

2021 INFECTIOUS MATERIAL SHIPPING GUIDE

JANUARY 1, 2021

The following guide provides a summary of marking, labeling and paperwork requirements for shipping Infectious Materials via domestic USA (49 CFR 171-180; current as of 1-JAN-2021]), international air (2021 IATA DGR, 62ND Edition) and international vessel (IMDG, 39-18). Refer to the regulatory citations provided, country specific regulations and/or operator variations for complete requirements. Employees who perform any pre-transportation functions must have current training certificates.

Also see: [DISCLAIMER](#)

This guide will be updated as infectious materials regulations change. Please check www.hazmateam.com for the most current version of this document.

TO GET STARTED, CLICK ON THE HOME ICON:





IMPORTANT DEFINITIONS (READ FIRST!)

CATEGORY A INFECTIOUS

CATEGORY B INFECTIOUS

REGULATED MEDICAL WASTE
(NO CATEGORY A PATHOGENS)

BIOLOGICAL PRODUCTS
(NO PATHOGENS)

PATIENT SPECIMENS
(NO PATHOGENS)

**GENETICALLY MODIFIED MICRO-
ORGANISMS OR ORGANISMS**
(NO PATHOGENS)

SELF-TRANSPORT OPTIONS

IMPORTANT DEFINITIONS

This guide is formatted to the following DOT, IATA and IMDG Hazardous Materials/DG definitions:

Division 6.2 (Infectious substance) means a material known or reasonably expected to contain a pathogen.

Pathogen is a microorganism (including bacteria, viruses, rickettsiae, parasites, fungi) or other agent, such as a proteinaceous infectious particle (prion), that can cause disease in humans or animals.

Category A Infectious: An infectious substance in a form capable of causing permanent disability or life-threatening or fatal disease in otherwise healthy humans or animals when exposure to it occurs. An exposure occurs when an infectious substance is released outside of its protective packaging, resulting in physical contact with humans or animals. A Category A infectious substance must be assigned to identification number UN 2814, UN 2900 or UN 3549, as appropriate.

Category B Infectious: An infectious substance that is not in a form generally capable of causing permanent disability or life-threatening or fatal disease in otherwise healthy humans or animals when exposure to it occurs. This includes Category B infectious substances transported for diagnostic or investigational purposes. A Category B infectious substance must be described as "Biological substance, Category B" and assigned identification number UN 3373. This does not include regulated medical waste, which must be assigned identification number UN 3291.

Regulated medical waste: means a waste or reusable material derived from the medical treatment of an animal or human, which includes diagnosis and immunization, or from biomedical research, which includes the production and testing of biological products. Regulated medical waste or clinical waste or (bio) medical waste containing a Category A infectious substance must be classed as an infectious substance, and assigned to UN2814, UN2900 or UN 3549 as appropriate.

Patient Specimen: means human or animal material collected directly from humans or animals and transported for research, diagnosis, investigational activities, or disease treatment or prevention. *Patient specimen* includes excreta, secreta, blood and its components, tissue and tissue swabs, body parts, and specimens in transport media (e.g., transwabs, culture media, and blood culture bottles).

Biological product means a virus, therapeutic serum, toxin, antitoxin, vaccine, blood, blood component or derivative, allergenic product, or analogous product, or arsphenamine or derivative of arsphenamine (or any other trivalent arsenic compound) applicable to the prevention, treatment, or cure of a disease or condition of human beings or animals. Unless otherwise excepted, a *biological product* known or reasonably expected to contain a pathogen that meets the definition of a Category A or B infectious substance must be assigned the identification number UN 2814, UN 2900, or UN 3373, as appropriate.







Genetically modified micro-organisms (GMMOs) and genetically modified organisms (GMOs) are micro-organisms and organisms in which genetic material has been purposely altered through genetic engineering in a way that does not occur naturally. GMMOs and GMOs which do not meet the definition of toxic or infectious substances must be assigned to UN 3245.

Refer to [49 CFR 173.134](#), IMDG 2.6.3 and IATA DGR 3.9.

NAVIGATE (CLICK):



**CATEGORY A INFECTIOUS
MATERIALS
TRANSPORTATION**




	MODE (CLICK):		
CATEGORY A PATHOGEN AFFECTS HUMANS AND ANIMALS			
CATEGORY A PATHOGEN AFFECT ANIMALS ONLY			

NAVIGATE (CLICK):



[IMPORTANT DEFINITIONS](#)

CATEGORY B INFECTIOUS MATERIALS TRANSPORTATION



	MODE (CLICK):		
CATEGORY B PATHOGENS SHIPPED FOR INVESTIGATIONAL PURPOSES			

NAVIGATE (CLICK):



[IMPORTANT DEFINITIONS](#)

**REGULATED MEDICAL WASTE
(NO CATEGORY A
PATHOGENS)**




	MODE (CLICK):
REGULATED MEDICAL WASTE	
SHARPS	

NAVIGATE (CLICK):



[IMPORTANT DEFINITIONS](#)

**BIOLOGICAL PRODUCTS
(NO PATHOGENS)**




	MODE (CLICK):		
BIOLOGICAL PRODUCTS			

NAVIGATE (CLICK):



[IMPORTANT DEFINITIONS](#)

**PATIENT SPECIMENS
(NO PATHOGENS)**



	MODE (CLICK):		
PATIENT SPECIMENS			

NAVIGATE (CLICK):



[IMPORTANT DEFINITIONS](#)

**GENETICALLY MODIFIED
MICRO-ORGANISMS OR
ORGANISMS
(NO PATHOGENS)**

	MODE (CLICK):		
GENETICALLY MODIFIED MICRO-ORGANISMS AND ORGANISMS	NOT REGULATED US GROUND		

NAVIGATE (CLICK):



[IMPORTANT DEFINITIONS](#)

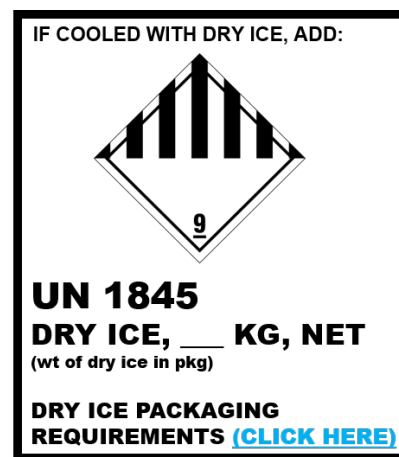
Biological Product



- **NO PROPER SHIPPING NAME OR UN NUMBER**
- Vessel and Air transport
- DECLARATION/SHIPPING PAPER: NO
- *Biological product* means a virus, therapeutic serum, toxin, antitoxin, vaccine, blood, blood component or derivative, allergenic product, or analogous product, or arsphenamine or derivative of arsphenamine (or any other trivalent arsenic compound) applicable to the prevention, treatment, or cure of a disease or condition of human beings or animals.
- Biological Products are not regulated for transportation provided the material does not contain a pathogen or meet the definition of any other hazard class.
- [Click Here](#) for OSHA Dry Ice and Bloodborne Pathogen labeling requirements.



Address label optional



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REFERENCE:

AIR: IATA DGR 3.6.2.1.2 & 3.6.2.3

VESSEL: IMDG CODE, 2.6.3.1.2 & 2.6..3.3

NAVIGATE (CLICK):



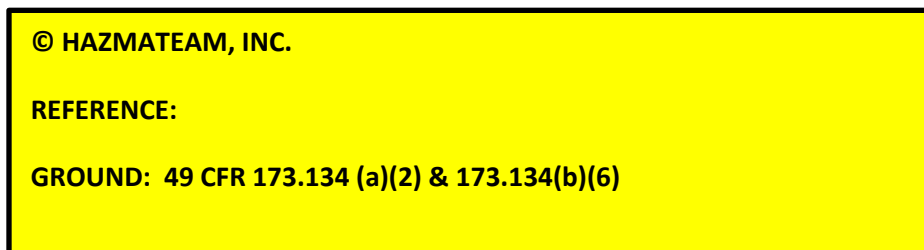
Biological Product



- **NO PROPER SHIPPING NAME OR UN NUMBER**
- GROUND – NOT REGULATED
- DECLARATION/SHIPPING PAPER: NO
- *Biological product* means a virus, therapeutic serum, toxin, antitoxin, vaccine, blood, blood component or derivative, allergenic product, or analogous product, or arsphenamine or derivative of arsphenamine (or any other trivalent arsenic compound) applicable to the prevention, treatment, or cure of a disease or condition of human beings or animals.
- Biological Products are not regulated for transportation provided the material does not contain a pathogen or meet the definition of any other hazard class.
- [Click Here](#) for OSHA Dry Ice and Bloodborne Pathogen labeling requirements.
- [Click Here](#) for ground self-transport exceptions



Address label optional



NAVIGATE (CLICK):



EXEMPT HUMAN/ANIMAL SPECIMENS



- **NO PROPER SHIPPING NAME OR UN NUMBER**
- GROUND TRANSPORT
- DECLARATION/SHIPPING PAPER: NO
- *Patient specimen* means human or animal material collected directly from humans or animals and transported for research, diagnosis, investigational activities, or disease treatment or prevention. *Patient specimen* includes excreta, secreta, blood and its components, tissue and tissue swabs, body parts, and specimens in transport media (e.g., transwabs, culture media, and blood culture bottles).
- Patient specimens which there is a minimal likelihood that pathogens are present or does not meet the definition or any other hazard class, are not regulated for transportation.
- [Click Here](#) for OSHA Dry Ice and Bloodborne Pathogen labeling requirements.
- [Click Here](#) for ground self-transport exceptions



Address label optional

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REFERENCE:

GROUND: 49 CFR 173.134 (a)(4) & 173.134 (b)

NAVIGATE (CLICK):



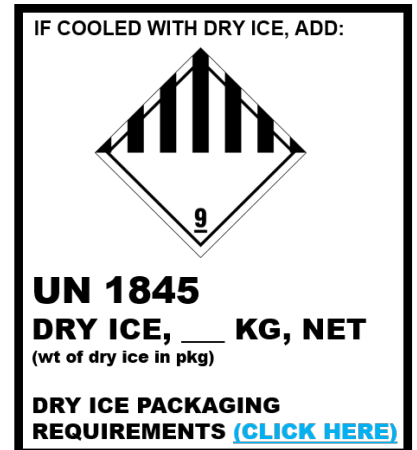
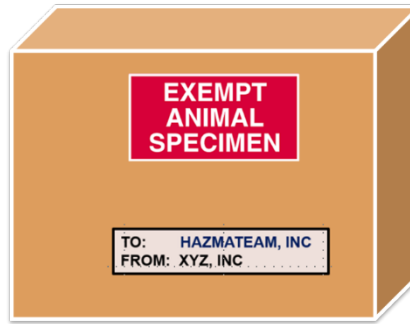
EXEMPT HUMAN/ANIMAL SPECIMENS



- **NO PROPER SHIPPING NAME OR UN NUMBER**
- Vessel & Air Transport
- DECLARATION/SHIPPING PAPER: NO
- *Patient specimen* means human or animal material collected directly from humans or animals and transported for research, diagnosis, investigational activities, or disease treatment or prevention. *Patient specimen* includes excreta, secreta, blood and its components, tissue and tissue swabs, body parts, and specimens in transport media (e.g., transwabs, culture media, and blood culture bottles).
- Patient specimens which there is a minimal likelihood that pathogens are present or does not meet the definition or any other hazard class, are not regulated for transportation.
- Must “triple package” following references below.
- [Click Here](#) for OSHA Dry Ice and Bloodborne Pathogen labeling requirements. [Click Here](#) for ground self-transport exceptions



OR



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REFERENCE:

AIR: IATA DGR 3.6.2.1.4 & 3.6.2.2.3.8

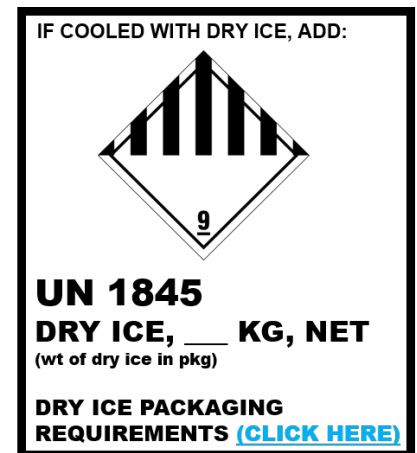
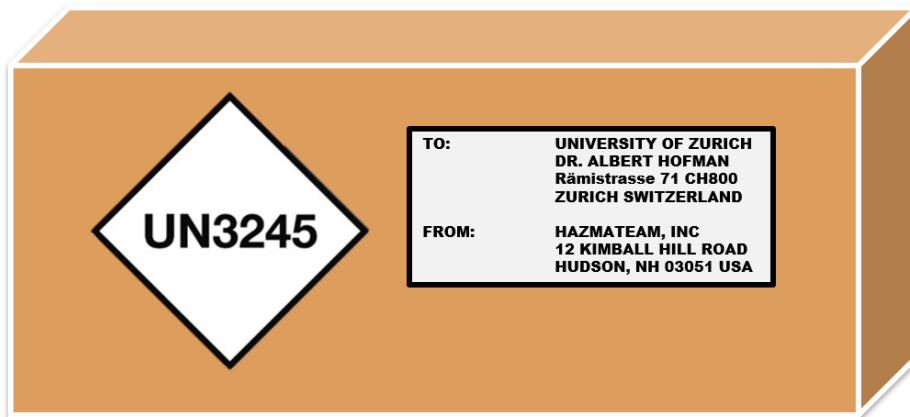
VESSEL: IMDG CODE 2.6.3.1.4 & 2.6.3.2.3.8

NAVIGATE (CLICK):



Genetically Modified Micro-organism

- **Genetically Modified Micro-organism, UN 3245**
- AIR AND VESSEL (NOT REGULATED US GROUND)
- DECLARATION/SHIPPING PAPER: NO
- Genetically modified micro-organisms (GMMOs) and genetically modified organisms (GMOs) are micro-organisms and organisms in which genetic material has been purposely altered through genetic engineering in a way that does not occur naturally.
- GMMOs do not contain pathogens or meet the definition of any other hazard class.
- Must “triple package” following references below.
- [Click Here](#) for OSHA Dry Ice and Bloodborne Pathogen labeling requirements.



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REFERENCE:

AIR: IATA DGR, 3.9.2.5 & PI 959

VESSEL: IMDG CODE, PI 904, SP 219

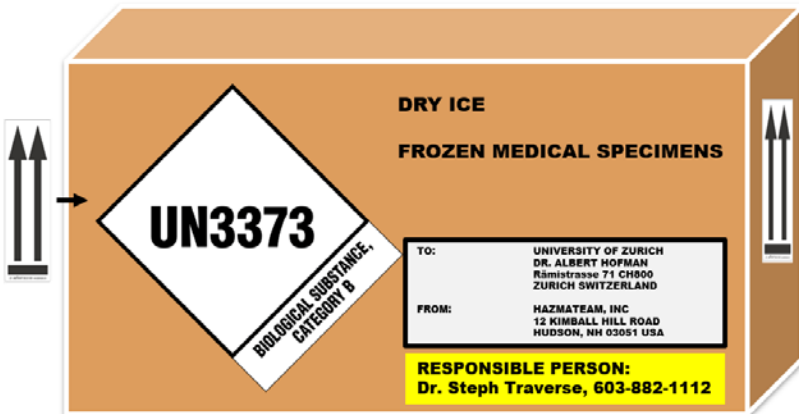
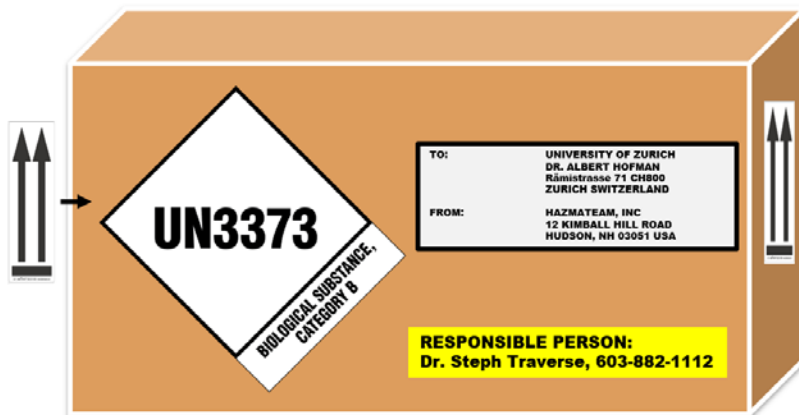
NAVIGATE (CLICK):



BIOLOGICAL SUBSTANCE, CATEGORY B



- *Biological Substance, Category B, UN 3373*
- GROUND
- DECLARATION/SHIPPING PAPER: NO
- Orientation arrows not required for primary receptacles filled with solid or primary receptacles filled with liquid not exceeding 50 ml
- Must “triple package” following reference below; Package closure instructions must be available for state and federal inspections
- The name and telephone number of a person must be included on a written document (such as a bill of lading) or on the outer packaging.
- Package testing: All packages must pass 1.2 m (3.9 ft) drop test;
- [Click Here](#) for OSHA Dry Ice and Bloodborne Pathogen labeling requirements.
- [Click Here](#) for ground self-transport exceptions



IF COOLED WITH DRY ICE, ADD

**“DRY ICE” OR
“CARBON DIOXIDE, SOLID”**

AND

and an indication that the material being refrigerated is used for diagnostic or treatment purposes (e.g., frozen medical specimens)

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REFERENCE: GROUND: 49 CFR 173.199

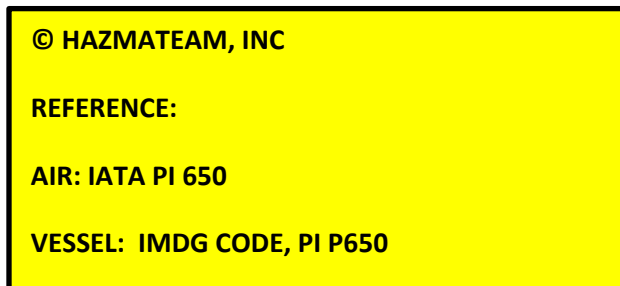
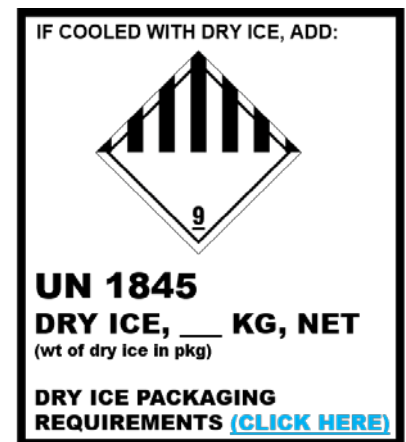
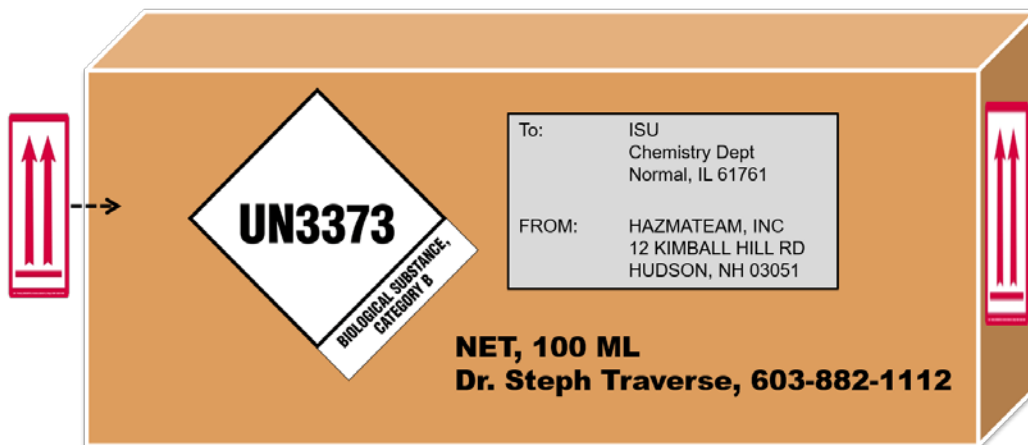
NAVIGATE (CLICK):



BIOLOGICAL SUBSTANCE, CATEGORY B



- **Biological Substance, Category B, UN 3373**
- AIR & VESSEL TRANSPORT
- DECLARATION/SHIPPING PAPER: NO
- Orientation arrows not required for primary receptacles filled with solid or primary receptacles filled with liquid not exceeding 50 ml
- Must “triple package” following references below.
- Package closure instructions must be available for state and federal inspections
- The name and telephone number of a person must be included on a written document (such as an air waybill or bill of lading) or on the outer packaging (optional for IMDG shipments)
- Package testing: All packages must pass 1.2 m (3.9 ft) drop test;
- Vessel & air transport: Primary or secondary receptacles containing liquid must pass 95 kPa pressure test.
- [Click Here](#) for OSHA Dry Ice and Bloodborne Pathogen labeling requirements.



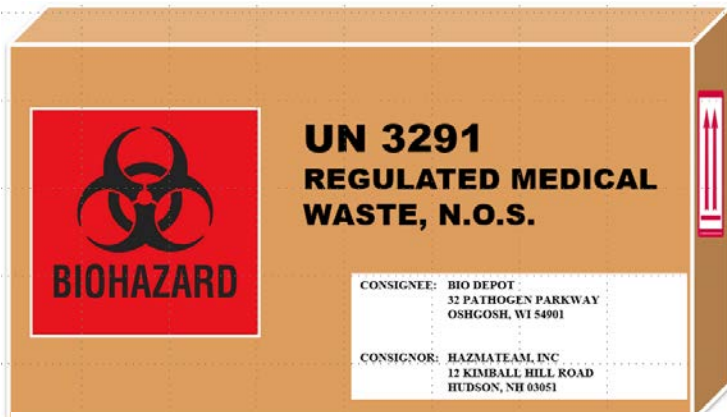
NAVIGATE (CLICK):



REGULATED MEDICAL WASTE, N.O.S.



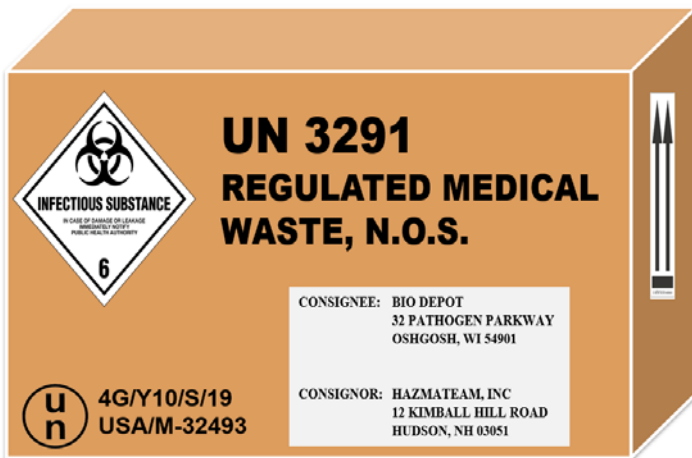
- **REGULATED MEDICAL WASTE, UN 3291**
- Could also use “Clinical waste, unspecified, N.O.S.” or “(BIO) Medical waste, N.O.S.”, or “Biomedical waste, N.O.S.” or “Medical waste, N.O.S.”
- GROUND TRANSPORT
- DECLARATION/SHIPPING PAPER & ER INFO (SDS or ERG Page): YES
- Package must not contain Category A pathogens
- Orientation arrows only required on combination packages containing liquid.
- [Click Here](#) for OSHA Dry Ice and Bloodborne Pathogen labeling requirements.
- [Click Here](#) for ground self-transport exceptions.



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ACCORDING TO 49 CFR 173.134 (c), shipped
w/private or contract carrier

[MORE EXAMPLES OF PACKAGES SHIPPED
ACCORDING TO 173.134 \(c\)](#)



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ACCORDING TO 49 CFR 173.197

[MORE EXAMPLES OF PACKAGES
SHIPPED PER 173.197](#)

NAVIGATE (CLICK):





REGULATED MEDICAL WASTE, N.O.S.

- **REGULATED MEDICAL WASTE, UN 3291**
- GROUND TRANSPORT – according to 49 CFR 173.197
- PACKAGE MUST NOT CONTAIN CATEGORY A PATHOGENS
- DECLARATION/SHIPPING PAPER & ER INFO (SDS or ERG Page): YES
- [BACK TO REGULATED MEDICAL WASTE, N.O.S.](#)
- [Click Here](#) for OSHA Dry Ice and Bloodborne Pathogen labeling requirements.



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 CART – 173.197(d)
 DRUM – 173.197 (b)
 BOTH – 172.301, 172.400



NAVIGATE (CLICK):





REGULATED MEDICAL WASTE, N.O.S. – exception

- **REGULATED MEDICAL WASTE, UN 3291**
- GROUND TRANSPORT – Private or contract carrier (exclusive use vehicle) for Regulated Medical Waste
- DECLARATION/SHIPPING PAPER & ER INFO (SDS or ERG Page): YES
- Package must not contain Category A pathogens
- Follow package closure instruction of sharps container.
- [Back to Regulated Medical Waste, N.O.S.](#)
- [Click Here](#) for OSHA Dry Ice and Bloodborne Pathogen labeling requirements.
- [Click Here](#) for ground self-transport exceptions.



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49 CFR 173.134 (c), 172.301



BOTH REQUIRED

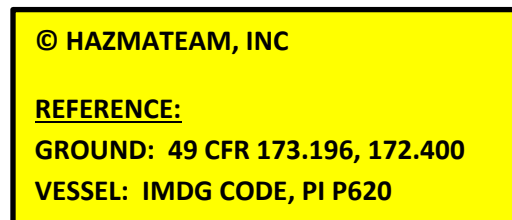
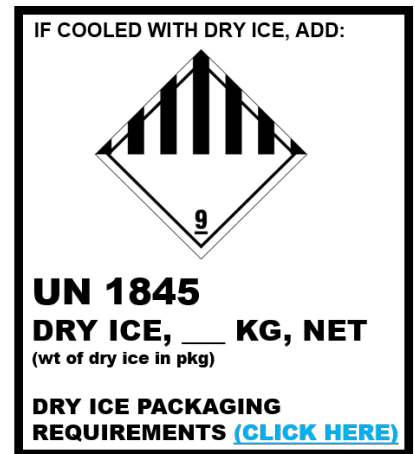
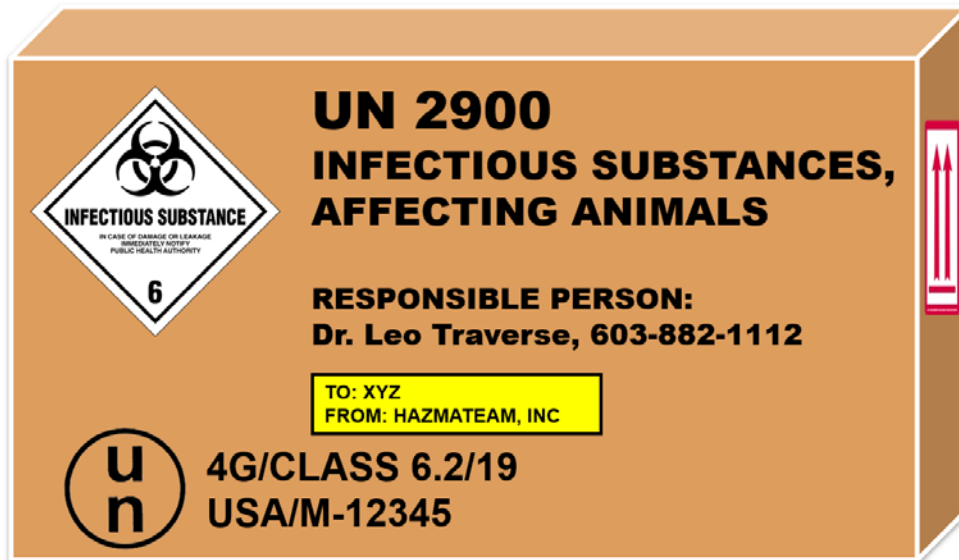
NAVIGATE (CLICK):



CATEGORY A INFECTIOUS MATERIAL --- AFFECTING ANIMALS ONLY



- **INFECTIOUS SUBSTANCES, AFFECTING ANIMALS, UN 2900**
- VESSEL TRANSPORT
- DECLARATION/SHIPPING PAPER & ER INFO (SDS or ERG Page): YES
- TECHNICAL NAMES ARE NOT REQUIRED ON PACKAGE MARK, BUT ARE REQUIRED ON SHIPPING PAPERS
- ORIENTATION ARROWS NOT REQUIRED FOR PRIMARY RECEPTACLES FILLED WITH SOLID OR PRIMARY RECEPTACLES FILLED WITH LIQUID NOT EXCEEDING 50 ML
- MUST "TRIPLE PACKAGE" FOLLOWING REFERENCES BELOW. PRIMARY OR SECONDARY PACKAGING MUST PASS 95 KPA PRESSURE TEST.
- [Click Here](#) for OSHA Dry Ice and Bloodborne Pathogen labeling requirements.



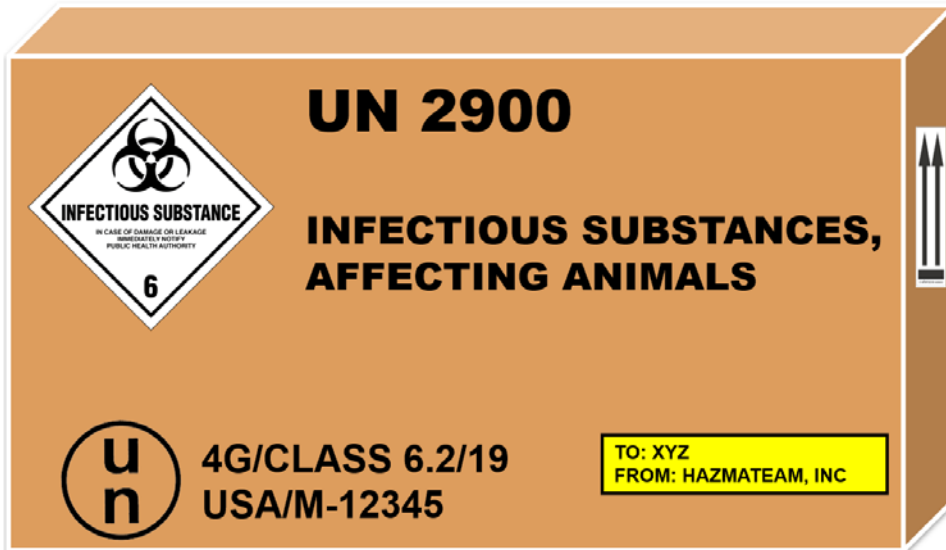
NAVIGATE (CLICK):



CATEGORY A INFECTIOUS MATERIAL --- AFFECTING ANIMALS ONLY



- **INFECTIOUS SUBSTANCES, AFFECTING ANIMALS, UN 2900**
- Ground Transport
- DECLARATION/SHIPPING PAPER & ER INFO (SDS or ERG Page): Yes
- Technical names are not required on package mark, but are required on shipping papers
- Orientation arrows not required for primary receptacles filled with solid or primary receptacles filled with liquid not exceeding 50 ml
- Must "triple package" following references below. Primary or secondary packaging must pass 95 kpa pressure test.
- [Click Here](#) for OSHA Dry Ice and Bloodborne Pathogen labeling requirements.



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REFERENCE:
GROUND: 49 CFR 173.196, 172.301, 172.400

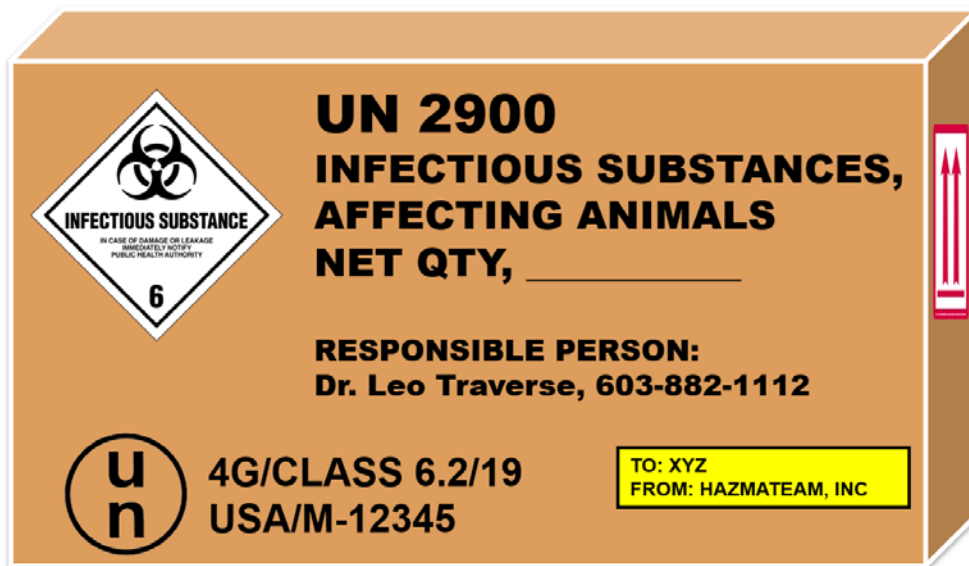
NAVIGATE (CLICK):



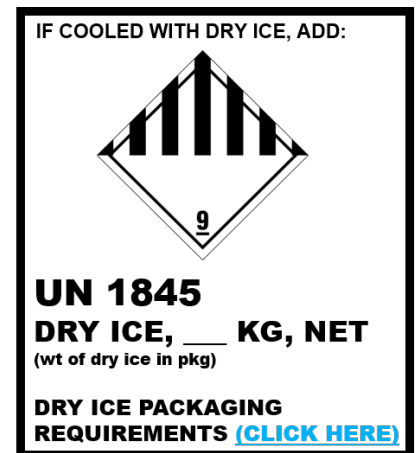
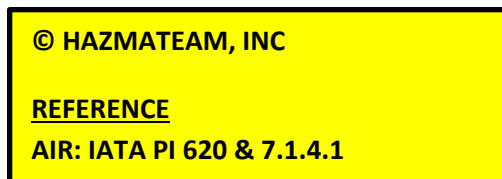
CATEGORY A INFECTIOUS MATERIAL --- AFFECTING ANIMALS ONLY



- **INFECTIOUS SUBSTANCES, AFFECTING ANIMALS, UN 2900**
- Air Transport
- DECLARATION/SHIPPING PAPER & ER INFO (SDS or ERG Page): YES
- Technical names are not required on package marks, but are required on shipping papers.
- Orientation arrows not required for primary receptacles filled with solid or primary receptacles filled with liquid not exceeding 50 ml
- Must “triple package” following references below. Primary or secondary packaging must pass 95 kpa pressure test.
- [Click Here](#) for OSHA Dry Ice and Bloodborne Pathogen labeling requirements.



ADD THIS LABEL IF PACKAGE CONTAINS GREATER THAN 50 ml or 50 g NET (4 L /4 KG MAX)



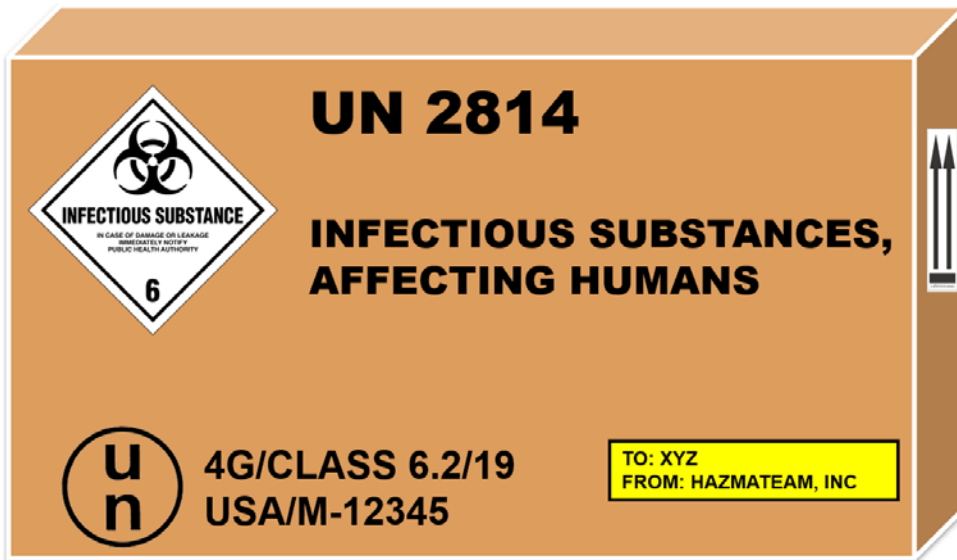
NAVIGATE (CLICK):



CATEGORY A INFECTIOUS MATERIAL --- AFFECTING HUMANS



- **INFECTIOUS SUBSTANCES, AFFECTING HUMANS, UN 2814**
- Ground Transport
- DECLARATION/SHIPPING PAPER & ER INFO (SDS or ERG Page): YES
- Technical names are not required on package marks, but are required on shipping papers.
- Orientation arrows not required for primary receptacles filled with solid or primary receptacles filled with liquid not exceeding 50 ml
- Must “triple package” following references below. Primary or secondary packaging must pass 95 kpa pressure test.
- [Click Here](#) for OSHA Dry Ice and Bloodborne Pathogen labeling requirements.



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REFERENCE:
GROUND: 49 CFR 173.196, 172.301, 172.312, 172.400

NAVIGATE (CLICK):



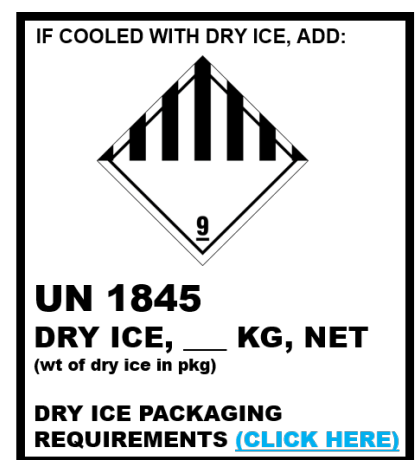
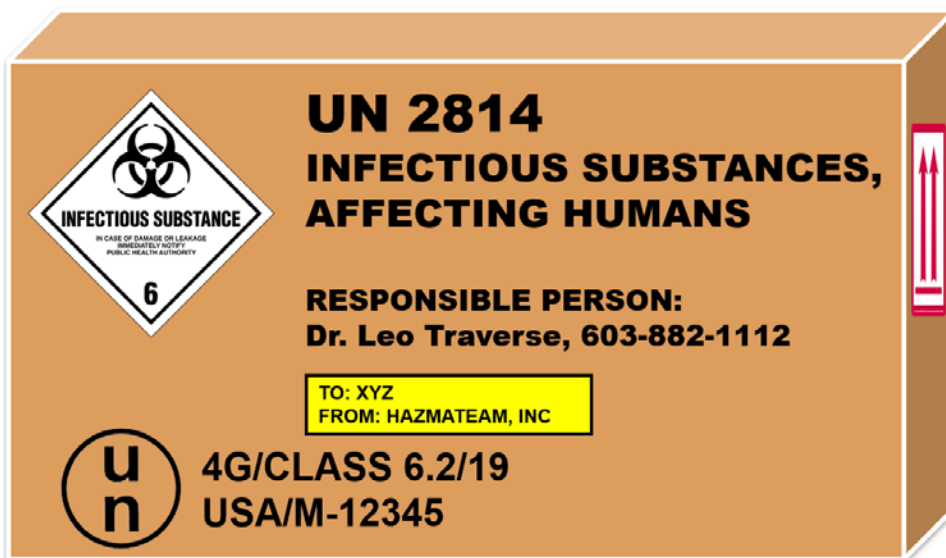
EMERGENCY
RESPONSE
INFORMATION



CATEGORY A INFECTIOUS MATERIAL --- AFFECTING HUMANS



- **INFECTIOUS SUBSTANCES, AFFECTING HUMANS, UN 2814**
- VESSEL TRANSPORT
- DECLARATION/SHIPPING PAPER & ER INFO (SDS or ERG Page): YES
- Technical names are not required on package marks, but are required on shipping papers.
- Orientation arrows not required for primary receptacles filled with solid or primary receptacles filled with liquid not exceeding 50 ml
- Must “triple package” following references below. Primary or secondary packaging must pass 95 kpa pressure test.
- [Click Here](#) for OSHA Dry Ice and Bloodborne Pathogen labeling requirements.



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REFERENCE:

VESSEL: IMDG CODE, PI P620

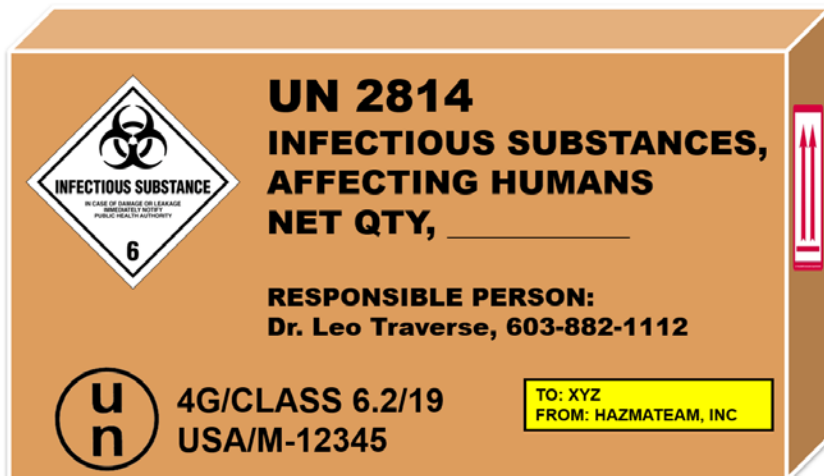
NAVIGATE (CLICK):



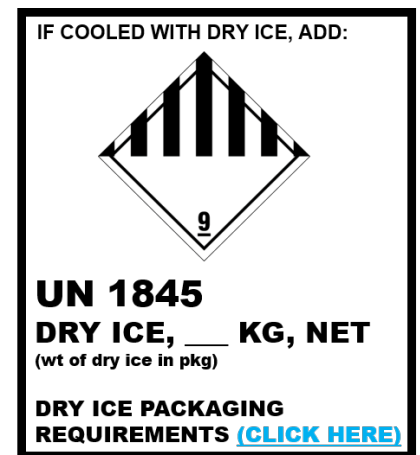
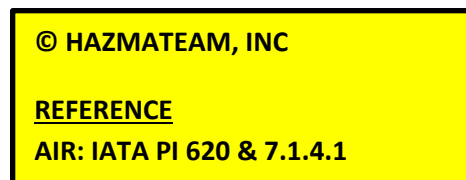
CATEGORY A INFECTIOUS MATERIAL --- AFFECTING HUMANS



- **INFECTIOUS SUBSTANCES, AFFECTING ANIMALS, UN 2814**
- AIR TRANSPORT
- DECLARATION/SHIPPING PAPER & ER INFO (SDS or ERG Page): YES
- TECHNICAL NAMES ARE NOT REQUIRED ON PACKAGE MARK, BUT ARE REQUIRED ON SHIPPING PAPERS
- ORIENTATION ARROWS NOT REQUIRED FOR PRIMARY RECEPTACLES FILLED WITH SOLID OR PRIMARY RECEPTACLES FILLED WITH LIQUID NOT EXCEEDING 50 ML
- MUST "TRIPLE PACKAGE" FOLLOWING REFERENCES BELOW. PRIMARY OR SECONDARY PACKAGING MUST PASS 95 KPA PRESSURE TEST.
- [Click Here](#) for OSHA Dry Ice and Bloodborne Pathogen labeling requirements.



ADD THIS LABEL IF PACKAGE CONTAINS GREATER THAN 50 ml or 50 g NET (4 L / 4 KG MAX)



NAVIGATE (CLICK):



SHIPPING PAPER/DECLARATION EXAMPLES

The following are examples of completed shipping papers/declarations. Always consult the appropriate regulation for complete details:

- USA Ground:** [49 CFR 172.200 \(CLICK\)](#)
- International vessel:** IMDG Code, Volume 1, Chapter 5.4
- International air:** IATA DGR, Section 8 (**Note:** New declaration format as of IATA 60th Edition, 2019; May use declaration illustrated in the 59th Edition until 31-Dec-2024.

EXAMPLE #	MODE	CONSIGNMENT
1 (click)	Ground	UN 2900, Infectious substances, affecting animals
2 (click)	Ground	UN 2814, Infectious substances, affecting humans
3 (click)	Ground	UN 3291, Regulated medical waste, n.o.s.
4 (click)	Vessel	UN 2900, Infectious substances, affecting animals
5 (click)	Vessel	UN 2814, Infectious substances, affecting humans cooled with dry ice
6 (click)	Air	UN 2900, Infectious substances, affecting animals; cargo aircraft only
7 (click)	Air	UN 2814, Infectious substances, affecting humans cooled with dry ice

NAVIGATE (CLICK):



EXAMPLE 1

○ 1 FIBREBOARD BOX of a category A infectious substance affecting only animals; of UN 2900. Box contains 1 liter net infectious liquid; Box weighs 20 LB, GROSS; GROUND SHIPMENT

Page 1 of 1 _____ Date 13-MARCH-2021

(Name of carrier) _____ (SCAC) _____

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

TO: XYZ, INC
 Consignee
 Street 1 MAIN STREET
 City OMAHA State NE Zip Code 72111

FROM: HAZMATEAM, INC
 Shipper
 Street 12 KIMBALL HILL ROAD
 City HUDSON State NH Zip Code 03051
 24 hr. Emergency Contact Tel. No. 800-535-5053; ID 12345

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)
1 BOX (4G)	X	UN 2900, Infectious Substances, Affecting Animals (Rinderpest virus), 6.2	1 LITER (NET) 20 LB (GROSS)			
		ERG GUIDE 158				

'X' IN HM COLUMN IF HAZARDOUS

TOTAL QTY, CAN BE NET OR GROSS

ADD TECHNICAL NAME IN PARENTHESES FOLLOWING PROPER SHIPPING NAME

IF USING 3RD PARTY ER PHONE SERVICE, INCLUDE CONTRACT NUMBER

PLACARDS TENDERED: YES NO

Note - (1) Where the rate is dependent on value shippers are required to state specifically in writing the agreed or declared value of the property, as follows "The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding _____ per _____."

(2) Where the applicable tariff provisions specify a limitation of the carrier's liability absent a release or a value declaration by the shipper and the shipper does not release the carrier's liability or declare a value the carrier's liability shall be limited to the extent provided by such provisions. See NMFC Item 172.

(3) Commodities requiring special or additional care or attention in handling or stowing must be so marked and packaged as to ensure safe transportation. See section 2(e) of item 360 Bills of Lading, Freight Bills and Statements of Charges and Section 1(a) of the Contract Terms and Conditions for a list of such articles.

I hereby declare that the contents of this consignment are fully and accurately described above by the 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.

REMIT COD TO ADDRESS
 COD Amt \$ _____
 Subject to Section 7 of the conditions, if this shipper consignee without recourse on the consignor, following statement.

Signature of Consignor: Leo Traverse, Jr

COD FEE PREPAID

TRAINED PERSON'S SIGNATURE

NAVIGATE (CLICK):



EMERGENCY RESPONSE INFORMATION

EXAMPLE 2

- 2 boxes of Category A infectious materials that affect humans. Each box contains 750 ml of infectious liquid. Each box weighs 13 KG; GROUND SHIPMENT

Page 1 of 1

Date 13-MAR-2021

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

TO: **XYZ, INC**
 Consignee
 Street **1 MAIN STREET**
 City **OMAHA** State **NE** Zip Code **72111**

FROM: **HAZMATEAM, INC**
 Shipper
 Street **12 KIMBALL HILL ROAD**
 City **HUDSON** State **NH** Zip Code **03051**
 24 hr. Emergency Contact Tel. No. **800-535-5053; ID 12345**

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 Correct)	RATE	CHARGES (For Carrier Use Only)
2 BOX (4G)	X	UN 2814, Infectious Substances, Affecting Humans (variola virus), 6.2	1.5 LITER (NET)	26 LB (GROSS)		
		ERG GUIDE 158				

'X' IN HM COLUMN IF HAZARDOUS

ADD TECHNICAL NAME IN PARENTHESES FOLLOWING PROPER SHIPPING NAME

TOTAL QTY OF ALL PACKAGES, CAN BE NET OR GROSS

IF USING 3RD PARTY CARRIER PHONE SERVICE, INCLUDE CONTRACT NUMBER

PLACARDS TENDERED: YES NO

Note - (1) Where the rate is dependent on value shippers are required to state specifically in writing the agreed or declared value of the property, as follows "The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding _____ per _____"
 (2) Where the applicable tariff provisions specify a limitation of the carrier's liability absent a release or a value declaration by the shipper and the shipper does not release the carrier's liability or declare a value the carrier's liability shall be limited to the extent provided by such provisions. See NMFC Item 172
 (3) Commodities requiring special or additional care or attention in handling or stowing must be so marked and packaged as to ensure safe transportation. See section 2(e) of item 350 Bills of Lading, Freight Bills and Statements of Charges and Section 1(a) of the Contract Terms and Conditions for a list of such articles

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

REMIT COD TO ADDRESS
COD Amt \$ _____ COD FEE PREPAID

Leo Traverse, Jr Signature (Signature) **TRAINED PERSON'S SIGNATURE**

NAVIGATE (CLICK):



SHIPPING PAPER EXAMPLES



EMERGENCY RESPONSE INFORMATION

EXAMPLE 3

Medical Waste Manifest form – No specific format. Many forms have the fill in the blank format as below. Note UN 3291 does not require technical names in parentheses following proper shipping name. This waste does not contain Category A pathogens. This shipment consists of 11 X 4 cubic ft tubs and 6 x 4 cubic ft boxes. GROUND SHIPMENT

MEDICAL WASTE MANIFEST		Emergency Response Telephone 800-535-5053 (ACCT 112233)	
Generator's Name, Address and Telephone Number			
St. Joes Hospital 1 Main Street Yourtown, NY 10001		800-XXX-XXXX	
2A. DESCRIPTION OF WASTE		2B CONTAINER TYPE	2C. NO. OF CONTAINERS
UN 3291, Regulated Medical Waste, N.O.S., 6.2, PG II		TB01 – Reusable tub (4.0 cu ft)	11
UN 3291, Regulated Medical Waste, N.O.S., 6.2, PG II		HW03 – Reusable tub (5.8 cu ft)	6
UN 3291, Regulated Medical Waste, N.O.S., 6.2, PG II		WW40 – Corrugated box (4.0 cu ft)	6
UN 3291, Regulated Medical Waste, N.O.S., 6.2, PG II		WW45 – Corrugated box (4.5 cu ft)	6
TOTALS			17
			66
			66
Generator's Certification: "This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation."			
Printed Name: Mike Trout		Signature: <i>Mike Trout</i>	Date: 10-JAN-2021
Transporter Name, Address and Telephone			
Acme Medical Waste Trans 12 Bluff Blvd Buffalo, NY 14201		888-XXX-XXXX	
Transporter Certification: Receipt of Medical Waste above			
Printed Name: Carlton Fisk		Signature: <i>C. Fisk</i>	Date: 10-JAN-2021
Designated Facility Name, Address and Telephone			
RMW Destruction, INC 1601 Pathogen Parkway Springfield, MA 01020		866-XXX-XXXX	
Treatment facility: I certify I have been authorized by the applicable state agency to accept untreated medical wastes and that I have received the above indicated wastes in accordance with the requirement outlined in that authorization.			
Printed Name: Chris Sale		Signature: <i>Christopher Sale</i>	Date: 11-JAN-2021

IF USING 3RD PARTY ER PHONE SERVICE, INCLUDE CONTRACT #

NO. OF CONTAINERS & TOTAL QTY

TRAINED PERSON'S SIGNATURE

NAVIGATE (CLICK):



EMERGENCY RESPONSE INFORMATION

EXAMPLE 4

VESSEL SHIPMENT OF CATEGORY A INFECTIOUS MATERIALS AFFECTING ANIMALS ONLY, UN 2900. EACH PACKAGE CONTAINS 1 LITER OF INFECTIOUS LIQUID; GROSS WT = 6 KG

MULTIMODAL DANGEROUS GOODS FORM

1 Shipper/Consignor/Sender HAZMATEAM, INC 12 KIMBALL HILL ROAD HUDSON NH 03051 USA Responsible Person: Leo Traverse, MD 603-882-1112		2 Transport document number	
3 Page 1 of 1 4 Date of issue		5 Page 1 of 1 6 Date of issue	
6 Consignee HAZMATEAM - JAMAICA 21 RASTA WAY KINGSTON JAMAICA		7 Carrier	
10 Vessel	11 Port of loading	8 Description of goods described below by the proper shipping name, and are classified, packaged, marked and labeled/placarded and are in all respects in proper condition for transport according to the applicable international and national government regulations.	
9 Additional handling instructions 24 HR ER - INFOTRAC 1-011-352-323-3500; Contract ID - 123S3B		12 Additional handling instructions	
14 Shipping marks IMDG EMS - COLUMN 15 OF DGL DOT ERG - 'ORANGE BOOK' CODE PACKAGE CODES (EX - 4G) OPTIONAL		15 Number and kind of packages: description of goods UN 2900, INFECTIOUS SUBSTANCES, AFFECTING ANIMALS (SHEEP POX VIRUS), 6.2, EMS: F-A, S-T; DOT ERG 158 2 (4G) FIBREBOARD BOXES	
16 Gross mass (kg) Net		17 Cube (m ³)	
12 KG 2 L			
18 Container identification No. /	19 Seal number(s)	20 Cont./vehicle size & type	21 Tare mass (kg)
22 Total gross mass (including tare) (kg)		23 RECEIVING ORGANIZATION RECEIPT	
CONTAINER/VEHICLE PACKING CERTIFICATE I hereby declare that the goods described above have been packed/loaded, packed together, into the container/vehicle identified above in accordance with the applicable provisions. (") MUST BE COMPLETED AND SIGNED FOR ALL CONTAINER/VEHICLE LOADS BY PERSON RESPONSIBLE FOR PACKING/LOADING		Received the above number of packages/containers/trailers in apparent good order and condition, unless stated herein: RECEIVING ORGANIZATION REMARKS:	
20 Name of company		Haulier's name	
Name/status of declarant		Vehicle reg. no	
Place and date		Signature and date	
Signature of declarant		Driver's signature	
		22 Name of co. of shipper preparing this note HAZMATEAM	
		Name/status of declarant Leo Traverse, Shipper	
		Place and date Hudson, NH, 13-MARCH-2021	
		Signature of declarant Leo Traverse	

INFECTIOUS - NAME AND PHONE OF RESPONSIBLE PERSON

IF USING 3RD PARTY ER PHONE SERVICE, INCLUDE CONTRACT NUMBER;

OUTSIDE USA, PHONE # TO INCLUDE INT'L ACCESS CODE, COUNTRY CODE, ETC..

BOX 22 ALWAYS REQUIRES A SIGNATURE BY TRAINED SHIPPER

NAVIGATE (CLICK):



EMERGENCY RESPONSE INFORMATION

EXAMPLE 5

VESSEL SHIPMENT OF CATEGORY A INFECTIOUS MATERIALS AFFECTING HUMANS COOLED W/ DRY ICE. PACKAGE CONTAINS 1 LITER OF INFECTIOUS LIQUID & 5 KG OF DRY ICE; GROSS WT = 10 KG

MULTIMODAL DANGEROUS GOODS FORM

1 Shipper/Consignor/Sender HAZMATEAM, INC 12 KIMBALL HILL ROAD HUDSON NH 03051 USA Responsible Person: A. Fauci, MD 603-882-1112		2 Transport document number INFECTIOUS – NAME AND PHONE OF RESPONSIBLE PERSON	
6 Consignee HAZMATEAM - JAMAICA 21 RASTA WAY KINGSTON JAMAICA		7 Carrier IF USING 3RD PARTY ER PHONE SERVICE, INCLUDE CONTRACT NUMBER	
10 Vessel	11 Port of loading	SHIP I hereby declare that the contents of this consignment are fully and accurately described below by the Proper Shipping Name, and are classified, packaged, marked and labelled/placarded and are in all respects in proper condition for transport according to the applicable international and national government regulations.	
OUTSIDE USA, PHONE # TO INCLUDE INT'L ACCESS CODE, COUNTRY CODE, ETC..		9 Additional handling instructions 24 HR ER - INFOTRAC 1-011-352-323-3500; Contract ID - 123S3B	
14 Shipping marks	1) Number and kind of packages: description of goods		Gross mass (kg) Net Cube (m ³)
IMDG EMS – COLUMN 15 OF DGL DOT ERG – ‘ORANGE BOOK’ CODE	UN 2814, INFECTIOUS SUBSTANCES, AFFECTING HUMANS (SABIA VIRUS), 6.2, EMS: F-A, S-T, DOT ERG 158		1 L
	UN 1845, DRY ICE, 9, EMS: F-C, S-V, DOT ERG 120		5 KG
	ABOVE PACKED IN ONE FIBREBOARD BOX		10 KG
SIGN BOX 20 ONLY IF LOADING FREIGHT CTN	15 Container	18 Tare	BOX 22 ALWAYS REQUIRES A SIGNATURE BY TRAINED SHIPPER
CONTAINER/VEHICLE PACKING CERTIFICATE I hereby declare that the goods described above have been packed/loaded, packed together, into the container/vehicle identified above in accordance with the applicable provisions. (1) MUST BE COMPLETED AND SIGNED FOR ALL CONTAINER/VEHICLE LOADS BY PERSON RESPONSIBLE FOR PACKING/LOADING		21 RECEIVING ORGANIZATION RECEIPT Received the above number of packages/containers/trailers in apparent good order and condition, unless stated hereon: RECEIVING ORGANIZATION REMARKS:	
20 Name of company		Haulier's name	
Name/status of declarant		Vehicle reg. no	
Place and date		Signature and date	
Signature of declarant		Driver's signature	
		22 Name of co. of shipper preparing this note HAZMATEAM	
		Name/status of declarant A. Fauci, Shipper	
		Place and date Hudson, NH, 13-MARCH-2021	
		Signature of declarant <i>Anthony Fauci, MD</i>	

NAVIGATE (CLICK):



EMERGENCY RESPONSE INFORMATION

EXAMPLE 6**AIR SHIPMENT OF ONE PACKAGE OF CATEGORY A INFECTIOUS MATERIALS AFFECTING ANIMALS ONLY. MUST GO CARGO AIRCRAFT ONLY AS THE 50 GRAM PASSENGER LIMIT IS EXCEEDED.**

SHIPPER'S DECLARATION FOR DANGEROUS GOODS

Shipper HAZMATEAM, INC 12 KIMBALL HILL ROAD HUDSON, NH 03051		Air Waybill No. 6980 Page 1 of 1 Pages Shipper's Reference Number (optional)			
Consignee XYZ PATHOLOGY 123 MAIN STREET PHOENIX, AZ 77777		INFECTIOUS – NAME AND PHONE OF RESPONSIBLE PERSON			
Person Responsible for Shipment: Leo Traverse, MD 603-882-1112					
SHIPMENT CANNOT GO ON PASSENGER AIR		AIRWAYBILL #, AIRPORTS OF DEPARTURE OR DESTINATION CAN BE COMPLETED BY AIRLINE			
This shipment is within the limitations prescribed for: (delete non-applicable) <input checked="" type="checkbox"/> PASSENGER AIRCRAFT <input checked="" type="checkbox"/> CARGO AIRCRAFT ONLY		Airport of Departure MANCHESTER, MA			
Airport of Destination PHOENIX, AZ		Shipment Type (delete non-applicable) NON-RADIOACTIVE <input checked="" type="checkbox"/> RADIOACTIVE			
NATURE AND QUANTITY OF DANGEROUS GOODS					
Dangerous Goods Identification					
UN or ID No.	Proper Shipping Name	Class or Division (Subsidiary Hazard)	Quantity and Type of Packing	Packing Instructions	Authorization
UN 2900	INFECTIOUS SUBSTANCES, AFFECTING ANIMALS (Goatpox virus)	6.2	1 FIBREBOARD BOXES x 100 GRAMS	620	
ICAO/IATA ERG CODE FROM COLUMN N OF DGL; DOT ERG – 'ORANGE BOOK' CODE		NUMBER OF PACKAGES X NET WT PER PACKAGE			
Additional Handling Information ICAO/IATA ERG CODE: 11Y; DOT ERG 158				OUTSIDE USA, PHONE # TO INCLUDE INT'L ACCESS CODE, COUNTRY CODE, ETC..	
Emergency Telephone Number INFOTRAC, 800-535-5053 (CONTRACT 12345)					
I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, labeled and marked in accordance with the provisions of the ICAO/IATA Dangerous Goods Regulations, and are ready for transport.		Name of signatory Paul Dambek			
IF USING 3RD PARTY ER PHONE SERVICE, INCLUDE CONTRACT NUMBER		Date 13-MARCH-2021			
		Signature (see warning above) <i>Paul J. Dambek</i>			

NAVIGATE (CLICK):**EMERGENCY RESPONSE INFORMATION**

EXAMPLE 7

AIR SHIPMENT OF A PACKAGE CONTAINING 10 ML OF CATEGORY A INFECTIOUS MATERIALS AFFECTING HUMANS (UN 2814) PLUS 10 KG OF DRY ICE.

SHIPPER'S DECLARATION FOR DANGEROUS GOODS

Shipper HAZMATEAM, INC 12 KIMBALL HILL ROAD HUDSON, NH 03051		Air Waybill No. 6980 Page 1 of 1 Pages Shipper's Reference Number (optional)				
Consignee XYZ PATHOLOGY 123 MAIN STREET PHOENIX, AZ 77777		INFECTIOUS – NAME AND PHONE OF RESPONSIBLE PERSON				
Person Responsible for Shipment: Dr. Leo Traverse, 603-882-1112		AIRWAYBILL #, AIRPORTS OF DEPARTURE OR DESTINATION CAN BE COMPLETED BY AIRLINE				
Two completed and signed copies of this Declaration must be handed to the operator.						
TRANSPORTATION This shipment is within the limitations prescribed for: (delete non-applicable)		Airport of Departure MANCHESTER, MA				
<table border="1"> <tr> <td>PASSENGER AND CARGO AIRCRAFT</td> <td>CARGO AIRCRAFT ONLY XXXX</td> </tr> </table>		PASSENGER AND CARGO AIRCRAFT	CARGO AIRCRAFT ONLY XXXX	Failure to comply in all respects with the applicable Dangerous Goods Regulations may be in breach of the applicable law, subject to legal penalties.		
PASSENGER AND CARGO AIRCRAFT	CARGO AIRCRAFT ONLY XXXX					
Airport of Destination PHOENIX, AZ		Shipment Type (delete non-applicable) NON-RADIOACTIVE XXXXXX				
NATURE AND QUANTITY OF DANGEROUS GOODS						
Dangerous Goods Identification						
UN or ID No.	Proper Shipping Name	Class or Division (Subsidiary Hazard)	Packing Group	Quantity and Type of Packing	Packing Instructions	Authorization
UN 2814	INFECTIOUS SUBSTANCES, AFFECTING HUMANS (Lassa virus)	6.2		10 ML	620	
UN 1845	DRY ICE	9		10 KG	954	
ICAO/IATA ERG CODE FROM COLUMN N OF DGL; DOT ERG – 'ORANGE BOOK' CODE				DRY ICE AND UN 2814 IN SAME PKG		
Additional Handling Information UN 2814 ICAO/IATA ERG CODE: 11Y ; DOT ERG 158 UN 1845 ICAO/IATA ERG CODE: 9L ; DOT ERG 120						
Emergency Telephone Number INFOTRAC, 800-535-5053 (CONTRACT X22YZ)						
I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked, labeled, and certified in accordance with applicable regulations.				Name of signatory Steph Traverse, Date 13-MARCH-2021 Signature <i>Steph Traverse</i> (see warning above)		
IF USING 3RD PARTY ER PHONE SERVICE, INCLUDE CONTRACT NUMBER;						

NAVIGATE (CLICK):



EMERGENCY RESPONSE INFORMATION

EXCEPTIONS FOR SELF-TRANSPORT

There are two exceptions in 49 CFR that allows for the self-transport of certain biological materials without having to comply with the Hazardous Materials Regulations in its entirety. Refer to citations below for full details. The HAZMATEAM online Transportation of Infectious Materials Training course addressed these exceptions.

These exceptions are limited to Motor Vehicle (ground) only and **are not for Category A infectious materials!**

1) 49 CFR 173.134 (b)(10)

- Infectious substances (including Category B) contained in **a patient sample** being transported for research, diagnosis, investigational activities, or disease treatment or prevention, or a biological product **are not regulated by 49 CFR** when transported ground via private or contract carrier used exclusively to ship these materials. Cannot ship Category A per this exception.
- This exception **may not** be applied to Regulated Medical Waste

2) 49 CFR 173.6 --- MATERIAL OF TRADE EXCEPTION (MOT)

The following may be shipped as a Material of Trade (as defined in 49 CFR 171.8):

A Division 6.2 material (incl. Category B) contained in **human or animal samples** (including, but not limited to, secreta, excreta, blood and its components, tissue and tissue fluids, and body parts) being transported for research, diagnosis, investigational activities, or disease treatment or prevention, or is a biological product or regulated medical waste.

Infectious (other than Category A) Material of Trade requirements:

- Regulated Medical Waste **may** be shipped according to this exception
- Transported via private carrier in conjunction with its principal business (ex, mobile test lab).
- The material must be contained in a combination packaging (inners ctns. inside outer pkg).
- For liquids, outer package must be leakproof and contain enough absorbent material to absorb all contents.
- For sharps, the sharps container (inner ctn) must be constructed of a rigid material resistant to punctures and securely closed to prevent leaks or punctures.
- The outer packaging must be a strong, tight packaging securely closed and for sharps: puncture resistant.
- Each package must be marked with a common name. Package limits:
 - Each package may not contain more than 0.5 kg (1.1 lbs) or 0.5 L (17 ounces), and an outer packaging containing not more than 4 kg (8.8 lbs) or 4 L (1 gallon); or
 - A single inner packaging containing not more than 16 kg (35.2 lbs) or 16 L (4.2 gallons) in a single outer packaging
 - **For a regulated medical waste:** a combination packaging must consist of one or more inner packagings, each of which may not contain more than 4 kg (8.8 lbs) or 4 L (1 gallon), and an outer packaging containing not more than 16 kg (35.2 lbs) or 16 L (4.2 gallons).
- Total of 440 lbs gross weight of all MOT per vehicle.

NAVIGATE (CLICK):



DRY ICE PACKAGING

There are three important hazards to remember while handling Dry Ice:

- 1) **Asphyxiation.** Dry ice, or Carbon Dioxide, solid, sublimates to form Carbon Dioxide gas (heavier than air). Handling and storage locations must be well ventilated. There have been numerous reports of fatalities of individuals suffocating in poorly ventilated Dry Ice storage areas.
- 2) **Contact Hazard.** Dry ice is a cryogenic material that causes severe frostbite upon contact with skin. The temperature of Dry Ice is -79°C (-107°F).
- 3) **Explosion Hazard.** Dry Ice has an expansion ratio of 1:554. As such, packages need to be designed to prevent the build-up of Carbon Dioxide gas.

When assembling a package containing Dry Ice, consider the following safety/packaging procedures:

- Always handle dry ice in a well-ventilated area.
- Wear eye/face protection and cryogenic gloves when handling dry ice.
- Never seal dry ice in a container with an airtight seal such as a container with a threaded lid, ziplock bag, or cooler
- Place the dry ice outside the sealed primary and secondary receptacles
- Secure the secondary packaging with interior supports such that the original orientation of the primary receptacle is maintained after the dry ice melts. Always follow package closure instructions.
- Always use an insulated package (ex- Styrofoam cooler inside a box).
- Package should not contain more than 200 KG of Dry Ice (IATA per package limit).
- Only properly trained individuals may handle this material.

NAVIGATE (CLICK):





OSHA Hazard Communication Standard (29 CFR 1910.1200).

The Hazard Communication Standard requires employers/chemical manufacturers to provide information concerning hazardous chemicals via labels, safety data sheets, training and written programs. Consult 1910.1200 for complete details. Note: Per 29 CFR 1910.1200 (b)(6), this standard does not apply to Biological Hazards or Drugs as defined in the Federal Food, Drug, and Cosmetic Act.

Dry Ice Labeling Requirements*:

Containers of Dry Ice handled by employees must have the following information:

Signal Word:	Warning
Hazard Statement:	May displace oxygen and cause rapid suffocation
Pictogram:	None
Hazards not otherwise classified:	Contact with cryogenic liquid can cause frostbite and cryogenic burns.

* LABEL ELEMENTS MUST BE ADDED FOR OTHER HAZARDOUS CHEMICALS (STABILIZERS, ETC), IF PRESENT.

OSHA Bloodborne Pathogen Standard (29 CFR 1910.1030).

The Bloodborne Pathogen standard has requirements for employers where pathogens are potentially present – exposure control plans, engineering, work practice controls, vaccinations, others. Consult 29 CFR 1910.1030 for complete details.

According to 1910.1030(g)(1)(i)(A), the warning label below shall be affixed to containers of regulated waste, refrigerators and freezers containing blood or other potentially infectious material; and other containers used to store, transport or ship blood or other **potentially** infectious material.



This label is affixed to the container handled by the employee. If a combination package is used, this label would be affixed to the primary or secondary package, not the outer package.

Note: this label would be on the outer shipping container when shipping single packages of OSHA regulated material or packages of Regulated Medical Waste, N.O.S. shipped by contract or private carrier.

NAVIGATE (CLICK):



EMERGENCY RESPONSE INFORMATION

When shipping papers (Bill of lading forms, Dangerous Goods Declaration forms) are required, all hazardous shipments to, from or through the United States must have written emergency response information accompany the shipment. This written document is typically either an SDS for the material or the applicable ERG pages from the DOT Emergency Response Guidebook (i.e., ‘Orange Book’). The applicable ERG Codes from the Orange Book - Guide 158 for infectious materials and/or Guide 120 for Dry Ice.

On each shipping paper example provided in this guide, DOT ERG GUIDE 158 is referenced. DOT ERG GUIDE 120 is referenced on air and vessel shipments of Dry ice. Simply writing the guide number only on the BOL/declaration does not meet the emergency response information requirements described in [49 CFR 172.602](#). Written information (the SDS, ERG pages or entire ERG book) must be provided along with the shipping paper.

All shipping papers for shipments from, to or through the United States must also have 24-hour emergency telephone number, as described in [49 CFR 172.604](#). Each shipping paper example provided in this guide illustrates placement of the ER phone number. § 172.604 requires a numeric emergency response telephone number, including the area code, for use in an emergency involving the hazardous material. For telephone numbers outside the United States, the international access code or the “+” sign, country code, and city code, as appropriate, that are needed to complete the call must be included.

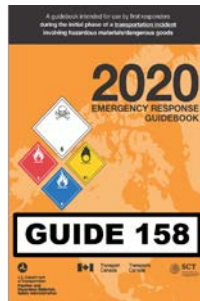
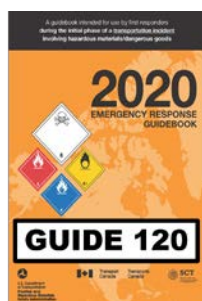
The shipping paper examples provided in this guide also reference emergency response guidebooks used by personnel on vessels or aircraft. The vessel and aircraft guides referenced are:

IMDG CODE: The EMS Code referenced in column 15 of the IMDG Dangerous Goods List (DGL) is listed in *“The EmS Guide – Emergency Response Procedures for Ships Carrying Dangerous Goods”*.

IATA DGR: The IACO/IATA ERG Code referenced in Column N of the IATA DGR Dangerous Goods List (DGL) is the Emergency Response Drill Code as found in the International Civil Aviation Organization (IACO) document, *“The Emergency Response Guidance for Aircraft Incidents Involving Dangerous Goods”* (ICAO Doc. 9481-AN/928).

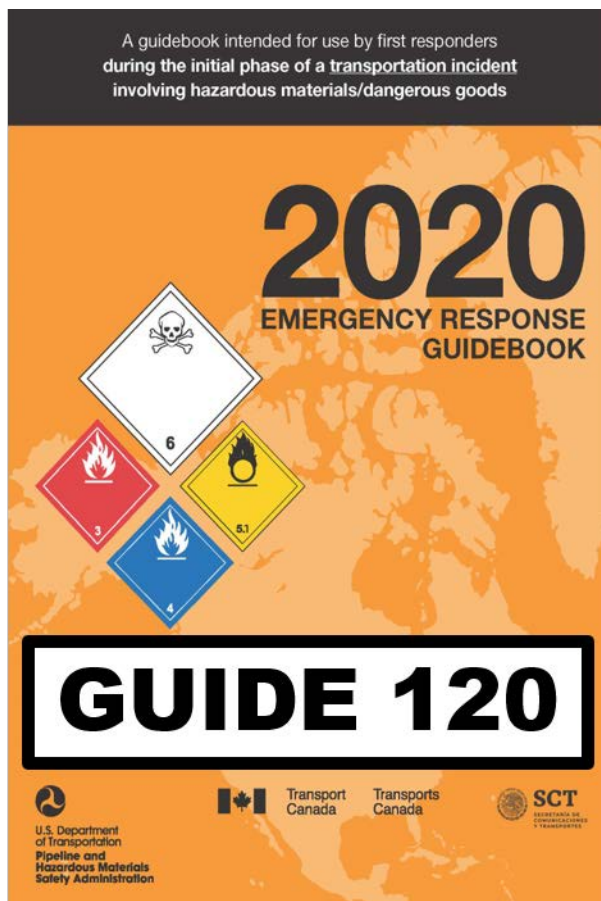
The IMDG Code and IATA DGR emergency response information described on the shipping paper examples in this guide are for the benefit of the operator of the vessel or aircraft.

NAVIGATE (CLICK):

A sample shipping paper form titled "SHIPPING PAPER EXAMPLES". The form is a grid with multiple columns and rows, designed for recording shipment details. The columns are labeled with various codes and fields, and the rows are numbered for individual entries.

EMERGENCY RESPONSE GUIDE #120 – NEXT PAGE

(THE ERG GUIDE PAGE, AN SDS FOR THE MATERIAL OR THE ENTIRE ERG BOOK MUST ACCOMPANY WHEN DRY ICE MUST BE DESCRIBED ON A SHIPPING PAPER)



NAVIGATE (CLICK):



A sample shipping paper form with a table structure. The header is titled "SHIPPING PAPER EXAMPLES". The table has multiple columns and rows, representing a standard shipping manifest or bill of lading form.

POTENTIAL HAZARDS

HEALTH

- Vapors may cause dizziness or asphyxiation without warning.
- Vapors from liquefied gas are initially heavier than air and spread along ground.
- Contact with gas or liquefied gas may cause burns, severe injury and/or frostbite.

FIRE OR EXPLOSION

- **Non-flammable gases.**
- Containers may explode when heated.
- Ruptured cylinders may rocket.

PUBLIC SAFETY

- **CALL 911. Then call emergency response telephone number on shipping paper.** If shipping paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.
- Keep unauthorized personnel away.
- Stay upwind, uphill and/or upstream.
- Many gases are heavier than air and will spread along the ground and collect in low or confined areas (sewers, basements, tanks, etc.).
- Ventilate closed spaces before entering, but only if properly trained and equipped.

PROTECTIVE CLOTHING

- Wear positive pressure self-contained breathing apparatus (SCBA).
- Structural firefighters' protective clothing provides thermal protection **but only limited chemical protection.**
- Always wear thermal protective clothing when handling refrigerated/cryogenic liquids or solids.

EVACUATION

Immediate precautionary measure

- Isolate spill or leak area for at least 100 meters (330 feet) in all directions.

Large Spill

- Consider initial downwind evacuation for at least 100 meters (330 feet).

Fire

- If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions.

EMERGENCY RESPONSE

FIRE

- Use extinguishing agent suitable for type of surrounding fire.
- If it can be done safely, move undamaged containers away from the area around the fire.
- Damaged cylinders should be handled only by specialists.

Fire Involving Tanks

- Fight fire from maximum distance or use unmanned master stream devices or monitor nozzles.
- Cool containers with flooding quantities of water until well after fire is out.
- Do not direct water at source of leak or safety devices; icing may occur.
- Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
- ALWAYS stay away from tanks engulfed in fire.

SPILL OR LEAK

- Do not touch or walk through spilled material.
- Stop leak if you can do it without risk.
- Use water spray to reduce vapors or divert vapor cloud drift. Avoid allowing water runoff to contact spilled material.
- Do not direct water at spill or source of leak.
- If possible, turn leaking containers so that gas escapes rather than liquid.
- Prevent entry into waterways, sewers, basements or confined areas.
- Allow substance to evaporate.
- Ventilate the area.

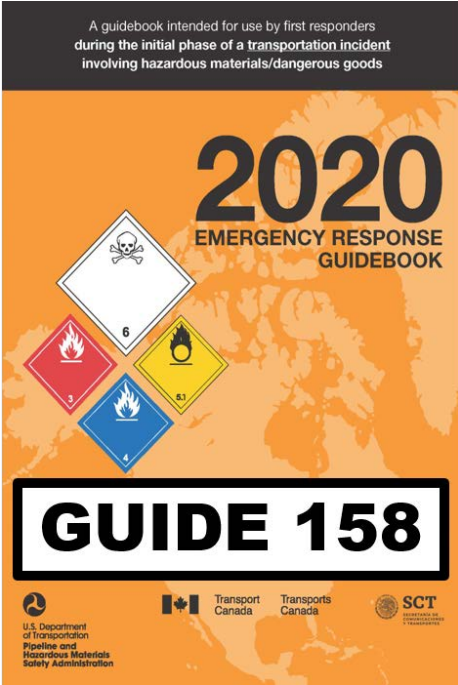
CAUTION: When in contact with refrigerated/cryogenic liquids, many materials become brittle and are likely to break without warning.

FIRST AID

- Call 911 or emergency medical service.
- Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.
- Move victim to fresh air if it can be done safely.
- Give artificial respiration if victim is not breathing.
- Administer oxygen if breathing is difficult.
- Clothing frozen to the skin should be thawed before being removed.
- In case of contact with liquefied gas, thaw frosted parts with lukewarm water.
- Keep victim calm and warm.

EMERGENCY RESPONSE GUIDE #158 – NEXT PAGE

(THE ERG GUIDE PAGE, AN SDS FOR THE MATERIAL OR THE ENTIRE ERG BOOK MUST ACCOMPANY SHIPMENTS OF UN 2814, UN 2900 OR UN 3291)



NAVIGATE (CLICK):



EMERGENCY RESPONSE INFORMATION



POTENTIAL HAZARDS

HEALTH

- Inhalation or contact with substance may cause infection, disease or death.
- Category A Infectious Substances (UN2814, UN2900 or UN3549) are more hazardous, or are in a more hazardous form, than infectious substances shipped as Category B Biological Substances (UN3373) or clinical waste/medical waste (UN3291).
- Runoff from fire control or dilution water may cause environmental contamination.
- Damaged packages containing solid CO₂ as a refrigerant may produce water or frost from condensation of air. Do not touch this liquid as it could be contaminated by the contents of the parcel.
- Contact with solid CO₂ may cause burns, severe injury and/or frostbite.

FIRE OR EXPLOSION

- Some of these materials may burn, but none ignite readily.
- Some may be transported in flammable liquids.

PUBLIC SAFETY

- **CALL 911. Then call emergency response telephone number on shipping paper.** If shipping paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.
- Keep unauthorized personnel away.
- Stay upwind, uphill and/or upstream.
- Consult the shipping paper to identify the substance involved.

PROTECTIVE CLOTHING

- Use judgement based on the amount of material present and the possible routes of exposure to select protective clothing.
- Wear appropriate respiratory protection, such as fit-tested N95 respirator (at minimum), powered air purifying respirator (PAPR), or positive pressure self-contained breathing apparatus (SCBA).
- Wear full coverage body protection (e.g., Tyvek suit), faceshield, and disposable fluid-resistant gloves (e.g., latex or nitrile).
- Wear appropriate footwear; disposable shoe covers can be worn to protect against contamination.
- Puncture- and cut-resistant gloves should be worn over fluid-resistant gloves if sharp objects (e.g., broken glass, needles) are present.
- Wear insulated gloves (e.g. cryo gloves) over fluid-resistant gloves when handling dry ice (UN1845).
- Decontaminate protective clothing and personal protective equipment after use and before cleaning or disposal with a compatible chemical disinfectant (e.g., 10% solution of bleach, equivalent to 0.5% sodium hypochlorite) or through a validated decontamination technology (e.g., autoclave) or process.
- Structural firefighters' protective clothing provides thermal protection **but only limited chemical protection.**
- For more information on decontamination, consult p. 362

EVACUATION

Immediate precautionary measure

- Isolate spill or leak area for at least 25 meters (75 feet) in all directions.



In Canada, an Emergency Response Assistance Plan (ERAP) may be required for this product. Please consult the shipping paper and/or the ERAP Program Section (page 390).

EMERGENCY RESPONSE

FIRE

Small Fire

- Dry chemical, soda ash, lime or sand.

Large Fire

- Use extinguishing agent suitable for type of surrounding fire.
- Do not scatter spilled material with high-pressure water streams.
- If it can be done safely, move undamaged containers away from the area around the fire.

SPILL OR LEAK

- Do not touch or walk through spilled material.
- Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
- Absorb with earth, sand or other non-combustible material.
- Cover damaged package or spilled material with absorbent material such as paper towel, towel or rag to absorb any liquids, and, beginning from outside edge, pour liquid bleach or other chemical disinfectant to saturate. Keep wet with liquid bleach or other disinfectant.
- **DO NOT CLEAN-UP OR DISPOSE OF, EXCEPT UNDER SUPERVISION OF A SPECIALIST.**

FIRST AID

- Call 911 or emergency medical service.
- Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.
- Move victim to a safe isolated area if it can be done safely.

CAUTION: Victim may be a source of contamination.

- Remove and isolate contaminated clothing and shoes.
- In case of contact with substance, immediately flush eyes with running water and wash skin with soap and water for at least 20 minutes. Take caution not to break the skin.
- Effects of exposure (inhalation, ingestion, injection/inoculation or skin contact) to substance may be delayed. Victim should consult medical professional for information regarding symptoms and treatment.
- **For further assistance, contact your local Poison Control Center.**



PACKAGE TEST REQUIREMENTS

Category A infectious materials require UN Specification packaging.

Packages of Category B infectious materials do not require UN Specification packaging, but do require some degree of package testing.

The following pages summarizes package test requirement for biological materials via ground (USA), air and vessel.

HAZMATEAM, INC. offers package testing services.

Call 603-882-1112 for more information or for a quote.

CATEGORY B INFECTIOUS MATERIALS ¹

PACKAGE	VIBRATION TEST ²	DROP TEST ²	PRESSURE TEST ³
UN 3373 GROUND			
UN 3373 AIR			
UN 3373 AIR - LIQUIDS			
UN 3373 VESSEL			
UN 3373 VESSEL - LIQUIDS			

1- Does not require UN Specification packaging

2- 173.199 (a)(4), IMDG PI 650 (6) and IATA PI 650










3- Ref: 49 CFR 173.199 (b)(4), IATA PI 650 (a)(5) and IMDG PI 650 (7).

NAVIGATE (CLICK):





CATEGORY A INECTIOUS MATERIALS REQUIRING PACKAGING

PACKAGE	AIR TRANSPORT 	VESSEL TRANSPORT 	DOMESTIC USA GROUND TRANSPORT 
UN 2900			
UN 2814			

NOTE: All Category A infectious packages (liquids or solids): primary or secondary receptacle must pass 95 kPa pressure test. Ref: 49 CFR 173.196 (a)(6), IMDG PI 620 and IATA PI 620.

NAVIGATE (CLICK):



DISCLAIMER

This guide provides a very basic summary of regulatory requirements. The user must follow the appropriate shipping requirements of IMDG/DOT/IATA Hazmat-DG regulations, as well as the OSHA Bloodborne Pathogen standard. HAZMATEAM, INC shall not be held liable for any damage resulting from handling or from contact with the products described in this guide.

The user of this guide must be trained and use the classification, packaging instructions and guidance in the most recent versions of the applicable DG regulations (IMDG, IATA, ICAO, 49 CFR and/or other country specific DG regulations). In addition, employers must ensure workers are following all applicable OSHA handling, packing and labeling procedures: OSHA 29 CFR 1910.1030, 1904.8, 1910.145, 1910.151, 1910.132 to 1910.138, 1910.1200 and 1910.1450.

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