Safety Data Sheet

1 Identification of the substance and of the company

.Product name: Heat Pack

.Product code: Toe Warmer,Hand Warmer,Body Warmer,Foot Insole Warmer

.End uses: For human heating

.Manufacturer/Supplier: Ergodyne

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.Further information obtainable from: Ergodyne

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.Contact: Dan Reider

2 Hazards identification

.NFPA ratings (scale 0 - 4)



Health = 1; Fire = 1; Reactivity = 0

.Classification according to Regulation (EC) No 1272/2008: The product is not classified according to the CLP regulation.

.Classification according to Directive 453/2010/EC or Directive 1907/2006/EC : Not applicable.

.Labelling according to Regulation (EC) No 1272/2008: Not applicable.

.Hazard pictograms: Not applicable.

.Potential Health Effects:

.Primary Entry Routes: Swallowed, Inhalation, Skin, and eye contact

.Inhalation: Short term exposure to high dust levels could cause minor irritation. Long term exposure to high concentrations of dust should be avoided , dust of this produsts can cause severe and permanent lung damage when inhaled.
Control dust levels with engineering controls (local exhaust ventilation).Prevent dust inhalation with use of a NIOSH Approved dust respirator if engineering controls are inadequate.

.Eyes: Dust may cause slight eye irritation inflammation. Direct contact should be avoided to prevent physical damage.

.Skin: No known acute effects of this product resulting from skin contact ,but it will irritant the damaged skin and cause inflammation,skin contact burning polymer can cause serious thermal burns.

.Swallowed: The product is expected a harmful can not to Ingestion. Ingestion will irritation the mouth and digestive tract, after ingestion will have vomiting , fever , abdominal pain, loss of appetite.

.CARCINOGENIC EFFECTS: This material is not a known carcinogen. Classified NONE by NTP, NONE by OSHA, 3 (Not classifiable for humans) by IARC.

.MUTAGENIC EFFECTS: Not available.

.TERATOGENIC EFFECTS: Not available.

3 Composition/information on ingredients

.Description: Mixture of substances listed below with additions.

.Components Number:	CAS Number	Approximate(%)by Wt.
Iron Powder	7439-89-6	48%
Water	7732-18-5	21%
Vermiculite	1318-00-9	5%
Activated carbon	7440-44-0	16%
Sodium Chloride	7647-14-5	5%
Polyethylene Film	9002-88-4	3%
Polypropylene (PP)	9003-07-0	2%

4 First aid measures

Generally not hazardous in normal handling, however good laboratory practices should always be used. Avoid long term exposure to skin or by inhalation.

.Inhalation: *Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.*

.Eye: *Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.*

.Skin: *Flush skin with plenty of water for a few minutes while removing contaminated clothing and shoes. Get medical aid If irritation develops or persists.*

.Ingestion: *If victim is conscious and alert, Never give anything by mouth to an unconscious person. Get medical aid.*

5 Fire-fighting measures

.General Information: *As in any fire,wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Non-combustible, substance itself does not burn.*

.Flammable class: *1*

.Suitable extinguishing media: *Water, CO2, Dry Chemicals, Foam-Fog*

.Fire/Explosion Hazards: *Heating or burning will release toxic gases or fumes, Negligible explosion hazard.*

.Other information: *Wear self-contained breathing apparatus and complete personal protective equipment when potential for exposure to products of combustion exists.*

6 Accidental release measures

.Small Spill: *Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.*

.Large Spill: *Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow evacuating through the sanitary system. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.*

7 Handling and storage

The regulations relating to storage remises apply to workshop where the product is handled :

.Handling: *Removal of mobile products need to wear protective gloves when products for the brittle materials, handled with care when handlingApply good manufacturing practice & industrial hygiene practices. Observe good personal hygiene, and do not eat, drink or smoke whilst handling. Wear protective goggles and gloves when handling material. Clean cloths、must be worn. Observe all warnings and precautions listed for the product.*

.Storage: *Store in a cool & dry area away from heat sources & protected from light. stored in relatively stable areas, to avoid collision occurred on a hard object Avoid dust formation and control ignition sources. Keep air contact to a minimum.*

8 Exposure controls/personal protection

.Engineering Controls: *Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.*

.Personal Protection: *Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.*

.Protective Gloves: *Protective Gloves*

.Eye Protection: *Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.*

.Respirators: *Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.*

.Health measures: *Local exhaust ventilations may be necessary for some operation*

9 Physical and chemical properties

.General Information	
Form:	*Solid Powder in Non-woven bag*
Color:	*White*
Odor:	*Odorless*
.Change in condition	
Melting point/Melting range:	*Not available*
Boiling point/Boiling range:	*Not available*
.Self-igniting:	*Product is not self-igniting*
.Danger of explosion:	*Not available*
.Density:	
.Relative density:	*>1（Water=1）*
.Vapor density:	*Not available*
.Evaporation rate	*Not available*
.Solubility in/Miscibility with	
Water:	*Slight soluble*
.PH-Value:	*Not available*

10 Stability and reactivity

.Chemical Stability: *Stable under normal temperatures and pressures.*

.Decomposition Products: *The following combustion products may be generated: Metal oxide ,carbon oxide,chloride and trace volatile organic compounds.*

.Materials with which substance is incompatible: *Products can chemical reactions halides, strong oxidizers, strong acids.*

.Hazardous Polymerizations: *Will not occur.*

.Special Remarks on Reactivity: *Not available.*

11 Toxicological information

.Chronic Effects on Humans: Causes damage to the following organs: *Not available.*

.Other Toxic Effects on Humans: *Not available.*

.Toxicity to Animals: *Not available.*

.Special Remarks on Chronic Effects on Humans: *Not available.*

.Special Remarks on other Toxic Effects on Humans: *Not available.*

12 Ecological information

.Ecotoxicity: *Not available.*

.Products of Biodegradation: *None hazardous short term degradation products are not likely.*

.Water Danger/Protection: *Water hazard class 0 (German Regulation) (Self-assessment): No hazardous for water.*

13 Disposal considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

.Waste Disposal Methods: *Disposal must be done as territory and /or local government regulations..Waste management information will help to receive the best results.*

.Disposal of packaging: *Dispose of according to local regulations. Avoid disposing into drainage systems and into the environment.*

14 Transport information

.DOT Classification: *Not a DOT controlled material (United States).*

.UN Number: *Not available.*

.Packing Group: *Not available.*

.Special Provisions for Transport: *Non-regulated*

.Marine Pollutant: *Non-dangerous*

.TDG Classification: *Not controlled under TDG (Canada).*

.ADR/RID Classification: *Not controlled under ADR(Europe)*

.IMO/IMDG Classification: *Not Controlled under IMDG.*

.ICAO/IATA Classification: *Not controlled under IATA.*

15 Regulatory information

US FEDERAL

TSCA: *Not listed on the TSCA inventory. It is for research and development use only.*

Health & Safety Reporting List: *None of the chemicals are on the Health & Safety Reporting List.*

CERCLA Hazardous Substances and corresponding RQs: *None of the chemicals in this material have an RQ.*

Chemical Test Rules: *None of the chemicals in this product are under a Chemical Test Rule.*

Section 12b: *None of the chemicals are listed under TSCA Section 12b.*

TSCA Significant New Use Rule: *None of the chemicals in this material have a SNUR under TSCA.*

SARA Section 302 Extremely Hazardous Substances: *None of the chemicals in this product have a TPQ.*

Section 313: *No chemicals are reportable under Section 313.*

OSHA: *None of the chemicals in this product are considered highly hazardous by OSHA.*

California Prop 65-California No Significant Risk Level: *None of the chemicals in this product are listed.*

European/International Regulations

REACH Regulation List of Substances of very high concern (SVHC):*None of the ingredients is listed.*

16 Other information

The contents and format of this MSDS are in accordance with ISO Commission Directive ISO11014-2009.

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DISCLAIMER OF LIABILITY

The information in this MSDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handing, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This MSDS was prepared and is to be used only for this product. If the product is used as a component in another product, this MSDS information may not be applicable.

· *Abbreviations and acronyms:*

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning theInternational Transport of Dangerous Goods by Rail)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

ICAO: International Civil Aviation Organization

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

ACGIH: American Conference of Governmental Industrial Hygienists

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

**********The End**********