

Material Safety Data Sheet

IDENTITY Battery 6F22-9V 41834 Digital Multimeter		Note: Blank spaces are not permitted if any item is not applicable or no information is available, the space must be marked to indicate that
Section I		
Manufacturer's name Draper Tools Ltd		Telephone Number +44 (0) 2380 494344
Address: Hursley Road, Chandlers Ford, Eastleigh, Hampshire, SO53 1YF		Fax Number +44 (0) 2380 260784
		Data Prepared December 31 2015
Section II - Hazardous Ingredients/Identity Information		
Hazardous Components		contents, (%/wt)
Manganese Dioxide	(MnO ₂)	45.0%
Zinc	(Zn)	15.0%
Zinc Chloride	(ZnCl ₂)	5.00%
Lead	(Pb)	0.0866%
Cadmium	(Cd)	0.00251%
Mercury	(Hg)	ND
Section III - Physical/Chemical Characteristics		
Boiling Point ZnCl ₂ aqua solution=732°C		Specific Gravity(H ₂ O=1) MnO ₂ =4.4 Zn=7.1 ZnCl ₂ =2.9
Vapor Pressure(mmHg) ZnCl ₂ aqua solution=1mmHg(at 428°C)		Melting Point ZnCl ₂ =293°C Zn=420°C MnO ₂ =535°C
Vapor Density(Air=1)		Evaporation Rate(Butyl Acetate=1)
Solubility in water ZnCl ₂ -complete		
Appearance and Color MnO ₂ is a black powder, Graphite is also a black powder, Zinc is a silver metal ZnCl ₂ is a white powder, crystals or granules		
Section IV - Fire and Explosion Hazard Data		
Flash Point(Method Used) I		Flammable Limits Not Available
Extinguishing Media: See Special Fire Fighting Procedure		

Special Fire Fighting Procedure: In case of fire an adjacent area, use water, CO2 or dry chemical extinguishers if cells are packed in their original containers since the fuel of the fire is basically paper products. For bulk quantities of unpackaged cells use LITH-X(Graphite Base)In this case, do not use water As with any fire, wear self-contained breathing apparatus to avoid inhalation of hazardous decomposition products.

Section V -Hazard Classification

Not Available

Section VI-Reactivity Data

Stability Unstable	Stable ✓	Conditions to Avoid Do not short circuit, charge or dispose of in fire
Incompatibility(Materials to Avoid)		Hazardous polymerization will not occur.
Hazardous Decomposition or Byproducts		Not Available
Hazardous Polymerization May occur	Will not occur ✓	Conditions to Avoid

Section VII-Health Hazard Data

Route of Entry	Inhalation? Yes Skin? Yes Ingestion? Yes
Health Hazards/Toxicological information	
In case of electrolyte leakage, skin will be itchy when contaminated with electrolyte	
In contact with electrolyte can cause severe irritation and chemical burns	
Inhalation of electrolyte vapors are may cause irritation of the upper respiratory tract and lungs	

Section VIII-Emergency and First Aid Procedures

In case of skin contact with content of battery, flush immediately with water. For eye contact, flush with copious amount of water for 10 minters, If imitation persists, get medical help

Section IX-Accidental Release or Spillage

Steps to Be Taken in Case Material is Released or Spilled

Batteries that are leakage should be handled with rubber gloves

Avoid direct contact with electrolyte

Wear protective clothing and a positive pressure Self-Contained Breathing Apparatus(SCBA)

Section X -Waste Disposal Method

General abandonment

Section XI-Handling and Storage

Safe Handling and storage advice

Batteries should be handled and stored carefully to avoid short circuits

Never disassemble a battery

Do not breathe cell vapors or touch internal material with bare hands

Keep batteries between -30°C and 35°C for prolong storage

Section XII-Control Measures

Respiratory Protection(Specify Type)	Not Available
Step	Not Available
Ventilation	
Local Exhaust	Not Available
Mechanical(General)	Not Available



Special	Not Available
Other	Not Available
Protective Gloves	Not Available
Eye Protection	Not Available
Other Protective Clothing or Equipment	Not Available
Work/Hygienic Practices	Not Available
Section XIII-Regulatory Information	
Not Available	
Section XIV-Other Information	
Not Available	
Section XV-Transportation Information	

These batteries are considered to be "dry cell" batteries and are not regulated for purpose of transportation by the U.S. Department of Transportation (DOT), International Civil Aviation Administration (ICAO), International Air Transport Association (IATA) and International Maritime Dangerous Goods Regulations (IMDG). Shipping these batteries is subject to the only requirements by DOT is Special Provision 130i.e. Batteries, dry are not subject to the requirements of this subchapter only when they are offered for transportation in a manner that prevents the dangerous evolution of heat. Shipping these batteries is subject to the only requirements by ICAO and IATA is Special Provision A123 i.e. An electrical battery or battery powered device having the potential of dangerous evolutions of heat that is not prepared so as to prevent a short-circuit is forbidden from transportation. The International Maritime Dangerous Goods Code(IMDG) regulate them for ocean transportation under Special Provision 304 which says batteries, dry, containing corrosive electrolyte which will not flow out of the battery case is cracked are not subject to the provision of this Code provided the batteries are securely packed and protected against short-circuit.