Commodity or Limited Quantity. Packaging meets the requirements for an exemption by the Ministry of Transportation, Transportation of Dangerous Goods laws as per Section 1.17 of the Transportation of Dangerous Goods Regulations <http://www.tc.gc.ca/tdg/clear/part1.htm#sec117>.

Shipment by ground within Canada and the US Product is no longer classified as Class 8 Corrosive, UN3244 Packing Group II for the above reason.

- This exemption means the following:
 - Class 8 placards NOT required
 - hazmat licensed driver NOT required
 - hazmat insured trucking company NOT required

- Because product is exempt from Transportation of Dangerous Goods regulations, the agricultural requirements for transportation of a pesticide do not apply, meaning that ANY quantity of product may be transported without placards from the store to the farm, or from the farm to beeyards at any distance traveled.

- Small quantities of product may be sent by courier (for example UPS, Purolator, Fedex, DHL) via ground or express services, domestically as long as the following steps are taken:
 1. The Consumer Commodity sticker must appear on the OUTSIDE of the box in which the pail or pails of MAQS are contained.
 2. On the shipping documents, the words denoting the classification of “Limited Quantity” or “Consumer Commodity” must appear along with a description of the product. Class 8 Corrosive UN3244 classification is not necessary as the product has been reclassified.
 3. Canada Post does not accept any type of pesticide for shipment.

By AIR or SEA

Product sent by AIR or by SEA in any quantity must revert to the Class 8 Corrosive, UN3244 Packing Group II classification meaning that all Transportation of Dangerous Goods documentation and placards are required.

Section 15: Regulatory Information

WHMIS code for the active ingredient (formic acid): D.IB E

In Canada and the U.S.A. product is labeled in accordance with the Pest Control Products Act or the Environmental Protection Agency where applicable.

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If you have any questions contact: David VanderDussen 1-613-398-8422