Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03.

Issue date 05/24/2018 Reviewed on 05/24/2018

1 Identification

· **Product Identifier**

· **Trade Name: Fumi-Cel® and Fumi-Strip®; U.S. EPA Reg. No. 72959-6**
· **Relevant identified uses of the substance or mixture and uses advised against:**
· **Product Description:** Fumigant for Insect Control
· **Application of the substance / the mixture:**
Fumigants used to treat raw agricultural commodities, processed foods, non-food commodities and rodent burrows.

· **Details of the Supplier of the Safety Data Sheet:**
· **Manufacturer/Supplier:**
DEGESCH America, Inc.
153 Triangle Dr.
P.O. Box 116
Weyers Cave, VA 24486 USA
Telephone: (540) 234-9281 / 800-330-2525
Telefax: (540) 234-8225
www.degeschamerica.com
degesch@degeschamerica.com
· **Emergency telephone number:**
For human or animal emergencies: 1-800-308-4856 (Rocky Mountain Poison and Drug Center)
For all other chemical emergencies: 1-800-424-9300 (Chemtrec)
Emergency and Information - DEGESCH America, Inc.: (540) 234-9281 / 800-330-2525

*
2 Hazard(s) Identification

· **Classification of the substance or mixture:**


GHS02 Flame

Water-react. 1 H260 In contact with water releases flammable gases, which may ignite spontaneously.


GHS06 Skull and crossbones

Acute Tox. 1 H300 Fatal if swallowed.
Acute Tox. 2 H330 Fatal if inhaled.


GHS05 Corrosion

Eye Dam. 1 H318 Causes serious eye damage.


GHS09 Environment

Aquatic Acute 1 H400 Very toxic to aquatic life.


GHS07

Skin Irrit. 2 H315 Causes skin irritation.

(Contd. on page 2)

Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03.

Issue date 05/24/2018 Reviewed on 05/24/2018

Trade Name: Fumi-Cel® and Fumi-Strip®; U.S. EPA Reg. No. 72959-6

· **Label elements:**
· **GHS label elements**
The product is classified and labeled according to the Globally Harmonized System (GHS).
· **Hazard pictograms:**

GHS02 GHS05 GHS06 GHS09

· **Signal word:** Danger

· **Hazard-determining components of labeling:**
Magnesium Phosphide
· **Hazard statements:**

H260	In contact with water releases flammable gases, which may ignite spontaneously.
H300+H330	Fatal if swallowed or if inhaled.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H400	Very toxic to aquatic life.

· **Precautionary statements:**

P223	Do not allow contact with water.
P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P264	Wash thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P284	[In case of inadequate ventilation] wear respiratory protection.
P301+P310	If swallowed: Immediately call a poison center/doctor.
P302+P352	If on skin: Wash with plenty of water.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P320	Specific treatment is urgent (see supplementary first aid instructions on this Safety Data Sheet).
P332+P313	If skin irritation occurs: Get medical advice/attention.
P362	Take off contaminated clothing.
P370+P378	In case of fire: Use for extinction: CO2, sand, extinguishing powder.
P391	Collect spillage.
P402+P404	Store in a dry place. Store in a closed container.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Unknown acute toxicity:**
This value refers to knowledge of known, established toxicological or ecotoxicological values.
26 % of the mixture consists of component(s) of unknown toxicity.
· **Classification system:** NFPA/HMIS Definitions: 0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme
· **NFPA ratings (scale 0 - 4)**

Health = 4
Fire = 4
Reactivity = 2

(Contd. on page 3)

Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03.

Issue date 05/24/2018 *Reviewed on 05/24/2018*

Trade Name: Fumi-Cel® and Fumi-Strip®; U.S. EPA Reg. No. 72959-6

The substance demonstrates unusual reactivity with water.

· ***HMIS-ratings (scale 0 - 4)***

Health = *4
Fire = 0
Physical Hazard = 2

· ***Hazard(s) not otherwise classified (HNOC):*** None known

3 Composition/Information on Ingredients

· ***Chemical characterization: Mixtures***

· ***Description:*** Mixture of substances listed below with non-hazardous additions.

· ***Dangerous Components:***

12057-74-8	Magnesium Phosphide Water-react. 1, H260; Acute Tox. 2, H300; Acute Tox. 3, H311; Acute Tox. 1, H330; Aquatic Acute 1, H400	56%
	Proprietary Eye Irrit. 2A, H319; STOT SE 3, H335	2-12%
	Proprietary Skin Irrit. 2, H315; Eye Irrit. 2A, H319; STOT SE 3, H335	≤2.5%

· ***Additional information:***

The exact percentages of the ingredients of this mixture are considered to be proprietary and are withheld in accordance with the provisions of paragraph (i) of §1910.1200 of 29 CFR 1910.1200 Trade Secrets.

Magtoxin Fumi-Cel & Fumi-Strip react with water to produce phosphine (hydrogen phosphide, PH3, CAS No. 7803-51-2) as shown in Equation 1.

1) $Mg_3P_2 + 6H_2O \rightarrow 3Mg(OH)_2 + 2PH_3$

4 First-Aid Measures

· ***Description of first aid measures***

· ***General information:***

Immediately remove any clothing soiled by the product.

Symptoms of overexposure are headache, dizziness, nausea, difficult breathing, vomiting, and diarrhea. In ALL cases of overexposure, get medical attention immediately. Take victim to a doctor or emergency treatment facility.

Have product container label or applicator's manual with you when calling a poison control center, doctor, or when going for treatment.

· ***After inhalation:***

Get exposed person to fresh aid. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth to mouth, if possible. Contact a poison control center or doctor for treatment advice.

· ***After skin contact:***

Take off contaminated clothing immediately. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

· ***After eye contact:***

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

· ***After swallowing:***

Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not give anything by mouth to an unconscious person. Do not induce vomiting unless told to by a poison control center or doctor.

(Contd. on page 4)

Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03.

Issue date 05/24/2018 Reviewed on 05/24/2018

Trade Name: Fumi-Cel® and Fumi-Strip®; U.S. EPA Reg. No. 72959-6

· ***Information for doctor***
· ***Most important symptoms and effects, both acute and delayed:***
Magnesium phosphide fumigant products react with moisture from the air, acids and many other liquids to release phosphine gas (hydrogen phosphide, PH3). Mild exposure by inhalation causes malaise (indefinite feeling of sickness), headache, ringing in the ears, fatigue, nausea and pressure in the chest which is relieved by removal to fresh air. Moderate poisoning causes weakness, vomiting, pain just above the stomach, chest pain, diarrhea and dyspnea (difficulty breathing). Symptoms of severe poisoning may occur within a few hours to several days resulting in pulmonary edema and may lead to dizziness, cyanosis, unconsciousness, and death.
· ***Indication of any immediate medical attention and special treatment needed:***
No further relevant information available.

5 Fire-Fighting Measures

· ***Extinguishing media***
· ***Suitable extinguishing agents:***
CO2, sand, extinguishing powder. Do not use water.
Use fire fighting measures that suit the environment.
· ***For safety reasons unsuitable extinguishing agents:*** Water
· ***Special hazards arising from the substance or mixture:***
Phosphine (hydrogen phosphide, PH3)-air mixtures at concentrations above the LEL of 1.8% v/v (18,000 ppm) may ignite spontaneously. Ignition of high concentrations of phosphine gas (hydrogen phosphide, PH3) can product a very energetic reaction. Explosions can occur under these conditions and may cause severe personal injury. Never allow the buildup of phosphine gas (hydrogen phosphide, PH3) to exceed explosive concentrations. Open containers of metal phosphides in open air only and never in a flammable atmosphere. Do not confine spent or partially spent dust from metal phosphide fumigants as the slow release of phosphine gas (hydrogen phosphide, PH3) from these materials may result in the formation of an explosive atmosphere. Spontaneous ignition may occur if large quantities of magnesium phosphide are piled in contact with liquid water. This is particularly true if quantities of these materials are placed in an environment which can provide partial confinement of the hydrogen phosphide gas liberated by hydrolysis.

If incinerated, product will release the following toxic materials: Oxides of magnesium, phosphorous, nitrogen (NOx), carbon, aluminum and silicon, phosphine gas (hydrogen phosphide, PH3) and phosphoric acid.
· ***Advice for firefighters***
Magnesium phosphide is not flammable by itself. However, it reacts readily with water to produce phosphine gas (hydrogen phosphide, PH3) which may ignite spontaneously in air at concentrations above its LEL of 1.8% v/v (18,000 ppm). The UEL of phosphine gas (hydrogen phosphide, PH3) is unknown. The paper covering and polyethylene matrix of the products are flammable.
· ***Special protective equipment for firefighters:***
As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent) and full protective gear to prevent contact with skin and eyes.
Wear a NOISH/MSHA approved full-face gas mask – phosphine gas canister combination may be used at levels up to 15 ppm or following manufacturers' use conditions instructions for escape . Above 15 ppm or in situations where the phosphine gas concentration is unknown, a NIOSH/MSHA approved SCBA must be worn.

6 Accidental Release Measures

· ***Personal precautions, protective equipment and emergency procedures:***
Respiratory protection will most likely be required during cleanup of spilled magnesium phosphide fumigants. If the concentration of phosphine (hydrogen phosphide, PH3) is unknown, NIOSH/MSHA approved SCBA or its equivalent must be worn. Full-face gas mask canister combinations may only be worn at concentrations no higher than 15 ppm.
· ***Environmental precautions:***
Inform respective authorities in case of seepage into water course or sewage system.

(Contd. on page 5)

Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03.

Issue date 05/24/2018 Reviewed on 05/24/2018

Trade Name: Fumi-Cel® and Fumi-Strip®; U.S. EPA Reg. No. 72959-6

· **Methods and material for containment and cleaning up:**
If possible, dispose of spilled material by use according to label instructions. Freshly spilled material which has not been contaminated by water or foreign matter may be placed into original or other gas-tight containers. Punctured pouches or containers may be temporarily repaired using aluminum tape. If the age of the spill is unknown or if the product has been contaminated with soil, debris, water, etc., gather up the spillage in small open buckets having a capacity no larger than about 1 gallon. Do not add more than about 0.5 kg (1 lb.) to a bucket. If on-site wet-deactivation is not feasible, transport the uncovered buckets in open vehicles to a suitable area.

Small amounts of spillage, from about 2 to 4 kg (4 to 9 lbs.) may be spread out over the ground in an open area to be deactivated by atmospheric moisture. Alternatively, spilled magnesium phosphide fumigants may be deactivated by the wet method as described in the following:

Wet Deactivation of Spilled Fumi-Cel and Fumi-Strip Products:
1. Spilled Fumi-Cel and Fumi-Strip may be deactivated with water. Do not use detergent for the deactivation of these products. Fill the container in which the deactivation is to be performed with water to within a few inches of the top.
2. The spilled material is added slowly to the water. Products may ignite during wet deactivation if they are allowed to float to the surface. Add weights or otherwise ensure that the materials stay submerged until deactivation is complete. At no time should the deactivation container be covered.
3. Due to the reactivity of magnesium phosphide, additions of spilled product to the water should be made slowly and carefully. This should be done in open air and respiratory protection will probably be required.
4. Allow the mixture to stand, with occasional stirring, for about six hours. Do not cover the container. The mixture will then be safe for disposal.
5. Dispose of the deactivated material, with or without preliminary decanting, at a sanitary landfill or other suitable site approved by local authorities. Where permissible, the deactivation water containing spent dust may be poured into a storm sewer or out onto the ground.

· **Reference to other sections:**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

· **Protective Action Criteria for Chemicals**

· **PAC-1:**	
12057-74-8	Magnesium Phosphide

· **PAC-2:**	
12057-74-8	Magnesium Phosphide

· **PAC-3:**	
12057-74-8	Magnesium Phosphide

7 Handling and Storage

· **Handling**
· **Precautions for safe handling:**
Store in a cool, dry place in tightly closed containers.
Avoid creating and breathing dust/fume/gas/mist/vapors/spray.
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
· **Information about protection against explosions and fires:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
Keep protective respiratory device available.

(Contd. on page 6)

Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03.

Issue date 05/24/2018 Reviewed on 05/24/2018

Trade Name: Fumi-Cel® and Fumi-Strip®; U.S. EPA Reg. No. 72959-6

· **Conditions for safe storage, including any incompatibilities**
Store away from water, acids, bases, strong oxidizing agents and strong reducing agents.
· **Storage**
· **Requirements to be met by storerooms and receptacles:**
Store products in a locked, dry, well-ventilated area away from heat. Post as a pesticide storage area. Do not store in buildings inhabited by humans or domestic animals.
· **Information about storage in one common storage facility:** Not required.
· **Further information about storage conditions:**
Keep container tightly sealed.
Store in cool, dry conditions in well-sealed containers.
· **Specific end use(s):** No further relevant information available.

8 Exposure Controls/Personal Protection

· **Additional information about design of technical systems:** No further data; see section 7.

· **Control parameters:**
All ventilation should be designed in accordance with OSHA standard (29 CFR 1910.94). Use local exhaust at filling zones and where leakage and dust formation is probable. Use mechanical (general) ventilation for storage areas. Use appropriate ventilation as required to keep Exposure Limits in Air below TLV & PEL limits.
· **Components with occupational exposure limits:**
The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.
At this time, the other constituents have no known exposure limits.

Proprietary	
PEL	Long-term value: 15* mg/m³ fume; *total particulate
TLV	Long-term value: 10* mg/m³ *as inhalable fraction
7803-51-2 Phosphine	
PEL	Long-term value: 0.4 mg/m³, 0.3 ppm
REL	Short-term value: 1 mg/m³, 1 ppm Long-term value: 0.4 mg/m³, 0.3 ppm
TLV	Short-term value: (1.4) mg/m³, (1) ppm Long-term value: (0.42) mg/m³, (0.3) NIC-0.1 ppm Ceiling limit value: NIC-0.5 ppm

· **Additional information:** The lists that were valid during the creation of this SDS were used as basis.

· **Exposure controls:**
· **Personal protective equipment**
· **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing and wash before reuse.
Wash hands before breaks and at the end of work.
Store protective clothing separately.
Avoid contact with the eyes and skin.
· **Breathing equipment:**
Respiratory protection will most likely be required while using magnesium phosphide fumigants. If the concentration of phosphine (hydrogen phosphide, PH3) is unknown, NIOSH/MSHA approved SCBA or its equivalent must be worn. Full-face gas mask canister combinations may only be worn at concentrations no higher than 15 ppm.

(Contd. on page 7)

Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03.

Issue date 05/24/2018 Reviewed on 05/24/2018

Trade Name: Fumi-Cel® and Fumi-Strip®; U.S. EPA Reg. No. 72959-6

· **Protection of hands:**
Wear dry gloves of cotton or other material if contact with tablets, pellets , or dust is likely. Gloves should remain dry after use. Aerate gloves and other clothing that may be contaminated in a well-ventilated area prior to laundering.


Protective gloves

· **Material of gloves:** Dry gloves of cotton or other material.
· **Penetration time of glove material:**
The exact break-through time has to be determined and observed by the manufacturer of the protective gloves.
· **Eye protection:**


Tightly sealed goggles

· **Limitation and supervision of exposure into the environment:**
Keep away from drains, surface and ground waters.
Avoid release into the environment.

9 Physical and Chemical Properties

· **Information on basic physical and chemical properties**
· **General Information**
· **Appearance:**
Form: Solid
Color: Dark charcoal gray
· **Odour:** Garlic, carbide or decaying fish
· **Odor threshold:** Not determined.

· **pH-value:** Not applicable.

· **Change in condition**
Melting point/Melting range: Mg3P2 = > 1000 °C (Mg37P36 = > 1832 °F) (PH3 = -133.5 °C)
Boiling point/Boiling range: Mg3P2 = > 1000 °C (Mg37P36 = > 1832 °F) (PH3 = -87.7 °C)
Not determined.

· **Flash point:** Not determined.

· **Flammability (solid, gaseous):** Contact with water or acids liberates extremely flammable gases.

· **Ignition temperature:** Not determined

· **Decomposition temperature:** Decomposes at ambient conditions when moisture is present.

· **Auto igniting:** Spontaneously flammable in air.

· **Danger of explosion:** Not determined.

· **Explosion limits:**
Lower: 1.8 Vol % (for PH3)
Upper: Not established Vol % (for PH3)

· **Vapor pressure:** Mg3P2 = 0 mm Hg
PH3 = 40 mm Hg @ -129.4 °C

(Contd. on page 8)

Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03.

Issue date 05/24/2018 Reviewed on 05/24/2018

Trade Name: Fumi-Cel® and Fumi-Strip®; U.S. EPA Reg. No. 72959-6

· **Density:** Mg3P2 = 2.06 g/cm³ (Mg25.035P16.69 = 17. lbs/gal) (PH3 = 1.37 g/l gas)
· **Relative density:** Not determined.
· **Vapor density:** Not applicable.
· **Evaporation rate:** Not applicable.
· **Solubility in / Miscibility with:**
Water: Mg3P2 = Insoluble, reacts
PH3 = 26 cc in 100 ml at 17 °C
· **Partition coefficient (n-octanol/water):** Not determined.
· **Viscosity:**
Dynamic: Not applicable.
Kinematic: Not applicable.
· **Solvent content:**
VOC content: 0.00 %
Solids content: 100 %
· **Other information:** No further relevant information available.

10 Stability and Reactivity

· **Reactivity:** No further relevant information available.
· **Chemical stability:**
Products are stable to most chemical reactions, except for hydrolysis. Products will react with moist air, liquid water, acids and some other liquids to produce toxic and flammable phosphine (hydrogen phosphide, PH3) gas.
· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
· **Possibility of hazardous reactions:**
Contact with water releases flammable gases.
Contact with water releases toxic gases.
· **Conditions to avoid:** Avoid prolonged exposure to air.
· **Incompatible materials:** Water, acids, bases, strong oxidizing agents and strong reducing agents.
· **Hazardous decomposition products:**
Oxides of magnesium, phosphorous, nitrogen (NOx), carbon, aluminum and silicon, phosphine gas (hydrogen phosphide, PH3) and phosphoric acid.
· **Additional information:**
Phosphine (hydrogen phosphide, PH3) gas may react with certain metals and cause corrosion, especially at higher temperatures and relative humidity. Metals such as copper, brass and other copper alloys, and precious metals such as gold and silver are susceptible to corrosion by phosphine. Small electric motors, smoke detectors, brass sprinkler heads, batteries and battery chargers, fork lifts, temperature monitoring systems, switching gears, communication devices, computers, calculators and other electrical equipment may be damaged by this gas. Phosphine (hydrogen phosphide, PH3) will also react with certain metallic salts and, therefore, sensitive items such as photographic film, some inorganic pigments, etc., should not be exposed.

11 Toxicological Information

· **Information on toxicological effects:**
· **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**		
12057-74-8 Magnesium Phosphide		
Oral	LD50	>5,000 mg/kg (Rat)

(Contd. on page 9)

Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03.

Issue date 05/24/2018 Reviewed on 05/24/2018

Trade Name: Fumi-Cel® and Fumi-Strip®; U.S. EPA Reg. No. 72959-6

Proprietary		
Oral	LD50	>10,000 mg/kg (Rat)
Dermal	LD50	>2,000 mg/kg (Rabbit)
12057-74-8 Magnesium Phosphide		
Oral	LD50	>5,000 mg/kg (Rat)
7803-51-2 Phosphine		
Inhalative	LC50/4 h	11 ppm (Rat)

· ***Primary irritant effect:***
· ***On the skin:***
Strong caustic effect on skin and mucous membranes.
Irritant to skin and mucous membranes.
· ***On the eye:***
Strong irritant with the danger of severe eye injury.
Corrosive effect.
Causes serious eye irritation.
· ***Additional toxicological information:***
The product shows the following dangers according to internally approved calculation methods for preparations:
Toxic
Irritant
Very toxic

· ***Carcinogenic categories:***
· ***IARC (International Agency for Research on Cancer):***
Group 1 - Carcinogenic to humans
Group 2A - Probably carcinogenic to humans
Group 2B - Possibly carcinogenic to humans
Group 3 - Not classifiable as to its carcinogenicity to humans
Group 4 - Probably not carcinogenic to humans

Proprietary	3
Proprietary	3

· ***NTP (National Toxicology Program):***
None of the ingredients are listed.

· ***OSHA-Ca (Occupational Safety & Health Administration):***
None of the ingredients are listed.

12 Ecological Information

· ***Toxicity:*** The hazards for the aquatic environment are unknown.
· ***Aquatic toxicity:***
Avoid release into the environment. Runoff from fire control or dilution water may cause pollution.
· ***Persistence and degradability:*** No further relevant information available.
· ***Behavior in environmental systems:***
· ***Bioaccumulative potential:*** No further relevant information available.
· ***Mobility in soil:*** No further relevant information available.
· ***Ecotoxical effects:***
· ***Remark:*** Very toxic for fish
· ***Additional ecological information:***
· ***General notes:***
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.

(Contd. on page 10)

Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03.

Issue date 05/24/2018 Reviewed on 05/24/2018

Trade Name: Fumi-Cel® and Fumi-Strip®; U.S. EPA Reg. No. 72959-6

Poisonous for fish and plankton in water bodies.
Very toxic for aquatic organisms

· **Results of PBT and vPvB assessment:**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **Other adverse effects:** No further relevant information available.

13 Disposal Considerations

· **Waste treatment methods**
· **Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
Observe all federal, state and local environmental regulations when disposing of this material.
When being disposed of, spilled or partially reacted Fumi-Cel and Fumi-Strip fumigants are considered hazardous wastes under existing Federal Regulations. If properly exposed, the grayish-white residual dust from these products will not be a hazardous waste and normally contain only a very small amount of unreacted magnesium phosphide. This waste will be safe for disposal. Properly exposed material is not a hazardous waste. However, the residuals from incompletely exposed Fumi-Cel or Fumi-Strip fumigants may require special care.

Some local and state waste disposal regulations may vary from the following recommendations. Disposal procedures should be reviewed with appropriate authorities to ensure compliance with local regulations. Contact your State Pesticide or Environmental Control Agency or Hazardous Waste Specialist at the nearest EPA Regional Office for guidance.

1. Confinement of partially spent fumigant or residual dust, as in a closed container, or collection and storage of large quantities of fumigant may result in a fire or explosion hazard. Small amounts of phosphine (hydrogen phosphide, PH3) may be given off from unreacted magnesium phosphide, and confinement of the gas may result in a flash.
2. In open areas, small amounts of spent residual dust may be disposed of on site by burial or by spreading over the land surface away from inhabited buildings.
3. Residuals from Fumi-Cel and Fumi-Strip fumigants may also be collected and disposed of at a sanitary landfill, incinerator or other approved sites or by other procedures approved by Federal, State or Local authorities.
4. From 1 to 2 kg (2 to 4 lbs.) of spent fumigant may be collected for disposal in an open 1-gallon bucket. Caution: Do not collect dust in large drum, dumpsters, plastic bags or other containers where confinement may occur. Transport the uncovered buckets in an open vehicle for disposal or deactivation.

· **Uncleaned packaging**
· **Recommendation:**
Triple rinse containers with water and then offer for recycling or reconditioning; or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

14 Transport Information

· **UN-Number:**
· **DOT, ADR/ADN, IMDG, IATA** UN2011
· **UN proper shipping name:**
· **DOT** Magnesium phosphide
· **ADR/ADN** UN2011 Magnesium phosphide, ENVIRONMENTALLY HAZARDOUS
· **IMDG** MAGNESIUM PHOSPHIDE, MARINE POLLUTANT
· **IATA** MAGNESIUM PHOSPHIDE

(Contd. on page 11)

Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03.

Issue date 05/24/2018 Reviewed on 05/24/2018

Trade Name: Fumi-Cel® and Fumi-Strip®; U.S. EPA Reg. No. 72959-6

· **Transport hazard class(es):**

· **DOT**

· **Class:** 4.3 Substances which, in contact with water, emit flammable gases

· **Label:** 4.3, 6.1

· **ADR/ADN**

· **Class:** 4.3 (WT2) Substances which, in contact with water, emit flammable gases

· **Label:** 4.3, 6.1

· **IMDG**

· **Class:** 4.3 Substances which, in contact with water, emit flammable gases

· **Label:** 4.3/6.1

· **IATA**

· **Class:** 4.3 Substances which, in contact with water, emit flammable gases

· **Label:** 4.3 (6.1)

· **Packing group:**

· **DOT, ADR/ADN, IMDG, IATA** I

· **Environmental hazards:** Product contains environmentally hazardous substances: Magnesium Phosphide

· **Special marking (ADR/ADN):** Symbol (fish and tree)

· **Special precautions for user:** Warning: Substances which, in contact with water, emit flammable gases

· **Danger code (Kemler):** 462

· **EMS Number:** F-G,S-N

· **Stowage Category** E

· **Stowage Code** SW2 Clear of living quarters.
SW3 Shall be transported under temperature control.

· **Handling Code** H1 Keep as dry as reasonably practicable

· **Segregation Code** SG26 In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained.

(Contd. on page 12)

Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03.

Issue date 05/24/2018 Reviewed on 05/24/2018

Trade Name: Fumi-Cel® and Fumi-Strip®; U.S. EPA Reg. No. 72959-6

· SG35 Stow "separated from" acids.

· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:** Not applicable.

· **Transport/Additional information:**

· **DOT**

· **Quantity limitations:** On passenger aircraft/rail: Forbidden
On cargo aircraft only: 15 kg

· **ADR/ADN**

· **Excepted quantities (EQ):** Code: E0
Not permitted as Excepted Quantity

· **IMDG**

· **Limited quantities (LQ):** 0

· **Excepted quantities (EQ):** Code: E0
Not permitted as Excepted Quantity

· **UN "Model Regulation":** UN 2011 MAGNESIUM PHOSPHIDE, 4.3 (6.1), I, ENVIRONMENTALLY HAZARDOUS

* 15 Regulatory Information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture:**

· **SARA (Superfund Amendments and Reauthorization):**

· **Section 355 (extremely hazardous substances):**

None of the ingredients are listed.

· **Section 313 (Specific toxic chemical listings):**

None of the ingredients are listed.

· **TSCA (Toxic Substances Control Act):**

12057-74-8	Magnesium Phosphide

· **TSCA new (21st Century Act) (Substances not listed)**

12057-74-8	Magnesium Phosphide
	Proprietary
	Proprietary

· **California Proposition 65:**

· **Chemicals known to cause cancer:**

None of the ingredients are listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients are listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients are listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients are listed.

· **New Jersey Right-to-Know List:**

12057-74-8	Magnesium Phosphide

· **New Jersey Special Hazardous Substance List:**

12057-74-8	Magnesium Phosphide	F3, R2

(Contd. on page 13)

Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03.

Issue date 05/24/2018 Reviewed on 05/24/2018

Trade Name: Fumi-Cel® and Fumi-Strip®; U.S. EPA Reg. No. 72959-6

· **Pennsylvania Right-to-Know List:**
None of the ingredients are listed.

· **Pennsylvania Special Hazardous Substance List:**
None of the ingredients are listed.

· **Carcinogenic categories:**

· **EPA (Environmental Protection Agency):**
None of the ingredients are listed.

· **TLV (Threshold Limit Value established by ACGIH):**	
Proprietary	A4

· **NIOSH-Ca (National Institute for Occupational Safety and Health):**
None of the ingredients are listed.

· **GHS label elements**
This product is labeled according to FIFRA.
The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms:**

GHS02 GHS05 GHS06 GHS09

· **Signal word:** Danger

· **Hazard-determining components of labeling:**
Magnesium Phosphide

· **Hazard statements:**

H260	In contact with water releases flammable gases, which may ignite spontaneously.
H300+H330	Fatal if swallowed or if inhaled.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H400	Very toxic to aquatic life.

· **Precautionary statements:**

P223	Do not allow contact with water.
P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P264	Wash thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P284	[In case of inadequate ventilation] wear respiratory protection.
P301+P310	If swallowed: Immediately call a poison center/doctor.
P302+P352	If on skin: Wash with plenty of water.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P320	Specific treatment is urgent (see supplementary first aid instructions on this Safety Data Sheet).
P332+P313	If skin irritation occurs: Get medical advice/attention.
P362	Take off contaminated clothing.
P370+P378	In case of fire: Use for extinction: CO2, sand, extinguishing powder.
P391	Collect spillage.

(Contd. on page 14)

Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03.

Issue date 05/24/2018 *Reviewed on 05/24/2018*

Trade Name: Fumi-Cel® and Fumi-Strip®; U.S. EPA Reg. No. 72959-6

P402+P404	Store in a dry place. Store in a closed container.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

· ***National regulations:***

None of the ingredients are listed.

· ***Chemical safety assessment:*** A Chemical Safety Assessment has not been carried out.

16 Other Information

The information and recommendations in this safety data sheet are, to the best of our knowledge, accurate as of the date of issue. Nothing herein shall be deemed to create warranty, expressed or implied, and shall not establish a legally valid contractual relationship. It is the responsibility of the user to determine applicability of this information and the suitability of the material or product for any particular purpose.

· ***Date of preparation / last revision:*** 05/24/2018 / 4

· ***Abbreviations and acronyms:***

ADR: The European Agreement concerning the International Carriage of Dangerous Goods by Road
ADN: The European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety and Health
OSHA: Occupational Safety & Health Administration
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
Water-react. 1: Substances and mixtures which in contact with water emit flammable gases – Category 1
Acute Tox. 2: Acute toxicity – Category 2
Acute Tox. 3: Acute toxicity – Category 3
Acute Tox. 1: Acute toxicity – Category 1
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1

· **** Data compared to the previous version altered.***

SDS created by MSDS Authoring Services www.msdsauthoring.com +1-877-204-9106