1. **GRANTEE:** (See individual authorization letter)

2. **PURPOSE AND LIMITATION:**

   a. This special permit authorizes the transportation in commerce of specially-designed UN 1A1 steel drums for the shipment of dichlorosilane, subject to the limitations and special requirements specified herein. 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.

   c. Unless otherwise stated herein, this special permit consists of the special permit authorization letter issued to the grantee together with this document.

3. **REGULATORY SYSTEM AFFECTED:** 49 CFR Parts 106, 107 and 171-180.

4. **REGULATIONS FROM WHICH EXEMPTED:** 49 CFR § 173.304a(d) in that the packaging is not authorized, except as specified herein.

5. **BASIS:** This special permit is based on the Pipeline and Hazardous Materials Safety Administration’s (PHMSA) editorial review under § 107.121 initiated on December 4, 2008.
6. **HAZARDOUS MATERIALS (49 CFR § 172.101):**

<table>
<thead>
<tr>
<th>Hazardous Materials Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Proper Shipping Name</strong></td>
</tr>
<tr>
<td>Dichlorosilane</td>
</tr>
</tbody>
</table>

7. **SAFETY CONTROL MEASURES:**

   a. **PACKAGING** - Prescribed packaging is a specially-designed UN 1A1 steel drum, designed, constructed, and "U" or "UM" stamped in accordance with the ASME Code Section VIII. Each drum, except for the 5 liter (0.5 gallon) capacity drum, is equipped with a protective skirt and cover. Drums must meet the following minimum criteria:

<table>
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<tr>
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</thead>
<tbody>
<tr>
<td>Capacity (gallons)</td>
<td>5</td>
<td>0.5</td>
<td>55</td>
<td>10</td>
<td>10</td>
<td>55</td>
</tr>
<tr>
<td>Thickness (inches)</td>
<td>0.135</td>
<td>0.109</td>
<td>0.165</td>
<td>0.135</td>
<td>0.105</td>
<td>0.135</td>
</tr>
<tr>
<td>Material</td>
<td>316L</td>
<td>316L</td>
<td>316L</td>
<td>316L</td>
<td>316L</td>
<td>316L</td>
</tr>
<tr>
<td>MAWP (psig)</td>
<td>120</td>
<td>45</td>
<td>115</td>
<td>120</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Hydrostatic Test (psig)</td>
<td>180</td>
<td>68</td>
<td>173</td>
<td>180</td>
<td>150</td>
<td>150</td>
</tr>
</tbody>
</table>

   b. **TESTING** - Drums certified to the UN 1A1 standard must be tested in accordance with 49 CFR Subpart M of Part 178, at the Packing Group I level for liquids. Minimum hydrostatic test pressure is as indicated in the table above. Each drum must successfully pass a leakproofness test at the MAWP indicated in the table above.

   c. **Sufficient outage must be provided so that the packaging will not be liquid full at 130°F.**
d. When shipping drums that are not overpacked, the shipper must load the drums, block and brace the drums for transportation in accordance with a prepared plan which precludes stacking (double decking) and must seal the freight container or vehicle used. Shipments must be from one origin to one destination only. No intermediate pickup or delivery is authorized.

e. When shipping drums that are overpacked, the overpack must be a UN 1A2 or UN 1H2 drum meeting the applicable requirements of § 173.227(b).

8. **SPECIAL PROVISIONS:**

a. A person who is not a holder of this special permit who receives a package covered by this special permit may reoffer it for transportation provided no modification or change is made to the package and it is reoffered for transportation in conformance with this special permit and the HMR.

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

c. **MARKING** - In addition to the UN 1A1 markings (as required by § 178.503), each drum must be marked "DOT-SP 10984."

9. **MODES OF TRANSPORTATION AUTHORIZED:** Motor vehicle, cargo vessel.

10. **MODAL REQUIREMENTS:** A current copy of this special permit must be carried aboard each cargo vessel or 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.
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.

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.

Under Title VII of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU)—"The Hazardous Materials Safety and Security Reauthorization Act of 2005" (Pub. L. 109-59), 119 Stat. 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.:

Diane Savalle
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: KFW/sln