

ARC Automotive, Inc.

Material Safety Data Sheet

1. Product and Contact Information

Product Name: Hybrid Airbag Inflator Assembly

Chemical Name / Synonym / Trade Name: Inflator Assembly
Pseudonyms/Programs: APH, DAPH, AHS, SH5, CADH, PH7-120, PH7-90, PH5, PH5.1, CH3, CH5, Piston, HC38, HD38, ADH89, MHS, Eco-Safe, DH8

Manufacturer's Name: ARC Automotive, Inc.
Address: 1601 Midpark Road Suite 100
Knoxville, TN 37921

ARC Information Phone Number: (865) 583-7851
Emergency Phone (Chemtrec) Inside USA: (800) 424-9300
Outside USA: (703) 527-3887

2. Hazards Identification

Appearance and Odor: The device is a Steel Cylinder containing pressurized gas and energetic material.

HMIS: Health: 0
Flammability: 0
Physical Hazard: 2

Personal Protection: Heat Protective Gloves, Eye Protection, Hearing Protection
May cause burns if deployed by hand

Relevant routes of exposure: Skin, Eye, Hearing
Inhalation: None. If device vents/functions, the products of combustion have been demonstrated to comply with ACGIH exposure limits.
Skin contact: May cause burns if deployed by hand
Eye contact: Protect eyes from debris
Hearing: Hearing protection from impact noise, exceeds 85 dBa

3. Composition / Information on Ingredients

Emergency Overview: The tamper-resistant, sealed metal container poses limited risk of chemical exposure before deployment. It may cause some skin and respirable irritation after deployment. If inflator is incinerated, broken, drilled into, crushed, or electric current is connected to lead wires, a physical hazard may exist. This inflator contains solid gas generant. *Do not* drill, break, or breach the steel container.

Potential Health Effects None expected when used as intended. Effluent gases from multiple deployments in testing situations may cause skin, eye, or mucous membrane irritation. Effluent gases in these situations must be effectively controlled through engineering systems designed and tested to remove applicable contaminants or PPE that will accomplish the same effect.

Human Health Effects and Symptoms of Overexposure

Inhalation	None expected when used as intended.
Skin Contact	None expected when used as intended.
Eyes	None expected when used as intended.
Ingestion	None expected when used as intended.
Carcinogenicity	None expected when used as intended.
Medical Conditions Aggravated by Exposure	None expected when used as intended.
Target Organs	None expected when used as intended.
Potential Environmental Effects	None expected when used as intended.

The inflator assembly is a steel pressure vessel containing igniter assemblies, compressed gas composed of between 0 and 170 grams of 75-98% argon / 2-50% helium mixture. It also contains the following potentially hazardous chemicals formulated into the gas generant components.

<u>HAZARDOUS INGREDIENTS</u>		<u>CAS NO.</u>	<u>Carcinogen</u>
ARCAIR 102A or 102H:	up to 40g:	Not Listed	No
• Ammonium Nitrate		6484-52-2	No
• Guanidine Nitrate		506-93-4	No
• Potassium Nitrate		7757-79-1	No
• Potassium Perchlorate		7778-74-7	No
• Polyvinyl Alcohol		9002-89-5	No
• Graphite		7782-42-5	No
ARCADENE 459 or ARCITE 497L:	up to 30.0g:	Not Listed	No
• Polyurethane Binder System		68951-41-7	No
• Potassium Perchlorate		7778-74-7	No
• Dioctyl Adipate		103-23-1	No
• Polyvinyl Chloride		9002-86-2	No
• Lithium Carbonate		554-13-2	No
FS01	up to 3.5 g:	Not Listed	No
• Proprietary Ingredients		None	No
AIC	up to 0.5 g:	Not Listed	No
• Molybdenum		7439-98-1	No
• Silver Nitrate		7761-88-8	No
• Potassium Nitrate		7758-09-0	No
• Guanidine Nitrate		506-93-4	No
• Cab-O-Sil		112945-52-5	No
Initiator:	up to 2 at 260mg ea.	Not Listed	No
• Zirconium Potassium Perchlorate		Not listed	No

4. First Aid Measures

Inhalation:	None
Skin Contact:	Treat for second degree burn, cool burn area
Eye contact:	Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention
Heating:	Avoid repeated exposure

5. Fire and Explosive Data

Special Fire and Explosive Hazards:	N/A
Extinguishing Media:	Copious amounts of water
Special Fire Fighting Procedures:	Apply water until the fire is extinguished and the device has cooled to a temperature less than 130°C The device will relieve pressure at relatively low temperatures and is designed to move no more than 2 to 3 meters when pressure is relieved. No special protective equipment required for firefighters.
Hazardous Combustion Products:	N/A
Conditions Which Cause Ignition:	When the device reaches a temperature in excess of 130 °C, it will release the stored gas. Additional heating will result in burning of the energetic materials. All energetic materials are consumed if the device reaches a temperature in excess of 300°C.

If the igniter is stimulated with an electrical current in the excess of 1.2 amps, the device will function; result is rapid combustion of the energetic materials and release of the stored gas.

6. Accidental Release Measures

Environmental precautions:	None expected
Clean up & Containment Method:	When handled and installed properly, no spills or leaks should occur. If inflator is ruptured and gas generant is present, clean up with non-sparking tools. Avoid spark, static electricity, and open flame. Avoid raising dust. Ventilate area. Wash spill site with water after material pick-up is complete.
Unusual Fire & Explosion Hazards:	The device (inflator assembly) is a container with compressed gas at up to 7000 psig pressure supplemented by rapidly burning gas generant materials. If the device is exposed to high temperature, the pressure system will release argon/helium gas mixture. Continued heating will cause the propellant to ignite and combustion gases to be released. The combustion gases are non-toxic, and have demonstrated compliance with ACGIH exposure limits.

7. Handling and Storage

Handling:	Avoid spark, ESD, impact, friction and open flame. Do not puncture or crush or drop. Post deployment, the surface of the inflator may have trace amounts of particulate and is usually hot. Residue may be irritating to the skin, eyes and mucous membranes.
Storage:	When not in use, devices should be stored in original shipping containers. Store away from high temperatures, open flame, static electricity, and other ignition sources. Store in accordance with federal, state, and local regulations. Recommend storage at ambient temperatures.

8. Exposure Controls Personal Protection

Engineering Controls:	Do not expose to excessive heat or flame. Do not puncture or crush. Do not expose to electrical current. Do not incinerate.
Respiratory Protection:	None
Skin Protection:	Heat Protection Gloves
Eye/Face Protection:	Safety Glasses
Hearing Protection:	Hearing Protection, Ear Muffs

9. Physical and Chemical Properties

Boiling Point:	N/A	Vapor Density:	N/A
Melting Point:	N/A	Specific Gravity:	N/A
Vapor Pressure:	N/A	Evaporation Rate:	N/A
Solubility:	N/A.		
Appearance and Odor:	The device is a Steel Cylinder/Toroid containing pressurized gas and energetic material.		

10. Stability and Reactivity

Stability:	Sealed unit is stable when used as designed.
Conditions to Avoid:	Sparks, static electricity, open flame, and hot temperatures
Incompatible Materials:	None in present form.

11. Toxicological Information

Carcinogen Status:	None Known
Target Organ and Other Health Effects:	None Known

12. Ecological Information

California Proposition 65: Could affect California's Perchlorate Contamination Prevention Act 2003 (AB 826)

13. Disposal Considerations

Information provided is for unused product only

Recommended method of disposal: Dispose in accordance with Federal, State and local regulations
EPA hazardous waste number: Not a RCRA Waste

14. Transportation Information

SPECIAL HANDLING, STORAGE, AND PACKAGING RECOMMENDATIONS: This MSDS is not intended to have all required shipping information. When not used, devices should be stored in original shipping containers. Do not drop or expose to temperatures above 107C.

Identification number UN3268
Proper shipping name Air bag Inflators
Hazard Classification Class 9
Packaging Group PGIII
DOT Approval Number Specific to the individual program
For further information contact: ARC Automotive, Inc
1729 Midpark Rd.
Knoxville, TN 37921

15. Regulatory Information

United States Regulatory Information

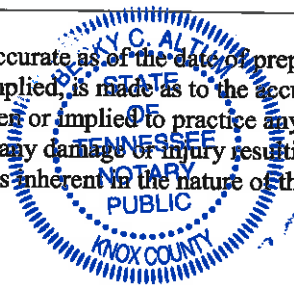
TSCA 8 (b) Inventory Status: Contains none listed
TSCA 12 (b) Export Notification: None
CERCLAS/Sara None Listed
California Proposition 65: Could affect California's Perchlorate Contamination Prevention Act 2003 (AB 826)

16. Other Information

For Technical Information:
Vice President of Engineering
ARC Automotive Inc.
Knoxville, TN 37921
(865) 583-7600

For Health and Safety Information:
Health, Safety, & Environmental Manager
ARC Automotive Inc.
Knoxville, TN 37921
(865) 583-7851

DISCLAIMER: The information presented herein is based on data considered to be accurate as of the date of preparation of this Material Safety Data Sheet. However, no warranty or representation, express or implied, is made as to the accuracy or completeness of the foregoing data and safety information, nor is any authorization given or implied to practice any patented invention without license. In addition, no responsibility can be assumed by vendor for any damage or injury resulting from abnormal use, from any failure to adhere to recommended practices or from any hazards inherent in the nature of the product.



Gabe Bucca
Gabe Bucca
VP Human Resources & Safety
11-21-2013
Date

Becky C. Altman
My Commission Expires:
August 5, 2015