

MATERIAL SAFETY DATA SHEET

Section 1. Product Identification and Use

Product Name: Mite-Away II Formic Acid Pad

Supplier Manufacturer: NOD Apiary Products Ltd.
P.O. Box 117, 2325 Frankford Road
Frankford, Ontario Canada
K0K 2C0
(P) 866-483-2929 or 613-398-8422
(F) 613-398-8422
In Case of Emergency: 866-483-2929 or 613-398-8422,
For Transport Emergency or After Hours
CANUTEC 613-996-6666

Code: WHMIS code for the active ingredient (formic acid)
B.3 D.IB E

Synonym: NOD Formic Acid Pad

Chemical Name: Not Applicable

Chemical family: Organic Acid Active Ingredient (Formic Acid)

Chemical Formula: Not applicable

Material Use: Miticide

Product Identification Number (PIN): UN 3244 PG2

Shipping Name: Formic Acid Single Application
Mite-Away II Pad UN: 3244 Class II

Section 2: Hazardous Ingredients

Name		CAS#	DOT ID & Guide	
Formic Acid				
Hydrogen Carboxylic Acid	65%	64-18-6	1779	<u>153</u>
Methoanoic Acid				

Exposure Limits:

NIOSH REL: TWA 5 ppm (9 mg/m³)

OSHA PEL: TWA 5 ppm (9 mg/m³)

IDLH: 30 ppm

Conversion 1 ppm = 1.88 mg/m³

Reference Concentration for Chronic Inhalation Exposure (RFC):

Not available at this time

Carcinogenicity Assessment for Lifetime Exposure:

Not available at this time

Wooden fiber pad contains 292 grams of 65% formic acid. Formic Acid is considered a corrosive liquid and mist can cause severe burns to all body tissue. The Mite-Away II pad is made up of wooden fibers that are bonded together with ingredients which are not considered hazardous or listed on the ingredients Disclosure List of Hazardous Products Act.

Section 3: Physical Data

Physical State:	Solid fiberboard containing corrosive liquid formic acid
Appearance:	Fiberboard (20 x 20 x 1.6 cm), containing 292 grams of formic acid placed inside 2 plastic bags.
Color:	Dark Brown
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 20 ⁰ C
Solubility:	Formic Acid miscible in water
Odor:	No odor if fiberboard is sealed inside double plastic bags. If opened, vapor with a pungent, penetrating odor is released.

Section 4: Fire and Explosion Information

Moderate fire hazard when exposed to heat. Vapors are heavier than air.

Flashpoint Formic Acid:	50 ⁰ C, 122 ⁰ C (for 90% solutions)
Upper Explosive Limit:	57 % (for 90% solution)
Lower Explosive Limit:	18 % (for 90% solution)
Auto Ignition Temperature:	601 ⁰ C (1114 ⁰ F)

Explosion:

Above flashpoint, vapor-air mixtures are explosive within flammable limits noted above. Sensitive to static discharge.

Fire Extinguishing Media:

Dry Chemical, carbon dioxide, water spray, or alcohol resistant foam.

Special Information:

In the event of a fire, wear full protective clothing and NIOSH approved self-contained breathing apparatus with full face piece operated in the pressure demand or other pressure mode.

Section 5: Accidental release Measures

Remove all sources of ignition. Ventilate area of spill or leak. Wear appropriate personal protective equipment. Isolate hazardous area. Contain and recover liquid when possible. Neutralize with alkaline material, (soda ash, and lime), then absorb with an inert material (e.g. vermiculite, dry sand, earth) and place in a chemical waste container. Do not use

combustible material, such as saw dust. Do not flush to sewer. If a leak or spill has not ignited, use water spray to disperse the vapors to protect personnel attempting to stop leak, and to slush spills away from exposures.

Section 6: Toxicological Information:

Formic Acid:

Oral Rat- LD₅₀:	1100 mg/kg
Inhalation Rat LC₅₀:	15 g/m ³ /15 min; investigated as a tumorigenic mutagen
LD₅₀ dermal (rabbit):	Not Available
Irritation data:	122 mg eye rabbit severe 610 mg open skin-rabbit mild

Section 7: Stability and Reactivity

Stability:

Stable under ordinary conditions of use and storage.

Hazardous Decomposition Products:

Carbon dioxide and carbon monoxide may form when heated to decomposition.

Dehydrated by sulfuric acid to produce carbon monoxide.

Hazardous Polymerization:

Will Not Occur

Incompatibilities:

Sulfuric acid, strong caustics, furfuryl alcohol, hydrogen peroxide, strong oxidizers and bases.

Reacts explosively with oxidizing agents

Conditions to avoid:

Heat, flame, other sources of ignition

Section 8: Health Hazard Information

Primary Routes of Exposure: Inhalation, skin and eye contact, ingestion

Inhalation:

Inhalation of vapors can cause severe irritation of nose, throat, and upper respiratory tract.

Inhalation of higher concentration may cause central nervous system effects and lung damage.

Ingestion:

Causes serious burns and corrosion of mouth, throat and esophagus, with immediate pain and difficulty swallowing. Other symptoms of abdominal pain nausea, diarrhea and vomiting can occur, leading to shortness of breath and death. Severe poisoning may cause shock, kidney damage.

Skin contact:

Corrosive, symptoms of redness, pain and severe burn can occur.

Eye Contact:

Corrosive! Vapors are irritating and may cause damage to eyes. Contact may cause severe burns and permanent eye damage.

Chronic Exposure:

Prolonged or repeated exposure to low concentrations may cause skin irritation and burn.

Prolonged or repeated exposure may cause liver and kidney damage.

Section 9: Ecological Information

Ecotoxicity:

Plain fiberboard is not considered hazardous HOWEVER formic acid is. If the pad is left open there is a chance that when formic acid is released into soil, this material is expected to leach into groundwater. Once released into soil, this material may biodegrade to a moderate extent. When released into water, this material is expected to readily biodegrade. When released into the air, this material is expected to be readily degraded by reaction with photochemically produced hydroxyl radicals.

Environmental Toxicity:

This material is not expected to be toxic to aquatic life.

Section 10: Preventative Measures

Ventilation:

Outdoor:

If outdoors, stay upwind. Wear a respirator with an organic-vapor removing cartridge with a prefilter 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 prefilter.

Spill or Emergency situations: use personal respirators (NIOSH Approved). Wear a supplied air, full face-piece respirator, airlined hood or full-face piece self-contained breathing apparatus.

Indoor:

A system of local and/or general exhaust is recommended to keep employee exposures below the airborne exposure limits. Local exhaust is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area.

Spill or Emergency situations: use personal respirators (NIOSH Approved). Wear a supplied air, full face-piece respirator, airlined hood or full-face piece self-contained breathing apparatus.

Skin Protection:

Wear rubber, PVC, nitrile or neoprene gloves and additional protection including impervious boots, apron or overalls, as needed in area of unusual exposure.

Eye Protection

Use chemical safety goggles and/or a full face shield where splashing is possible. Maintain an eye wash fountain and quick drench facilities in work area.

Personal Protective Equipment:

Wear chemical safety goggles and chemical resistant gloves (rubber, PVC, nitrile or neoprene) when handling formic acid single application Pads (mite Away II). Do not wear contact lenses when working with pads.

Other Protective Measures:

Have water readily available for use if eye or skin contact should occur. Wash skin thoroughly with soap and a large amount of water after handling. Remove clothing

immediately if contaminated. Was contaminated clothing separately from household laundry. Do not contaminate water supply, ponds, lakes or streams with the product.

Storage and Handling Precautions

Store in original container in a cool, dry and well-ventilated area. Do not eat, drink or smoke in area of use or storage.

Disposal Method:

For information on the disposal of unused, unwanted or damaged products and the clean up of spill, contact the Provincial regulatory Agency or the Manufacturer.

Section 11: First Aid Measures

Inhalation:

Remove to fresh air, if not breathing, give artificial respiration. If breathing is difficult give oxygen. Get medical attention immediately.

Ingestion:

If swallowed, DO NOT INDUCE VOMITING. Give large quantities of water. Never give anything by mouth to an unconscious person. Get medical attention immediately.

Skin Contact:

Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention immediately. Wash clothing before reuse. Thoroughly clean shoes before reuse.

Eye Contact:

Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical help immediately.

NOTICE: NOD APIARY PRODUCTS LTD. BELIEVES THAT THE ABOVE INFORMATION IS ACCURATE AND REPRESENTS THE BEST INFORMATION CURRENTLY AVAILABLE TO US. HOWEVER, WE MAKE NO WARRANTY OF MERCHANTABILITY OR ANY OTHER WARRANTY, EXPRESSED OR IMPLIED, WITH RESPECT TO SUCH INFORMATION AND WE ASSUME NO LIABILITY RESULTING FROM ITS USE. USERS SHOULD MAKE THEIR OWN INVESTIGATION TO DETERMINE THE SUITABILITY OF THE INFORMATION FOR THEIR PARTICULAR PURPOSE

Prepared: March 31, 2005 by Dr. Ramesh Makhija

If you have any questions please contact: David VanderDussen 1-866-483-2929