Material Safety Data Sheet: FROST AWAY AEROSOL

Supercedes Date 01/06/2011 **Issuing Date** 09/12/2013

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name FROST AWAY AEROSOL
Recommended use Automotive Care Product
Information on Manufacturer
CERTIFIED LABS, DIV. OF NCH CORP.
BOX 152170
IRVING, TEXAS 75015

Product Code 5195
Chemical nature Solvent mixture
Emergency Telephone Number
CHEMTREC® 800-424-9300

2. HAZARDS IDENTIFICATION

Emergency Overview
DANGER
POISON
Extremely flammable
Harmful if inhaled
Causes skin irritation
Causes severe eye irritation
Harmful or fatal if swallowed
May cause blindness
Cannot be made non-poisonous
Contents under pressure

Color Colorless **Physical State** Liquid **Odor** Alcoholic

Potential Health Effects

Principle Route of Exposure Skin contact, Eye contact, Inhalation.

Primary Routes of Entry Inhalation, Ingestion, Skin Absorption.

Acute Effects

Eyes Severe irritation.

Skin Causes skin irritation. Substance may be absorbed through the skin which can contribute to damage to the optic nerve resulting in permanent vision changes, loss of vision, or total blindness.

Inhalation May cause irritation of respiratory tract. Inhalation may cause central nervous system effects. May cause central nervous system depression. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness. Inhalation of vapors in high concentration can cause narcotic effects and metabolic acidosis.

Ingestion Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May be fatal or cause blindness if swallowed. Blood disorder may occur after ingestion. Acidosis.

Chronic Toxicity Repeated and prolonged exposure to solvents may cause brain and nervous system damage. Inhalation of vapors in high concentration can cause narcotic effects and metabolic acidosis. May cause damage to the kidneys/liver/eyes/brain/digestive system/central nervous system if swallowed. Suspect reproductive hazard - contains material which may injure unborn child.

Target Organ Effects Respiratory system, Central nervous system, Peripheral Nervous System (PNS), Cardiovascular system, Eyes, Ears, Pancreas, Gastrointestinal tract, Liver, Kidney, Blood, Lymphatic System, Spleen, Reproductive System.

Aggravated Medical Conditions Respiratory disorders, Skin disorders, Neurological disorders, Liver disorders, Kidney disorders, Blood disorders, Heart disease.

Potential Environmental Effects See Section 12 for additional Ecological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS-No
Methyl alcohol	67-56-1
n-Propyl alcohol	71-23-8
Propylene glycol	57-55-6
Carbon dioxide	124-38-9

4. FIRST AID MEASURES

General advice Avoid breathing vapors, mist, or gas. Avoid contact with skin, eyes and clothing.

Eye Contact Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Get medical attention immediately.

Skin Contact Wash off immediately with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Get medical attention if irritation develops and persists. Wash contaminated clothing before re - use.

Inhalation	Move to fresh air. In case of shortness of breath, give oxygen. If breathing has stopped, apply artificial respiration. Get medical attention immediately.
Ingestion	Drink 1 or 2 glasses of water. Do NOT induce vomiting. Get medical attention immediately. Never give anything by mouth to an unconscious person. Rinse mouth.
Notes to physician	Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Flash Point 52 °F / 11 °C **Method** Seta closed cup

Autoignition Temperature No information available.

Flammability Limits in Air % Solvent mixture. **Upper** 36.0 **Lower** 2.2

Suitable Extinguishing Media

Foam. Carbon dioxide (CO2). Dry chemical. Water spray. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Specific hazards arising from the chemical

Flame extension: >30 inches / >76 cm and Burnback: 3 inch / 7.6 cm. Solvent vapors are heavier than air and may spread along floors. Vapors may ignite and explode. Material can create slippery conditions.

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.

Aerosol Level (NFPA 30B) - 1

NFPA	**Health** 2	**Flammability** 4	**Instability** 0
HMIS	**Health** 2	**Flammability** 4	**Instability** 0

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Use personal protective equipment. Ensure adequate ventilation. Take precautionary measures against static discharges. Remove all sources of ignition. Prevent further leakage or spillage if safe to do so. Material can create slippery conditions.
Environmental Precautions	Do not flush into surface water or sanitary sewer system.
Methods for Containment	Contain spillage, soak up with non -combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13)
Methods for Cleaning Up	Use clean non-sparking tools to collect absorbed material. Pick up and transfer to properly labeled containers.
Neutralizing Agent	Not applicable.

7. HANDLING AND STORAGE

Handling	Keep away from flames and hot surfaces. Avoid breathing vapors, mist or gas. Avoid contact with skin, eyes and clothing.
Storage	Keep away from open flames, hot surfaces and sources of ignition. Store in original container. Keep in a dry, cool and well-ventilated place.

Storage Temperature **Minimum** 0 °F / -18 °C **Maximum** 120 °F / 49 °C

Storage Conditions **Indoor** X **Outdoor** **Heated** **Refrigerated**

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH
Methyl alcohol	TWA: 200 ppm Skin STEL: 250 ppm	TWA: 200 ppm TWA: 260 mg/m^3	IDLH: 6000 ppm STEL 250 ppm STEL 325 mg/m^3 TWA: 200 ppm TWA: 260 mg/m^3
n-Propyl alcohol	TWA: 100 ppm	TWA: 200 ppm TWA: 500 mg/m^3	IDLH: 800 ppm STEL 250 ppm STEL 625 mg/m^3 TWA: 200 ppm TWA: 500 mg/m^3
Propylene glycol	No data available	No data available	No data available
Carbon dioxide	TWA: 5000 ppm STEL: 30000 ppm	TWA: 5000 ppm TWA: 9000 mg/m^3	IDLH: 40000 ppm STEL 30000 ppm STEL 54000 mg/m^3 TWA: 5000 ppm TWA: 9000 mg/m^3

Engineering Measures Ensure adequate ventilation, especially in confined areas. Where reasonably practicable this should

	be achieved by the use of local exhaust ventilation and good general extraction.
Personal Protective Equipment	
Eye/Face Protection	Tightly fitting safety goggles.
Skin Protection	Wear suitable protective clothing, Impervious gloves.
Respiratory Protection	In case of inadequate ventilation wear respiratory protection. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
General Hygiene Considerations	Ensure that eyewash stations and safety showers are close to the workstation location. Remove and wash contaminated clothing before re -use. Wear protective gloves/clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid	**Viscosity**	Non viscous
Color	Colorless	**Odor**	Alcoholic
Appearance	Transparent	**pH**	Not applicable
Specific Gravity	0.62	**Evaporation Rate**	129.3 (Butyl acetate=1)
Percent Volatile (Volume)	100	**VOC Content (%)**	94.7
VOC Content (g/L)	587	**Vapor Pressure**	3391 mmHg @ 70°F
Vapor Density	1.5 (Air = 1.0)	**Solubility**	Completely soluble
Boiling Point/Range	148 °F / 64 °C		

10. STABILITY AND REACTIVITY

Chemical Stability	Stable. Hazardous polymerization does not occur.
Conditions to Avoid	Keep away from open flames, hot surfaces, and sources of ignition
Incompatible Products	Strong oxidizing agents, Reducing agents, Acids, Highly halogenated compounds, Light and/or alkaline metals.
Hazardous Decomposition Products	Carbon oxides
Possibility of Hazardous Reactions	None under normal processing

11. TOXICOLOGICAL INFORMATION

Product Information No information available.

Component Information

Acute Toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation	Draize Test	Other
Methyl alcohol	= 5628 mg/kg (Rat)	no data available	= 83.2 mg/L (Rat) 4 h	no data available	no data available
n-Propyl alcohol	= 1870 mg/kg (Rat)	no data available	> 13548 ppm (Rat) 4 h	no data available	no data available
Propylene glycol	= 20000 mg/kg (Rat)	= 20800 mg/kg (Rabbit)	no data available	no data available	no data available
Carbon dioxide	no data available	no data available	no data available	no data available	no data available

Chronic Toxicity

Component	Mutagenicity	Sensitization	Developmental Toxicity	Reproductive Toxicity	Target Organ Effects
Methyl alcohol	no data available	no data available	x	no data available	eyes, CNS, skin, GI tract, respiratory system, kidney, spleen, liver, blood, pancreas, heart, reproductive system
n-Propyl alcohol	no data available	no data available	no data available	no data available	skin,eyes,respiratory system,GI tract,CNS
Propylene glycol	no data available	no data available	no data available	no data available	CNS, liver, kidney
Carbon dioxide	no data available	no data available	no data available	no data available	respiratory system,CVS

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	ACGIH	IARC	NTP	OSHA	Other
Methyl alcohol	not applicable	not applicable	not applicable	not applicable	not applicable
n-Propyl alcohol	not applicable	not applicable	not applicable	not applicable	not applicable
Propylene glycol	not applicable	not applicable	not applicable	not applicable	not applicable
Carbon dioxide	not applicable	not applicable	not applicable	not applicable	not applicable

12. ECOLOGICAL INFORMATION

Product Information No information available.

Component Information

Component	Toxicity to Algae	Toxicity to Fish	Microtox	Water Flea	log Pow
Methyl alcohol	no data available	LC50 = 28200 mg/L Pimephales promelas 96 h	EC50 = 39000 mg/L 25 min	no data available	-0.77

		LC50 > 100 mg/L Pimephales promelas 96 h LC50 19500 - 20700 mg/L Oncorhynchus mykiss 96 h LC50 18 - 20 mL/L Oncorhynchus mykiss 96 h LC50 13500 - 17600 mg/L Lepomis macrochirus 96 h	EC50 = 40000 mg/L 15 min EC50 = 43000 mg/L 5 min		
n-Propyl alcohol	no data available	LC50 = 4480 mg/L Pimephales promelas 96 h	EC50 = 17700 mg/L 5 min EC50 = 45000 mg/L 5 h EC50 = 8686 mg/L 15 min EC50 = 980 mg/L 12 h	EC50= 3642 mg/L 48 h EC50 3339 - 3977 mg/L 48 h	0.25 - 0.34
Propylene glycol	EC50 = 19000 mg/L Pseudokirchneriella subcapitata 96 h	LC50 = 51600 mg/L Oncorhynchus mykiss 96 h LC50 41 - 47 mL/L Oncorhynchus mykiss 96 h LC50 = 51400 mg/L Pimephales promelas 96 h LC50 = 710 mg/L Pimephales promelas 96 h	EC50 = 710 mg/L 30 min	EC50> 10000 mg/L 24 h EC50> 1000 mg/L 48 h	N/A
Carbon dioxide	no data available	no data available	no data available	no data available	N/A

Persistence and Degradability No information available.
Bioaccumulation No information available.
Mobility No information available.

13. DISPOSAL CONSIDERATIONS

Product Disposal Dispose of in accordance with local regulations.
Container Disposal Contents under pressure. Do not puncture. Empty remaining contents. Empty containers should be taken for local recycling, recovery, or waste disposal.

14. TRANSPORT INFORMATION

DOT
Proper Shipping Name DOT
Hazard Class Consumer commodity
Description ORM-D
Consumer commodity ,ORM-D,

TDG
Proper shipping name Aerosols
Hazard Class 2.1
UN-No UN1950
Description AEROSOLS,2.1,UN1950 LTD QTY

ICAO
UN-No UN1950
Proper Shipping Name Aerosols
Hazard Class 2.1
Shipping Description UN1950, AEROSOLS, 2.1, LTD QTY

IATA
UN-No UN1950
Proper Shipping Name Aerosols, flammable
Hazard Class 2.1
ERG Code 10L
Shipping Description UN1950,Aerosols, flammable,2.1, LTD QTY

IMDG/IMO
Proper Shipping Name Aerosols
Hazard Class 2.1
UN-No UN1950
EmS No. F-D, S-U
Shipping Description UN1950, Aerosols,2.1, LTD QTY

15. REGULATORY INFORMATION

Inventories
TSCA Complies
DSL Complies

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Component	CAS-No	Weight %	SARA 313 - Threshold Values
Methyl alcohol	67-56-1	60-100	1.0

SARA 311/312 Hazardous Categorization

Acute Health Hazard	Chronic Health Hazard	Fire Hazard	Sudden Release of Pressure Hazard	Reactive Hazard
Yes	Yes	Yes	Yes	No

CERCLA

Component	Hazardous Substances RQs	CERCLA EHS RQs
Methyl alcohol	5000 lb	Not applicable
n-Propyl alcohol	Not applicable	Not applicable
Propylene glycol	Not applicable	Not applicable
Carbon dioxide	Not applicable	Not applicable

Canada

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS Hazard Class

A Compressed gases B5 Flammable aerosol D2A Very toxic materials D2B Toxic materials

16. OTHER INFORMATION

Prepared By	Adrienne McKee
Supercedes Date	01/06/2011
Issuing Date	09/12/2013
Reason for Revision	No information available.
Glossary	No information available.
List of References.	No information available.

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