

MATERIAL SAFETY DATA SHEET
POWER PACK PRODUCT

1: Identification

Commercial Product Name: Medis Power Pack (PP1.0)

Date: 26 June 2008

Manufacturer: Medis Technologies/More Energy Ltd

2 Yodfat St, Global Park
P.O Box 1112, Lod 71291
Israel
Website: www.medistechnologies.com

Product: Micro Fuel Cell

Emergency Contact: CHEMTREC Tel: 1-800-424-9300 or 1-703-527-3887

2: Composition/Information on Ingredients

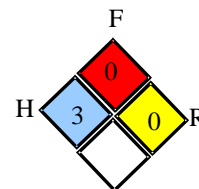
Chemical characterization: Three compartments containing liquid ingredients 1-5.

	<i>Chemical name</i>	<i>CAS-No</i>	<i>EINECS-No</i>	<i>Concentration %</i>	<i>Classification</i>
1	Potassium tetrahydroborate	13762-51-1	-	15-45	R15, R25, R34, T
2	Sodium tetrahydroborate	16940-66-2	241-004-4	0-25	R15, R25, R34, T
3	Potassium hydroxide	1310-58-3	215-181-3	5-40	R22, R35 Xn
4	Glycerin	56-81-5	200-289-5	0-30	-
5	Water	7732-18-5	231-791-2	20-50	-

(See full text of R-phrases in section 15)

Contains caustic liquid. Maximum liquid content is 70 ml.

3: Hazards Identification



Under normal use there is no exposure to contents.

In the event of a leak, any contents are to be treated as a corrosive liquid mixture:

Corrosive, water reactive, harmful if swallowed. Causes severe eye and skin burns,

Target organs: None

Health (H) Flammability (F)
Reactivity (R) in scale 0 (not
hazardous) till 4 (extremely
hazardous).

4: Exposure Effects and First Aid Treatment

These chemicals are contained in a sealed product. For consumer use, adequate hazard warnings are included on the instructions and the Power Pack. Potential for exposure does not exist unless the Power Pack is physically, electrically or chemically abused, resulting in a leak. In the event of such a leak:

Symptoms: Contains corrosive and toxic ingredients. May cause burns occasionally followed by blistering, in the contacted site. Pain in the respiratory tract, nausea, vomiting (occasionally with blood), shortness of breath and unconsciousness.

Skin contact: Remove contaminated clothing and shoes unless stuck to skin. Rinse with large amounts of water for at least 10 minutes. In NO case should creams of any kind be applied to chemical burns. Also, do NOT try to remove "dead skin" or to puncture blisters. Make sure to cool the area with water, then cover with clean cloth or burn-bandage and seek immediate medical assistance

Eyes contact: Rinse opened eyes under running water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Seek immediate medical assistance.

Ingestion: Do NOT induce vomiting. If victim is conscious, have him drink three cups of milk or water. Seek immediate medical assistance. Do not administer liquids to unconscious persons.

Inhalation: Using protective gear, evacuate victim from site of exposure. Have victim lie or sit comfortably. If he has difficulty breathing, have him sit with back straight and administer oxygen, if possible. If breathing has ceased apply artificial resuscitation, using oxygen and a suitable mechanical device such as a bag and mask. If victim suffers from burns in the respiratory system, sit him up, loosen tight clothing, and cool chest area with water. Watch the victim at all times to make sure that he continues breathing. Seek immediate medical assistance

Note to doctor: Treat symptomatically and supportively

5: Fire-Fighting Measures

Flammability: Non flammable.

Suitable extinguishing media: CO₂, dry chemicals.

Use water with caution and in flooding amounts. Contact with moisture or water may generate sufficient heat to ignite nearby combustible materials.

In case of fire, use full protective equipment and a self-contained breathing apparatus.

6: Accidental Release Measures

If more than 10 Power Packs are thought to have leaked:

Wear full protective clothing. Evacuate personnel.

Eliminate all sources of ignition. Stop the leakage if you can do it without jeopardizing your safety. Absorb the chemical onto sand, vermiculite, or other non-combustible absorbent, and scoop into containers for later disposal. Prevent product from entering the sewage system and water sources.

If less than 10 Power Packs are thought to have leaked:

Avoid direct contact with contents.

Wear disposable nitrile gloves when attending to a spill.

Absorb liquids and rinse area thoroughly with water.

Wash hands thoroughly afterwards

7: Handling and Storage

Safe to handle and store unless the Power Pack is physically, electrically or chemically abused.

Keep away from incompatible materials (see section 10).

Safety phrases

Avoid leaked contents coming in to contact with skin and eyes.

Do not breathe gas, fumes or spray, from leaked contents or fire.

Storage temperature: Max 50°C; Min 5°C.

Do not apply physical pressure

8: Exposure Control and Personal Protection

These chemicals are retained in a sealed product. For consumer use, adequate hazard warnings are included on the instructions and the Power Pack. Additional information may be found at www.poweritanywhere.com. Potential for exposure does not exist unless the Power Pack is mechanically, physically or chemically abused

Threshold values:

Potassium hydroxide:

PEL-OSHA for 8 hours 2 mg/m³ TWA

TLV-ACGIH for 8 hours 2 mg/m³ TWA

REL-NIOSH for 8 hours 2 mg/m³ TWA

Glycerin:

PEL-OSHA for 8 hours 5 mg/m³ TWA

TLV-ACGIH for 8 hours 0 mg/m³ TWA (*)

* Respirable fraction

Personal Protective equipment: None under normal conditions.

Respiratory protection: None under normal conditions.

In case of an emergency: Do not come in to direct contact with leaked contents while attending to a spillage. Wear nitrile disposable gloves, to prevent skin exposure. Wear appropriate respirator when ventilation is inadequate. For bulk quantities (over 10 power packs) full personal protective equipment and self contained breathing apparatus is to be used

9: Physical and Chemical Properties:

General information: Sealed product – no contact with contents under normal conditions.

Form / color: Plastic outer case – various colors

Odor: N/A

Boiling point °C: N/A

Freezing point °C: N/A

Molecular weight: N/A

Density g/cm³ (20°C): N/A

Vapor density (air=1): N/A

Vapor pressure (hPa) (20°C): N/A

Solubility (in water): N/A

pH: N/A

Flash point °C: N/A

Auto-ignition temperature °C: N/A

LEL: N/A UEL: N/A

10: Stability and Reactivity

Chemical Stability: Stable

Chemical reactivity: Stable under ordinary use. Keep away from oxidizing agents and acids

Hazardous decomposition products: On fire emits toxic and irritating fumes.

Stable in non-activated state. After activation, may emit a minor controlled flow of hydrogen gas.

11: Toxicological Information

Toxicology:

Non-toxic under normal operating and storage conditions

Contents toxic if swallowed

12: Ecological Information

N/A

Biodegradability: No data available.

There is no data available on the preparation itself. For components which are dangerous for the environment see section 2. The contents of the Power Pack should not be allowed to enter drains or water courses.

13: Disposal Considerations

This product is readily re-cycled through approved and authorized recyclers utilizing appropriate shipping and packaging instructions, contained in the instructions The product and its contents should not be allowed to enter drains or water courses. Any disposal should be in accordance with all local regulations.

14: Transport Information

UN recommendations: UN 1760

Proper shipping name:

CORROSIVE LIQUID, N.O.S [contains hydroxides and borohydrides mixture]

Class 8

Packing group: II

LABEL 'CLASS 8: CORROSIVE SUBSTANCES'. HAZCHEM: 3X

Up to 3 Power Packs may be carried in the cabin of an aircraft that is under US or Canadian air traffic control.

Shipping Options:

Limited quantity – passenger and cargo aircraft: Max quantity per package 8 power packs

Cargo on passenger and cargo aircraft: Max quantity per package 250 power packs, in UN approved packaging

Cargo on cargo aircraft: Max quantity per package 500 power packs in UN approved packaging

For Transport within the US Only (Domestic US Transport):

This product may be shipped via surface (ground) services if properly packaged and marked

"CONSUMER COMMODITY ORM-D" via US Postal Service .

Further shipping instructions may be obtained by contacting Medis Technologies, via its website www.poweritanywhere.com

15: Regulatory Information

Labeling in accordance with EC, USDOT, IMDG and IATA directives.

Symbol and indicating of hazard: T, Toxic: NONE

R-phrases:

R35: Causes severe burn

R25: Toxic if swallowed

S-phrases:

S24/25: Avoid contact with skin and eyes

S23: Do not breathe gas or fumes or spray

According to local regulations

16: Other Information

Full text of R-phrases with No. appearing in section 2:

R15: Contact with water liberates highly flammable gases.

R25: Toxic if swallowed.

R34: Causes burns.

R22: Harmful if swallowed.

R35: Causes severe burns.

R36: Irritating to eyes.

17: Document History

MSDS creation date: April 07

Revision A date: February 08

Revision B date: April 08

Revision C date: June 2008

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