

MATERIAL SAFETY DATA SHEET (MSDS)

This MSDS should be attached or kept with the respective product with which it is associated.

SDS - D2799

Associated Grainger Items
6VEE3

PRODUCT SAFETY DATA SHEET

PRODUCT NAME:
LITHIUM-ION BATTERY PACKS (LESS THAN OR EQUAL TO 100 WATT HOURS)

-----SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION -----

MANUFACTURER INFORMATION:
STANLEY BLACK & DECKER
1000 STANLEY DRIVE
NEW BRITAIN, CT 06053

PHONE: 1-860-225-5111

CATALOG NUMBERS:

BLACK & DECKER VPX0111 (7 VOLT)

BLACK & DECKER BL1110, BL1310, BL1510 (10.8 VOLT)

BLACK AND DECKER LB12, LBX12, LBXR12 (12 VOLT MAX)

BLACK & DECKER A1114L, A1514L, BL1114, BL1314, BL1514 (14.4 VOLT)

BLACK & DECKER LB16, LBX16, LBXR16 (16 VOLT MAX)

BLACK & DECKER A1518L, A1118L, LB018, BL1118, BL1318, BL1518 (18 VOLT)

BLACK & DECKER LB20, LBX20, LBXR20, LBXR2020, LB2X4020 (20 VOLT MAX)

BLACK & DECKER BL1336, BL1536, BL2036 (36 VOLT)

BLACK & DECKER LBX36, LBXR36, LBXR2040 (40 VOLT MAX)

BOSTITCH 9B12070R (3.6 VOLT)

BOSTITCH 9R201436, 9R201498, 9R209111, 9R209775 (12/10.8 VOLT)

BOSTITCH B-CB182-EU (18 VOLT)

DEWALT DCB080 (8 VOLT)

DEWALT DCB121, DCB123, DCB125, DCB127 (10.8 VOLT)

DEWALT DCB120, DCB127 (12 VOLT MAX)

DEWALT DC9140, DE9140, DE9141, DC9144, DCB140, DCB141, DCB142, DCB143, DCB144, DCB145 (14.4 VOLT)

DEWALT DC9180, DE9180, DC9181, DC9182, DE9181, DCB180, DCB181, DCB182, DCB183, DCB184, DCB185 (18 VOLT)

DEWALT DCB200, DCB201, DCB203, DCB204, DCB205, DCB207 (20 VOLT MAX)

DEWALT DC9280, DE9280 (28 VOLT)

DEWALT DC9360, DE9360, DCB361 (36 VOLT)

DUBUIS AB18LI300, AB18LI150 (18 VOLT)

FACOM CL3.BA1018, CL3.BA1015, CL3.BA1020 (10.8 VOLT)

FACOM CL3.BA1815, CL3.BA1830, CL3.BA1820, CL3.BA1840, CL3.BA1850 (18 VOLT)

MAC TOOLS MB120, MB127 (12 VOLT MAX)

MAC TOOLS MB200, MB201, MB203, MB204, MB205 (20 VOLT MAX)

MAC TOOLS MB120-UK, MB127-UK (10.8V)

MAC TOOLS MB200-UK, MB201-UK, MB203-UK, MB204-UK, MB205-UK (18 VOLT) POP
EBC180, EBC181, EBC182, EBC183 (18 VOLT)

PORTER-CABLE PC12BL, PC12BLX, PC12BLXLW (12 VOLT)

PORTER-CABLE PC18BL, PC18BLX, PC18BLEX (18 VOLT)

PORTER-CABLE PCC680L, PCC681L, PCC685L, PCC682L (20 VOLT MAX)

SIDCHROME SCMT90050, SCMT90053 (10.8 VOLT)

SIDCHROME SCMT90051, SCMT90052, SCMT90054, SCMT90055, SCMT90056 (18 VOLT)

STANLEY FATMAX FMC085L (10.8 VOLT)

STANLEY FATMAX FMC080L (12 VOLT MAX)

STANLEY FATMAX FMC585L (14.4 VOLT MAX)

STANLEY FATMAX FMC680L, FMC685L, FMC686L, FMC687L, FMC688L (18/20 VOLT)

NOTES:

1. A SUFFIX FOLLOWING CATALOG NUMBER (I.E., "-XJ") MAY BE USED TO DESIGNATE
END MARKET.

2. BATTERIES MAY BE SHIPPED IN KITS WITH THE PRODUCTS THEY ARE INTENDED TO
POWER.

THE BATTERIES REFERENCED IN THIS DOCUMENT ARE CONSIDERED "ARTICLES,"
NOT "MATERIALS," AS DEFINED BY THE OCCUPATIONAL SAFETY AND HEALTH
ADMINISTRATION'S HAZARD COMMUNICATION STANDARD, AND AS SUCH ARE EXEMPTED
FROM THE REQUIREMENTS TO PUBLISH MSDS SHEETS PER THE CODE OF FEDERAL
REGULATIONS 29 CFR 1910.1200 (b)(6)(v). THIS DOCUMENT IS PROVIDED AS A
SERVICE TO OUR CUSTOMERS.

-----SECTION 2 - HAZARDS IDENTIFICATION -----

EMERGENCY OVERVIEW:
NOT CONSIDERED DANGEROUS AS MANUFACTURED. IF BATTERY IS DAMAGED, EXPOSURE
TO PRODUCT COMPONENTS MAY CAUSE EYE, SKIN AND RESPIRATORY TRACT IRRITATION.
COMBUSTION PRODUCTS FROM A FIRE INVOLVING BATTERIES MAY BE HARMFUL.

POTENTIAL HEALTH EFFECTS:

EYES:
NONE ANTICIPATED UNDER NORMAL PRODUCT USE AND HANDLING CONDITIONS.
IF BATTERY IS DAMAGED, EXPOSURE MAY CAUSE SEVERE IRRITATION OR BURNS.

POTENTIAL HEALTH EFFECTS:

SKIN:
NONE ANTICIPATED UNDER NORMAL PRODUCT USE AND HANDLING CONDITIONS.
IF BATTERY IS DAMAGED, EXPOSURE MAY CAUSE SEVERE IRRITATION OR BURNS.

POTENTIAL HEALTH EFFECTS:

INGESTION:
NOT CONSIDERED A LIKELY ROUTE OF EXPOSURE UNDER NORMAL PRODUCT USE AND
HANDLING CONDITIONS. INGESTION OF MATERIAL FROM A DAMAGED BATTERY MAY
CAUSE SERIOUS BURNS TO MOUTH, ESOPHAGUS, AND GASTROINTESTINAL TRACT.

POTENTIAL HEALTH EFFECTS:

INHALATION:
NONE ANTICIPATED UNDER NORMAL PRODUCT USE AND HANDLING CONDITIONS.
IF BATTERY IS DAMAGED, EXPOSURE TO VAPORS OR MIST MAY CAUSE RESPIRATORY
IRRITATION.

HMIS RATINGS:

HEALTH 0
FIRE 0
HMIS REACTIVITY 0

HAZARD SCALE:

0 = MINIMAL
1 = SLIGHT
2 = MODERATE
3 = SERIOUS
4 = SEVERE
* = CHRONIC HAZARD

-----SECTION 3 - COMPOSITION / INFORMATION ON INGREDIENTS -----

THIS BATTERY IS AN ARTICLE AS DEFINED BY 29 CFR 1910.1200 AND IS NOT A
CONTROLLED PRODUCT UNDER WHMIS. EXPOSURE TO HAZARDOUS INGREDIENTS IS NOT
ANTICIPATED UNDER NORMAL PRODUCT USE.

CHEMICAL NAME	CAS NO.	%
LITHIUM TRANSITION METAL OXIDE (Li[M]m[O]n)(1)	12057-17-9 182442-95-1 193214-24-3	12190-79-3 <30
CARBON	7440-44-0	<30
POLYVINYLIDENE FLUORIDE	24937-79-9	<10
LITHIUM HEXAFLUOROPHOSPHATE	21324-40-3	<10
ORGANIC CARBONATES(2)		<20
ALUMINUM FOIL	7429-90-5	<10
COPPER FOIL	7440-50-8	<20
INERT MATERIALS		<30

NOTES:

1. THE LETTER 'M' STANDS FOR TRANSITION METAL, WITH POTENTIAL CANDIDATES
Co, Mn, Ni, OR Al. ONE COMPOUND INCLUDES ONE OR MORE OF THESE TRANSITION
METALS AND ONE PRODUCT MAY CONTAIN ONE OR MORE OF THE COMPOUNDS.
THE LETTERS 'M' AND 'N' REPRESENT THE NUMBER OF ATOMS PER UNIT.

2. COMPOSITION OF ORGANIC CARBONATES IN THE ELECTROLYTE SOLVENT VARIES.

-----SECTION 4 - FIRST AID MEASURES -----

FIRST AID:

EYES:
FLUSH EYES WITH LUKEWARM WATER FOR AT LEAST 30 MINUTES WHILE HOLDING THE
EYELIDS OPEN. SEEK IMMEDIATE MEDICAL CARE.

FIRST AID:

SKIN:
REMOVE CONTAMINATED CLOTHING, SHOES AND LEATHER GOODS. FLUSH WITH WATER FOR
AT LEAST 30 MINUTES. SEEK MEDICAL ATTENTION IF SYMPTOMS PERSIST.

FIRST AID:

INGESTION:
NEVER GIVE ANYTHING BY MOUTH IF VICTIM IS UNCONSCIOUS. RINSE MOUTH
THOROUGHLY WITH WATER. DO NOT INDUCE VOMITING. SEEK IMMEDIATE MEDICAL ATTENTION.

FIRST AID:

INHALATION: REMOVE PERSON TO FRESH AIR AWAY FROM SOURCE OF CONTAMINATION.

-----SECTION 5 - FIRE FIGHTING MEASURES -----

GENERAL FIRE HAZARDS:

SEE SECTION 9 FOR FLAMMABILITY PROPERTIES.

BATTERY CELLS MAY RUPTURE WHEN EXPOSED TO EXCESSIVE HEAT. ELECTROLYTE
SOLUTION IS FLAMMABLE.

HAZARDOUS COMBUSTION PRODUCTS:
MAY RELEASE TOXIC FUMES IF BURNED OR EXPOSED TO FIRE.

EXTINGUISHING MEDIA:
USE APPROPRIATE EXTINGUISHING AGENT FOR SURROUNDING FIRE. FOR DAMAGED OR RUPTURED CELLS, USE CLASS D EXTINGUISHER OR OTHER APPROPRIATE AGENT. CLASS C FIRE EXTINGUISHERS SHOULD BE USED TO EXTINGUISH ELECTRICAL FIRES. DO NOT USE WATER TO EXTINGUISH ELECTRICAL OR RUPTURED CELL RELATED FIRES.

FIRE FIGHTING EQUIPMENT/INSTRUCTIONS:
FIREFIGHTERS SHOULD WEAR FULL PROTECTIVE GEAR.

NFPA RATINGS:
HEALTH 0
FIRE 0
REACTIVITY 0

HAZARD SCALE:
0 = MINIMAL
1 = SLIGHT
2 = MODERATE
3 = SERIOUS
4 = SEVERE

-----SECTION 6 - ACCIDENTAL RELEASE MEASURES -----

CONTAINMENT PROCEDURES: STOP THE FLOW OF MATERIAL, IF THIS IS WITHOUT RISK.

CLEAN-UP PROCEDURES:
ABSORB SPILL WITH INERT MATERIAL. SHOVEL MATERIAL INTO APPROPRIATE CONTAINER FOR DISPOSAL. CLEAN SPILL AREA WITH DETERGENT AND WATER; COLLECT WASH WATER FOR PROPER DISPOSAL.

EVACUATION PROCEDURES: ISOLATE AREA. KEEP UNNECESSARY PERSONNEL AWAY.

SPECIAL PROCEDURES: AVOID SKIN CONTACT WITH THE SPILLED MATERIAL.

-----SECTION 7 - HANDLING AND STORAGE -----

HANDLING PROCEDURES: AVOID DAMAGING OR RUPTURING BATTERY.

STORAGE PROCEDURES:
STORE IN A DRY LOCATION AT ROOM TEMPERATURE. AVOID EXTREME HEAT OR FIRE. KEEP OUT OF REACH OF CHILDREN.

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

A:
COMPONENT EXPOSURE LIMITS:
ACGIH, OSHA, AND NIOSH HAVE NOT DEVELOPED EXPOSURE LIMITS FOR ANY OF THIS PRODUCT'S COMPONENTS.

ENGINEERING CONTROLS: NOT NECESSARY UNDER NORMAL PRODUCT USE CONDITIONS.

PERSONAL PROTECTIVE EQUIPMENT:

PERSONAL PROTECTIVE EQUIPMENT:
EYES/FACE:
NOT NECESSARY UNDER NORMAL PRODUCT USE CONDITIONS. WEAR SAFETY GLASSES IF HANDLING A DAMAGED BATTERY.

PERSONAL PROTECTIVE EQUIPMENT:
SKIN:
NOT NECESSARY UNDER NORMAL PRODUCT USE CONDITIONS. WEAR NEOPRENE OR NATURAL RUBBER GLOVES WHEN HANDLING A DAMAGED BATTERY.

PERSONAL PROTECTIVE EQUIPMENT:
RESPIRATORY: NOT NECESSARY UNDER NORMAL PRODUCT USE CONDITIONS.

PERSONAL PROTECTIVE EQUIPMENT:
GENERAL: EYEWASH FOUNTAINS AND EMERGENCY SHOWERS ARE REQUIRED.

-----SECTION 9 - PHYSICAL & CHEMICAL PROPERTIES -----

APPEARANCE: VARIOUS SHAPED BATTERY

ODOR: NONE

PHYSICAL STATE: SOLID

PH: NA

VAPOR PRESSURE: NA

VAPOR DENSITY: NA

BOILING POINT: NA

MELTING POINT: NA

SOLUBILITY (H₂O): INSOLUBLE

SPECIFIC GRAVITY: NA

EVAPORATION RATE: NA

VOC: NA

OCTANOL/H₂O COEFF.: NA

FLASH POINT: NA
FLASH POINT METHOD: NA

UPPER FLAMMABILITY LIMIT (UFL): NA
LOWER FLAMMABILITY LIMIT (LFL): NA

BURNING RATE: NA

AUTO IGNITION: NA

-----SECTION 10 - CHEMICAL STABILITY & REACTIVITY INFORMATION -----

CHEMICAL STABILITY: THIS IS A STABLE MATERIAL.

CHEMICAL STABILITY:
CONDITIONS TO AVOID: AVOID EXPOSURE TO ELEVATED TEMPERATURES AND FIRE.

INCOMPATIBILITY: NOT AVAILABLE.

HAZARDOUS DECOMPOSITION:
MAY RELEASE TOXIC FUMES IF BURNED OR EXPOSED TO FIRE.

POSSIBILITY OF HAZARDOUS REACTIONS: NOT AVAILABLE.

-----SECTION 11 - TOXICOLOGICAL INFORMATION -----

ACUTE DOSE EFFECTS:

A:
GENERAL PRODUCT INFORMATION:
IF PRODUCT IS RUPTURED, MATERIAL MAY CAUSE IRRITATION TO THE SKIN, EYES AND RESPIRATORY TRACT.

B:
COMPONENT ANALYSIS - LD50/LC50:
NO LD50/LC50'S ARE AVAILABLE FOR THIS PRODUCT'S COMPONENTS.

CARCINOGENICITY:

A:
GENERAL PRODUCT INFORMATION: NO INFORMATION AVAILABLE FOR THE PRODUCT.

B:
COMPONENT CARCINOGENICITY:
NONE OF THIS PRODUCT'S COMPONENTS ARE LISTED BY ACGIH, IARC, OSHA, NIOSH, OR NTP.

-----SECTION 12 - ECOLOGICAL INFORMATION -----

ECOTOXICITY:

A:
GENERAL PRODUCT INFORMATION: NO INFORMATION AVAILABLE FOR THE PRODUCT.

B:
COMPONENT ANALYSIS - ECOTOXICITY - AQUATIC TOXICITY:
NO ECOTOXICITY DATA ARE AVAILABLE FOR THIS PRODUCT'S COMPONENTS.

-----SECTION 13 - DISPOSAL CONSIDERATIONS -----

US EPA WASTE NUMBER & DESCRIPTIONS:

COMPONENT WASTE NUMBERS:
NO EPA WASTE NUMBERS ARE APPLICABLE FOR THIS PRODUCT'S COMPONENTS.

DISPOSAL INSTRUCTIONS:
RECYCLE BATTERY. DO NOT DISPOSE OF IN WATER BODIES OR SEWER SYSTEM. ALL WASTES MUST BE HANDLED IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.

SEE SECTION 7 FOR HANDLING PROCEDURES. SEE SECTION 8 FOR PERSONAL PROTECTIVE EQUIPMENT RECOMMENDATIONS.

-----SECTION 14 - TRANSPORTATION INFORMATION -----

LITHIUM-ION BATTERIES COMPLY WITH ALL APPLICABLE SHIPPING REGULATIONS AS PRESCRIBED BY INDUSTRY AND LEGAL STANDARDS WHICH INCLUDE UN RECOMMENDATIONS ON THE TRANSPORT OF DANGEROUS GOODS; IATA DANGEROUS GOODS REGULATIONS AND US DOT REQUIREMENTS. CELLS AND BATTERIES HAVE BEEN TESTED TO SECTION 38.3 OF THE UN RECOMMENDATIONS ON THE TRANSPORT OF DANGEROUS GOODS MANUAL OF TESTS AND CRITERIA. ALL OF THE BATTERIES LISTED IN THIS SAFETY DATA SHEET ARE LESS THAN OR EQUAL TO 100 WHRS; THEREFORE, AIR SHIPMENT OF UP TO 2 BATTERIES WITHOUT EQUIPMENT IN A PACKAGE CAN BE SHIPPED AS AN "EXCEPTED" QUANTITY AND DOES NOT REQUIRE BEING SHIPPED AS A FULLY REGULATED CLASS 9 HAZARDOUS MATERIAL. IF MORE THAN 2 BATTERIES WITHOUT EQUIPMENT ARE BEING SHIPPED IN ONE PACKAGE, USING AIR TRANSPORTATION, THEN THE PACKAGE IS CONSIDERED A FULLY REGULATED SHIPMENT AND MUST MEET THE MORE STRINGENT DOCUMENTATION, MARKING, AND LABELING REQUIREMENTS.

BATTERIES ALONE:

UN3480, LITHIUM ION BATTERIES

AIR SHIPMENTS (IATA):
PACKING INSTRUCTION 965 (SECTION 1B FOR GREATER THAN 2 BATTERIES PER PACKAGE, SECTION II FOR LESS THAN OR EQUAL TO 2 BATTERIES PER PACKAGE)

SEA SHIPMENTS (IMO-IMDG): SPECIAL PROVISION 188

EUROPE ROAD TRANSPORTATION (ADR): SPECIAL PROVISION 188

US ROAD TRANSPORTATION (DOT): 49 CFR 173.185(C)

BATTERIES WITH OR IN EQUIPMENT:
UN3481, LITHIUM ION BATTERIES PACKED WITH EQUIPMENT OR LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT.

AIR SHIPMENTS (IATA): PACKING INSTRUCTION 966 OR 967, SECTION II

SEA SHIPMENTS (IMO-IMDG): SPECIAL PROVISION 188

EUROPE ROAD TRANSPORTATION (ADR): SPECIAL PROVISION 188

US ROAD TRANSPORTATION (DOT): 49 CFR 173.185(C)

-----SECTION 15 - REGULATORY INFORMATION -----

US FEDERAL REGULATIONS:

A:
GENERAL PRODUCT INFORMATION:
ALL COMPONENTS ARE ON THE U.S. EPA TSCA INVENTORY LIST.

B:
COMPONENT ANALYSIS:

NONE OF THIS PRODUCTS COMPONENTS ARE LISTED UNDER SARA SECTION 302 (40 CFR 355 APPENDIX A), SARA SECTION 313 (40 CFR 372.65), OR CERCLA (40 CFR 302.4).

STATE REGULATIONS:

A:
GENERAL PRODUCT INFORMATION: NO ADDITIONAL INFORMATION AVAILABLE.

B:
COMPONENT ANALYSIS - STATE:
NONE OF THIS PRODUCT'S COMPONENTS ARE LISTED ON THE STATE LISTS FROM CA, MA, MN, NJ, PA, OR RI.

CANADIAN WHMIS INFORMATION:

A:
GENERAL PRODUCT INFORMATION:
THIS PRODUCT HAS BEEN CLASSIFIED IN ACCORDANCE WITH THE HAZARD CRITERIA OF THE CONTROLLED PRODUCTS REGULATIONS.

B:
COMPONENT ANALYSIS - WHMIS IDL: NO COMPONENTS ARE LISTED IN THE WHMIS IDL.

ADDITIONAL REGULATORY INFORMATION: NONE

-----SECTION 16 - OTHER INFORMATION -----

OTHER INFORMATION:
THE INFORMATION HEREIN IS PRESENTED IN GOOD FAITH AND BELIEVED TO BE ACCURATE AS OF THE EFFECTIVE DATE GIVEN. HOWEVER, NO WARRANTY, EXPRESSED OR IMPLIED, IS GIVEN. IT IS THE BUYER'S RESPONSIBILITY TO ENSURE THAT ITS ACTIVITIES COMPLY WITH FEDERAL, STATE OR PROVINCIAL, AND LOCAL LAWS.

KEY/LEGEND:
EPA = ENVIRONMENTAL PROTECTION AGENCY
TSCA = TOXIC SUBSTANCE CONTROL ACT
ACGIH = AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS
IARC = INTERNATIONAL AGENCY FOR RESEARCH ON CANCER
NIOSH = NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH
NTP = NATIONAL TOXICOLOGY PROGRAM
OSHA = OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION.
NJTSR = NEW JERSEY TRADE SECRET REGISTRY
WHMIS = WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (CANADA)

REVISION: 3.3

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