

APPLICATION FOR LICENSE TO EXPORT NUCLEAR
MATERIAL AND EQUIPMENT (See Instructions on Reverse)

APPROVED BY OMB
9150-0027
EXPIRES 12-31-90

DCS/DF02

1. APPLICANT'S USE		a. DATE OF APPLICATION 3-20-90		b. APPLICANT'S REFERENCE RIS		2. NRC USE		a. DOCKET NO. 11004276		b. LICENSE NO. XMAT-0346	
3. APPLICANT'S NAME AND ADDRESS						4. SUPPLIER'S NAME AND ADDRESS (Complete if applicant is not supplier of material)					
a. NAME HI-MARK RESEARCH LTD. INC.						b. NAME					
b. STREET ADDRESS RD #1, BOX 227, ROUTE 322E						c. NAME					
c. CITY BROOKVILLE,				STATE PA		ZIP CODE 15825		d. STREET ADDRESS			
d. TELEPHONE NUMBER (Area Code - Number - Extension) 814-849-8006 or 849-8007						c. CITY		STATE		ZIP CODE	
5. FIRST SHIPMENT SCHEDULED		6. FINAL SHIPMENT SCHEDULED		7. APPLICANT'S CONTRACTUAL DELIVERY DATE		8. PROPOSED LICENSE EXPIRATION DATE		9. U.S. DEPARTMENT OF ENERGY CONTRACT NO. (If Known)			
4-30-90		12-30-90		4-30-90		5 YEARS FROM ISSUANCE OF LICENSE					
10. ULTIMATE CONSIGNEE						11. ULTIMATE END USE (Include plant or facility name)					
a. NAME ERODEX (U.K.) LTD						ELECTRODE MATERIAL FOR ELECTRICAL DISCHARGE MACHINING (EXPLAINED IN MORE DETAIL IN ATTACHED LETTER)					
b. STREET ADDRESS UNIT 6, TIPPER INDUSTRIAL ESTATE PARK ROAD, HALESOWEN						11a. EST. DATE OF FIRST USE					
c. CITY - STATE - COUNTRY WEST MIDLANDS B632RH, UNITED KINGDOM						12. INTERMEDIATE CONSIGNEE					
a. NAME						13. INTERMEDIATE END USE					
b. STREET ADDRESS						13a. EST. DATE OF FIRST USE					
c. CITY - STATE - COUNTRY						14. INTERMEDIATE CONSIGNEE					
a. NAME						15. INTERMEDIATE END USE					
b. STREET ADDRESS						15a. EST. DATE OF FIRST USE					
c. CITY - STATE - COUNTRY						16. NRC USE					
17. DESCRIPTION (Include chemical and physical form of nuclear material; give dollar value of nuclear equipment and components)						18. MAX. ELEMENT WEIGHT		19. MAX. WT. %		20. MAX. ISOTOPE WEIGHT	
BULK NUCLEAR GRADE GRAPHITE (see attached property sheet)						13,000 Total per year for the next 5 years		65,000 Total		OFFICE OF INTERNATIONAL PROGRAMS	
9004060346 900320 PDR XPORT XMAT-0346 PDC										kg	
22. COUNTRY OF ORIGIN-SOURCE MATERIAL USA				23. COUNTRY OF ORIGIN-SNM WHERE ENRICHED OR PRODUCED N.A.				24. COUNTRIES WHICH ATTACH SAFEGUARDS (If Known) N.A.			
25. ADDITIONAL INFORMATION (Use separate sheet if necessary) SEE ATTACHED SHEETS											
26. The applicant certifies that this application is prepared in conformity with Title 10, Code of Federal Regulations, and that all information in this application is correct to the best of his/her knowledge.											
27. AUTHORIZED OFFICIAL				a. SIGNATURE				b. TITLE V.P. Marketing and Sales			

RECEIVED
USNRC

#1

HI-MARK RESEARCH, LTD.

XMAT0346
11004276

PENETRATOR

PREMIUM EDM GRAPHITE

	<u>MARK 7</u>	<u>MARK 5</u>	<u>MARK 1</u>
APPARENT DENSITY (g/cc)	1.75	1.83	1.87
FLEXURAL STRENGTH (psi)	8,200	11,500	12,500
SPECIFIC RESISTANCE ($\times 10^{-5}$ ohm-in.)	68	65	69
HARDNESS, SCLEROSCOPE	68	78	83
GRAIN SIZE, MICRONS	7	5	1
INCHES	.0003	.0002	.00004
COLOR CODE	WHITE	RED	BLUE
SUGGESTED APPLICATIONS	FINISHING	DETAIL	FINE DETAIL

3/89

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MEASURED PROPERTIES NOT LISTED ON EDM LITERATURE

	MARK 7	MARK 5	MARK 1
COMPRESSIVE STRENGTH, (psi)	14,000	22,000	34,000
MODULUS, x10 psi	1300	1500	2100
CTE, x10 in/in/°c	6.0	6.5	7.2
ASH, %	.23	.18	.17
BORON CONTENT, ppm	1.4	1.7	2.2
BLOCK SIZE(S), in	6½x6½x26" 6½x12½x24½"	6½x6½x24½"	3½x6½x18½"