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CHANGES TO BOE-6000-Y (ISSUED April 29, 2005)

See page FYI-25 for a list of DOT Dockets and regulations that remain in effect.

All changes will be denoted in the following manner:

- All changes will be shaded with a gray screen and identified with a ★ or ▲.
- Deletions are identified with a ★ or ▲ at the point where the deletion occurred. If an entire section or entry is deleted the ★ or ▲ will appear opposite the previous section or entry.
- A five-point star (★) in the outside margins indicates regulatory changes or deletions made by the US Department of Transportation. In some instances, either the old or new regulations are permitted to be used until the effective date of the new regulations, or have a delayed compliance date or a transition date. For these instances, users are encouraged to retain the old regulations until the effective date of the change, the end of the delayed compliance date or the end of the transition date. The requirements governing the transition date are located in §172.14.
- A triangle (▲) in the outside margins indicates editorial changes or deletions made by the Bureau of Explosives.

If you have either the loose-leaf or the bound Tariff that is reissued each quarter, there will be pages that indicate changes, which may have occurred in previous issues. The date at the top right for even numbered pages or the top left for odd number pages indicates which date the changes occurred. The list of changes, beginning on page FYI-23, start with the April 29th issue of each year. Subsequent quarters are identified as Supplement 1, 2 and 3 consistent with the supplemented version of the Tariff.

LIST OF CHANGES INCORPORATED IN TARIFF BOE-6000-Y

PART A-EDITORIAL CHANGES MADE BY THE BUREAU OF EXPLOSIVES

None

PART B-REGULATORY CHANGES MADE BY THE US DEPART. OF TRANSPORTATION ¹

<u>Section</u>	<u>DOT Document</u>	<u>FR² Date</u>	<u>Tariff Page</u>	<u>Effective Date</u>
PART 171-GENERAL INFORMATION, REGULATIONS, AND DEFINITIONS				
§171.7(a)(3)	HM-233	1/24/05	57, 58	3/25/05
PART 173-GENERAL REQUIREMENTS FOR SHIPMENTS AND PACKAGINGS				
§§173.3(d) redesignated as (e) and new (d) added; .5a.12(b)(1); (e) added; .13(a); (b); (c)(1)(i); (2)(i); 22a(b); (c)	HM-233	1/24/05	265, 266, 269, 270, 272	3/25/05
PART 174-GARRIAGE BY RAIL				
§174.81(c); (d)	HM-233	1/24/05	402	3/25/05
PART 176-GARRIAGE BY VESSEL				
§§176.83(a)(11) added; .84(b)	HM-233	1/24/05	430, 434	3/25/05
PART 177-GARRIAGE BY PUBLIC HIGHWAY				
§177.848(c); (d)	HM-233	1/24/05	458	3/25/05

¹The cut-off date for changes to BOE-Tariff 6000-Y was the April 8, 2005 Federal Register (FR).

²Federal Register

PUBLISHER'S NOTE

This list is provided for information only. It is compiled and kept up-to-date by the publisher.

UN-NA CROSS REFERENCE

UN 0004	Ammonium picrate	NA 0124	Jet perforating guns, charged
UN 0005	Cartridges for weapons	UN 0124	Jet perforating guns, charged
UN 0006	Cartridges for weapons	UN 0129	Lead azide, wetted
UN 0007	Cartridges for weapons	UN 0130	Lead styphnate, wetted <i>or</i> Lead trinitroresorcinate, wetted
UN 0009	Ammunition, incendiary	UN 0131	Lighters, fuse
UN 0010	Ammunition, incendiary	UN 0132	Deflagrating metal salts of aromatic nitroderivatives, n.o.s
UN 0012	Cartridges for weapons, inert projectile <i>or</i> Cartridges, small arms	UN 0133	Mannitol hexanitrate, wetted <i>or</i> Nitromannite, wetted
UN 0014	Cartridges for weapons, blank <i>or</i> Cartridges, small arms, blank	UN 0135	Mercury fulminate, wetted
UN 0015	Ammunition, smoke	UN 0136	Mines
UN 0016	Ammunition, smoke	UN 0137	Mines
UN 0018	Ammunition, tear-producing	UN 0138	Mines
UN 0019	Ammunition, tear-producing	UN 0143	Nitroglycerin, desensitized
UN 0020	Ammunition, toxic	UN 0144	Nitroglycerin, solution in alcohol
UN 0021	Ammunition, toxic	UN 0146	Nitrostarch
NA 0027	Black powder for small arms	UN 0147	Nitro urea
UN 0027	Black powder <i>or</i> Gunpowder	UN 0150	Pentaerythrite tetranitrate, wetted <i>or</i> Pentaerythritol tetranitrate, wetted, <i>or</i> PETN, wetted Pentaerythrite tetranitrate, <i>or</i> Pentaerythritol tetranitrate <i>or</i> PETN, desensitized
UN 0028	Black powder, compressed <i>or</i> Gunpowder, compressed <i>or</i> Black powder, in pellets <i>or</i> Gunpowder, in pellets	UN 0151	Pentolite
UN 0029	Detonators, non-electric	UN 0153	Trinitroaniline <i>or</i> Picramide
UN 0030	Detonators, electric	UN 0154	Trinitrophenol <i>or</i> Picric acid
UN 0033	Bombs	UN 0155	Trinitrochlorobenzene <i>or</i> Picryl chloride
UN 0034	Bombs	UN 0159	Powder cake, wetted <i>or</i> Powder paste, wetted
UN 0035	Bombs	UN 0160	Powder, smokeless
UN 0037	Bombs, photo-flash	UN 0161	Powder, smokeless
UN 0038	Bombs, photo-flash	UN 0167	Projectiles
UN 0039	Bombs, photo-flash	UN 0168	Projectiles
UN 0042	Boosters	UN 0169	Projectiles
UN 0043	Bursters	UN 0171	Ammunition, illuminating
UN 0044	Primers, cap type	UN 0173	Release devices, explosive
UN 0048	Charges, demolition	UN 0174	Rivets, explosive
UN 0049	Cartridges, flash	UN 0180	Rockets
UN 0050	Cartridges, flash	UN 0181	Rockets
UN 0054	Cartridges, signal	UN 0182	Rockets
UN 0055	Cases, cartridge, empty with primer	UN 0183	Rockets
UN 0056	Charges, depth	UN 0186	Rocket motors
UN 0059	Charges, shaped	UN 0190	Samples, explosive
UN 0060	Charges, supplementary explosive	UN 0191	Signal devices, hand
UN 0065	Cord, detonating	UN 0192	Signals, railway track, explosive
UN 0066	Cord, igniter	UN 0193	Signals, railway track, explosive
UN 0070	Cutters, cable, explosive	UN 0194	Signals, distress
UN 0072	Cyclotrimethylenetrinitramine, wetted <i>or</i> Cyclonite, wetted <i>or</i> Hexogen, wetted <i>or</i> RDX, wetted	UN 0195	Signals, distress
UN 0073	Detonators for ammunition	UN 0196	Signals, smoke
UN 0074	Diazodinitrophenol, wetted	UN 0197	Signals, smoke
UN 0075	Diethyleneglycol dinitrate, desensitized	UN 0204	Sounding devices, explosive
UN 0076	Dinitrophenol	UN 0207	Tetranitroaniline
UN 0077	Dinitrophenolates	UN 0208	Trinitrophenylmethylnitramine <i>or</i> Tetryl
UN 0078	Dinitroresorcinol	UN 0209	Trinitrotoluene <i>or</i> TNT
UN 0079	Hexanitrodiphenylamine <i>or</i> Dipicrylamine <i>or</i> Hexyl	UN 0212	Tracers for ammunition
UN 0081	Explosive, blasting, type A	UN 0213	Trinitroanisole
UN 0082	Explosive, blasting, type B	UN 0214	Trinitrobenzene
UN 0083	Explosive, blasting, type C	UN 0215	Trinitrobenzoic acid
UN 0084	Explosive, blasting, type D	UN 0216	Trinitro-meta-cresol
UN 0092	Flares, surface	UN 0217	Trinitronaphthalene
UN 0093	Flares, aerial	UN 0218	Trinitrophenetole
UN 0094	Flash powder	UN 0219	Trinitroresorcinol <i>or</i> Styphnic acid
UN 0099	Fracturing devices, explosive	UN 0220	Urea nitrate
UN 0101	Fuse, non-detonating	UN 0221	Warheads, torpedo
UN 0102	Cord detonating <i>or</i> Fuse detonating	UN 0222	Ammonium nitrate
UN 0103	Fuse, igniter	UN 0224	Barium azide
UN 0104	Cord, detonating, mild effect <i>or</i> Fuse, detonating, mild effect	UN 0225	Boosters with detonator
UN 0105	Fuse, safety	UN 0226	Cyclotetramethylenetetranitramine, wetted <i>or</i> HMX, wetted <i>or</i> Octogen, wetted
UN 0106	Fuzes, detonating	UN 0234	Sodium dinitro-o-cresolate
UN 0107	Fuzes, detonating	UN 0235	Sodium picramate
UN 0110	Grenades, practice	UN 0236	Zirconium picramate
UN 0113	Guanyl nitrosaminoguanilydene hydrazine, wetted	UN 0237	Charges, shaped, flexible, linear
UN 0114	Guanyl nitrosaminoguanilyltetrazene, wetted <i>or</i> Tetrazene, wetted	UN 0238	Rockets, line-throwing
UN 0118	Hexolite, <i>or</i> Hexotol	UN 0240	Rockets, line-throwing
UN 0121	Igniters	UN 0241	Explosive, blasting, type E

§172.101 Hazardous Materials Table

Symbols (1)	Hazardous Materials Descriptions and Proper Shipping Names (2)	Hazard Class or Division (3)	Identification Numbers (4)	PG (5)	Label Codes (6) ¹	Special Provisions (7)	(8) Packaging (§173.***)			(9) Quantity Limitations		(10) Vessel Stowage		ERG Guide # (11)
							Ex- cep- tions (8A)	Non- bulk (8B)	Bulk (8C)	Passen- ger Aircraft/ Rail (9A)	Cargo Aircraft Only (9B)	Loca- tion (10A)	Other (10B)	
	<i>Accelerene, see p-Nitrosodimethylaniline</i>													
	<i>Accumulators, electric, see Batteries, wet etc</i>													
*	<i>Accumulators, pressurized, pneumatic or hydraulic (containing non-flammable gas) see Articles pressurized, pneumatic or hydraulic (containing non-flammable gas)</i>													
	Acetal	3	UN1088		II 3	IB2, T4, TP1	150	202	242	5 L	60 L	E		127
R4	Acetaldehyde	3	UN1089		I 3	A3, B16, T11, TP2, TP7	None	201	243	Forbidden	30 L	E		129
A	Acetaldehyde ammonia	9	UN1841		III 9	IB8, IP6	155	204	240	200 kg	200 kg	A	34	171
	Acetaldehyde oxime	3	UN2332		III 3	B1, IB3, T4, TP1	150	203	242	60 L	220 L	A		129
R5	Acetic acid, glacial or Acetic acid solution, with more than 80 percent acid, by mass	8	UN2789		II 8, 3	A3, A6, A7, A10, B2, IB2, T7, TP2	154	202	243	1 L	30 L	A		132
R5	Acetic acid solution, not less than 50 percent but not more than 80 percent acid, by mass	8	UN2790		II 8	A3, A6, A7, A10, B2, IB2, T7, TP2	154	202	242	1 L	30 L	A		153
R5	Acetic acid solution, with more than 10 percent and less than 50 percent acid, by mass	8	UN2790		III 8	IB3, T4, TP1	154	203	242	5 L	60 L	A		153
R5	Acetic anhydride	8	UN1715		II 8, 3	A3, A6, A7, A10, B2, IB2, T7, TP2	154	202	243	1 L	30 L	A	40	137
R5	Acetone	3	UN1090		II 3	IB2, T4, TP1	150	202	242	5 L	60 L	B		127
P, R2	Acetone cyanohydrin, stabilized	6.1	UN1541		I 6.1	2, A3, B9, B14, B32, B76, B77, N34, T20, TP2, TP13, TP38, TP45	None	227	244	Forbidden	Forbidden	D	25, 40, 49	155
	Acetone oils	3	UN1091		II 3	IB2, T4, TP1, TP8	150	202	242	5 L	60 L	B		127
R5	Acetonitrile	3	UN1648		II 3	IB2, T7, TP2	150	202	242	5L	60 L	B	40	131
	<i>Acetyl acetone peroxide with more than 9 percent by mass active oxygen</i>	Forbidden												
	<i>Acetyl benzoyl peroxide, solid, or with more than 40 percent in solution</i>	Forbidden												
R5	Acetyl bromide	8	UN1716		II 8	B2, IB2, T8, TP2, TP12	154	202	242	1 L	30 L	C	40	156
R5	Acetyl chloride	3	UN1717		II 3, 8	A3, A6, A7, IB1, N34, T8, TP2, TP12	None	202	243	1 L	5 L	B	40	132
	<i>Acetyl cyclohexanesulfonyl peroxide, with more than 82 percent wetted with less than 12 percent water</i>	Forbidden												
	Acetyl iodide	8	UN1898		II 8	B2, IB2, T7, TP2, TP13	154	202	242	1 L	30 L	C	40	156
	Acetyl methyl carbinol	3	UN2621		III 3	B1, IB3, T2, TP1	150	203	242	60 L	220 L	A		127
	<i>Acetyl peroxide, solid, or with more than 25 percent in solution</i>	Forbidden												
	Acetylene, dissolved	2.1	UN1001		2.1		None	303	None	Forbidden	15 kg	D	25, 40, 57	116
	<i>Acetylene (liquefied)</i>	Forbidden												
	<i>Acetylene silver nitrate</i>	Forbidden												
P	<i>Acetylene tetrabromide, see Tetrabromoethane</i>													
	<i>Acid butyl phosphate, see Butyl acid phosphate</i>													
	Acid, sludge, see Sludge acid													
	Acridine	6.1	UN2713		III 6.1	IB8, IP3	153	213	240	100 kg	200 kg	A		153
	Acrolein dimer, stabilized	3	UN2607		III 3	B1, IB3, T2, TP1	150	203	242	60 L	220 L	A	40	129P
P, R1	Acrolein, stabilized	6.1	UN1092		I 6.1, 3	1, B9, B14, B30, B42, B72, B77, T22, TP2, TP7, TP13, TP38, TP44	None	226	244	Forbidden	Forbidden	D	40	131P
R5	Acrylamide	6.1	UN2074		III 6.1	IB8, IP3, T4, TP1	153	213	240	100 kg	200 kg	A	12	153P
R3	Acrylic acid, stabilized	8	UN2218		II 8, 3	B2, IB2, T7, TP2	154	202	243	1 L	30 L	C	25, 40	132P
R3	Acrylonitrile, stabilized	3	UN1093		I 3, 6.1	B9, T14, TP2, TP13	None	201	243	Forbidden	30 L	E	40	131P
	<i>Actuating cartridge, explosive, see Cartridges, power device</i>													
	Adhesives, containing a flammable liquid	3	UN1133		I 3	B42, T11, TP1, TP8, TP27	150	201	243	1 L	30 L	B		128
*	Adhesives, containing a flammable liquid	3	UN1133		II 3	149, B52, IB2, T4, TP1, TP8	150	173	242	5 L	60 L	B		128

¹Label Codes: 1.1, 1.2, 1.3, 1.4, 1.5, and 1.6—EXPLOSIVE; 2.1—FLAMMABLE GAS; 2.2—NON-FLAMMABLE GAS; 2.3—POISON GAS; 3—FLAMMABLE LIQUID; 4.1—FLAMMABLE SOLID; 4.2—SPONTANEOUSLY COMBUSTIBLE; 4.3—DANGEROUS WHEN WET; 5.1—OXIDIZER; 5.2—ORGANIC PEROXIDE; 6.1 (PGI, Zone A and B inhalation hazard)—POISON INHALATION HAZARD; 6.1 (PGI, other than Zone A and B, PGII or PGIII)—POISON; 6.1 (PGIII) see §172.405(c) for alternate label; 6.2—INFECTIOUS SUBSTANCE; 7—RADIOACTIVE; 8—CORROSIVE; 9—CLASS 9

PUBLISHER'S NOTE

Unless exempted, each shipment of hazardous materials must be accompanied by a "shipping paper" that contains information outlined in this Subpart. The information required on the shipping paper must be easy to identify, legible and printed in English. Depending on who prepared the shipping paper, it is often referred to as "bills of lading," "shipping orders," "waybill," etc. For hazardous wastes the Hazardous Waste Manifest can sometimes be used as the shipping papers. No matter who prepared the shipping paper or what it is called, any document containing the required information can be used as a shipping paper. It must accompany the hazardous material at all times during transportation. During transportation the shipping papers must be located as outlined in the modal Parts, 174 through 177.

Subpart C

SHIPPING PAPERS

§172.200 Applicability. (a) Description of hazardous materials required. Except as otherwise provided in this subpart, each person who offers a hazardous material for transportation shall describe the hazardous material on the shipping paper in the manner required by this subpart.

(b) This subpart does not apply to any material, other than a hazardous substance, hazardous waste or marine pollutant, that is—

(1) Identified by the letter "A" in column 1 of the §172.101 table, except when the material is offered or intended for transportation by air; or

(2) Identified by the letter "W" in column 1 of the §172.101 table, except when the material is offered or intended for transportation by water; or

(3) An ORM-D, except when the material is offered or intended for transportation by air.

§172.201 Preparation and retention of shipping papers. (a) Contents. When a description of hazardous material is required to be included on a shipping paper, that description must conform to the following requirements:

(1) When a hazardous material and a material not subject to the requirements of this subchapter are described on the same shipping paper, the hazardous material description entries required by §172.202 and those additional entries that may be required by §172.203:

(i) Must be entered first, or

(ii) Must be entered in a color that clearly contrasts with any description on the shipping paper of a material not subject to the requirements of this subchapter, except that a description on a reproduction of a shipping paper may be highlighted, rather than printed, in a contrasting color (the provisions of this paragraph apply only to the basic description required by §172.202(a)(1) and (2), or (3), and (4)), or

(iii) Must be identified by the entry of an "X" placed before the proper shipping name in a column captioned "HM". (The "X" may be replaced by "RQ," if appropriate.)

(2) The required shipping description on a shipping paper and all copies thereof used for transportation purposes, must be legible and printed (manually or mechanically) in English.

(3) Unless it is specifically authorized or required in this subchapter, the required shipping description may not contain any code or abbreviation.

(4) A shipping paper may contain additional information concerning the material provided the information is not inconsistent with the required description. Unless otherwise permitted or required by this subpart, additional information must be placed after the basic description required by §172.202(a).

(b) [Reserved].

(c) Continuation page. A shipping paper may consist of more than one page, if each page is consecutively numbered and the first page bears a notation specifying the total number of pages included in the shipping paper. For example, "Page 1 of 4 pages."

(d) Emergency response telephone number. Except as provided in §172.604(c), a shipping paper must contain an emergency response telephone number, as prescribed in subpart G of this part.

(e) Each person who provides a shipping paper must retain a copy of the shipping paper required by §172.200(a), or an electronic image thereof, that is accessible at or through its principal place of business and must make the shipping paper available, upon request, to an authorized official of a Federal, State, or local government agency at reasonable times and locations. For a hazardous waste, the shipping paper copy must be retained for three years after the material is accepted by the initial carrier. For all other hazardous materials, the shipping paper copy must be retained for 375 days after the material is accepted by the initial carrier. Each shipping paper copy must include the date of acceptance by the initial carrier, except that, for rail, vessel, or air shipments, the date on the shipment waybill, airbill, or bill of lading may be used in place of the date of acceptance by the initial carrier. A motor carrier (as defined in §390.5 of Subchapter B of Chapter III of Subtitle B) using a shipping paper without change for multiple shipments of one or more hazardous materials having the same shipping name and identification number may retain a single copy of the shipping paper, instead of a copy for each shipment made, if the carrier also retains a record of each shipment made, to include shipping name, identification number, quantity transported, and date of shipment.

§172.202 Description of hazardous material on shipping papers. (a) The shipping description of a hazardous material on the shipping paper must include:

(1) The proper shipping name prescribed for the material in column 2 of the §172.101 table;

(2) The hazard class or division number prescribed for the material, as shown in Column (3) of the §172.101 Table. Except for combustible liquids, the subsidiary hazard class(es) or subsidiary division number(s) must be entered in parentheses immediately following the primary hazard class or division number. The words "Class" or "Division" may be included preceding the primary and subsidiary hazard class or division numbers. The hazard class need not be included for the entry "Combustible liquid, n.o.s.";

(3) The identification number prescribed for the material as shown in column 4 of the §172.101 table;

(4) The packing group, in Roman numerals, as designated for the hazardous material in Column 5 of the §172.101 Table. Class 1 (explosives) materials, self-reactive substances, organic peroxides and entries that are not assigned a packing group are excepted from this requirement. The packing group may be preceded by the letters "PG" (e.g., "PG II"); and

(5) The total quantity of hazardous materials covered by the description must be indicated (by mass or volume, or by activity for Class 7 materials) and must include an indication of the applicable unit of measurement. For example, "200 kgs." or "50 L." The following provisions also apply:

(i) For Class 1 materials, the quantity must be the net explosive mass.

(ii) For hazardous materials in salvage packaging, an estimate of the total quantity is acceptable.

(iii) The following are excepted from the requirements of paragraph (a)(5) of this section:

(A) Bulk packages, provided some indication of the total quantity is shown, for example, "1 cargo tank" or "2 IBCs."

SUBJECT INDEX

The subject index contains up to four tiers. To assist the user, each tier is identified in the heading at the beginning of each page with a number identifying the tier.

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Definition of repair	§180.403
Registration	§107.502(b)
Retention of product in piping	§173.33(e)
Specification packaging	See Index to Part 178
Unloading requirements	§§177.834(i) & 177.840(p) thru (u)
Carriage by air	Part 175
Accepting and inspecting shipments	§175.30
Applicability	§175.5
Exceptions	§175.10
Loading, unloading and handling	
Exception when air only means of transportation	§175.320
Class 3 (flammable liquids)	§175.310
Class 6.1 (poisonous) materials	§175.630
Class 6.2 (etiologic or infectious substance)	§175.630
Class 7 (radioactive) materials	§175.700
Cargo aircraft	§175.702
Inspection for contamination	§175.705
Other requirements	§175.703
Plutonium shipments	§175.704
Separation distances	§175.701
Damaged shipments	§175.90

GUIDE 112 Explosives* - Division 1.1, 1.2, 1.3, 1.5 or 1.6; CLASS A or B

POTENTIAL HAZARDS

FIRE OR EXPLOSION

- MAY EXPLODE AND THROW FRAGMENTS 1600 meters (1 MILE) OR MORE IF FIRE REACHES CARGO.
- For information on Compatibility Group letters, refer to Glossary section.

HEALTH

- Fire may produce irritating, corrosive and/or toxic gases.

PUBLIC SAFETY

- CALL Emergency Response Telephone Number on Shipping Paper first. If Shipping Paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.
- Isolate spill or leak area immediately for at least 500 meters (1/3 mile) in all directions.
- Move people out of line of sight of the scene and away from windows.
- Keep unauthorized personnel away.
- Stay upwind.
- Ventilate closed spaces before entering.

PROTECTIVE CLOTHING

- Wear positive pressure self-contained breathing apparatus (SCBA).
- Structural firefighters' protective clothing will only provide limited protection.

EVACUATION

Large Spill

- Consider initial evacuation for 800 meters (1/2 mile) in all directions.

Fire

- If rail car or trailer is involved in a fire and heavily encased explosives such as bombs or artillery projectiles are suspected, ISOLATE for 1600 m (1 mile) in all directions; also, initiate evacuation including emergency responders for 1600 m (1 mile) in all directions.
- When heavily encased explosives are not involved, evacuate the area for 800 meters (1/2 mile) in all directions.

EMERGENCY RESPONSE

FIRE

CARGO Fires

- DO NOT fight fire when fire reaches cargo! Cargo may EXPLODE!
 - Stop all traffic and clear the area for at least 1600 meters (1 mile) in all directions and let burn.
 - Do not move cargo or vehicle if cargo has been exposed to heat.
- #### TIRE or VEHICLE Fires
- Use plenty of water - FLOOD IT! If water is not available, use CO₂, dry chemical or dirt.
 - If possible, and WITHOUT RISK, use unmanned hose holders or monitor nozzles from maximum distance to prevent fire from spreading to cargo area.
 - Pay special attention to tire fires as re-ignition may occur. Stand by with extinguisher ready.

SPILL OR LEAK

- ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).
- All equipment used when handling the product must be grounded.
- Do not touch or walk through spilled material.
- DO NOT OPERATE RADIO TRANSMITTERS WITHIN 100 meters (330 feet) OF ELECTRIC DETONATORS.
- DO NOT CLEAN-UP OR DISPOSE OF, EXCEPT UNDER SUPERVISION OF A SPECIALIST.

FIRST AID

- Move victim to fresh air.
- Call 911 or emergency medical service.
- Apply artificial respiration if victim is not breathing.
- Administer oxygen if breathing is difficult.
- Remove and isolate contaminated clothing and shoes.
- In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
- Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

* For information on "Compatibility Group" letters, refer to the Glossary section.

* For information on "Compatibility Group" letters, refer to the Glossary section.

TABLE OF INITIAL ISOLATION AND PROTECTIVE ACTION DISTANCES

ID No.	NAME OF MATERIAL	SMALL SPILLS (From a small package or small leak from a large package)				LARGE SPILLS (From a large package or from many small packages)			
		First ISOLATE in all Directions		Then PROTECT persons Downwind during-		First ISOLATE in all Directions		Then PROTECT persons Downwind during-	
		Meters	(Feet)	DAY	NIGHT	Meters	(Feet)	DAY	NIGHT
				Kilometers (Miles)	Kilometers (Miles)			Kilometers (Miles)	Kilometers (Miles)
1005	Ammonia, anhydrous	30 m	(100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	60 m	(200 ft)	0.5 km (0.3 mi)	1.1 km (0.7 mi)
1005	Ammonia, anhydrous, liquefied								
1005	Ammonia, solution, with more than 50% Ammonia								
1005	Anhydrous ammonia								
1005	Anhydrous ammonia, liquefied								
1008	Boron trifluoride	30 m	(100 ft)	0.2 km (0.1 mi)	0.6 km (0.4 mi)	215 m	(700 ft)	1.6 km (1.0 mi)	5.1 km (3.2 mi)
1008	Boron trifluoride, compressed								
1016	Carbon monoxide	30 m	(100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	125 m	(400 ft)	0.6 km (0.4 mi)	1.8 km (1.1 mi)
1016	Carbon monoxide, compressed								
1017	Chlorine	30 m	(100 ft)	0.3 km (0.2 mi)	1.1 km (0.7 mi)	275 m	(900 ft)	2.7 km (1.7 mi)	6.8 km (4.2 mi)
1023	Coal gas	30 m	(100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	60 m	(200 ft)	0.3 km (0.2 mi)	0.5 km (0.3 mi)
1023	Coal gas, compressed								
1026	Cyanogen	30 m	(100 ft)	0.3 km (0.2 mi)	1.1 km (0.7 mi)	305 m	(1000 ft)	3.1 km (1.9 mi)	7.7 km (4.8 mi)
1026	Cyanogen, liquefied								
1026	Cyanogen gas								
1040	Ethylene oxide	30 m	(100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	60 m	(200 ft)	0.5 km (0.3 mi)	1.8 km (1.1 mi)
1040	Ethylene oxide with Nitrogen								
1045	Fluorine	30 m	(100 ft)	0.2 km (0.1 mi)	0.5 km (0.3 mi)	185 m	(600 ft)	1.4 km (0.9 mi)	4.0 km (2.5 mi)
1045	Fluorine, compressed								
1048	Hydrogen bromide, anhydrous	30 m	(100 ft)	0.2 km (0.1 mi)	0.5 km (0.3 mi)	125 m	(400 ft)	1.1 km (0.7 mi)	3.4 km (2.1 mi)
1050	Hydrogen chloride, anhydrous	30 m	(100 ft)	0.2 km (0.1 mi)	0.6 km (0.4 mi)	185 m	(600 ft)	1.6 km (1.0 mi)	4.3 km (2.7 mi)
1051	AC (when used as a weapon)	60 m	(200 ft)	0.2 km (0.1 mi)	0.5 km (0.3 mi)	460 m	(1500 ft)	1.6 km (1.0 mi)	3.9 km (2.4 mi)
1051	Hydrocyanic acid, aqueous solutions, with more than 20% Hydrogen cyanide	60 m	(200 ft)	0.2 km (0.1 mi)	0.5 km (0.3 mi)	400 m	(1300 ft)	1.3 km (0.8 mi)	3.4 km (2.1 mi)
1051	Hydrocyanic acid, liquefied								
1051	Hydrogen cyanide, anhydrous, stabilized								
1051	Hydrogen cyanide, stabilized								
1052	Hydrogen fluoride, anhydrous	30 m	(100 ft)	0.2 km (0.1 mi)	0.6 km (0.4 mi)	125 m	(400 ft)	1.1 km (0.7 mi)	2.9 km (1.8 mi)
1053	Hydrogen sulfide	30 m	(100 ft)	0.2 km (0.1 mi)	0.3 km (0.2 mi)	215 m	(700 ft)	1.4 km (0.9 mi)	4.3 km (2.7 mi)
1053	Hydrogen sulfide, liquefied								
1053	Hydrogen sulphide								
1053	Hydrogen sulphide, liquefied								
1062	Methyl bromide	30 m	(100 ft)	0.2 km (0.1 mi)	0.3 km (0.2 mi)	95 m	(300 ft)	0.5 km (0.3 mi)	1.4 km (0.9 mi)
1064	Methyl mercaptan	30 m	(100 ft)	0.2 km (0.1 mi)	0.3 km (0.2 mi)	95 m	(300 ft)	0.8 km (0.5 mi)	2.7 km (1.7 mi)
1067	Dinitrogen tetroxide	30 m	(100 ft)	0.2 km (0.1 mi)	0.5 km (0.3 mi)	305 m	(1000 ft)	1.3 km (0.8 mi)	3.9 km (2.4 mi)
1067	Dinitrogen tetroxide, liquefied								
1067	Nitrogen dioxide								
1067	Nitrogen dioxide, liquefied								
1067	Nitrogen peroxide, liquid								
1067	Nitrogen tetroxide, liquid								
1069	Nitrosyl chloride	30 m	(100 ft)	0.3 km (0.2 mi)	1.4 km (0.9 mi)	365 m	(1200 ft)	3.5 km (2.2 mi)	9.8 km (6.1 mi)
1071	Oil gas	30 m	(100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	30 m	(100 ft)	0.3 km (0.2 mi)	0.5 km (0.3 mi)
1071	Oil gas, compressed								
1076	CG (when used as a weapon)	155 m	(500 ft)	1.3 km (0.8 mi)	3.2 km (2.0 mi)	765 m	(2500 ft)	7.2 km (4.5 mi)	11.0+ km (7.0+ mi)
1076	Diphosgene	60 m	(200 ft)	0.2 km (0.1 mi)	0.5 km (0.3 mi)	95 m	(300 ft)	1.0 km (0.6 mi)	1.9 km (1.2 mi)
1076	DP (when used as a weapon)	60 m	(200 ft)	0.3 km (0.2 mi)	1.0 km (0.6 mi)	185 m	(600 ft)	1.6 km (1.0 mi)	4.5 km (2.8 mi)
1076	Phosgene	95 m	(300 ft)	0.8 km (0.5 mi)	2.7 km (1.7 mi)	765 m	(2500 ft)	6.6 km (4.1 mi)	11.0 km (6.9 mi)
1079	Sulfur dioxide	30 m	(100 ft)	0.3 km (0.2 mi)	1.1 km (0.7 mi)	185 m	(600 ft)	3.1 km (1.9 mi)	7.2 km (4.5 mi)
1079	Sulfur dioxide, liquefied								
1079	Sulphur dioxide								
1079	Sulphur dioxide, liquefied								

"+" means distance can be larger in certain atmospheric conditions

TABLE OF WATER-REACTIVE MATERIALS WHICH PRODUCE TOXIC GASES

Materials Which Produce Large Amounts of Toxic-by-Inhalation (TIH) Gas(es)
When Spilled in Water

ID No.	Guide No.	Name of Material	TIH Gas(es) Produced
1162	155	Dimethyldichlorosilane	HCl
1242	139	Methyldichlorosilane	HCl
1250	155	Methyltrichlorosilane	HCl
1295	139	Trichlorosilane	HCl
1298	155	Trimethylchlorosilane	HCl
1340	139	Phosphorus pentasulfide, free from yellow and white Phosphorus	H ₂ S
1340	139	Phosphorus pentasulphide, free from yellow and white Phosphorus	H ₂ S
1360	139	Calcium phosphide	PH ₃
1384	135	Sodium dithionite	H ₂ S SO ₂
1384	135	Sodium hydrosulfite	H ₂ S SO ₂
1384	135	Sodium hydrosulphite	H ₂ S SO ₂
1397	139	Aluminum phosphide	PH ₃
1412	139	Lithium amide	NH ₃
1419	139	Magnesium aluminum phosphide	PH ₃
1432	139	Sodium phosphide	PH ₃
1433	139	Stannic phosphides	PH ₃
1541	155	Acetone cyanohydrin, stabilized	HCN
1680	157	Potassium cyanide	HCN
1689	157	Sodium cyanide	HCN
1714	139	Zinc phosphide	PH ₃
1716	156	Acetyl bromide	HBr
1717	132	Acetyl chloride	HCl
1724	155	Allyl trichlorosilane, stabilized	HCl
1725	137	Aluminum bromide, anhydrous	HBr

Chemical Symbols for TIH Gases:

Br ₂	Bromine	HF	Hydrogen fluoride	PH ₃	Phosphine
Cl ₂	Chlorine	HI	Hydrogen iodide	SO ₂	Sulfur dioxide
HBr	Hydrogen bromide	H ₂ S	Hydrogen sulfide	SO ₂	Sulphur dioxide
HCl	Hydrogen chloride	H ₂ S	Hydrogen sulphide	SO ₃	Sulfur trioxide
HCN	Hydrogen cyanide	NH ₃	Ammonia	SO ₃	Sulphur trioxide

Use this list only when material is spilled in water.

Materials Which Produce Large Amounts of Toxic-by-Inhalation (TIH) Gas(es)
When Spilled in Water

ID No.	Guide No.	Name of Material	TIH Gas(es) Produced
1726	137	Aluminum chloride, anhydrous	HCl
1728	155	Amyltrichlorosilane	HCl
1732	157	Antimony pentafluoride	HF
1736	137	Benzoyl chloride	HCl
1745	144	Bromine pentafluoride	HF HBr Br ₂
1746	144	Bromine trifluoride	HF HBr Br ₂
1747	155	Butyltrichlorosilane	HCl
1752	156	Chloroacetyl chloride	HCl
1754	137	Chlorosulfonic acid	HCl
1754	137	Chlorosulfonic acid and Sulfur trioxide mixture	HCl
1754	137	Chlorosulphonic acid	HCl
1754	137	Chlorosulphonic acid and Sulphur trioxide mixture	HCl
1754	137	Sulfur trioxide and Chlorosulfonic acid	HCl
1754	137	Sulphur trioxide and Chlorosulphonic acid	HCl
1758	137	Chromium oxychloride	HCl
1777	137	Fluorosulfonic acid	HF
1777	137	Fluorosulphonic acid	HF
1801	156	Octyltrichlorosilane	HCl
1806	137	Phosphorus pentachloride	HCl
1809	137	Phosphorus trichloride	HCl
1810	137	Phosphorus oxychloride	HCl
1818	157	Silicon tetrachloride	HCl
1828	137	Sulfur chlorides	HCl SO ₂ H ₂ S
1828	137	Sulphur chlorides	HCl SO ₂ H ₂ S

Chemical Symbols for TIH Gases:

Br ₂	Bromine	HF	Hydrogen fluoride	PH ₃	Phosphine
Cl ₂	Chlorine	HI	Hydrogen iodide	SO ₂	Sulfur dioxide
HBr	Hydrogen bromide	H ₂ S	Hydrogen sulfide	SO ₂	Sulphur dioxide
HCl	Hydrogen chloride	H ₂ S	Hydrogen sulphide	SO ₃	Sulfur trioxide
HCN	Hydrogen cyanide	NH ₃	Ammonia	SO ₃	Sulphur trioxide

Use this list only when material is spilled in water.