1. GRANTEE: Advance Research Chemicals, Inc. 
   Catoosa, OK

2. PURPOSE AND LIMITATION:
   a. This special permit authorizes the transportation in commerce of a Division 6.1, Packing Group I, Hazard Zone B material poisonous by inhalation in specially designed UN 1A1 stainless steel drums without the cap seal specified in § 173.227(b)(2)(iii). This special permit provides no relief from the Hazardous Materials Regulations (HMR) other than as specifically stated herein. The most recent revision supersedes all previous revisions.

   b. The safety analyses performed in development of this special permit only considered the hazards and risks associated with transportation in commerce. The safety analyses did not consider the hazards and risks associated with consumer use, use as a component of a transport vehicle or other device, or other uses not associated with transportation in commerce.

   c. No party status will be granted to this special permit.


4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR § 173.227(b)(2)(iii) in that screw closures must be provided with a cap seal that is capable of withstanding an internal pressure of at least 100 kPa, except as specified herein.
5. **BASIS:** This special permit is based on the application of Advance Research Chemicals, Inc. dated January 06, 2016, submitted in accordance with § 107.105 and the public proceeding thereon.

6. **HAZARDOUS MATERIALS (49 CFR § 172.101):**

<table>
<thead>
<tr>
<th>Hazardous Materials Description</th>
<th>Hazard Class/Division</th>
<th>Identification Number</th>
<th>Packing Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toxic by inhalation liquid, water-reactive, n.o.s. (Thionyl Chloride, Bromine, Sulfur Dioxide)</td>
<td>6.1</td>
<td>UN3386</td>
<td>I (Hazard Zone B)</td>
</tr>
</tbody>
</table>

7. **SAFETY CONTROL MEASURES:**

   a. **PACKAGING** -

   (1) Prescribed packaging is an 18.9 L UN 1A1 non-removable head stainless steel drum as described in the application for special permit dated August 20, 2015.

   (2) The UN 1A1 drum must be overpacked in a 55-gallon UN 1A2 removable head drum. A maximum of one UN 1A1 drum may be overpacked within the UN 1A2 drum under the terms of this special permit.

   (3) The UN 1A1 drum must be isolated from the outer drum by a shock-mitigating, non-reactive material that completely surrounds it on all sides.

   b. **TESTING** -

   (1) The UN 1A1 stainless steel drum must be designed and tested in accordance with § 173.227(b)(1) through (5) except that a cap seal is not required.

   (2) The UN 1A2 overpack drum must successfully pass a hydrostatic pressure test in accordance with § 178.605 at a minimum pressure of 100 kPa. The drum must have a minimum thickness of 1.35 mm.
c. OPERATIONAL CONTROLS -

(1) Under the terms of this special permit, only the special permit grantee may fill packagings authorized in paragraph 7.a.(1) with the hazardous material authorized in paragraph 6.

(2) The shipper must load the material, block and brace the drums within the transport vehicle, and seal the transport vehicle.

(3) Drums must not be stacked on other packages and the drums must not have additional packages stacked upon them.

(4) Under the terms of this special permit:

   (i) Shipments must be from Advance Research Chemicals, Inc. located at 1110 W. Keystone Avenue, Catoosa, OK to EaglePicher Technologies, LLC located at C & Porter Streets, Joplin, MO without any intermediate pickup or delivery.

   (ii) Shipments must be from EaglePicher Technologies, LLC located at C & Porter Streets, Joplin, MO to Advance Research Chemicals, Inc. located at 1110 W. Keystone Avenue, Catoosa, OK without any intermediate pickup or delivery.

   (iii) For shipments under paragraph 7.c.(4)(ii), the packaging as described in paragraph 7.a.(1) may only contain the residue of the hazardous material authorized in paragraph 6 or full containers if the material is determined to be unusable. Additionally, no modification or change may be made to the packaging.

(5) Only one package authorized under this special permit may be transported on each transport vehicle.

(6) Additional materials may be transported in the transport vehicle provided they do not meet the definition of a hazardous material and are loaded in such a manner that they cannot come into contact with the drums shipped in accordance with this special permit under normal conditions of transport.
(7) Carriage must be conducted by FedEx Custom Critical, Inc.

d. MARKING: Each package and overpack must be plainly and durably marked “DOT-SP 16555”.

8. SPECIAL PROVISIONS: A current copy of this special permit must be maintained at each facility where the package is offered or reoffered for transportation.

9. MODES OF TRANSPORTATION AUTHORIZED: Motor vehicle.

10. MODAL REQUIREMENTS: A current copy of this special permit must be carried aboard each motor vehicle used to transport packages covered by this special permit.

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

   o All terms and conditions prescribed in this special permit and the Hazardous Materials Regulations, 49 CFR Parts 171-180.

   o Persons operating under the terms of this special permit must comply with the security plan requirement in Subpart I of Part 172 of the HMR, when applicable.

   o Registration required by § 107.601 et seq., when applicable.

Each "Hazmat employee", as defined in § 171.8, who performs a function subject to this special permit must receive training on the requirements and conditions of this special permit in addition to the training required by §§ 172.700 through 172.704.

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

1144 (August 10, 2005), amended the Federal hazardous materials transportation law by changing the term “exemption” to “special permit” and authorizes a special permit to be granted up to two years for new special permits and up to four years for renewals.

12. REPORTING REQUIREMENTS: Shipments or operations conducted under this special permit are subject to the Hazardous Materials Incident Reporting requirements specified in 49 CFR §§ 171.15 – Immediate notice of certain hazardous materials incidents, and 171.16 – Detailed hazardous materials incident reports. In addition, the grantee(s) of this special permit must notify the Associate Administrator for Hazardous Materials Safety, in writing, of any incident involving a package, shipment or operation conducted under terms of this special permit.

Issued in Washington, D.C.:

[Signature]

For Dr. Magdy El-Sibaie
Associate Administrator for Hazardous Materials Safety


Copies of this special permit may be obtained by accessing the Hazardous Materials Safety Homepage at http://hazmat.dot.gov/sp_app/special_permits/spec_perm_index.htm. Photo reproductions and legible reductions of this special permit are permitted. Any alteration of this special permit is prohibited.

PO: BeMOORE/SG