

Chromalox[®]

MATERIAL SAFETY DATA SHEET

SERVICE REFERENCE

DIVISION 4	SECTION CXH-A
SALES REFERENCE (Supersedes PF462-1)	PF462-2
161-302441-002	
DATE	APRIL, 2006

DATE	
MANUFACTURER'S NAME Chromalox, Inc.	EMERGENCY TELEPHONE NO. 1-800-UCC-HELP
ADDRESS 103 Gamma Drive, Pittsburgh, PA 15238	

Chromalox urges each customer or recipient of this MSDS to study it carefully to become aware of and understand the hazards associated with the product. The reader should consider consulting reference works or individuals who are experts in ventilation, toxicology and fire prevention, as necessary or appropriate to the use and understand the data contained in this MSDS.

To promote safe handling, each customer or recipient should: (1) notify its employees, agents, contractors and others whom it knows or believes will use this material of the information in this MSDS and any other information regarding hazards or safety; (2) furnish this same information to each of its customers for the product; and (3) request its customers to notify their employees, customers and other users of the product of this information.

I. IDENTIFICATION

PRODUCT NAME:	UCAR FOODFREEZE 35
CHEMICAL NAME:	Propylene Glycol (Phosphate Inhibited)
CHEMICAL FAMILY:	Glycols
FORMULA:	CH ₃ CH (OH) CH ₂ OH
MOLECULAR WEIGHT:	76.1
SYNONYMS:	PM-6552
CAS # AND NAME:	Not Applicable (mixture)

II. PHYSICAL DATA (Determined on Typical Material)

BOILING POINT, 760 mm Hg:	161°C (323°F)	SOLUBILITY IN WATER by wt:	100 AT 20°C
SPECIFIC GRAVITY (H ₂ O = 1):	1.05 AT 20/20°C	APPEARANCE:	Transparent colorless
FREEZING POINT:	Pour Point -51°C (-59°F)	ODOR:	Odorless
VAPOR PRESSURE AT 20°C:	0.66 mmHg	PHYSICAL STATE:	Liquid
EVAPORATION RATE (Butyl Acetate = 1):	0.07	PERCENT VOLATILES (by weight):	98.0
VAPOR DENSITY (AIR = 1):	2.4		

III. INGREDIENTS

%	MATERIAL	CAS#	EXPOSURE LIMIT
95.5	Propylene Glycol	57-55-6	None established
-2	Dipotassium Hydrogen Phosphate	7758-11-4	None established
-2.5	Demineralized Water	7732-18-5	Not Applicable

IV. FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (test method(s)): 210°F
Cleveland Open Cup ASTM D 92
240°F
Tag Closed Cup ASTM D 56

FLAMMABLE LIMITS IN AIR
% by volume: LOWER: 2.6 (Propylene glycol)
UPPER: 12.5 (Propylene glycol)

SPECIAL FIRE FIGHTING PROCEDURES: Use self-contained breathing apparatus and protective clothing.

EXTINGUISHING MEDIA: Apply alcohol-type or all-purpose-type foam by manufacturer's recommended techniques for large fires. Use carbon dioxide or dry chemical media for small fires.

UNUSUAL FIRE AND EXPLOSION HAZARDS: None

V. HEALTH HAZARD DATA

EXPOSURE LIMIT(S): None established by ACGIH or OSHA.

EFFECTS OF SINGLE OVEREXPOSURE:

SWALLOWING: No evidence of harmful effects from available information.

SKIN ABSORPTION: No evidence of harmful effects from available information.

INHALATION: Short-term harmful health effects are not expected from vapor generated at ambient temperature.

SKIN CONTACT: May cause minor irritation with itching and possible slight local redness.

EYE CONTACT: May cause mild discomfort. Excess redness of the conjunctiva may occur.

EFFECTS OF REPEATED OVEREXPOSURE:

No adverse effects anticipated from available information.

MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

A knowledge of the available toxicology information and of the physical and chemical properties of the material suggests that overexposure is unlikely to aggravate existing medical conditions.

SIGNIFICANT LABORATORY DATA WITH POSSIBLE RELEVANCE TO HUMAN HEALTH HAZARD EVALUATION:

In a developmental toxicity study, mice were given dosages of 0 (water control), 0.5, 5.0, 10.0 ml/kg/day of undiluted propylene glycol by gavage over the period of organogenesis. The only material effect was an increase in water consumption at 5.0 and 10.0 ml/kg/day. There was no evidence of teratogenic or embryotoxic effects. The only skeletal variant apparently increased was poorly ossified/unossified cervical centra #1-#4. This however fell within the historical control values.

OTHER EFFECTS OF OVEREXPOSURE:

Skin contact may cause sensitization and an allergic skin reaction in a small proportion of individuals.

EMERGENCY AND FIRST AID PROCEDURES:

SWALLOWING: If patient is fully conscious, give two glasses of water. Induce vomiting. Obtain medical attention without delay.

SKIN: Wash skin with soap and water.

INHALATION: Remove to fresh air.

EYES: Immediately flush eyes with water and continue washing for several minutes. Obtain medical attention if discomfort persists.

NOTES TO PHYSICIAN: There is no specific antidote. Treatment of overexposure should be directed at the control of symptoms and the clinical condition of the patient.

VI. REACTIVITY DATA	
STABILITY:	Stable
CONDITIONS TO AVOID:	None known.
INCOMPATIBILITY (materials to avoid):	None known.
HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS:	Burning can produce oxides of carbon, and trace amounts of oxides of potassium and phosphates. Carbon monoxide is highly toxic if inhaled; carbon dioxide in sufficient concentrations can act as an asphyxiant. Acute overexposure to the products of combustion may result in irritation of the respiratory tract.
HAZARDOUS POLYMERIZATION:	Will Not Occur.
CONDITIONS TO AVOID:	None Known.
VII. SPILL OR LEAK PROCEDURES	
STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:	Small spills can be flushed with large amounts of water; larger spills should be collected for disposal.
WASTE DISPOSAL METHOD:	Incinerate in a furnace where permitted under Federal, State, and local regulations.
VIII. SPECIAL PROTECTION INFORMATION	
RESPIRATORY PROTECTION (specify type):	None expected to be needed.
VENTILATION:	General mechanical room ventilation is satisfactory for normal handling and storage operations.
PROTECTIVE GLOVES:	PVC-coated
EYE PROTECTION:	Safety glasses or Monogoggles
OTHER PROTECTIVE EQUIPMENT:	Eye Bath, Safety Shower
IX. SPECIAL PRECAUTIONS	
PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:	WARNING! Causes eye and skin irritation. May cause allergic skin reaction. Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling. FOR INDUSTRIAL USE ONLY
OTHER PRECAUTIONS:	DISPOSAL: At very low concentrations in water, this product is readily biodegradable in a biological wastewater treatment system. WARNING: Sudden release of hot organic chemical vapors or mists from process equipment operating at elevated temperature and pressure, or sudden ingress of air into vacuum equipment, may result in ignitions without the presence of obvious ignition sources. Published "autoignition" or "ignition" temperature values cannot be treated as safe operating temperatures in chemical processes without analysis of the actual process conditions. Any use of this product in elevated-temperature processes should be thoroughly evaluated to establish and maintain safe operating conditions. Further information is available in a technical bulletin entitled "Ignition Hazards of Organic Chemical Vapors."

X. REGULATORY INFORMATION

STATUS OF SUBSTANCE LISTS:

The concentrations shown are maximum or ceiling levels (weight %) to be used for calculations for regulations. Trade Secrets are indicated by "TS".

FEDERAL EPA

Comprehensive Environmental Response Compensation, and Liability Act of 1980 (CERCLA) requires notification of the National Response Center of release of quantities of Hazardous Substances equal to or greater than the reportable quantities (RQs) in 40 CFR 302.4.

Components present in this product at a level which could require reporting under the statute are: "NONE"

Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III

requires emergency planning based on Threshold Planning Quantities (TPQs) and release reporting based on Reportable Quantities (RQs) in 40 CFR 355 (used for SARA 302, 304, 311 and 312).

Components present in this product at a level which could require reporting under the statute are: "NONE"

Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III

requires submission of annual reports of release of toxic chemicals that appear in 40 CFR 372 (for SARA 313). This information must be included in all MSDSs that are copied and distributed for this material.

Components present in this product at a level which could require reporting under the statute are: "NONE"

Toxic Substances Control Act (TSCA) STATUS:

The ingredients of this product are the TSCA inventory.

STATE RIGHT-TO-KNOW

CALIFORNIA Proposition 65: This product does not contain materials which the State of California has found to cause cancer, birth defects or other reproductive harm

MASSACHUSETTS Right-To-Know, Substances Lists (MSL) Hazardous Substances and Extraordinarily Hazardous Substances on the MSL must be identified when present in products.

Components present in this product at a level which could require reporting under the statute are: "NONE"

PENNSYLVANIA Right-To-Know, Hazardous Substance List Hazardous Substances and Special Hazardous Substances on the list must be identified when present in products.

Components present in this product at a level which could require reporting under the statute are:

HAZARDOUS SUBSTANCES (= > 1%)

CHEMICAL	CAS NUMBER	UPPER BOUND CONCENTRATION %
Propylene Glycol	57-55-6	95.5

CALIFORNIA SCAQMD RULE 443.1 VOC'S:

Voc. 1004.18 G/L; Vapor Pressure 0.66 mmHg at 20°C.

OTHER REGULATORY INFORMATION:

None Known

NOTE:

The opinions expressed herein are those of qualified experts with Union Carbide. We believe that the information contained herein is current as of the date of this Material Safety Data Sheet. Since the use of this information and the conditions of the use of the product are not under the control of Union Carbide, it is the user's obligation to determine conditions of safe use of the product.

REVISED SECTIONS:

This MSDS has been revised to update the information in Section V (HEALTH HAZARD DATA).

WARRANTY AND LIMITATION OF REMEDY AND LIABILITY

Chromalox warrants only that the Products and parts manufactured by Chromalox, when shipped, and the work performed by Chromalox when performed, will meet all applicable specification and other specific product and work requirements (including those of performance), if any, and will be free from defects in material and workmanship under normal conditions of use. All claims for defective or nonconforming (both hereinafter called defective) Products, parts or work under this warranty must be made in writing immediately upon discovery, and in any event, within one (1) year from delivery, provided, however all claims for defective Products and parts must be made in writing no later than eighteen (18) months after shipment by Chromalox. Defective and nonconforming items must be held for Chromalox's inspections and returned to the original f.o.b. point upon request. THE FOREGOING IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES WHATSOEVER, EXPRESS, IMPLIED AND STATUTORY, INCLUDING, WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

Notwithstanding the provisions of this WARRANTY AND LIMITATION Clause, it is specifically understood that Products and parts not manufactured and work not performed by Chromalox are warranted only to the extent and in the manner that the same are warranted to Chromalox by Chromalox's vendors, and then only to the extent that Chromalox is reasonably able to enforce such warranty, it being understood Chromalox shall have no obligation to initiate litigation unless Buyer undertakes to pay all cost and expenses therefor, including but not limited

to attorney's fees, and indemnifies Chromalox against any liability to Chromalox's vendors arising out of such litigation.

Upon Buyer's submission of a claim as provided above and its substantiation, Chromalox shall at its option either (i) repair or replace its Products, parts or work at the original f.o.b. point of delivery or (ii) refund an equitable portion of the purchase price.

THE FOREGOING IS CHROMALOX'S ONLY OBLIGATION AND BUYER'S EXCLUSIVE REMEDY FOR BREACH OF WARRANTY, AND IS BUYER'S EXCLUSIVE REMEDY AGAINST CHROMALOX FOR ALL CLAIMS ARISING HEREUNDER OR RELATING HERETO WHETHER SUCH CLAIMS ARE BASED ON BREACH OF CONTRACT, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORIES, BUYER'S FAILURE TO SUBMIT A CLAIM AS PROVIDED ABOVE SHALL SPECIFICALLY WAIVE ALL CLAIMS FOR DAMAGES OR OTHER RELIEF, INCLUDING BUT NOT LIMITED TO CLAIMS BASED ON LATENT DEFECTS. IN NO EVENT SHALL BUYER BE ENTITLED TO INCIDENTAL OR CONSEQUENTIAL DAMAGES AND BUYER SHALL HOLD CHROMALOX HARMLESS THEREFROM. ANY ACTION BY BUYER ARISING HEREUNDER OR RELATING HERETO, WHETHER BASED ON BREACH OF CONTRACT, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORIES, MUST BE COMMENCED WITHIN ONE (1) YEAR AFTER THE DATE OF SHIPMENT OR IT SHALL BE BARRED.

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Chromalox[®]
PRECISION HEAT AND CONTROL

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