DIRECTIONS FOR THE USE OF PELSORB SACHETS

Product Code: 857-7500

All types of silica gel will loose some of their relative humidity regulating properties over time. Therefore the conditioning of a Pelsorb sachet needs to be checked with a calibrated hygrometer at regular intervals. Initially this should be done after two years, and thereafter once a year. Depending on the measurement results the weight of the sachet will need to be adjusted. The following instructions describe how to re-condition a Pelsorb sachet to the desired weight (i.e. the weight that is printed on the sachet).

Humidification of Pelsorb sachet (increasing their weight):

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1) Weigh the sachet in order to determine how much its weight needs to be increased.
2) Take some layers of tissue paper, blotting paper or cloth and pour the calculated quantity of water onto this material. The water has to be absorbed completely without dripping at the edges
3) Place this humidified paper or cloth on top of the sachet and place it in a polyethylene bag
4) Securely close the bag and wait until the water is completely absorbed by the sachet (several days)
5) Weigh the sachet to make sure that it has reached the desired weight
6) As you can imagine, the upper layers will be much wetter now than the beads on the bottom of the sachet. So mix the beads well by slowly turning the sachet - or let the sachet equilibrate for some days
7) Measure the RH by putting the sachet and a calibrated hygrometer in a small enclosure such as a polyethylene bag, securely close the bag and after approximately two hours read the RH measurement

Drying of Pelsorb sachet (reducing their weight):

There are a number of ways in which a sachet can be dried respectively its weight reduced. Three of them are described below (Instructions A, B or C):

A - Heating the sachet on a radiator, in the sun or in a fan oven.

This method is somewhat impractical because the sachet have to be weighed at regular intervals.

8) Weigh the sachet in order to determine how much its weight needs to be reduced.
9) Put the sachet on a heater, in the sun or in a fan oven. Make sure that the temperature does not exceed 70°C in order to best preserve the properties of the silica gel.
10) Weigh the sachet at regular intervals and remove it from the heating source when the desired weight has been achieved.

B - Drying with the aid of a drying agent.

The drying agent (dry clay) comes in 35g bags and is very inexpensive. Between 0% and 40% RH, one bag absorbs 6g of water vapors.

1) Weigh the sachet in order to determine how much its weight needs to be reduced.
2) Put the cassette in a polyethylene bag, together with the required amount of bags of drying agent.
3) Weigh the cassette after some days to see that the desired weight has been achieved.
   Please Note: The drying agent can be regenerated by heating the bags in a fan oven at 110 – 130°C There is no risk of heating them for too long a time.

C - Drying with the aid of a drying agent inside the display case.

This is often the most practical way of keeping display cases within a certain relative humidity range over longer periods of time.

1) Put the bags of drying agent directly to the side or underneath the sachets while they are in the display case. It is recommended not to add more than one or two 35g bags at a time per sachet, in order to not reduce the RH inside the display case too abruptly.

giving history a future

Preservation Equipment Ltd
Vinces Road, Diss, Norfolk,
England IP22 4HQ
t +44 (0) 1379 647400
f +44 (0) 1379 650582
e info@preservationequipment.com
w www.preservationequipment.com

PEL SORB Material Safety Data Sheet

Effective Date: Nov 2004

1) Product Identification:

Product name:	PEL SORB
Product use	Stabilization of humidity, gas drying
Supplier:	**Preservation Equipment Ltd** Vinces Road, Diss Norfolk, IP22 4HQ

2) Composition/Information on Ingredients:

Ingredient	Weight in product	EC Index No	EC EINECS No	Classification
Amorphous Aluminosilica Gel 1327-36-2	100%	n.a	215-475-1	n.a

3) Hazards Identification:

Most important hazards:	Classification according to the European Directive on classification of hazardous preparations 1999/45/EC. Not regarded as a health or environmental hazard under current legislation.
Specific hazards:	Spheres: Material is slippery Dust affects respiratory system, causes irritation to eyes. Active material asorbs gases and vapours Risk of static discharges.

4) First Aid Measures:

General	Do not breathe dust Wash hands before breaks and immediately after handling the product. No hazards which require special first aid measures
Inhalation	Remove to fresh air. Get medical attention for any breathing difficulty.
Ingestion	Give several glasses of water to dilute, If large amounts were swallowed, get medical advice.
Skin Contact	Wash exposed area with soap and water. Get medical advice if irritation develops
Eye Contact	Immediately flush eyes with plenty of water: If symptoms persist, call a physician.

5) Fire Fighting Measures:

Fire Extinguishing Media	The product itself does not burn. Standard procedure for chemical fires
Explosion	Not considered to be an explosion hazard
Not use	not applicable
Special Information	Product on the ground may have a slippery effect.

6) Accidental Release Measures:

Methods for cleaning up	Contain spillage. Scoop up or vacuum into a container for reclamation or disposal. Avoid dusting
Personal precautions	Avoid dust formation. Use personal protective equipment
Environmental Precautions:	No special environmental precautions required

7) Handling and Storage:

General advice	Keep Containers dry and tightly closed to avoid moisture adsorption and contamination. Keep in a dry, cool place.
Handling and storage	Product on the ground may have a slippery effect. Avoid contact with skin and eyes

8) Exposure Controls/Personal Protection

Engineering measures	Ensure adequate ventilation, especially in confined areas
Hygiene measures	Wash hands before breaks and immediately after handling the product
Personal Protective Equipment	Safety glasses with side-shields. Lightweight protective clothing
Respiratory Protection	Dust: Use approved respiratory protection if exposure limits are exceeded or overexposure is likely. (dust filter type P1)
Protective glovers	rubber or plastic glovers
Ventilation	Local exhauset ventilation is recommended to control exposure to within applicable limits.

Ingredient	Weight in Product (%)	ACGIH TLV: EU	Occupational Exposure Limits
Amorphous Aluminosilica Gel 1327-36-2	100	None Established	4 mg/m³ (Inhalable fraction, General dust limit)

9) Physical and Chemical Properties

Appearance	brown /light brown bead
Odor	None
Solubility	Insoluble
Boiling Point	2980°C
Melting Point	>1000°C
Bulk density	400 -900 kg / m³

Vapor density	Not applicable
Vapor pressure	Not applicable
pH	app.4
Flash point °C	Not applicable
autoignition temperature °C	Not applicable
Lower Explosive Limit %	Not applicable
Upper Explosive Limit %	Not applicable

10) Stability and Reactivity

Stability Data	Stable up to 823 °C. Above this temperature Amorphous Silica will transform into Crystalline Silica
Hazardous Decomposition Products	Fresh material: none anticipated Used material: In case of fire the adsorbed gases and vapours can be set free.
Polymerization	Will not occur
Incompatibilitiy (Materials to Avoid)	This material is a desiccant and can absorb water or arganic liquids and vapors with some generation of heat.
Polymerisation	None anticipated

11) Toxicological Information

Information on Product:	Avoid dust formation.
Chronic Toxicity	Prolonged exposure may cause chronic effects
Potential Health Effects:	May result in drying of mucous membranes.
Inhalation:	May cause irritation of the respiratory tract.
Ingestion	May cause stomach discomfort
Skin Contact	May cause skin irritation. Drying
Eye Contact	Causes eye irritation
Chronic Health Hazards	Prolonged or repeated exosure to dust may cause pulmonary problems

Information on Componenets	Ingredient Weight in Product	Acute Toxicity - Oral	Acute Toxicity- Inhalation	Acute Toxicity - Dermal	Acute Toxicity - Other
Amorphous Aluminosilica Gel 1327-36-2	100	Not Available	Not Available	Not Available	Not Available

Carcinogenicity

Information on Componenets	Ingredient Weight in Product	IARC (See Notes)	ACGIH(See Notes)	EU Carcionogenicity (See Notes)
Amorphous Aluminosilica Gel 1327-36-2	100	N3	N	N

12) Ecological Information

Information on Product	No data available to the best of our knowledge
Environmental Fate	
Mobility	Not relevant. Insoluble in water
Persistence/Degradeablility	No data available to the best of our knowledge
Ecotoxicological Information	No data available

13) Disposal Consideration

Disposal of Waste Method	In accordance with local and national regulations
Contaminated Packaging	Empty contaminated containers/packaging must be handled according to regulations as given for the hazardous properties of the contamination.
Other Information	Used product may have different hazards or properties than the original product. This SDS does NOT apply to spent/used product

14) Transport Information

ADR/RID	Not Regulated
Class:	
IMO/IMDG	Not Regulated
EmS No.:	
ICAO/IATA	Not Regulated
ICAO Class	

15) Regulatory Information:

Europe: Indication of Danger	Not a Dangerous Preparation under current legislation
Category of Danger	None
Risk Phrases	Not applicable
Safety Phrases	Not applicable
Water endangering class	Not water endangering according to VwVwSof 17 May 1999 (German Legislation)

Waste disposal number	For fresh product 06 08 99 (European Waste disposal numb er)

16) Other Information

Revision number Sections Revised in this Version	All Sections: Reissue from a new MSDS authoring system, and safety data sheet re-classified according to the European Directive on classification of hazardous preparations article 14 of Directive 1999/45/EC

The information in this Safety Data Sheet should be provided to all who will use, handle, store, transport, or otherwise be exposed to this product. This information has been prepared for the guidance of plant engineering, operations, management and for persons working with or handling this product. The information presented in the SDS is premised upon proper handling and anticipated uses, and is for the material without chemical additions/alterations. We believe this information to be reliable and up-to-date as of the date of publication, but make no warranty that it is.