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TRUCK FREIGHT
Return shipping instructions for: NRD P-2000 series Static Elimination devices using Polonium-210 Radionuclide

A GUIDE TO PROPER PACKAGING AND SHIPPING
READ THESE INSTRUCTIONS COMPLETELY

PART A: GENERAL INFORMATION

1. FOUR BASIC ITEMS ARE NEEDED TO RETURN THE PRODUCT:
 - **AN ORIGINAL, TYPE A, SHIPPING CONTAINER** - Available upon request from NRD. DO NOT USE YOUR OWN PACKAGING OR CORRUGATION. Package is not to rattle.
 - **STRAIGHT BILL OF LADING** - This has been supplied in this packet. See instructions on PART “C” and example on PART “D” of this instruction manual. Be sure that the Straight Bill of Lading used has a HAZARDOUS MATERIALS (“HM”) column.
 - **PROPER LABELING** - This has been supplied in this packet. See instructions on PART “C” and example on PART “B” of this instruction manual.
 - **ERG GUIDE 163** – This has been supplied in this packet.
2. CONTACT NRD CUSTOMER SERVICE, MONDAY – FRIDAY AT 1-800-525-8076 U.S., FOR REQUIRED MATERIAL BEFORE RETURNING ANY PRODUCT.
3. PREPARE THE DEVICE FOR SHIPMENT:
 - USE ONLY AN ORIGINAL, TYPE A, SHIPPING CONTAINER. TYPE A PACKAGE(S) AND CERTIFICATION AVAILABLE UPON REQUEST FROM NRD, LLC CUSTOMER SERVICE.
 - IF APPLICABLE, SECURE THE NUCLESTAT™ COVERSIELD TO HOUSING WITH NYLON REINFORCED TAPE (P2001 MODEL ONLY) OR PLACE THE DEVICE INTO A PLASTIC BAG FOR MODELS P2021, P2031, P2035, P2042, P2061, AND P2063.
 - USE SUFFICIENT STYROFOAM DUNNAGE TO FILL INNER PACKAGE VOIDS AND TO PREVENT RATTLES.
 - CLOSE PACKAGE AND TAPE ALL SEAMS WITH NYLON REINFORCED TAPE.
 - MARK OUTSIDE OF PACKAGE WITH THE WORDS “SECURITY SEAL” IN BOLD BLACK MARKER ACROSS TAPED SEAMS.
4. BELOW IS A LIST OF NRD DEVICE “ACTIVITY” AT THE TIME OF MANUFACTURE. THIS MAY BE A REFERENCE TO YOU IF YOUR DEVICE LABEL IS ILLEGIBLE DUE TO HANDLING.

<u>MODEL</u>	<u>ACTIVITY</u>
P2001	2.25 mCi per active inch = 83.3 MBq per active inch
P2021	10.0 mCi = 370 MBq
P2031	20.0 mCi = 740 MBq
P2035	40.0 mCi = 1480 MBq
P2042	5.0 mCi = 185 MBq
P2061	40.0 mCi = 1480 MBq
P2063	31.5 mCi = 1166 MBq

NOTE: IT IS THE SHIPPER’S/SENDER’S RESPONSIBILITY TO BE TRAINED FOR HAZARDOUS MATERIALS SHIPPING.

PART B: Decay Chart, Device and Package Labeling

DECAY FACTOR CHART

Remaining Activity

AGE OF DEVICE	1 month old	2 months old	3 months old	4 months old	5 months old	6 months old	7 months old	8 months old	9 months old	10 months old	11 months old	12 months old	13 months old	14 months old	15 months old	16 months old	17 months old	18 months old	19 months old	20 months old	21 months old	22 months old	23 months old	24 months old	25 months old	26 months old
DECAY FACTOR	31.8	27.4	23.6	20.3	17.5	15.0	12.9	11.1	9.57	8.23	7.08	6.10	5.25	4.51	3.88	3.34	2.88	2.47	2.13	1.83	1.58	1.36	1.17	1.00	0.864	0.744

To determine the current activity of a device, in MBq (megabecquerel), multiply the original activity of the device, in mCi (millicurie), as found on the device label, by the appropriate decay factor for the age of the device, as found in the chart above.

EXAMPLE: A P-2021 that is 4 months old would have a current activity of:

10 mCi – original activity, from device label
 20.3 – decay factor, from chart above

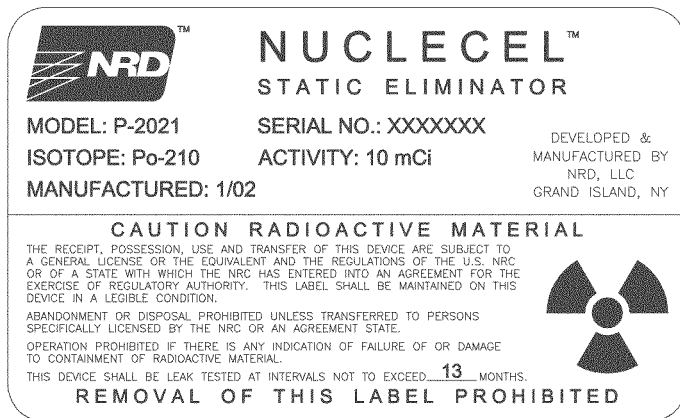
$$10 \text{ mCi} \times 20.3 = 203 \text{ MBq}$$

IMPORTANT NOTE

DO NOT EXCEED 20000 MBq (540 mCi) PER PACKAGE

LABEL EXAMPLES BELOW ARE FOR SHIPPING NRD MODEL P2021 NUCLECEL 4 MONTHS OLD.

EXAMPLE: DEVICE LABEL



EXAMPLE: BOX LABEL



EXAMPLE: OUTER BOX "RQ" LABEL

TO BE PLACED NEXT TO PRINTING "RADIOACTIVE MATERIAL" ONLY WHEN "ACTIVITY" IS 370 MBq OR GREATER

(PLACE THE ORANGE LABEL NEXT TO THIS LABEL – DO NOT OVERLAP THEM.)



PART C: Bill of Lading

1. PACKAGE LABELING:

- a) ENSURE THE MARKINGS “**RADIOACTIVE MATERIAL, USA DOT 7A, TYPE A PACKAGE, NON-SPECIAL FORM, NON FISSILE UN2915**” ON OUTSIDE OF PACKAGE. THIS IS THE PROPER SHIPPING NAME AND ID NUMBER FOR THIS CLASS 7 MATERIAL.
- b) PREPARE AND APPLY “**WHITE 1**” LABELS AS FOLLOWS:
 - TWO “WHITE 1” LABELS PER PACKAGE
 - **CONTENTS** – FILL IN “**Po-210**”
 - **ACTIVITY** – FILL IN ACTIVITY VALUE IN **MBq**. THIS IS CALCULATED USING THE DECAY FACTOR CHART FROM PART “**B**”, SECOND PAGE OF THE INSTRUCTIONS. SEE EXAMPLE ON PART “**B**”.
 - PLACE THE “WHITE 1” LABELS ON **OPPOSITE SIDES** OF THE OUTSIDE PACKAGE.

2. STRAIGHT BILL OF LADING: TO BE COMPLETED AS OUTLINED BELOW AND ILLUSTRATED IN EXAMPLE ON PART “D”.

A. **TO (CONSIGNEE):** “NRD LLC (716) 773-7634
2937 ALT BLVD.
GRAND ISLAND, NY 14072”

B. **FROM (SHIPPER):** YOUR COMPANY NAME, TELEPHONE NUMBER, AND COMPLETE ADDRESS

C. **NO. OF UNITS:** NUMBER OF PACKAGES OR PIECES BEING SHIPPED

D. **HM COLUMN:** ONE LETTER “X” IS TO BE PLACED IN THIS AREA OR THE LETTERS “RQ” IF APPLICABLE.

ENTER THE LETTERS “RQ” (Reportable Quantity) HERE AND PLACE THE “RQ” LABEL ON OUTER PACKAGE ONLY IF THE TOTAL PACKAGE ACTIVITY IS EQUAL TO, OR GREATER THAN, 370 MBq OR 10.0 mCi.

THE TOTAL PER PACKAGE ACTIVITY MUST NOT EXCEED 20000 MBq OR 540.0 MILLICURIE (mCi).

E. **BASIC DESCRIPTION:** “UN2915, RADIOACTIVE MATERIAL, TYPE A PACKAGE, NON-SPECIAL FORM, NON FISSILE, 7 WHITE 1, TI.0, USA DOT 7A, PO-210 SOLID METAL”, *ENTER NO. OF UNITS FROM C*, “TYPE A PACKAGES X”, *ENTER THE ACTIVITY ENTERED ON “WHITE 1” LABEL*, “MBq, FIBERBOARD BOX, TOTAL SHIPMENT ACTIVITY” *ENTER THE SUM OF THE ACTIVITIES ENTERED ON “WHITE 1” LABELS* “MBq, TO BE PREPAID, ERG GUIDE 163 ATTACHED”

F. **24 hr. EMERGENCY CONTACT TEL. NO.:** “CHEMTREC Day or Night 1-800-424-9300”

G. AN EMERGENCY RESPONSE GUIDE HAS ALSO BEEN ISSUED WITH THESE INSTRUCTIONS, IT IS MARKED AS ERG GUIDE 163, THIS SHOULD BE GIVEN TO THE TRUCK DRIVER WHEN YOU TENDER THE SHIPMENT FOR TRANSPORTATION.

H. FREIGHT CHARGES MUST BE PREPAID BY YOU THE SHIPPER, OTHERWISE YOUR SHIPMENT WILL BE REFUSED BY NRD.

I. DATE THE BILL OF LADING

J. SHIPPER: ENTER YOUR COMPANY NAME

PER: YOU MUST SIGN HERE

YOUR JOB TITLE (i.e. Shipping Clerk)

3. IF YOU HAVE ANY QUESTIONS REGARDING PREPARATION OF PACKAGING AND DOCUMENTATION PLEASE CALL NRD AT (716) 773-7634 BETWEEN THE HOURS OF 8:30 A.M. TO 5:00 P.M. MONDAY THROUGH FRIDAY.

PART D: Bill of Lading (Sample Only)

Example of Bill of Lading: **SAMPLE ONLY**

ATTENTION SHIPPERS!

FREIGHT CHARGES ARE PREPAID ON THIS BILL OF LADING UNLESS MARKED COLLECT.

STRAIGHT BILL OF LADING ORIGINAL – NOT NEGOTIABLE

Shipper No. _____

Carrier No. _____

Page _____ of _____

(Name of carrier)

(SCAC)

I Date DATE

On Collect on Delivery shipments, the letters "COD" must appear before consignee's name or as otherwise provided in item 430, Sec. 1.

TO: NRD LLC (716) 773-7634
Consignee

Street 2937 ALT BLVD. N. **A**
City GRAND ISLAND State N.Y. Zip Code 14072

FROM: YOUR COMPANY NAME AND TELEPHONE NO.
Shipper

Street YOUR COMPANY COMPLETE ADDRESS

City **B** State _____ Zip Code _____

24 hr. Emergency Contact Tel. No. CHEMTREC Day or Night 800-424-9300

Route _____ The letters "RQ" are ONLY entered in this area if the total per pkg. activity is equal to or greater than 10 mCi or 370 MBq **F** Vehicle Number _____

No. of Units & Container Type	HM	BASIC DESCRIPTION Proper Shipping Name, Hazard Class, Identification Number (UN or NA), Packing Group, per 172.101, 172.202, 172.203	TOTAL QUANTITY (Weight, Volume Gallons, etc.)	WEIGHT (Subject to Correction)	RATE	CHARGES (For Carrier Use Only)
C 3	D X	UN2915, Radioactive material, Type A package, non-special form, non fissile, 7 WHITE I, TI.O,				
Number of Packages, same as first column "C"		USA DOT 7A, Po-210 Metal Solid,	Activity from the "WHITE 1" label is entered here (calculation from the decay chart)			
		3 Type A packages X 59.0 MBq, Fiberboard Box,				
		Total Shipment Activity 177 MBq	The sum of the Activities from the "WHITE 1" labels is entered here			
	E	TO BE PREPAID, ERG GUIDE 163 ATTACHED				

PLACARDS TENDERED: YES NO

REMIT C.O.D. TO: ADDRESS _____

Note - Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property.

The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding

\$ _____ per _____

I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packaged, marked and labelled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Signature _____

COD Amt: \$ _____

Subject to Section 7 of the conditions, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement:

The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.

(Signature of Consignor)

C.O.D. FEE:
PREPAID
COLLECT \$ _____

TOTAL CHARGES: \$ _____

FREIGHT CHARGES
FREIGHT PREPAID Check box if charges except when box at right is checked are to be collected

RECEIVED, subject to the classifications and lawfully filed tariffs in effect on the date of the issue of this Bill of Lading, the property described above in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated above which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of, said property over all or any portion of

said route to destination and as to each party at any time interested in all or any said property, that every service to be performed hereunder shall be subject to all the bill of lading terms and conditions in the governing classification on the date of shipment.

Shipper hereby certifies that he is familiar with all the bill of lading terms and conditions in the governing classification and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

SHIPPER YOUR COMPANY NAME

CARRIER _____

PER YOU MUST SIGN HERE **J**

PER _____

YOUR JOB TITLE

DATE _____

Permanent post-office address of shipper. _____