



U.S. Department
of Transportation

**Pipeline and Hazardous
Materials Safety Administration**

July 02, 2021

East Building, PHH-30
1200 New Jersey Avenue S.E.
Washington, D.C. 20590

DOT-SP 21250

EXPIRATION DATE: 2021-12-31

(FOR RENEWAL, SEE 49 CFR 107.109)

1. GRANTEE: NASA/George C Marshall Space Flight Center
Huntsville, Al
2. PURPOSE AND LIMITATIONS:
 - a. This special permit authorizes the one-time, one-way transportation of refrigerant gases in non-DOT specification packaging by motor vehicle. 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.
3. REGULATORY SYSTEM AFFECTED: 49 CFR Parts 106, 107 and 171-180.
4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR § 173.304a in that non-DOT specification packaging is authorized.

July 02, 2021

5. BASIS: This special permit is based on the application of Nasa/George C Marshall Space Flight Center dated June 14, 2021, submitted in accordance with § 107.117 and the determination that it is necessary to prevent significant economic loss.

6. HAZARDOUS MATERIALS (49 CFR 172.101):

Hazardous Material Description			
Proper Shipping Name	Hazard Class/ Division	Identification Number	Packing Group
Refrigerant gases, n.o.s.	2.2	UN1078	N/A

7. SAFETY CONTROL MEASURES:

a. PACKAGING:

(1) Inner packaging - Prescribed inner packaging is a non-specification reaction control system (RCS). The RCS is a custom VACCO Chemically Etched Micro System Micro Propulsion System (MIPS) containing 1298 grams (2.862 lbs.) of hazardous material. The MIPS has an exterior volume of approximately 2U (2,000 cm³) and a maximum design pressure of 100 psia and a design burst pressure of no less than 200 psia. The material is pressurized to 39.5 psia at 77 °F and 63.5 psi at 104 °F.

(2) Intermediate packaging - The MIPS is housed inside the NEA Scout Spacecraft, which is enclosed in an Aluminum Planetary System Dispenser, then placed in a bag.

(3) Outer packaging - The bagged dispenser is placed in a 1610 Pelican Case for shipment and sealed with an integrity seal. The completed package has a weight of approximately 80 lbs.

b. TESTING: The MIPS shall pass a proof pressure test of no less than 145 psia.

c. OPERATIONAL CONTROLS -

July 02, 2021

(1) The completed package shall be shipped in a dedicated motor vehicle via contract or private carrier.

(2) The motor vehicle shall be temperature controlled to ensure a minimum temperature of 32 °F and a maximum temperature of 104 °F.

(3) The package will be secured to the motor vehicle to ensure no movement or shifting during transportation.

8. SPECIAL PROVISIONS:

a. A person who is not a holder of this special permit, but receives a packaging covered by this special permit, may reoffer it for transportation provided no modification or change is made to the packaging and it is offered 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.

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.

July 02, 2021

- 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.

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.:



for William Schoonover
Associate Administrator for Hazardous Materials Safety

July 02, 2021

Address all inquiries to: Associate Administrator for Hazardous Materials Safety, Pipeline and Hazardous Materials Safety Administration, U.S. Department of Transportation, East Building PHH-30, 1200 New Jersey Avenue, Southeast, Washington, D.C. 20590.

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: Andrew Eckenrode