U.S. Department of Transportation
Research and Special Programs Administration

AUG 16 1996

400 Seventh Street, S.W.
Washington, D.C. 20590

DOT-E 5704
(NINTH REVISION)

EXPIRATION DATE: July 31, 1998 (See Appendix A for PTE expiration dates)

(FOR RENEWAL, SEE 49 CFR SECTION 107.105.)

1. GRANTEE: ICI Explosives USA Inc.
Dallas, Texas
(See Appendix A of this exemption)

2. PURPOSE AND LIMITATION: This exemption authorizes the transportation in commerce of certain approved Division 1.1D and 1.3C liquid explosives substances in specification and non-specification packagings prescribed herein and provides no relief from any regulation other than as specifically stated.

3. REGULATORY SYSTEM AFFECTED: 49 CFR Section 173.62, 174.3, 176.3 and 177.801.

4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR Section 173.62, Packing Method E-103.

5. BASIS: This exemption is based on ICI Explosives USA Inc.'s application dated June 10, 1996, submitted in accordance with 49 CFR 107.105. (See Appendix A of this exemption.)

6. HAZARDOUS MATERIALS (49 CFR 172.101):

Hazardous Materials Description/Proper Shipping Name	Hazard Class\Division	Identification Number	Packing Group
Substances, explosive, liquid, n.o.s.	1.1D	UN 0475	II
Substances, explosive, liquid, n.o.s.	1.3C	UN 0477	II

* And any other Class 1.1D or 1.3C liquid explosives substances which have been classified and assigned an EX-Approval Number in writing (See Appendix B) by the Office of Hazardous Materials Exemptions and Approvals prior to their first shipment under the terms of this exemption.

Expired - Not Active

Copperhead Chem. Co. Inc. = Appl. date 6-30-99

7. PACKAGING AND SAFETY CONTROL MEASURES:

PACKAGING - **The following DOT specification packaging is authorized until October 1, 1996; after that date, only the UN packaging listed below may be used.**

a. 25-gallon capacity 22-gauge steel drum, approximately 20-inches in diameter and 25-inches tall, fitted with a ring lock closure, and with inside packaging as follows:

(i) A 5-gallon capacity DOT Specification 37P metal drum; or

(ii) A 5-gallon capacity DOT Specification 5B metal drum with a DOT Specification 2S polyethylene liner.

(iii) The void between the inner and outer drum must be at least 50 mm and filled with an inert fire resistant cushioning material.

b. DOT Specification 6J, 18-gauge metal drum, not over 55-gallon capacity, fitted with a ring lock closure, or a DOT Specification 17C, 18 gauge metal drum, not over 30-gallon capacity, fitted with a bolt lock closure, and with inside packaging as follows:

(i) A 5-gallon capacity DOT Specification 6D cylindrical steel overpack with a DOT Specification 2S or 2U liner; or,

(ii) A 5-gallon capacity DOT Specification 5B metal drum with a DOT Specification 2S or 2U liner; or,

(iii) A 30-gallon DOT Specification 6J or 6D metal drum with a DOT Specification 2SL polyethylene liner.

(iv) The void between the inner and outer drum must be at least 50 mm and filled with an inert fire resistant cushioning material.

c. UN1A2 or UN1B2 removable head drums, not over 55-gallon capacity, tested and marked at the packing group II level, and with inside packaging as follows:

(i) A UN6HA1 or UN6HB1 composite packaging with outer metal drum and inner plastic receptacle, tested and marked at the Packing Group II level for liquids.

(ii) The void between the inner and outer metal drum must be at least 50 mm and must be filled with an inert, fire resistant, cushioning material.

(iii) The maximum capacity of the inner packaging shall not exceed 120 liters (30-gallons).

d. DOT Specification 6J/2S or 6D/2S, or UN6HA1 or UN6HB1 composite packaging with outer metal drum and inner plastic receptacle having a rated capacity not greater than 120 liters (30-gallons), tested and marked at the Packing Group II level for liquids. These composite packagings must be palletized in groups of four using two rugged, form-fitting, expanded plastic or reconstituted wooden cover skids having skirts long enough to totally protect both top and bottom drum ends, and secured together with at least two sturdy steel bands in two directions as described in the Department of the Navy's letter dated November 13, 1981. Any shipment of less than four drums must be palletized and strapped as described above using empty drums of equivalent size to fill the remaining spaces on the pallets.

e. The following non-specification single outer packaging are also authorized (subject to contingent conditions.)

(i) Non-specification metal drums constructed in accordance with Allegheny Ballistic Laboratory Drawings Nos. 1343-K, 9652-F, and 9653, in which drums must be securely attached to strong wooden skids, or rigidly mounted on strong aluminum skids as an integral part of the packaging.

(ii) The material may also be shipped in DOT Specification 5 metal or UN1A1 drums, cradled and securely attached to heavy wooden skids, or mounted on strong aluminum skids, or DOT Specification 42B aluminum or UN1B1 drums, cradled and securely attached to strong aluminum skids. Such drums shall be in full compliance with applicable requirements of the specification except that, in lieu of threaded closures, a thiokol rubber stopper securely wired in a specially designed flange may be used. UN1A1 and UN1B1 drums must be tested and marked at the Packing Group II level for liquids.

(iii) Material may also be shipped in non-specification specially designed metal containers as described in Hercules Powder Company, Incorporated, Allegheny Ballistics Laboratory, Rocket Center, West Virginia Drawings ABL-7923, ABL-7924-B, and ABL-8200. Capacities of these containers are limited for transportation to 275 kg.(600 lb.). Material may also be shipped in desiccators described in Redford Arsenal Drawings Nos. HRP 37-7946, HRP 37-4130-A, HRP 37-4130-B, HRP 37-7947, and HRP 37-4167, on file with the Associate Administrator for Hazardous Materials Safety (AAHMS).

(iv) Wire tying of non-specification container closures shall be limited to soft (rubber or rubber-like material) plugs, each to have a metal backing plate extending across its top surface, with tying holes matching those in the flange of the opening. At least two wires, No. 6 gauge aluminum or equivalent shall be used on each closure.

(v) Non-specification containers must be subjected to careful inspection before each shipment is made to see that they are not leaking, and containers showing defects which might result in leakage during transit must not be continued in this service. Closing and/or venting devices shall be of such design that leakage will not occur during transportation; they must be so constructed that the liquid will not be subjected to friction or impact between any two metal surfaces.

(vi) The body of the trailer used in transportation of non-specification containers shall be tight so that sparks cannot enter. The floor of the trailer must be of wood, free of protruding bolts,nails, staples or metal screws and covered with at least two inches of sawdust or equally suitable absorbent material. No other explosives or other commodities of any kind are to be carried in the trailer while the liquid explosive substance is being transported.

(vii) Each non-specification container authorized in Section 7.e. must not exceed 500 liters (125 gallons) net capacity, nor contain more than 400 kg.(850 lb.) net mass of the liquid explosives substance.

8. SPECIAL PROVISIONS:

a. All Division 1.1D and 1.3C liquid explosives substances must have received both an EX-Approval Number and an authorization letter to ship under this exemption from the Office of Hazardous Materials Exemptions and Approvals prior to their first shipment. See Appendix B for a list of EX-Numbers currently authorized for shipment under this exemption.

b. Persons who receive Division 1.1D and 1.3C liquid explosives in any of the packagings authorized in Paragraph 7. above, may re-offer them for transportation provided:

(i) There is no observable signs of structural damage to the outer packaging, leakage or loss of contents;

(ii) no modifications or changes are made to the packaging;

(iii) all terms of this exemption are complied with; and

(iv) a current copy of this exemption is maintained at each facility from which such re-offering occurs.

c. Each Specification outer steel or aluminum drum described in Paragraph 7. may be reused provided it is thoroughly cleaned of cushioning material and examined inside and outside for evidence of leakage or structural damage. Re-use of leaking or structurally damaged drums is not authorized.

d. The inside of steel drums should be galvanized, painted, coated or otherwise protected. Bare steel should not come into contact with the liquid explosive substances, should the inner plastic liner fail. Steel drums should also be constructed without pockets or crevices in which liquid explosive could be trapped or nipped.

e. Any closures employing steel threaded bolts or nuts must have all the threads sealed with a caulking compound prior to shipment to protect against ingress of liquid explosive substances.

9. MODES OF TRANSPORTATION AUTHORIZED: Motor vehicle, rail freight and cargo vessel.

10. MODAL REQUIREMENTS:

a. A copy of this exemption must be carried aboard each motor vehicle and cargo vessel.

b. When shipped by motor vehicle , Division 1.1D or 1.3C liquid explosives substances specifically identified by EX-Number and approved for shipment under the provisions of this exemption may be mixed in truckload lots only.

c. When transported by motor vehicle or rail freight, Class 1.1D or Class 1.3C liquid explosives substances in quantities of more than 20 liters net per inner container are limited to carload and truckload lots only.

d. Vehicles used when transporting packaging authorized by Paragraphs 7.d. and 7.e. are to be single unit truck or truck tractor semi-trailer combination having a minimum design load capacity of not less than 3,500 pounds per square foot (full trailers not authorized). If the vehicle is equipped with a heating or refrigerating unit, it must meet the conditions specified in 49 CFR 177.834 (1)(2)(iii)(A) except paragraph (4).

e. Approved Division 1.1D or 1.3C liquid explosive substances containing solutions of diethylene glycol dinitrate (DEGDN) or nitroglycerin dissolved in inert solvents, when carried in packaging authorized by Paragraphs 7.d. and 7.e,. must be transported in vehicles maintained at a temperature of not less than 60 degrees F. In any case, for any approved Division 1.1D and 1.3C liquid explosive substance authorized for shipment under this exemption, the temperature during transportation must be controlled so that here is no separation of any component of the mixture during transportation. Also the vehicle shown in Hercules Incorporated, Magna, Utah Drawing No. 093-0711-52006-5BU-01 and modified by Engineering Order No. 13628 and 13910 on file with the AAHMS may be used. The net load limitation of 7,500 lbs. in Section 177.835(k)is waived. Instead, the net load of explosives substances may not exceed 26,500 lb.

f. Approved Division 1.1D or 1.3C liquid explosive substances containing trimethylolethane trinitrate or trimethylolethane trinitrate solutions, when shipped in packaging authorized in Paragraph 7.d. and 7.e. must be transported in vehicles maintained at a temperature of not less than 35 degrees F. nor more than 100 degrees F, unless it has been demonstrated by test that there is no difference in the sensitivity of the liquid, the solid (frozen) and a mixture of liquid and solid.

g. Lading transported by motor vehicle in packaging authorized by Paragraph 7.d. and 7.e. must be inspected by a qualified authorized representative of the shipper not less than once in each hundred miles while in transportation to determine if the containers are not leaking. Each shipment must be routed straight through a continuous trip without stopover or layover except as necessitated by mechanical failure or adverse weather conditions.

h. The following special provisions apply to transportation by cargo vessel:

(i) Packages of explosives authorized for shipment by vessel under Section 6 must be transported in intermodal freight containers approved by the Commandant, U.S. Coast Guard, under 49 CFR 176.76(a).

(ii) 46 CFR Part 146 does not apply to shipments of explosives by vessel under this exemption.

i. Transportation by vessel is permitted only for those Class 1.1D and Class 1.3C liquid explosives substances described in Section 6 Table which:

(i) are packaged in accordance with Paragraphs 7.a., 7.b. and 7.c.; and

(ii) have a freezing point less than - 15°C.(5°F.),

11. COMPLIANCE. Failure by a person to comply with any of the following may result in suspension or revocation of this exemption and penalties prescribed by the Federal hazardous materials transportation law, 49 U.S.C. Section 5101 et seq.:

- All terms and conditions prescribed in this exemption and the Hazardous Materials Regulations, 49 CFR Parts 171-180.
- Registration required by 49 CFR 107.601 et seq., when applicable.

No person may use or apply this exemption, including display of its number, when the exemption has expired or is otherwise no longer in effect.

12. REPORTING REQUIREMENTS: The carrier is required to report any incident involving fire, explosion or loss of packaging contents or packaging failure to the Associate Administrator for Hazardous Materials Safety (AAHMS) as soon as practicable. (49 CFR 171.15 and 171.16 apply to any activity undertaken under the authority of this exemption.) In addition, the holder(s) of this exemption must inform the AAHMS, in writing, of any incidents involving fire, explosion or the package and shipments made under the terms of this exemption.

Issued at Washington, D.C.:

Marilyn E. Morris

for Alan I. Roberts
Associate Administrator
for Hazardous Materials Safety

August 16, 1996
(DATE)

Address all inquiries to: Associate Administrator for Hazardous Materials Safety, Research and Special Programs Administration, Department of Transportation, Washington, D.C. 20590. Attention: DHM-31.

The original of this exemption is on file at the above office. Photo reproductions and legible reductions of this exemption are permitted. Any alteration of this exemption is prohibited.

Dist: FHWA, FRA, USCG

APPENDIX B

UN #	EX-NUMBER	UN #	EX-NUMBER
0475	8502075	0477	8508012
0475	8502076	0477	8604010
0475	8505028	0477	8604011
0475	8506072	0477	8609029
0475	8509007	0477	8611130
0475	8601016	0477	8612747
0475	8601025	0477	8704104
0475	8604008	0477	8708022
0475	8604009	0477	8802074
0475	8604029	0477	8807258
0475	8604030	0477	8808049
0475	8604031	0477	8812059
0475	8605037	0477	8812060
0475	8607186	0477	8812061
0475	8607187	0477	8812063
0475	8607188	0477	9011154
0475	8607189	0477	9011155
0475	8607212	0477	9307066
0475	8607213		
0475	8607214		
0475	8609028		
0475	8610018		
0475	8610030		
0475	8610031		
0475	8610032		
0475	8610032A		
0475	8612030		
0475	8709024		
0475	8802075		
0475	8802076		
0475	8808050		
0475	8812064		
0475	8901115		
0475	8901269		
0475	8906077		
0475	8908072		
0475	9011153		
0475	9011168		