



SAFETY DATA SHEET

Issue Date: 20-Feb-2015

Revision Date: 06-Apr-2015

Version 1

1. IDENTIFICATION

Product Identifier

Product Name APFA1, APFA2 Power Flush II

Other means of identification

SDS # PDC-002

UN/ID No UN1950

Other Information Aerosol

Recommended use of the chemical and restrictions on use

Recommended Use Flush treatment/cleaning agent for air conditioning & refrigeration systems.

Details of the supplier of the safety data sheet

DISTRIBUTOR ADDRESS

Atlantic Chemical & Equipment Co. Inc.
3471 Atlanta Ind. Pkwy – Ste 200
Atlanta, GA 30331 USA

Emergency telephone number

Company Phone Number 800-929-2436

Emergency Telephone Chemtrec 1-800-424-9300 (USA) 1-800-567-7455 (International)

2. HAZARDS IDENTIFICATION

Classification

Acute toxicity – Oral	Category 4
Acute toxicity – Inhalation (Dusts/Mists)	Category 4

Signal Word

Warning

Hazard Statements

Harmful if swallowed

Harmful if inhaled



Appearance Clear liquid in an aerosol

Physical State Aerosol

Odor Ether-like

Precautionary Statements – Prevention

Wash face, hands and any exposed skin thoroughly after handling.
 Do not eat, drink or smoke when using this product.
 Avoid breathing dust/fume/gas/mist/vapors/spray.
 Use only outdoors or in a well-ventilated area.

Precautionary Statements – Response

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
 Call a poison center or doctor/physician if you feel unwell.
 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth

Precautionary Statements – Storage

Dispose of contents/container to an approved waste disposal plant.

Precautionary Statements – Disposal

Harmful to aquatic life with long lasting effects.

Hazards not otherwise classified (HNOC)

Pressurized container: May burst if heated.

Other Information

Not Applicable

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Weight-%
1,2-trans-Dichloroethylene	156-60-5	50-60
1,1,1,2-Tetrafluoroethane	811-97-2	15-25
1,1,1,2,2,3,4,5,5,5-Decafluoropentane	138495-42-8	16-24
Ethyl Alcohol	64-17-5	1-9

4. FIRST AID MEASURES

First aid measures

Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a physician if you feel unwell.
Eye Contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Ingestion	Call a poison center or doctor/physician if you feel unwell. Rinse mouth.
Skin Contact	Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician.

Most important symptoms and effects, both acute and delayed

Symptoms Irritation by inhalation. Irritation to skin and eyes.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media Not determined.

Specific hazards arising from the chemical

Pressurized container: May burst if heated. Vapors confined in a poorly ventilated area may be ignited by a spark or flame.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. If container is not properly cooled, it can rupture in the heat of a fire.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Wear protective clothing as described in Section 8 of this safety data sheet. Evacuate personnel to safe areas. In case of spill, evacuate the area and remove all ignition sources.

For Emergency Responders Follow applicable OSHA regulations (29 CFR 1910.120).

Environmental Precautions See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so. Soak up condensate with inert absorbent material and collect in ventilated waste container for disposal.

Methods for cleaning up Use clean non-sparking tools to collect absorbed material. Sweep up absorbed material and shovel into suitable containers for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Avoid breathing dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area. Avoid contact with skin, eyes or clothing.

Conditions for safe storage, including any incompatibilities

Storage Conditions Do not store at temperatures above 120°F. Keep away from incompatible materials, open flames, and high temperatures.

Incompatible materials Strong oxidizing agents. Alkali metals. Alkali earth metals. Powdered metals. Powdered metal salts. Acids. Bases.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
1,2-trans-dichloroethylene 156-60-2	TWA: 200 ppm	-	-
Ethyl Alcohol 64-17-5	STEL: 1000 ppm	TWA: 1000 pm TWA: 1900 mg/m ³ (vacated) TWA: 1000 ppm (vacated) TWA: 1900 mg/m ³	IDLH: 3300 ppm TWA: 1000 ppm TWA: 1900 mg/m ³

Appropriate engineering controls

Engineering Controls Apply technical measures to comply with the occupational exposure limits.

Individual protection measures, such as personal protective equipment

Eye/face Protection Avoid contact with eyes. Wear approved safety goggles.

Skin and Body Protection Use solvent impermeable gloves to avoid contact with product.

Respiratory Protection Ensure adequate ventilation, especially in confined areas.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Aerosol	Odor	Ether-like
Appearance	Clear liquid in an aerosol	Odor threshold	Not determined
Color	Not determined		
Property	Values	Remarks • Method	
pH	Neutral		
Melting point/freezing point	<50°C / -58°F		
Boiling point/Boiling range	41°C / 105.8°F	@ 1013 hPa	
Flash point	No flash	Pensky-Martens Closed Cup (PMCC)	
Evaporation rate	Not determined		
Flammability (solid, gas)	Not determined		
Flammability Limits in Air	Not determined		
Upper flammability limits	13.5%		
Lower flammability limits	4.3%		
Vapor pressure	347.9 hPa	@ 25°C (77°F)	
Vapor density	3.7		
Specific gravity	Not determined		
Water solubility	3 g/L Slightly soluble	@ 25°C (77°F)	
Solubility in other solvents	Not determined		
Partition in other solvents	Not determined		
Partition coefficient	Not determined		
Autoignition temperature	Not determined		
Kinematic viscosity	Not determined		
Dynamic viscosity	0.48 mPa s		
Explosive properties	Not determined		
Oxidizing properties	Not determined		

Other Information

10. STABILITY AND REACTIVITY

Reactivity

Not reactive under normal conditions.

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

None under normal processing.

Hazardous Polymerization

Hazardous polymerization does not occur.

Conditions to avoid

Keep away from heat, sparks and open flame. Contact with incompatible materials.

Incompatible materials

Strong oxidizing agents. Alkali metals. Alkali earth metals. Powdered metals. Powdered metal salts. Acids. Bases.

Hazardous decomposition products

May emit toxic or corrosive fumes under fire conditions.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation	Harmful if inhaled.
Eye Contact	Irritating to eyes.
Skin Contact	Irritating to skin.
Ingestion	Harmful if swallowed.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
1,2-trans-Dichloroethylene 156-60-5	=1235 mg/kg (Rat)	>5 g/kg (Rabbit)	-
1,1,1,2-Tetrafluoroethane 811-97-2	-	-	=1500 g/m ³ (Rat) 4 h
1,1,1,2,2,3,4,5,5,5- Decafluoropentane 138495-42-8	>5 g/kg (Rat)	>5 g/kg (Rabbit)	-
Ethyl Alcohol 64-17-5	=7060 mg/kg (Rat)	-	=124.7 mg/L (Rat) 4 h

Information on physical, chemical and toxicological effects

Symptoms

Please see section 4 of this SDS for symptoms.

Delayed and immediate effects as well as chronic effects from short and long-term exposure**Carcinogenicity**

Ethanol has been shown to be carcinogenic in long-term studies only when consumed as an alcoholic beverage.

Chemical Name	ACGIH	IARC	NTP	OSHA
Ethyl Alcohol 64-17-5	A3	Group 1	Known	X

Legend

ACGIH (American Conference of Governmental Industrial Hygienists)

A3 - Animal Carcinogen

IARC (International Agency for Research on Cancer)

Group 1 - Carcinogenic to Humans

NTP (National Toxicology Program)

Known - Known Carcinogen

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

X - Present

Numerical measures of toxicity – Product

Not determined

12. ECOLOGICAL INFORMATION

Ecotoxicity

Harmful to aquatic life with long lasting effects.

Component Information

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
1,2-trans-Dichloroethylene 156-60-5	-	135: 96 h <i>Lepomis macrochirus</i> mg/L LC50 static	EC50 = 1142 mg/L 5 min EC50 = 1546 mg/L 30 min	-
Ethyl Alcohol 64-17-5	-	12.0 - 16.0: 96 h <i>Oncorhynchus mykiss</i> mL/L LC50 static 100: 96 h <i>Pimephales promelas</i> mg/L LC50 static 13400 - 15100: 96 h <i>Pimephales promelas</i> mg/L LC50 flow-through	EC50 = 34634 mg/L 30 min EC50 = 35470 mg/L 5 min	9268 - 14221: 48 h <i>Daphnia magna</i> mg/L LC50 10800: 24 h <i>Daphnia magna</i> mg/L EC50 2: 48 h <i>Daphnia magna</i> mg/L EC50 Static

Persistence and degradability

Not determined

Bioaccumulation

Not determined

Mobility

Chemical Name	Partition Coefficient
1,2-trans-Dichloroethylene 156-60-5	1.48
Ethyl Alcohol 64-17-5	-0.32

Other adverse effects

Not determined

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging Disposal should be in accordance with applicable regional, national and local laws and regulations.

US EPA Waste Number

Chemical Name	RCRA	RCRA – Basis for Listing	RCRA – D Series Wastes	RCRA – U Series Wastes
1,2-trans-Dichloroethylene 156-60-5	U079	Included in waste streams: F024, F025, F039, K073		U079

Chemical Name	RCRA – Halogenated Organic Compounds	RCRA – P Series Wastes	RCRA – F Series Wastes	RCRA – K Series Wastes
1,2-trans-Dichloroethylene 156-60-5	Category I - Volatiles		Toxic waste waste number F025 Waste description: Condensed light ends, spent filters and filter aids, and spent desiccant wastes from the production of certain chlorinated aliphatic hydrocarbons, by free radical catalyzed processes. These chlorinated aliphatic hydrocarbons are those having carbon chain lengths ranging from one to and including five, with varying amounts and positions of chlorine substitution.	

California Hazardous Waste Status

Chemical Name	California Hazardous Waste Status
Ethyl Alcohol 64-17-5	Toxic Ignitable

14. TRANSPORT INFORMATION

DOT

UN/ID No UN1950
Proper shipping name Aerosols, 2.1, LTD QTY
Hazard Class 2.1

- Until 2020 this product can be reclassified as an ORM-D (Consumer Commodity)

IATA

UN/ID No UN1950
Proper shipping name Aerosols, 2.1, LTD QTY
Hazard Class 2.1

IMDG

UN/ID No UN1950
 Proper shipping name Aerosols, 2.1, LTD QTY
 Hazard Class 2.1

15. REGULATORY INFORMATION

International Inventories

Chemical Name	TSCA	DSL	NDSL	EINECS	ELINCS	ENCS	IECSC	KECL	PICCS	AICS
1,2-trans-Dichloroethylene 156-60-5	Present	X		Present		Present	X	Present	X	X
1,1,1,2-Tetrafluoroethane 811-97-2	Present	X		Present		Present	X	Present	X	X
1,1,1,2,2,3,4,5,5,5-Decafluoropentane 138495-42-8	Present	X			Present	Present	X	Present	X	X
Ethyl Alcohol 64-17-5	Present	X		Present		Present	X	Present	X	X

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

U.S. Federal Regulations

CERCLA

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
1,2-trans-Dichloroethylene 156-60-5	1000 lb 1 lb		RQ 1000 lb final RQ RQ 454 kg final RQ RQ 1 lb final RQ RQ 0.454 kg final RQ

SARA 311/312 Hazard Categories

Not determined

SARA 313

Not determined

U.S. State Regulations

California Prop 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
1,2-trans-Dichloroethylene 156-60-5		X	X
Ethyl Alcohol 64-17-5	X	X	X

U.S. EPA Label Information

16. OTHER INFORMATION

<u>NFPA</u>	Health hazards Not determined	Flammability Not determined	Instability Not determined	Special Hazards Not determined
<u>HMIS</u>	Health hazards Not determined	Flammability Not determined	Physical hazards Not determined	Personal protection Not determined

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Revision Note: Corrections

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet