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[www.deltaeducation.com](http://www.deltaeducation.com)

Dear Educator,

This file contains the Safety Data Sheets (SDS) for FOSS ENERGY, NEXT GENERATION as of July 24, 2017.

Because kit contents can sometimes be replaced, we recommend searching our online portal of SDS for current sheets as you need them. To make that searching easier, we have provided a listing below of the items with SDS in this kit.

Portal: <http://www.schoolspecialty.com/sds>

Part Number to Search	Item Description
020-9152	D-cells
021-0693	9-volt batteries
021-3730	AA-cells
1448145	Runways, foam

Note: The part numbers to search for in the portal are often not the same part numbers used to order replacements. To order replacements, please visit [www.deltaeducation.com/refillcenter](http://www.deltaeducation.com/refillcenter)

If you have any questions, please contact Customer Care at 800-258-1302 for assistance.

# PRODUCT SAFETY DATASHEET

Page 1 of 4  
Alkaline Batteries  
March 2015

## PRODUCT SAFETY DATA SHEET

**PRODUCT NAME:** Eveready / Energizer Battery

**Type No.:**

**Volts:**

**TRADE NAMES:** ENERGIZER, ENERGIZER e<sup>2</sup>, INDUSTRIAL ZMA, HERCULES, EVEREADY, WONDER

**Approximate Weight:**

**CHEMICAL SYSTEM:** Alkaline Manganese Dioxide-Zinc

**Designed for Recharge:** No

Energizer has prepared copyrighted Product Safety Datasheets to provide information on the different Eveready/Energizer battery systems. Batteries are articles as defined under the GHS and exempt from GHS classification criteria (Section 1.3.2.1.1 of the GHS). The information and recommendations set forth herein are made in good faith, for information only, and are believed to be accurate as of the date of preparation. However, ENERGIZER BATTERY MANUFACTURING, INC. MAKES NO WARRANTY, EITHER EXPRESS OR IMPLIED, WITH RESPECT TO THIS INFORMATION AND DISCLAIMS ALL LIABILITY FROM REFERENCE ON IT.

### SECTION 1 - MANUFACTURER INFORMATION

Energizer Battery Manufacturing, Inc.  
25225 Detroit Rd.  
Westlake, OH 44145

Telephone Number for Information:  
800-383-7323 (USA / CANADA)

Date Prepared: March 2015

### SECTION 2 – HAZARDS IDENTIFICATION

**GHS classification:** N/A

**Signal Word:** N/A

**Hazard Classification:** N/A

Under normal conditions of use, the battery is hermetically sealed.

**Ingestion:** Swallowing a battery can be harmful. Contents of an open battery can cause serious chemical burns of mouth, esophagus, and gastrointestinal tract.

**Inhalation:** Contents of an open battery can cause respiratory irritation.

**Skin Contact:** Contents of an open battery can cause skin irritation and/or chemical burns.

**Eye Contact:** Contents of an open battery can cause severe irritation and chemical burns.

### SECTION 3 - INGREDIENTS

**IMPORTANT NOTE:** The battery should not be opened or burned. Exposure to the ingredients contained within or their combustion products could be harmful.

MATERIAL OR INGREDIENT	PEL (OSHA)	TLV (ACGIH)	%/wt.
Graphite (CAS# 7782-42-5)	15 mg/m <sup>3</sup> TWA (total dust) 5 mg/m <sup>3</sup> TWA (respirable fraction)	2 mg/m <sup>3</sup> TWA (respirable fraction)	2-6
Manganese Dioxide (CAS# 1313-13-9)	5 mg/m <sup>3</sup> Ceiling (as Mn)	0.2 mg/m <sup>3</sup> TWA (as Mn)	30-45
Potassium Hydroxide (CAS# 1310-58-3)	None established	2 mg/m <sup>3</sup> Ceiling	4-8
Zinc (CAS# 7440-66-6)	15 mg/m <sup>3</sup> TWA PNOR* (total dust) 5 mg/m <sup>3</sup> TWA PNOR* (respirable fraction)	10 mg/m <sup>3</sup> TWA PNOC** (inhalable particulate) 3 mg/m <sup>3</sup> TWA PNOC** (respirable particulate)	12-25

Non-Hazardous Components			
Steel	None established	None established	18-22
(iron CAS# 65997-19-5			
Water, Paper, Plastic and Other	None established	None established	Balance

\* PNOR: Particulates not otherwise regulated

\*\*PNOC: Particulates not otherwise classified

**SECTION 4 – FIRST AID MEASURES**

**Ingestion:** Do not induce vomiting or give food or drink. Seek medical attention immediately. CALL NATIONAL BATTERY INGESTION HOTLINE for advice and follow-up (202-625-3333) collect day or night.

**Inhalation:** Provide fresh air and seek medical attention.

**Skin Contact:** Remove contaminated clothing and wash skin with soap and water. If a chemical burn occurs or if irritation persists, seek medical attention.

**Eye Contact:** Immediately flush eyes thoroughly with water for at least 15 minutes, lifting upper and lower lids, until no evidence of the chemical remains. Seek medical attention.

**SECTION 5 - FIRE FIGHTING MEASURES**

In case of fire, it is permissible to use any class of extinguishing medium on these batteries or their packing material. Cool exterior of batteries if exposed to fire to prevent rupture.

Fire fighters should wear self-contained breathing apparatus.

**SECTION 6 - ACCIDENTAL RELEASE MEASURES**

To cleanup leaking batteries:

**Ventilation Requirements:** Room ventilation may be required in areas where there are open or leaking batteries.

**Eye Protection:** Wear safety glasses with side shields if handling an open or leaking battery.

**Gloves:** Use neoprene or natural rubber gloves if handling an open or leaking battery.

Battery materials should be collected in a leak-proof container.

**SECTION 7 - HANDLING AND STORAGE**

**Storage:** Store in a cool, well ventilated area. Elevated temperatures can result in shortened battery life.

**Mechanical Containment:** If potting or sealing the battery in an airtight or watertight container is required, consult your Energizer Battery Manufacturing, Inc. representative for precautionary suggestions. Batteries normally evolve hydrogen which, when combined with oxygen from the air, can produce a combustible or explosive mixture unless vented. If such a mixture is present, short circuits, high temperature, or static sparks can cause an ignition.

Do not obstruct safety release vents on batteries. Encapsulation (potting) of batteries will not allow cell venting and can cause high pressure rupture.

**Handling:** Accidental short circuit for a few seconds will not seriously affect the battery. Prolonged short circuit will cause the battery to lose energy, and can cause the safety release vent to open. Sources of short circuits include jumbled batteries in bulk containers, metal jewelry, metal covered tables or metal belts used for assembly of batteries into devices.

If soldering or welding to the battery is required, consult your Energizer Battery Manufacturing, Inc. representative for proper precautions to prevent seal damage or short circuit.

**Charging:** This battery is manufactured in a charged state. It is not designed for recharging. Recharging can cause battery leakage or, in some cases, high pressure rupture. Inadvertent charging can occur if a battery is installed backwards.

**Labeling:** If the Eveready / Energizer Battery label or package warnings are not visible, it is important to provide a package and/or device label stating:

**WARNING:** do not install backwards, charge, put in fire, or mix with other battery types. May explode or leak causing injury.

**Replace all batteries at the same time.**

Where accidental ingestion of small batteries is possible, the label should include:

Keep away from small children. If swallowed, promptly see doctor; have doctor phone (202) 625-3333 collect.

**SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Ventilation Requirements:** Not necessary under normal conditions.

**Respiratory Protection:** Not necessary under normal conditions.

**Eye Protection:** Not necessary under normal conditions.

**Gloves:** Not necessary under normal conditions.

**SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES**

Appearance (physical state, color, etc.):	Solid object
Upper Explosive Limits:	Not applicable for an Article
Lower Explosive Limits	Not applicable for an Article
Odor	No odor
Vapor Pressure (mm Hg @ 25°C)	Not applicable for an Article
Odor Threshold	No odor
Vapor Density (Air = 1)	Not applicable for an Article
pH	Not applicable for an Article
Density (g/cm <sup>3</sup> )	2.0 – 3.0
Melting point/Freezing Point	Not applicable for an Article
Solubility in Water (% by weight)	Not applicable for an Article
Boiling Point @ 760 mm Hg (°C)	Not applicable for an Article
Flash Point	Not applicable for an Article
Evaporation Rate (Butyl Acetate = 1)	Not applicable for an Article
Flammability	Not applicable for an Article
Partition Coefficient	Not applicable for an Article
Auto-ignition Temperature	Not applicable for an Article
Decomposition Temperature	Not applicable for an Article
Viscosity	Not applicable for an Article

**SECTION 10 – STABILITY AND REACTIVITY**

Alkaline batteries do not meet any of the criteria established in 40 CFR 261.2 for reactivity.

**SECTION 11 – TOXICOLOGICAL INFORMATION**

Under normal conditions of use, alkaline batteries are non-toxic.

**SECTION 12 – ECOLOGICAL INFORMATION**

Issues such as ecotoxicity, persistence and bioaccumulation are not applicable for articles.

**SECTION 13 – DISPOSAL CONSIDERATIONS**

Dispose of in accordance with all applicable federal, state and local regulations. Appropriate disposal technologies include incineration and land filling.

**SECTION 14 – TRANSPORT INFORMATION**

In general, all batteries in all forms of transportation (ground, air, or ocean) must be packaged in a safe and responsible manner. Regulatory concerns from all agencies for safe packaging require that batteries be packaged in a manner that prevents short circuits and be contained in "strong outer packaging" that prevents spillage of contents. All original packaging for Energizer alkaline batteries has been designed to be compliant with these regulatory concerns.

Alkaline batteries (sometimes referred to as "Dry cell" batteries) are not listed as dangerous goods under the ADR European Agreement Concerning the International Carriage of Dangerous Goods by Road, the IMDG International Maritime Dangerous Goods Code, UN Dangerous Goods Regulations, IATA Dangerous Goods Regulations, ICAO Technical Instructions and the U.S. hazardous materials regulations (49 CFR). These batteries are not subject to the dangerous goods regulations provided they meet the requirements contained in the following special provisions.

Regulatory Body	Special Provisions
ADR	Not regulated
IMDG	Not regulated
UN	Not regulated
US DOT	49 CFR 172.102 Provision 130
IATA	A123
ICAO	Not regulated

All Energizer alkaline batteries are packed in such a way to prevent short circuits or the generation dangerous quantities of heat and meet the special provisions listed above. In addition, the IATA Dangerous Goods Regulations and ICAO Technical Instructions require the words "not restricted" and the Special Provision number A123 be provided on the air waybill, when an air waybill is issued.

**SECTION 15 - REGULATORY INFORMATION**

Batteries marketed by Energizer Battery Manufacturing, Inc. are not classified as dangerous goods by the US Department of Transportation or the major international regulatory bodies and are therefore not regulated.

SARA/TITLE III - As an article, this battery and its contents are not subject to the requirements of the Emergency Planning and Community Right-To-Know Act.

**SECTION 16 - OTHER INFORMATION**

None.

# PRODUCT SAFETY DATASHEET

Page 1 of 4  
Alkaline Batteries  
March 2015

## PRODUCT SAFETY DATA SHEET

**PRODUCT NAME:** Eveready / Energizer Battery

**Type No.:**

**Volts:**

**TRADE NAMES:** ENERGIZER, ENERGIZER e<sup>2</sup>, INDUSTRIAL ZMA, HERCULES, EVEREADY, WONDER

**Approximate Weight:**

**CHEMICAL SYSTEM:** Alkaline Manganese Dioxide-Zinc

**Designed for Recharge:** No

Energizer has prepared copyrighted Product Safety Datasheets to provide information on the different Eveready/Energizer battery systems. Batteries are articles as defined under the GHS and exempt from GHS classification criteria (Section 1.3.2.1.1 of the GHS). The information and recommendations set forth herein are made in good faith, for information only, and are believed to be accurate as of the date of preparation. However, ENERGIZER BATTERY MANUFACTURING, INC. MAKES NO WARRANTY, EITHER EXPRESS OR IMPLIED, WITH RESPECT TO THIS INFORMATION AND DISCLAIMS ALL LIABILITY FROM REFERENCE ON IT.

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Energizer Battery Manufacturing, Inc.  
25225 Detroit Rd.  
Westlake, OH 44145

Telephone Number for Information:  
800-383-7323 (USA / CANADA)

Date Prepared: March 2015

### SECTION 2 – HAZARDS IDENTIFICATION

**GHS classification:** N/A

**Signal Word:** N/A

**Hazard Classification:** N/A

Under normal conditions of use, the battery is hermetically sealed.

**Ingestion:** Swallowing a battery can be harmful. Contents of an open battery can cause serious chemical burns of mouth, esophagus, and gastrointestinal tract.

**Inhalation:** Contents of an open battery can cause respiratory irritation.

**Skin Contact:** Contents of an open battery can cause skin irritation and/or chemical burns.

**Eye Contact:** Contents of an open battery can cause severe irritation and chemical burns.

### SECTION 3 - INGREDIENTS

**IMPORTANT NOTE:** The battery should not be opened or burned. Exposure to the ingredients contained within or their combustion products could be harmful.

MATERIAL OR INGREDIENT	PEL (OSHA)	TLV (ACGIH)	%/wt.
Graphite (CAS# 7782-42-5)	15 mg/m <sup>3</sup> TWA (total dust) 5 mg/m <sup>3</sup> TWA (respirable fraction)	2 mg/m <sup>3</sup> TWA (respirable fraction)	2-6
Manganese Dioxide (CAS# 1313-13-9)	5 mg/m <sup>3</sup> Ceiling (as Mn)	0.2 mg/m <sup>3</sup> TWA (as Mn)	30-45
Potassium Hydroxide (CAS# 1310-58-3)	None established	2 mg/m <sup>3</sup> Ceiling	4-8
Zinc (CAS# 7440-66-6)	15 mg/m <sup>3</sup> TWA PNOR* (total dust) 5 mg/m <sup>3</sup> TWA PNOR* (respirable fraction)	10 mg/m <sup>3</sup> TWA PNOC** (inhalable particulate) 3 mg/m <sup>3</sup> TWA PNOC** (respirable particulate)	12-25

Non-Hazardous Components			
Steel	None established	None established	18-22
(Iron CAS# 65997-19-5)			
Water, Paper, Plastic and Other	None established	None established	Balance

\* PNOR: Particulates not otherwise regulated

\*\*PNOC: Particulates not otherwise classified

**SECTION 4 – FIRST AID MEASURES**

**Ingestion:** Do not induce vomiting or give food or drink. Seek medical attention immediately. CALL NATIONAL BATTERY INGESTION HOTLINE for advice and follow-up (202-625-3333) collect day or night.

**Inhalation:** Provide fresh air and seek medical attention.

**Skin Contact:** Remove contaminated clothing and wash skin with soap and water. If a chemical burn occurs or if irritation persists, seek medical attention.

**Eye Contact:** Immediately flush eyes thoroughly with water for at least 15 minutes, lifting upper and lower lids, until no evidence of the chemical remains. Seek medical attention.

**SECTION 5 - FIRE FIGHTING MEASURES**

In case of fire, it is permissible to use any class of extinguishing medium on these batteries or their packing material. Cool exterior of batteries if exposed to fire to prevent rupture.

Fire fighters should wear self-contained breathing apparatus.

**SECTION 6 - ACCIDENTAL RELEASE MEASURES**

To cleanup leaking batteries:

**Ventilation Requirements:** Room ventilation may be required in areas where there are open or leaking batteries.

**Eye Protection:** Wear safety glasses with side shields if handling an open or leaking battery.

**Gloves:** Use neoprene or natural rubber gloves if handling an open or leaking battery.

Battery materials should be collected in a leak-proof container.

**SECTION 7 - HANDLING AND STORAGE**

**Storage:** Store in a cool, well ventilated area. Elevated temperatures can result in shortened battery life.

**Mechanical Containment:** If potting or sealing the battery in an airtight or watertight container is required, consult your Energizer Battery Manufacturing, Inc. representative for precautionary suggestions. Batteries normally evolve hydrogen which, when combined with oxygen from the air, can produce a combustible or explosive mixture unless vented. If such a mixture is present, short circuits, high temperature, or static sparks can cause an ignition.

Do not obstruct safety release vents on batteries. Encapsulation (potting) of batteries will not allow cell venting and can cause high pressure rupture.

**Handling:** Accidental short circuit for a few seconds will not seriously affect the battery. Prolonged short circuit will cause the battery to lose energy, and can cause the safety release vent to open. Sources of short circuits include jumbled batteries in bulk containers, metal jewelry, metal covered tables or metal belts used for assembly of batteries into devices.

If soldering or welding to the battery is required, consult your Energizer Battery Manufacturing, Inc. representative for proper precautions to prevent seal damage or short circuit.

**Charging:** This battery is manufactured in a charged state. It is not designed for recharging. Recharging can cause battery leakage or, in some cases, high pressure rupture. Inadvertent charging can occur if a battery is installed backwards.

**Labeling:** If the Eveready / Energizer Battery label or package warnings are not visible, it is important to provide a package and/or device label stating:

**WARNING:** do not install backwards, charge, put in fire, or mix with other battery types. May explode or leak causing injury.

**Replace all batteries at the same time.**

Where accidental ingestion of small batteries is possible, the label should include:

Keep away from small children. If swallowed, promptly see doctor; have doctor phone (202) 625-3333 collect.

**SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Ventilation Requirements:** Not necessary under normal conditions.

**Respiratory Protection:** Not necessary under normal conditions.

**Eye Protection:** Not necessary under normal conditions.

**Gloves:** Not necessary under normal conditions.

**SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES**

Appearance (physical state, color, etc.):	Solid object
Upper Explosive Limits:	Not applicable for an Article
Lower Explosive Limits	Not applicable for an Article
Odor	No odor
Vapor Pressure (mm Hg @ 25°C)	Not applicable for an Article
Odor Threshold	No odor
Vapor Density (Air = 1)	Not applicable for an Article
pH	Not applicable for an Article
Density (g/cm <sup>3</sup> )	2.0 – 3.0
Melting point/Freezing Point	Not applicable for an Article
Solubility in Water (% by weight)	Not applicable for an Article
Boiling Point @ 760 mm Hg (°C)	Not applicable for an Article
Flash Point	Not applicable for an Article
Evaporation Rate (Butyl Acetate = 1)	Not applicable for an Article
Flammability	Not applicable for an Article
Partition Coefficient	Not applicable for an Article
Auto-ignition Temperature	Not applicable for an Article
Decomposition Temperature	Not applicable for an Article
Viscosity	Not applicable for an Article

**SECTION 10 – STABILITY AND REACTIVITY**

Alkaline batteries do not meet any of the criteria established in 40 CFR 261.2 for reactivity.



**SECTION 11 – TOXICOLOGICAL INFORMATION**

Under normal conditions of use, alkaline batteries are non-toxic.

**SECTION 12 – ECOLOGICAL INFORMATION**

Issues such as ecotoxicity, persistence and bioaccumulation are not applicable for articles.

**SECTION 13 – DISPOSAL CONSIDERATIONS**

Dispose of in accordance with all applicable federal, state and local regulations. Appropriate disposal technologies include incineration and land filling.

**SECTION 14 – TRANSPORT INFORMATION**

In general, all batteries in all forms of transportation (ground, air, or ocean) must be packaged in a safe and responsible manner. Regulatory concerns from all agencies for safe packaging require that batteries be packaged in a manner that prevents short circuits and be contained in "strong outer packaging" that prevents spillage of contents. All original packaging for Energizer alkaline batteries has been designed to be compliant with these regulatory concerns.

Alkaline batteries (sometimes referred to as "Dry cell" batteries) are not listed as dangerous goods under the ADR European Agreement Concerning the International Carriage of Dangerous Goods by Road, the IMDG International Maritime Dangerous Goods Code, UN Dangerous Good Regulations, IATA Dangerous Goods Regulations, ICAO Technical Instructions and the U.S. hazardous materials regulations (49 CFR). These batteries are not subject to the dangerous goods regulations provided they meet the requirements contained in the following special provisions.

Regulatory Body	Special Provisions
ADR	Not regulated
IMDG	Not regulated
UN	Not regulated
US DOT	49 CFR 172.102 Provision 130
IATA	A123
ICAO	Not regulated

All Energizer alkaline batteries are packed in such a way to prevent short circuits or the generation dangerous quantities of heat and meet the special provisions listed above. In addition, the IATA Dangerous Goods Regulations and ICAO Technical Instructions require the words "not restricted" and the Special Provision number A123 be provided on the air waybill, when an air waybill is issued.

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Batteries marketed by Energizer Battery Manufacturing, Inc. are not classified as dangerous goods by the US Department of Transportation or the major international regulatory bodies and are therefore not regulated.

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**SECTION 16 - OTHER INFORMATION**

None.

# PRODUCT SAFETY DATASHEET

Page 1 of 4  
Alkaline Batteries  
March 2015

## PRODUCT SAFETY DATA SHEET

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**Type No.:**

**Volts:**

**TRADE NAMES:** ENERGIZER, ENERGIZER e<sup>2</sup>, INDUSTRIAL ZMA, HERCULES, EVEREADY, WONDER

**Approximate Weight:**

**CHEMICAL SYSTEM:** Alkaline Manganese Dioxide-Zinc

**Designed for Recharge:** No

Energizer has prepared copyrighted Product Safety Datasheets to provide information on the different Eveready/Energizer battery systems. Batteries are articles as defined under the GHS and exempt from GHS classification criteria (Section 1.3.2.1.1 of the GHS). The information and recommendations set forth herein are made in good faith, for information only, and are believed to be accurate as of the date of preparation. However, ENERGIZER BATTERY MANUFACTURING, INC. MAKES NO WARRANTY, EITHER EXPRESS OR IMPLIED, WITH RESPECT TO THIS INFORMATION AND DISCLAIMS ALL LIABILITY FROM REFERENCE ON IT.

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Westlake, OH 44145

Telephone Number for Information:  
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Date Prepared: March 2015

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**GHS classification:** N/A

**Signal Word:** N/A

**Hazard Classification:** N/A

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(Iron CAS# 65997-19-5)			
Water, Paper, Plastic and Other	None established	None established	Balance

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**Ventilation Requirements:** Not necessary under normal conditions.

**Respiratory Protection:** Not necessary under normal conditions.

**Eye Protection:** Not necessary under normal conditions.

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Vapor Pressure (mm Hg @ 25°C)	Not applicable for an Article
Odor Threshold	No odor
Vapor Density (Air = 1)	Not applicable for an Article
pH	Not applicable for an Article
Density (g/cm <sup>3</sup> )	2.0 – 3.0
Melting point/Freezing Point	Not applicable for an Article
Solubility in Water (% by weight)	Not applicable for an Article
Boiling Point @ 760 mm Hg (°C)	Not applicable for an Article
Flash Point	Not applicable for an Article
Evaporation Rate (Butyl Acetate = 1)	Not applicable for an Article
Flammability	Not applicable for an Article
Partition Coefficient	Not applicable for an Article
Auto-ignition Temperature	Not applicable for an Article
Decomposition Temperature	Not applicable for an Article
Viscosity	Not applicable for an Article

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IATA	A123
ICAO	Not regulated

All Energizer alkaline batteries are packed in such a way to prevent short circuits or the generation dangerous quantities of heat and meet the special provisions listed above. In addition, the IATA Dangerous Goods Regulations and ICAO Technical Instructions require the words "not restricted" and the Special Provision number A123 be provided on the air waybill, when an air waybill is issued.

**SECTION 15 - REGULATORY INFORMATION**

Batteries marketed by Energizer Battery Manufacturing, Inc. are not classified as dangerous goods by the US Department of Transportation or the major international regulatory bodies and are therefore not regulated.

SARA/TITLE III - As an article, this battery and its contents are not subject to the requirements of the Emergency Planning and Community Right-To-Know Act.

**SECTION 16 - OTHER INFORMATION**

None.

# SAFETY DATA SHEET

## SECTION 1 : IDENTIFICATION

<b>PRODUCT IDENTIFIER:</b>	ITP P.E. FOAM PROFILES AND EXTRUSIONS (WITH BLACK PIGMENT)	<b>MANUFACTURER NAME &amp; ADDRESS:</b> INDUSTRIAL THERMO POLYMERS (Owned and Operated by Armacell Canada Inc.) 153 VAN KIRK DRIVE BRAMPTON, ONTARIO , L7A 1A4	
<b>CHEMICAL IDENTITY:</b>	POLYETHYLENE	<b>PHONE NO.:</b>	1-905-846-3666
<b>RECOMMENDED USE</b>	PACKAGING, CUSHIONING, SOUND DAMPENING, INSULATION, SEALING, FLOATATION etc.	<b>FAX NO.:</b>	1-905-846-0363
<b>RESTRICTION OF USE</b>	NONE	<b>EMERGENCY PHONE NO.:</b>	1-800-387-3847

## SECTION 2 : HAZARD(S) IDENTIFICATION

- POLYETHYLENE EXTRUDED FOAM PRODUCTS ARE CLASSIFIED BY OSHA AS "NON HAZARDOUS".
- PE FOAM PRODUCTS ARE MADE FROM POLYETHYLENE RESIN , ADDITIVES AND ISOBUTANE .(MORE DETAILS IN SEC.3.)
- ISOBUTANE, A FLAMABLE HYDROCARBON IS USED AS BLOWING AGENT. SMALL TRACES OF THIS GAS MAY BE PRESENT IN THE PRODUCT. THIS GAS MAY ACCUMULATE AT HAZARDOUS CONCENTRATIONS ABOVE THE LOWER FLAMMABLE LIMITS (LFL) IF LARGE QUANTITIES OF THIS PRODUCT ARE STORED IN UNVENTILATED AREAS.

<b>ROUTES OF EXPOSURE:</b>	SWALLOWING <input checked="" type="checkbox"/>	SKIN ABSORPTION <input type="checkbox"/>	INHALATION <input checked="" type="checkbox"/>	SKIN CONTACT <input checked="" type="checkbox"/>	EYE CONTACT <input checked="" type="checkbox"/>
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### EFFECTS OF A SINGLE (ACUTE) OVEREXPOSURE BY:

<b>SWALLOWING:</b>	CHOKING - MECHANICAL BLOCKAGE
<b>SKIN ABSORPTION:</b>	NOT LIKELY.
<b>INHALATION:</b>	FOAM DUST MAY CAUSE IRRITATION TO NOSE , THROAT OR LUNGS.
<b>SKIN CONTACT:</b>	NON IRRITATING TO SKIN CONTACT
<b>EYE CONTACT:</b>	EYE INJURY OR FOAM DUST MAY CAUSE IRRITATION TO EYES
<b>OTHER EFFECTS</b>	NOT KNOWN

## SECTION 3 : COMPOSITION / INFORMATION ON INGREDIENTS

INGREDIENTS	CAS NO.	WEIGHT %	EXPOSURE LIMITS ACGIH - TLV*
POLYETHYLENE	9002-88-4	75% -100%	NA
ISOBUTANE	75-28-5	-	800 PPM TWA
CARBON BLACK	1333-86-4	0% - 5%	3.5 mg/m <sup>3</sup>

\* Applicable provincial TLV's may differ

\* Specific chemical names and percentage in the mix has been withheld to protect trade secret.

## SECTION 4 : FIRST AID MEASURES

<b>SWALLOWING:</b> CONSULT PHYSICIAN	<b>SKIN CONTACT:</b> WASH WITH SOAP AND WATER
<b>INHALATION:</b> MOVE TO FRESH AIR. SEEK MEDICAL ATTENTION IF BREATHING PROBLEMS PERSISTS.	<b>EYE CONTACT:</b> FLUSH EYES WITH CLEAN LUKEWARM WATER. CONSULT PHYSICIAN.

## SECTION 5 : FIRE FIGHTING MEASURES

1. PE FOAM IS COMBUSTIBLE AND SHOULD NOT BE EXPOSED TO SPARKS OR OPEN FLAME. RESULTS IN CLASS A FIRE.
2. FIRE TO BE EXTINGUISHED BY USING WATER FOG OR FINE SPRAY. SOAK THE PRODUCT WITH WATER TO COOL AND SMOTHER.
3. FIRE WILL CAUSE DENSE SMOKE. USE SELF-CONTAINED BREATHING APPRATUS AND FULL PROTECTIVE CLOTHING.
4. FIRE WILL RESULT IN INTENSE HEAT AND SMOLDERING. EXTINGUISHMENT IS BY COOLING WITH WATER.
5. OTHER FIRE EXTINGUISHERS (DRY CHEMICAL, FOAM OR CO2 EXTINGUISHERS) MAY BE USED FOR EXTINGUISHMENT.
6. CHEMICAL/GASEOUS HAZARDS LIKE CO, CO2 AND CARBON MAY BE PRODUCED FROM THE SMOLDERING SUBSTANCES AND FIRE.

# SAFETY DATA SHEET

## SECTION 6: ACCIDENTAL RELEASE MEASURES

PE FOAM IS COMBUSTIBLE. SHOULD NOT BE EXPOSED TO SPARKS OR OPEN FLAME. RESULTS IN CLASS 'A' FIRE.

## SECTION 7: HANDLING AND STORAGE

- PE FOAM IS COMBUSTIBLE AND SHOULD NOT BE EXPOSED TO SPARKS OR OPEN FLAME. WHEN BURNS, WILL RELEASE TOXIC GASES LIKE CO .

-WHEN FABRICATING OR CUTTING , THIS PRODUCT MAY RELEASE TRAPPED ISOBUTANE FROM THE FOAM CELLS. ADEQUATE VENTILATION IS A MUST.

- PE FOAM SHOULD BE STORED IN COOL, DRY AND WELL VENTILATED LOCATIONS. ISOBUTANE GAS MAY ACCUMULATE AROUND THE PRODUCT.

- PE FOAM IS INCOMPATIBLE WITH STRONG OXIDIZING AGENTS LIKE, CL<sub>2</sub> ,H<sub>2</sub>O<sub>2</sub> , KNO<sub>3</sub> ,H<sub>2</sub>SO<sub>4</sub>.

## SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

- NOT NECESSARY OTHER THAN STATED IN SECTION 2

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE:	SOLID	FREEZING POINT:	N/A	SPECIFIC GRAVITY VAPOUR	N/A
BOILING POINT 760 mm Hg:	N/A	VAP. PRESS at 20°C:	N/A	MOLECULAR WEIGHT:	N/A
SPECIFIC GRAVITY	0.01 - 0.15	SOLUBILITY IN WATER	INSOLUBLE	COEFFICIENT OF WATER / OIL DISTRIBUTION:	N/A
MELTING POINT:	+ 212°F	EVAPORATION RATE	N/A		
DENSITY	0-30 lbs/cuft	% VOLATILES BY VOLUME:	N/A	VAPOUR DENSITY	N/A
APPEARANCE	CLOSED CELL FOAM	ODOR:	NEGLECTIBLE	ODOR THRESHOLD:	N/A

## SECTION 10 : STABILITY AND REACTIVITY

- PE FOAM IS STABLE AND NON-REACTIVE. OTHER THAN CONDITIONS STATED IN SECTION 5 ,6 & 7

## SECTION 11 : TOXICOLOGICAL INFORMATION

- PE FOAM HAS NO CARCINOGENIC SUBSTANCES. IT IS NOT LISTED IN : IARC & NTP

ROUTES OF EXPOSURE : SWALLOWING FOAM DUST INHALATION SKIN CONTACT EYE CONTACT

EFFECTS OF ABOVE EXPOSURE STATED IN SECTION 4

## SECTION 12 : ECOLOGICAL INFORMATION

- PE FOAM DOES NOT EXHIBIT ANY SIGNIFICANT BIODEGRADATION.

## SECTION 13 : DISPOSAL CONSIDERATIONS

- PE FOAM CAN BE REPROCESSED OR CAN BE DISPOSED OFF IN LANDFILL

## SECTION 14 : TRANSPORT INFORMATION

- PE FOAM HAS SOME RESIDUAL ISOBUTANE AND HENCE TO BE TRANSPORTED IN VENTILATED TRAILERS.

## SECTION 15 : REGULATORY INFORMATION

- PE FOAM HAS NO CARCINOGENIC SUBSTANCES AND IS CLASSIFIED AS NON HAZARDOUS UNDER THE FEDERAL OSHA STANDARDS.

## SECTION 16 : OTHER INFORMATION

PREPARED BY / DEPARTMENT	PHONE NUMBER	DATE UPDATED
HARENDRA RATHOD / QA DEPARTMENT	905-846-36660 / 1-800-387-3847	April 16, 2015

FOR INFORMATION : Visit Web: [www.tundrafoam.com](http://www.tundrafoam.com) or Email: [info@tundrafoam.com](mailto:info@tundrafoam.com)