

ITEM: 3HFX7 - Hammerdrill/Drill/Driver 18V Litiu

ORDER: 0072275016

LP NUMBER: U700685054

MATERIAL SAFETY DATA SHEET (MSDS)

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

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% VOLATILE BY VOLUME:

Associated Grainger Items

VADGR1P5252M0H7(MMAG)2271, 1XGN4, 1XGN5, 3CRK8, 3FRN3, 6042941, 6354542
6361591, 6347248, 2XYS5, 2XYS6, 2XYS7, 1GEA4, 1GEA5, 1GEA
VADGRANR1R1CEB2, 1GEB3, 1GEB4, 1GEB5, 1GEB6, 1GEB7, 1GEB8, 1GEB9, 1GEB1
1GEB2, 1GEB3, 1GEB4, 1GEB5, 1GEB6, 1GEB7, 1GEB8, 1GEB9, 1GEB1
VADGR, DEKSHITY 15CEB, =1ED32, 1EB37, 1EB38, 1EB39, 1PKP9, 1PZ10, 1PZ11, 1PZ12
1PZ14, 1PZ15, 1PZ16, 1PZ17, 1PZ18, 1PZ19, 1PZ20, 1PZ21
SP25FIP225FVIF22V20228, GRM187, 1F1V9, 1F1V6, 2NY21, 2NY22, 2NY24, 2NY25
3AB13, 3AB14, 3EB89, 3EB90, 3KA75, 3KA
SOM5BILIPASIN 3W0R:31N50, 3PA28, 3WE97, 3WE98, 3W80, 4E845, 4E870
4EB26, 4EB27, 4EB28, 4EB29, 4EB30, 4EB31, 4EB32
APBRANES 3ANR0R:4EB40, 4EB41, 4EB42, 4EB43, 4EB44, 4EB45, 4EB46, 4EB47, 4EB48, 4EB49
4GA68, 4GA69, 4
SUBSTROLATE SPECIFIC 4CRAVITACEB, 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 38, 40, 42, 44, 46, 48, 50, 52, 54, 56, 58, 60, 62, 64, 66, 68, 70, 72, 74, 76, 78, 80, 82, 84, 86, 88, 90, 92, 94, 96, 98, 100
4VX35, 4WL38, 4YB73, 4YB77, 4YK29, 4YK
EXE2TPOLETS, VEDQ5ITS1A190 4 M5P3, 5MPF4, 5MPF7, 5MP80, 5MP81, 5MP82, 5MP83
(*MPAS: MILLI-PASCAL SECOND) 5MP84, 5MP85, 5MP86, 5ZM44, 5ZM45, 6GD51, 6GD52
6RM75, 6RM76, 6RM77, 6RM78, 6RM79, 6XG84, 6XG85, 6
10X19, 1M1X0R0X0E4, 1PUK8, 6225051, 6354270, 1WLX9, 1WXN1, 1WXN2, 7YR35
7YR36, 7YR37, 7YR38, 7YR39, 7YR40, 7YR41, 2AEU4, 2AEU6, 2AEU7
DEKING 4E80T 2A0G, 2AEV5, 2AEV7, 2AEV8, 2AEV9, 2AEW1, 2AEW2, 2AEW3, 2HNX5
2HNX6, 2VDJ2, 2VDJ3, 2VDJ4, 2VDJ9, 2RDZ5, 3HFV7, 3HFV8,
BORWING 3HFVNT 3HWS, 3HEW6, 3HFW7, 3HFW8, 3HFW9, 3HFY1, 3HFY2, 3HFY3, 3HFY4
3HFY5, 3HFY6, 3HFY7, 3HFY8, 3HFY9, 3HFY11, 3HFY12, 3HFY13, 3HFY14, 3HFY15, 3HFY16, 3HFY17, 3HFY18, 3HFY19, 3HFY20, 3HFY21, 3HFY22, 3HFY23, 3HFY24, 3HFY25, 3HFY26, 3HFY27, 3HFY28, 3HFY29, 3HFY30, 3HFY31, 3HFY32, 3HFY33, 3HFY34, 3HFY35, 3HFY36, 3HFY37, 3HFY38, 3HFY39, 3HFY40, 3HFY41, 3HFY42, 3HFY43, 3HFY44, 3HFY45, 3HFY46, 3HFY47, 3HFY48, 3HFY49, 3HFY50, 3HFY51, 3HFY52, 3HFY53, 3HFY54, 3HFY55, 3HFY56, 3HFY57, 3HFY58, 3HFY59, 3HFY60, 3HFY61, 3HFY62, 3HFY63, 3HFY64, 3HFY65, 3HFY66, 3HFY67, 3HFY68, 3HFY69, 3HFY70, 3HFY71, 3HFY72, 3HFY73, 3HFY74, 3HFY75, 3HFY76, 3HFY77, 3HFY78, 3HFY79, 3HFY80, 3HFY81, 3HFY82, 3HFY83, 3HFY84, 3HFY85, 3HFY86, 3HFY87, 3HFY88, 3HFY89, 3HFY90, 3HFY91, 3HFY92, 3HFY93, 3HFY94, 3HFY95, 3HFY96, 3HFY97, 3HFY98, 3HFY99, 3HFY100

% VOLATILE BY VOLUME:

PRODUCT INFORMATION AND DATA SHEET

VAPOR PRESSURE (MMHG): THIS PRODUCT IS A MANUFACTURED ARTICLE AS DESCRIBED IN 29
OSHA'S HAZARD COMMUNICATION STANDARD REQUIREMENTS FOR
PREPARATION OF MATERIAL SAFETY DATA SHEETS (MSDS).

VAPOR DENSITY (AIR = 1):

SANYO BATTERIES

SANYO ELECTRIC CO., LTD.

2055 SANYO AVE.

SANBIBBY IN WATER: PRACTICALLY INSOLUBLE

APPEARANCE AND (ODR) POWDER88

WWW.SANYOBATTERIES.COM

MANUFACTURER'S (NAME): F: 2,831

SANYO ELECTRIC CO., LTD.

BOOKING REPORT KAGE: CETY 5,134

HYOGO, 675-2332

SAPENATILE BY VOLUME:

VAPOR PRESSURE (MMHg) 43-2043
 EMERGENCY CONTACT:
 CHEMTREC AT: (800) 424-9300
 VAPOR DENSITY (AIR = 1):
 SPECIFIC GRAVITY (H₂O)
 SECTION I - PRODUCT INFORMATION
 PRODUCT NAME: NICKEL-CADMIUM BATTERY
 REFRANDED AND RECHARGED
 (X) YES
 NICKEL DIOXIDE:
 TRIMETHYLAMINE (PPM): *
 CHEMICAL SYSTEM: NICKEL-CADMIUM
 NOMINATE: 1.5V
 VAPOR PRESSURE (MMHg):

SECTION II - COMPOSITION / INFORMATION ON INGR

EVAPORATION RATE: THE INGREDIENTS ARE CONTAINED IN A HERMETICALLY SEALED CASE. D
WATER AND TEMPERATURES AND PRESSURES ENCOUNTERED DURING NORMAL USE. AS A
RESULT, DURING NORMAL USE, HAZARDOUS MATERIALS ARE FULLY
THE CHARGE OF THE BATTERY SHOULD NOT BE OPENED OR EXPOSED TO HEAT BECAUSE
EXPOSURE TO THE FOLLOWING INGREDIENTS CONTAINED WITHIN C
UNDER ANY CIRCUMSTANCES. THE FOLLOWING INFORMATION IS PROVIDED FOR THE
USER'S INFORMATION ONLY.

APPEARANCE AND ODOR	APPLE GREEN POWDER	CHEMICAL NAME	CAS NO.	%
* NOTE: DECOMPOSES ABOVE 392 DEG. F INTO NiO AND H2O.				
POTASSIUM HYDROXIDE:	CADMIUM HYDROXIDE	21041-95-2	11-26	0.005 TWA
MELTING POINT (DEG. F):*	NICKEL (POWDER)	7440-02-0	8-17	1 TWA
BOILING POINT (DEG. F):	NICKEL HYDROXIDE	12054-48-7	5-12	1 TWA
% VOLATILE BY VOLUME:	POTASSIUM HYDROXIDE	1310-58-3	<3	2 CELLI
VAPOR PRESSURE (MMHg):	NYLON	N/A	<2	N/A
EVAPORATION RATE:	STEEL	N/A	12-13	N/A
VAPOR DENSITY (AIR = 1):	OTHER	N/A		<1
SPECIFIC GRAVITY (H2O):	TOTAL			

SOLUBILITY IN WATER: SOLUBLE IN 0.9 PART WATER, 0.6 PART IN BOILING WATER

APPEARANCE: WHITE POWDERY SUBSTANCE

* NOTE: POTASSIUM HYDROXIDE IS PRESENT AS A LIQUID OR PASTE AND ACTS AS THE ELECTROLYTE IN THE BATTERY CELL.

Figure 1. The effect of the concentration of the polymer on the gelation time of the polymer solution. The concentration of the polymer was 0.5, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: NA BOILING POINT (DEG. F): 1,407 MELT

PLEASE CHARGE BATTERY BEFORE FIRST USE.
CARGUE SU BATERIA ANTES DEL PRIMER USO.
PRIÈRE DE CHARGER LA PILE AVANT LA PREMIÈRE UTILISATION.

SECTION IX - PRECAUTIONS FOR SAFE HANDLING AND USE

STORAGE:
STORE IN A COOL PLACE, BUT PREVENT CONDENSATION ON CELL OR BATTERY
TERMINALS. ELEVATED TEMPERATURES MAY RESULT IN REDUCED BATTERY LIFE.
OPTIMUM STORAGE TEMPERATURES ARE BETWEEN -31 DEG. F AND 95 DEG. F.