



Safety Data Sheet (SDS)

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

Printing date 04/02/2015

Reviewed on 9/23/2021

* 1 Identification

- **Product identifier**
- **Trade name:** Spent Magnesium Phosphide Generated From: Fumi-Cel®, Fumi-Strip®, Degesch Magtoxin® Prepac Spot Fumigant and Degesch Magtoxin® Granules
- **Relevant identified uses of the substance or mixture and uses advised against**
- **Product description:** Spent fumigant for disposal.
- **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**



GHS07

Skin Irrit. 2 H315 Causes skin irritation.
Eye Irrit. 2A H319 Causes serious eye irritation.
STOT SE 3 H335 May cause respiratory irritation.

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



GHS07

- **Signal word** Warning
- **Hazard-determining components of labeling:**
Magnesium Hydroxide
- **Hazard statements**
Causes skin irritation.
Causes serious eye irritation.
May cause respiratory irritation.
- **Precautionary statements**
Avoid breathing dust/fume/gas/mist/vapors/spray
Wear protective gloves/protective clothing/eye protection/face protection.

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Wash thoroughly after handling.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses. Continue rinsing. Specific treatment (see supplementary first aid instructions on this Safety Data Sheet).

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

Call a poison center/doctor if you feel unwell.

If skin irritation occurs: Get medical advice/attention.

If eye irritation persists: Get medical advice/attention.

If on skin: Wash with plenty of water.

Take off contaminated clothing and wash it before reuse.

Store locked up.

Store in a well-ventilated place.

Dispose of contents/container in accordance with local/regional/national/international regulations.

Classification system:**NFPA ratings (scale 0 - 4)**

Health = 2

Fire = 0

Reactivity = 0

HMIS-ratings (scale 0 - 4)

Health = 2

Fire = 0

Reactivity = 0

Other hazards None known*** 3 Composition/information on ingredients****Chemical characterization: Mixtures****Description:** Mixture of substances listed below with nonhazardous additions.**Dangerous Components:**

1309-42-8	Magnesium Hydroxide	99.8-99.9%
	⚠ Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2A, H319; STOT SE 3, H335	
12057-74-8	Magnesium Phosphide	0.1-0.2%
	⚠ Water-react. 1, H260; ⚠ Acute Tox. 2, H300; ⚠ Aquatic Acute 1, H400	

Additional information:

Spent Fumi-Cel, Fumi-Strip, Degesch Magtoxin Spot Fumigant and Degesch Magtoxin Granules consist mainly of magnesium hydroxide and inert ingredients in the formulation of the product. The magnesium hydroxide is generated via the reaction in equation 1. The spent material will also contain from about 0.1 to 0.2 percent unreacted magnesium phosphide. If the spent material or partially exposed product is wet deactivated following directions in the Applicator's Manual, the spent material will contain less than 0.1 percent unreacted magnesium phosphide. The spent waste has very low oral and dermal toxicity, is not a significant fire hazard and is not a RCRA hazardous waste. Spent and partially spent dusts are rather dense and ordinarily do not represent an inhalation hazard. Proper protective equipment should be worn under conditions where significant risks of inhalation are present.

Unreacted or incompletely exposed magnesium phosphide fumigants are highly toxic and hazardous wastes which will trigger RCRA laboratory test characteristics of reactivity and ignitability. Since Degesch metal phosphide fumigants are not manufactured with ingredients listed under the RCRA toxicity characteristic, they will not trigger the toxicity characteristic leaching procedure (TCLP).

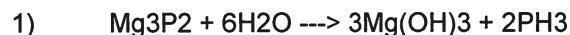
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* 4 First-aid measures

· Description of first aid measures

· General information:

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 and applicator's manual with you when calling a poison control center, doctor, or when going for treatment.

· After inhalation:

Get exposed person to fresh air. 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.

· Information for doctor:

· Most important symptoms and effects, both acute and delayed

The primary route of exposure to spent magnesium phosphide fumigant products is dermal. However, ingestion and inhalation exposures are possible. Spent dust from Degesch magnesium phosphide products has a very low oral and dermal toxicity. This small risk may be avoided by the use of cloth gloves when handling the material, as required by EPA-approved labeling. Accidental ingestion is avoided by washing, prior to eating, after handling spent magnesium phosphide fumigants. The risk of any significant inhalation is very small because of the high density of the spent dust and its low toxicity.

· Indication of any immediate medical attention and special treatment needed

No further relevant information available.

* 5 Fire-fighting measures

· Extinguishing media

· **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.

· Special hazards arising from the substance or mixture

If incinerated, product will release the following toxic materials: Oxides of magnesium and phosphorous and phosphine gas (hydrogen phosphide, PH₃).

· Advice for firefighters

The magnesium phosphide found in the spent magnesium phosphide products is not flammable by itself. However, it reacts readily with water, acids or bases to produce phosphine gas (hydrogen phosphide, PH₃) which may evolve to form toxic and/or flammable concentrations in air. The LEL of phosphine gas (hydrogen phosphide, PH₃) is 1.8% v/v (18,000 ppm). The UEL of phosphine gas (hydrogen phosphide, PH₃) is unknown.

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· **Protective equipment:**

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 NIOSH/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**

None normally required. Use NIOSH/MSHA approved dust mask if spent dust becomes airborne.

· **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.

· **Methods and material for containment and cleaning up:**

Dispose contaminated material as waste according to section 13.

Ensure adequate ventilation.

Dispose of the collected material according to regulations.

· **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.

* 7 Handling and storage

· **Handling:**

· **Precautions for safe handling**

Store in a cool, dry place.

Ensure good ventilation/exhaustion at the workplace.

· **Information about protection against explosions and fires:** No special measures required.

· **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.

· **Information about storage in one common storage facility:** Not required.

· **Further information about storage conditions:** Store in cool, dry conditions.

· **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:**

7803-51-2 phosphine

PEL	Long-term value: 0.4 mg/m ³ , 0.3 ppm
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REL	Short-term value: 1 mg/m ³ , 1 ppm Long-term value: 0.4 mg/m ³ , 0.3 ppm
TLV	Short-term value: (1.4) mg/m ³ , (1) ppm Long-term value: (0.42) mg/m ³ , (0.3) NIC-0.1 ppm Ceiling limit value: NIC-0.5 ppm

· **Additional information:** The lists that were valid during the creation 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.

Avoid contact with the eyes and skin.

· **Breathing equipment:**

Respiratory protection is not required unless handling of the material produces nuisance airborne concentrations.

· **Protection of hands:**



Protective gloves

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.

· **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

* 9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form:

Dust/Solid

Color:

Grayish-white

· **Odor:**

Generally odorless, possible slight garlic, carbide or decaying fish

· **Odor threshold:**

Not determined.

· **pH-value:**

Not applicable.

· **Change in condition**

Melting point/Melting range:

Not determined.

Boiling point/Boiling range:

>1000 °C (>1832 °F)

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· Flash point:	Not applicable.
· Flammability (solid, gaseous):	Not flammable under normal conditions. Contact with water or acids may release small amounts of phosphine gas which is flammable
· Ignition temperature:	Not determined
· Decomposition temperature:	Decomposes at ambient conditions when moisture is present.
· Auto igniting:	Product is not self-igniting.
· Danger of explosion:	Product does not present an explosion hazard.
· Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
· Vapor pressure @ 20 °C (68 °F):	0 mm Hg
· Density @ 20 °C (68 °F):	2.400 g/cm ³ (20.028 lbs/gal)
· Relative density	Not determined.
· Vapor density	Not applicable.
· Evaporation rate	Not applicable.
· Solubility in / Miscibility with Water:	Insoluble.
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity:	
Dynamic:	Not applicable.
Kinematic:	Not applicable.
· Solvent content:	
Organic solvents:	0.0 %
Solids content:	100.0 %
· 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** No dangerous reactions known.
- **Conditions to avoid** Contact with moisture, acids and bases.
- **Incompatible materials:** Water, acids, bases, strong oxidizing agents and strong reducing agents.
- **Hazardous decomposition products:**
Oxides of magnesium and phosphorous and phosphine gas (hydrogen phosphide, PH₃).

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* 11 Toxicological information

- **Information on toxicological effects**

- **Acute toxicity:**

- **LD/LC50 values that are relevant for classification:**

1309-42-8 Magnesium Hydroxide

Oral LD50 8500 mg/kg (rat)

- **Primary irritant effect:**

- **on the skin:**

May be irritating.

Irritant to skin and mucous membranes.

- **on the eye:**

Direct contact may cause eye irritation.

Irritating effect.

Causes serious eye irritation.

- **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:

Harmful

Irritant

- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

None of the ingredients are listed.

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

- **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:** No further relevant information available.

- **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.

- **Additional ecological information:**

- **General notes:** Not known to be hazardous to water.

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

- **Other adverse effects** No further relevant information available.

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*** 13 Disposal considerations****· Waste treatment methods****· Recommendation:**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system. When being disposed of, spilled or partially reacted Degesch magnesium phosphide fumigants are hazardous wastes under existing Federal Regulations. If properly exposed, the grayish residual dust after a fumigation will not be a hazardous waste and normally contains only trace amounts of unreacted magnesium phosphide. This waste will be safe for disposal. However, the residual dust from incompletely exposed products may require special care such as wet or dry deactivation.

Triple rinse containers with water or dry deactivate them by exposure to open air for 24 hours or longer. 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. Rinsate may be disposed of in a storm sewer, sanitary landfill or by other approved procedures. Or it is permissible to remove lids and expose empty flasks to atmospheric conditions until the residue in the flasks is reacted. Then puncture and dispose of in a sanitary landfill or other approved site, or by other procedures approved by state and local authorities.

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

See Degesch America, Inc. SDS for Magnesium Phosphide fumigants for recommendations on disposal and handling unreacted or incompletely reacted fumigant.

· Uncleaned packagings:**· Recommendation:**

Triple rinse containers with water or dry deactivate them by exposure to open air for 24 hours or longer. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill or by other approved procedures.

*** 14 Transport information**

· UN-Number	
· DOT, ADR, ADN, IMDG, IATA	Non-Regulated Material
· UN proper shipping name	
· DOT, ADR, ADN, IMDG, IATA	Non-Regulated Material
· Transport hazard class(es)	
· DOT, ADR, ADN, IMDG, IATA	
· Class	Non-Regulated Material
· Packing group	
· DOT, ADR, IMDG, IATA	Non-Regulated Material
· Environmental hazards:	Not applicable.
· Special precautions for user	Not applicable.
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· UN "Model Regulation":	-

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* 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Sara**

- **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):**

All ingredients are listed.

- **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.

- **Carcinogenic categories**

- **EPA (Environmental Protection Agency)**

None of the ingredients are listed.

- **TLV (Threshold Limit Value established by ACGIH)**

None of the ingredients are listed.

- **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 substance is classified and labeled according to the Globally Harmonized System (GHS).

- **Hazard pictograms**



GHS07

- **Signal word** Warning

- **Hazard-determining components of labeling:**

Magnesium Hydroxide

- **Hazard statements**

Causes skin irritation.

Causes serious eye irritation.

May cause respiratory irritation.

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Precautionary statements

Avoid breathing dust/fume/gas/mist/vapors/spray

Wear protective gloves/protective clothing/eye protection/face protection.

Wash thoroughly after handling.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Specific treatment (see supplementary first aid instructions on this Safety Data Sheet).

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

Call a poison center/doctor if you feel unwell.

If skin irritation occurs: Get medical advice/attention.

If eye irritation persists: Get medical advice/attention.

If on skin: Wash with plenty of water.

Take off contaminated clothing and wash it before reuse.

Store locked up.

Store in a well-ventilated place.

Dispose of contents/container in accordance with local/regional/national/international regulations.

National regulations:

The product is subject to be labeled according with the prevailing version of the regulations on hazardous substances.

State Right to Know

1309-42-8	Magnesium Hydroxide ⚠ Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2A, H319; STOT SE 3, H335	99.8-99.9%
12057-74-8	Magnesium Phosphide ⚠ Water-react. 1, H260; ⚠ Acute Tox. 2, H300; ⚠ Aquatic Acute 1, H400	0.1-0.2%

All 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 04/02/2015 / -**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)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

Water-react. 1: Substances and Mixtures which, in contact with water, emit flammable gases, Hazard Category 1

Acute Tox. 2: Acute toxicity, Hazard Category 2

Acute Tox. 4: Acute toxicity, Hazard Category 4

Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2

Eye Irrit. 2A: Serious eye damage/eye irritation, Hazard Category 2A

STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

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Aquatic Acute 1: Hazardous to the aquatic environment - AcuteHazard, Category 1

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

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