

## 1. Identification of The Substance / Mixture and of The Company / Undertaking

### 1.1 Product identifier

**Name** SmartSet HT  
**Chemical Name** Earth Metal Compound

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

**Relevant identified uses** Industrial use  
**Uses advised against** Additive

### 1.3 Details of the Supplier of the safety data sheet

**Company** **PLUTO Ground Mühendislik ve Ticaret Anonim Şirketi**  
**Address** Ferhatpaşa SB Mahallesi Gonca Sokak 2.  
Kısım Beton Depo No:2 Z-16/ Z-17 Çatalca / İSTANBUL  
**Telephone** +90 212 702 5055

### 1.4 Manufacturer

**Company** Pluto Ground Technologies  
**Address** 9168 52nd Street SE, Calgary, Alberta T2C 5A9, CANADA  
**Telephone** +1 587 973 1983  
**Web** [www.plutogt.com](http://www.plutogt.com)

### 1.5 Person Responsible for Safety Data Sheet

**Name** Philip Tomlinson  
**Telephone** +1 587 973 1983  
**E-mail Address** [philiptomlinson@plutogt.com](mailto:philiptomlinson@plutogt.com)

### 1.6 Emergency telephone number

**Company Emergency** +994 51-846-48-82

## 2. Hazards Identification

### 2.1 Classification of the substance or mixture (EC regulation criteria 1272/2008 (CLP):

#### 2.2 Label elements

**Hazard pictograms (CLP):**  
Not applicable

**Signal word:**  
Not applicable

**Hazard statements (CLP):**  
Not applicable

**EUH statements (CLP):**  
Not applicable

#### 2.3 Other hazards

Results of PBT and vPvB assessment: Not applicable. Risk of dust explosion.

## 3. Composition/Information on Ingredients

### 3.1 Substances / Mixtures

Name	Product identifier	%	Classification
Earth Metal Compound	CAS No: 1309-48-4 EC:215-171-9	100	Not classified

Full text of H-statements: see section 16

## 4. First Aid Measures

### 4.1 Description of first aid measures

#### **Additional advice**

Pay attention to self-protection. Concerning personal protective equipment to use, see section 8. Never give anything by mouth to an unconscious person. In case of doubt or persistent symptoms, consult always a physician. Show this safety data sheet to the doctor in attendance.

#### **Inhalation**

Remove person to fresh air and keep comfortable for breathing.

#### **Skin contact**

Wash skin soap and water. Get medical attention if irritation persists.

#### **Eyes contact**

Flush eyes with water as a precaution.

#### **Ingestion**

Never give anything by mouth to an unconscious person. Rinse mouth with water

### 4.2 Most important symptoms and effects, both acute and delayed

**Inhalation**                      May cause irritation of the respiratory tract. Symptoms include cough, sore throat, fever and chest pain. Repeated inhalation of dusts may cause lung problems over a number of years.

**Ingestion**                        Ingestion may cause diarrhea.

**Skin Contact**                    No effects.

**Eye Contact**                    Irritating to eyes. May cause pain and redness.

### 4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

## 5. Fire-fighting Measures

### 5.1 Extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

### 5.2 Special hazards arising from the substance or mixture

Incombustible material. Thermal decomposition can lead to the escape of irritating gases and vapours. Avoid dust formation.

Explosion hazard: Risk of dust explosion.

Hazardous decomposition products in case of fire: On burning formation of metallic fumes.

### 5.3 Advise for firefighters

*Evacuate area. Use water spray or fog for cooling exposed containers.  
Contain the extinguishing fluids by bunding.  
Prevent fire fighting water from entering the environment.  
Avoid dust formation. Knock down/dilute dust cloud with water spray.  
Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus.*

#### **5.4 Other information**

*Do not allow run-off from fire-fighting to enter drains or water courses. Dispose of waste in accordance with environmental legislation.  
In the case of an accident or other emergency, act according to the Internal Emergency Plan and Information Forms.*

## **6. Accidental Release Measures**

### **6.1 Personal precautions, protective equipment and emergency procedures**

#### **6.1.1. For non-emergency personnel:**

*Evacuate unnecessary personnel. Keep upwind. Provide adequate ventilation. Wear recommended personal protective equipment. Concerning personal protective equipment to use, see section 8. Do not breathe dust. Avoid contact with skin, eyes and clothing. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ensure equipment is adequately earthed. Use explosion-proof equipment. Use only non-sparking tools.*

#### **6.1.2. For emergency responders:**

*Ensure procedures and training for emergency decontamination and disposal are in place. Concerning personal protective equipment to use, see section 8.*

### **6.2 Environmental precautions**

*Do not allow to enter into surface water or drains. Notify authorities if product enters sewers or public waters.*

### **6.3 Methods and material for containment and cleaning up**

*Methods for cleaning up: Take up mechanically (sweeping, shovelling) and collect in suitable container for disposal. Residue should be washed down with plenty of water*

### **6.4 Reference to other sections**

*Concerning personal protective equipment to use, see section 8.  
Concerning disposal elimination after cleaning, see section 13.*

## **7. Handling and Storage**

### **7.1 Precautions for safe handling**

*Provide adequate ventilation.  
Use personal protective equipment as required. Concerning personal protective equipment to use, see section 8.  
Do not breathe dust. Obtain special instructions before use.  
Do not handle until all safety precautions have been read and understood.  
Contaminated work clothing must not be allowed out of the workplace.  
Avoid dust formation.  
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. -No-smoking.  
Ground/bond container and receiving equipment.  
Use explosion-proof equipment. Use only non-sparking tools.*

**Hygiene measures:**

Keep good industrial hygiene.

Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Do not eat, drink or smoke when using this product. Keep away from food, drink and animal feeding stuffs. Remove contaminated clothes. Separate working clothes from town clothes. Launder separately. Wash contaminated clothing before reuse.

Do not make direct contact with the substance without taking the precautions described in sec 8

Work in accordance with the provisions of the "Regulation on Health and Safety Precautions in the Work of Chemical Substances" and the "Regulation on Health and Safety Precautions in Carcinogenic or Mutagenic Activities".

**7.2 Conditions for safe storage, including any incompatibilities**

Technical measures: Keep container tight closed.

Storage conditions: Store in a dry, cool and well-ventilated place. Do not store near or with any of the incompatible materials listed in section 10. Incompatible substances or mixtures: Strong acids.

Heat and ignition sources: Keep away from open flames, hot surfaces and sources of ignition.

Do not smoke.

Special rules on packaging: Keep in properly labelled containers.

Packaging materials: Keep only in the original container.

**7.3 Specific end use(s)**

No additional information available.

**8. Exposure Controls/Personal Protection****8.1 Control parameters**

Exposure controls: Monitoring of the workplace should be considered in accordance with EH40 (or equivalent) controls. Magnesium

Oxide(CAS 1309-48-4):

ACIGH TLV-TWA:10 mg/m<sup>3</sup>

OSHA PEL-TWA:15 mg/m<sup>3</sup>

LTEL (8 hr TWA): 10 mg/m<sup>3</sup> (total inhalable dust); 4mg/m<sup>3</sup> (fume and respirable dust) STEL (15 min TWA):5 ppm;8 mg/m<sup>3</sup>

LTEL(8 hrTWA):10 mg/m<sup>3</sup> (total dust) ; 4mg/m<sup>3</sup> (respirable dust)

**8.2 Exposure controls**

**Engineering measure(s)** Provide adequate ventilation. Organisational measures to prevent/limit releases, dispersion and exposure. Safe handling: see section 7. Apply measures to prevent dust explosions. Ensure equipment is adequately earthed.

**Personal protective equipment**

The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**Respiratory protection**

Not required for normal conditions of use.

In case of insufficient ventilation, wear suitable respiratory equipment. Effective dust mask (EN 149). Half-face mask (EN140). Full face mask (DIN EN 136). Filter type: P (EN 143)

**Eye protection**

Use suitable eye protection. (EN166): Safety glasses with side shields.

**Hand protection**

Wear chemically resistant gloves (tested to EN 374)  
Suitable material: Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances.

**Body protection**

Wear suitable protective clothing. Wear suitable coveralls to prevent exposure to the skin.

**Thermal hazard protection**

Not required for normal conditions of use. Use dedicated equipment.

**Environmental exposure controls**

Avoid release to the environment. Comply with applicable community environmental protection legislation

**9. Physical and Chemical Properties****9.1 Information on basic physical and chemical properties**

Physical state	Solid
Colour	White
Odour	Odourless
Odour threshold	No data available
pH	Not known
Relative evaporation rate (butylacetate=1)	No data available
Melting point °C	Not known
Freezing point	No data available
Boiling point	Not applicable
Flash point	No data available
Auto-ignition temperature	Not applicable
Decomposition temperature	Not applicable
Flammability (solid,gas)	Not flammable
Vapour pressure	Not known
Relative vapour density at 20°C	No data available
Relative density	3.58 g/cm <sup>3</sup>
Solubility	Insoluble
Log Pow	No data available
Explosive properties	Not applicable
Oxidising properties	Not applicable
Explosive limits	Not applicable

## 10. Stability and Reactivity

### 10.1 Reactivity

No special measures known.  
Reference to other sections: 10.4 & 10.5

### 10.2 Chemical stability

Stable under normal conditions.

### 10.3 Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.  
Risk of dust explosion.

### 10.4 Conditions to avoid

Humidity.  
Safe handling: see section 7.

### 10.5 Incompatible materials

Strong oxidizing agents,  
May react violently with: phosphorous pentachloride, Strong acids  
Safe handling: see section 7.

### 10.6 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. – Earth Metal Compound  
Reference to other sections: 5.2

## 11. Toxicological Information

### 11.1 Information on toxicological effects

Acute toxicity (oral) : Product has been classified as not hazardous in terms of physicochemical and health effects.

Acute toxicity(dermal) : Not classified

Acute toxicity(inhalation) : Not classified

Skin corrosion / irritation : Not classified

Serious eye damage / irritation : Not classified

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Carcinogenicity - Hamster - Intratracheal Tumorigenic: Equivocal tumorigenic agent by RTECS criteria. Sense Organs and Special Senses

(Nose, Eye, Ear, and taste):Olfaction:Tumors. Lungs, Thorax, or Respiration:Tumors.

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

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Reproductive toxicity : Not classified

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STOT –single exposure : Not classified

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STOT- repeated exposure : Not classified

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Aspiration hazard : Not classified

## 12. Ecological Information



## 12.1 Toxicity

*Ecology – General :The product is not considered harmful to aquatic organisms nor to cause long- term adverse effects in the environment.*

*Acute aquatic toxicity :Not classified*

*Chronic aquatic toxicity :Not classified*

## 12.2 Persistence and degradability:

*No data available*

## 12.3 Bioaccumulative potential

*Bioaccumulative potential: Not bioaccumulative.*

## 12.4 Mobility in soil

*No data available*

## 12.5 Results of PBT and vPvB assessment:

*No data available*

## 12.6 Other adverse effects

*No additional information available*

## 13. Disposal Considerations

### 13.1 Waste treatment methods

*Avoid release to the environment.*

*Dispose of empty containers and wastes safely. Safe handling: see section 7.*

*Refer to manufacturer/supplier for information on recovery/recycling.*

*Recycling is preferred to disposal or incineration. If recycling is not possible, eliminate in accordance with local valid waste disposal regulations.*

*Handle contaminated packages in the same way as the substance itself.*

*Dispose of contaminated materials in accordance with current regulations.*

### 13.2 Contaminated Packaging

*Dispose of as unused product.*

## 14. Transport Information

### 14.1 UN Number (ADR/RID, IMDG, IATA)

*Not applicable*

### 14.2 UN Proper ShippingName

*Not applicable*

### 14.3 Transport Hazard Class(es)

*Not applicable*

### 14.4 Packing Group

*Not applicable*

### 14.5 Environmental Hazards

*Not applicable*

### 14.6 Special Precautions For User

*Not applicable*

### 14.7 Transport In Bulk According to Annex II of Marpol and the IBC Code

*Not applicable*

## 15. Regulatory Information

## **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

*This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.*

## **15.2 Chemical Safety Assessment**

*No chemical safety assessment has been carried out*

## **16. Other Information**

### **16.1 Recommended uses and restrictions:**

*Proprietary information.*

### **16.2 Revision Date, Version and SDS no**

*This safety datasheet, dated 16.03.2018 is the first issue and complies with the requirements of Regulation (EC) No: 1907/2006 (REACH), Annex II - 1272/2008 CLP; 453/2010*

### **16.3 Prepared by**

*Gamze Gökdoğan Dalbudak, SDS Author & DGSA Instructor*

### **16.4 Reason of re-issue**

*First issue*

### **16.5 Number and Full Text of Relevant H and EUH Phrases Declared in Section 2**

*Not applicable*

### **16.6 Legal disclaimer**

*The purpose of the above information is to describe the products only in terms of health and safety requirements.*

*The information given should not, therefore, be construed as guaranteeing specific properties or as specification.*

*Customers should satisfy themselves as to the suitability and completeness of such information for their own particular use.*

*The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication.*

*The above information relates only to the specific material(s) designated herein and may not be valid for such material(s) used in combination with any other materials or in any process or if the material is altered or processed, unless specified in the text.*

*The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. Due to the many factors outside our control when using this product, we cannot accept liability for any injury, accident, loss or damage caused through its use.*