

## CHEMICAL PRODUCT AND COMPANY INFORMATION

**PRODUCT: KLEENFLUSH** 

PRODUCT CODE: 1NCKFS, 2NCKFS, NCKFSKIT, NCKFSPAK

CHEMICAL NAME/FAMILY: Hydrofluorocarbon

**OTHER NAME:** NA

**DISTRIBUTED BY: NATIONAL REFRIGERATION PRODUCTS** 

ADDRESS: 985 Wheeler Way, Langhorne, PA 19047 USA

**INFORMATION:** 800-352-6951 **EMERGENCY:** 800-424-9300 **PREPARER:** Richard Rosen

## **HAZARD IDENTIFICATION**



**CLASSIFICATION:** Gases under pressure, Liquefied Gas

SIGNAL WORD: WARNING

**HAZARD STATEMENT:** Contains gas under pressure, may explode if heated

**SYMBOL:** Gas Cylinder

**PRECAUTIONARY STATEMENT:** STORAGE: Protect from sunlight, store in a well

ventilated place

**OTHER HAZARDS:** SKIN AND EYE CONTACT: Prolonged contact may cause minor skin

irritation.

## **COMPOSITION/ INFORMATION ON INGREDIENTS**

Principal Hazardous Component(s)

Page 1 150 OIL



		OSHA	AGCIH	VAPOR PRES @25			FLASH POINT	% BY
INGREDIENT NAME	CAS #	PEL	TLV	DEG. C.	LEL	UEL	DEG. F.	WEIGHT
Trans, Dichloroethylene	156-60-5	N/E	200ppm	400 mmHg	6.7	18	36 (CC)	30-50
Pentafluorobutane	406-58-6	N/A	N/A	43.3 kPa	N/A	N/A	N/A	30-50
Decafluoropentane (HFC 43-10)	138495-42-8	N/E	N/E	366 mmHg	N/A	N/A	0	<10
1,1,1,2-Tetrafluoroethane	811-97-2	N/A	N/A	96 psia	Nonflammable		None	10-20
Ethyl Alcohol	64-17-5	1000ppm	1000ppm	44 mmHg	3.3	19	54 (TCC)	<5
Carbon Dioxide	124-38-9	5000ppm	5000ppm	1 atm	No	ne	None	<5

N/E is not established

N/A is not available or not applicable

### COMMON NAMES AND SYNONYMS

Hydrofluorocarbon

There are no stabilizers or impurities that contribute to the classification of the material identified in section 2

## FIRST AID MEASURES

**EYES:** Flush with water for at least 15 minutes. Get medical assistance if irritation

persists.

**SKIN:** Wash off in flowing water or shower. Remove contaminated clothing and

wash before reuse.

**INHALATION:** Remove to fresh air. If not breathing, give mouth-to-mouth. If breathing is

difficult, give oxygen. Do not give epinephrine or similar drugs. Call a

physician.

**INGESTION:** Do not induce vomiting. Call a physician immediately.

NOTE TO PHYSICIANS: BECAUSE OF POSSIBLE DISTURBANCES OF CARDIAC RHYTHM, CATECHOLAMINE DRUGS, SUCH AS EPINEPHRINE, SHOULD ONLY BE USED WITH SPECIAL CAUTION IN SITUATIONS OF EMERGENCY LIFE SUPPORT.

## **FIRE FIGHTING MEASURES**

FLASH POINT: None

FLAMMABLE LIMITS IN AIR - % BY VOLUME: NA

Page 2 150 OIL



**EXTINGUISHER MEDIA:** Water fog, dry chemical, carbon dioxide

**SPECIAL FIRE FIGHTING PROCEDURES:** Water may be used to cool closed containers to prevent pressure build-up and possible bursting when exposed to high temperatures. Firemen should wear self-contained, positive pressure, respiratory equipment.

**UNUSUAL FIRE AND EXPLOSION HAZARDS:** Keep Temperature of containers below 110 degrees F to keep from bursting.

## ACCIDENTAL RELEASE MEASURES

### STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

**SMALL SPILLS:** Remove ignition sources. Mop up, wipe up, or soak up

immediately. Use proper protective equipment.

**LARGE SPILLS:** Evacuate area. Remove ignition sources. Contain liquid; transfer

to closed containers; keep out of water supplies. Vapors are

heavier than air and will collect in low areas.

# **HANDLING AND STORAGE**

### PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

Do not store above 110 Deg. F. Do not use or store near any open

flames or ignition sources.

**OTHER PRECAUTIONS:** Do not puncture or incinerate. Exposure to temperatures above

110 Deg. F may cause can to burst with violence and cause injury.

# EXPOSURE CONTROLS/PERSONAL PROTECTION

## **ENGINEERING CONTROLS**

Provide adequate ventilation when working in confined areas

## PERSONAL PROTECTIVE EQUIPMENT

**SKIN PROTECTION:** Solvent resistant gloves - impervious gloves

**EYE PROTECTION:** For normal conditions, wear safety glasses. Where there is reasonable probability of liquid contact, wear chemical safety goggles.

**RESPIRATORY PROTECTION:** NIOSH or Bureau of Mines approved organic vapor-type respirator is required in absence of proper environmental control.

Page 3 150 OIL



# **ADDITIONAL RECOMMENDATIONS:**

Where contact with liquid is likely, such as in a spill or leak, impervious boots and clothing should be worn.

# **EXPOSURE LIMITS**

	OSHA	AGCIH	% BY
INGREDIENT NAME	PEL	TLV	WEIGHT
Trans, Dichloroethylene	N/E	200ppm	30-50
Pentafluorobutane	N/A	N/A	30-50
Decafluoropentane	NI/E	NI/E	-10
(HFC 43-10)	N/E	N/E	<10
1,1,1,2-Tetrafluoroethane	N/A	N/A	10-20
Ethyl Alcohol	1000ppm	1000ppm	<5
Carbon Dioxide	5000ppm	5000ppm	<5

N/E is not established

N/A is not available or not applicable

# PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Clear liquid ODOR: Petroleum odor **ODOR THRESHOLD:** Not Determined

PH: Neutral

Not Determined **MELTING/FREEZING POINT:** 

104 F **BOILING POINT:** 

FLASH POINT: Not Determined

**EVAPORATION RATE:** >1

FLAMMABILITY: Not applicable LEL/UEL: Not applicable Not Determined VAPOR PRESSURE: **VAPOR DENSITY:** >1 (air=1)

Not Determined

**RELATIVE DENSITY:** 

Negligible **SOLUBILITY:** 

PARTITION COEFFICIENT Not Determined n-Octanol/water: Not Determined **AUTO IGNITION TEMPERATURE:** Not Determined DECOMPOSITION TEMPERATURE: Not Determined VISCOSITY: Not Determined

# STABILITY AND REACTIVITY

Page 4 150 OIL



**STABILITY**: Stable

HAZARDOUS POLYMERIZATION: Will not occur

**CONDITIONS TO AVOID:** Avoid any excessive heat, ignition sources, open flames, or other high temperatures which induce thermal decomposition.

**INCOMPATIBILITY:** Chemically Active Metals. Oxidizing agents. Sodium, Potassium, Calcium, etc. Alkali or alkaline earth metals. Powdered Aluminum, Zinc, Magnesium, Beryllium, etc.

**HAZARDOUS DECOMPOSITION OR BYPRODUCTS:** Hydrofluoric acid, hydrochloric acid, possibly cabonyl fluoride.

## **TOXILOGICAL INFORMATION**

#### SIGNS AND SYMPTOMS OF EXPOSURE:

**EYE CONTACT:** Contact with liquid or mist may cause irritation. Vapors may irritate eyes.

**SKIN CONTACT:** Prolonged contact may cause irritation, defatting of skin.

**INHALATION:** Overexposure to vapor may cause dizziness, loss of concentration and

irritation. With high exposure levels, effects can include central nervous system (CNS), depression (intoxication) and cardiac arrhythmia. Product vapors displace air and can cause suffocation especially in confined space.

INTENTIONAL MISUSE BY DELIBERATELY CONCENTRATING AND INHALING THE CONTENTS OF THE CAN MAY BE HARMFUL OR FATAL.

**INGESTION:** Aspiration may cause rapid absorption through the lungs, which may result in

systemic effects.

IMPORTANT NOTICE: REPEATED AND PROLONGED OVEREXPOSURE TO SOLVENTS MAY LEAD TO PERMANENT BRAIN AND NERVOUS SYSTEM DAMAGE. EYE WATERING, HEADACHES, NAUSEA, DIZZINESS AND LOSS OF COORDINATION ARE SIGNS THAT SOLVENT LEVELS ARE TOO HIGH. INTENTIONAL MISUSE BY DELIBERATELY CONCENTRATING AND INHALING THE CONTENTS MAY BE HARMFUL OR FATAL.

CARCINOGENICITY: NTP IARC MONOGRAPHS

NO NO

## MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: N/A

Page 5 150 OIL



## **ECOLOGICAL INFORMATION**

No data available

# **DOSPOSAL CONSIDERATIONS**

**WASTE DISPOSAL METHOD:** Dispose of in accordance with Federal, State, and Local regulations. Do not incinerate or burn empty containers.

## **TRANSPORATION INFORMATION**

### TRANSPORTATION INFORMATION – DOMESTIC GROUND

This material qualifies for the Limited Quantity exception per 49CFR172.101 (Aerosol, Non-Flammable 2.2) and is packaged and shipped according to the Limited Quantity exception per 49 CFR 173.306.

## TRANSPORTATION INFORMATION – DOMESTIC AIR

Shipping Name: Aerosols, Non-Flammable

Hazard Class:

UN Number:

Packing Group:

Hazard Label:

2.2

N/A

2.2

Carton Marking: Limited Quantity-Air

## REGULATORY INFORMATION

SUBJECT TO SECTION 313 OF SARA TITLE III: NO

ALL CHEMICAL COMPONENTS ARE LISTED IN THE TSCA INVENTORY.

CHEMICAL LISTED AS CARCINOGEN OR POTENTIAL CARCINOGEN: NATIONAL

TOXICOLOGY PROGRAM: No I.A.R.C. MONOGRAPHS: No

OSHA: No

OSHA PERMISSIBLE EXPOSURE LIMIT: See Hazardous Ingredients Table AGCIH THRESHOLD LIMIT VALUE: See Hazardous Ingredients Table

OTHER EXPOSURE LIMITED USED: None

Page 6 150 OIL



# **OTHER INFORMATION**

HMIS: H F R 1 0 1

# **DISCLAIMER**

INFORMATION AND RECOMMENDATIONS CONTAINED HEREIN ARE BELIEVED TO BE ACCURATE AT THE TIME OF PREPARATION. NO WARRANTY IS MADE CONCERNING THE ACCURACY AND NO LIABILITY SHALL BE MADE FOR CLAIMS FOR USE OR RELIANCE OF THE RECOMMENDATIONS CONTAINED HEREIN

Page 7 150 OIL