1. **GRANTEE:** Entegris, Inc.
   Billerica, MA

2. **PURPOSE AND LIMITATIONS:**
   a. This special permit authorizes the manufacture, mark, sale, and use of a non-DOT specification pressure vessel conforming to the American Society of Mechanical Engineers (ASME) pressure vessel codes and standards, for the transportation in commerce of a Division 4.2 material. 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. In accordance with 49 CFR 107.107(a), party status may not be granted to a manufacturing special permit. These packagings may be used in accordance with 49 CFR 173.22a.

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

4. **REGULATIONS FROM WHICH EXEMPTED:** 49 CFR § 173.212 in that a non-DOT specification ASME pressure vessel is not authorized for solid hazardous materials in Packing Group II, except as specified herein.

5. **BASIS:** This special permit is based on the application of Entegris, Inc. dated April 19, 2022, submitted in accordance with § 107.109.
6. **HAZARDOUS MATERIALS (49 CFR § 172.101):**

<table>
<thead>
<tr>
<th>Hazardous Material Description</th>
<th>Hazard Class/Division</th>
<th>Identification Number</th>
<th>Packing Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-heating solid, inorganic, n.o.s. (Nickel Mixture)</td>
<td>4.2</td>
<td>UN3190</td>
<td>II</td>
</tr>
</tbody>
</table>

7. **SAFETY CONTROL MEASURES:**

a. **PACKAGING:** Prescribed packaging is a non-DOT specification American Society of Mechanical Engineers (ASME) pressure vessel made in accordance with all requirements of Section VIII, Division 1, of ASME Pressure Vessel Codes and the Aeronex, Inc. design criteria (Drawing 10327-D, Rev. C) on file at the Office of Hazardous Materials Safety (OHMS). The ASME specification, U1A, sheets for the first five pressure vessels must be submitted to OHMS.

b. **TESTING:** Each pressure vessel must be hydrostatically tested to 300 psi without the measurement of expansion in accordance with CGA pamphlet C-1 to verify structural integrity. Records of the test must be made available to a DOT representative upon request. No retest is required.

c. **OPERATIONAL CONTROLS:** Each package must be shipped at atmospheric pressure and padded with dry nitrogen. The moisture content in the pressure vessel during transportation must be less than 1 part per billion.

8. **SPECIAL PROVISIONS:**

a. In accordance with the provisions of Paragraph (b) of § 173.22a, persons may use the packaging authorized by this special permit for the transportation of the hazardous materials specified in paragraph 6, only in conformance with the terms of this special permit.

b. Each packaging manufactured under the authority of this special permit must be either (1) marked with the name of the manufacturer and location (city and state) of the facility at which it is manufactured or (2) marked with a registration symbol designated by the Office of Hazardous Materials Safety for a specific manufacturing facility.

c. A current copy of this special permit must be maintained at each facility where the package is manufactured under this special permit. It must be made available to a DOT representative upon request.
d. A person who is not a holder of this special permit, but 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 offered for transportation in conformance with this special permit and the HMR.

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

f. **MARKING:** Each pressure vessel must be marked “DOT-SP 11782”, as required by § 172.301(c).

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

10. **MODAL REQUIREMENTS:** A current copy of this special permit must be carried aboard each cargo vessel 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, 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 the special permit has expired or is otherwise no longer in effect.

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 notices 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.:

for William Schoonover
Associate Administrator for Hazardous Materials Safety


Copies of this special permit may be obtained by accessing the Hazardous Materials Safety Homepage at https://www.phmsa.dot.gov/approvals-and-permits/hazmat/special-permits-search. Photo reproductions and legible reductions of this special permit are permitted. Any alteration of this special permit is prohibited.

PO: SG/NICKS