

# Safety Data Sheet

## ECO FREEZE ECO 22

### SECTION 1: PRODUCT INFORMATION

**Substance** : Hydrocarbon mixture

**Chemical family**: hydrocarbons , Aliphatic

### SECTION 2: COMPOSITION INFORMATION ON INGREDIENTS

Dangerous engredients:

N° CAS	N° EINECS	DESCRIPTION	Symbols	R-sentences	%
75-28-5	200-857-2	Tri-methylmethane	F+	12	< 25
74-98-6	200-827-9	Dimethylmethane	F+	12	> 75

### SECTION 3: HAZARD IDENTIFICATION

NFPA Ratings (scale 0-4) Health=2 Fire=4 Reactivity=0

Emergency overview:

**Color** : colorless

**Physical forms**: gas

**Odor**: petroleum odor

**Major health hazards**: Respiratory tract irritation, central nervous system, depression, suffocation, difficulty breathing

**Potential health effects**: inhalation:

Short term exposure: irritation, nausea, vomiting, headache, symptoms of drunkenness, suffocation, convulsions, coma.

**Long term exposure**: no information on significant adverse effects

**Skin contact**:

short term exposure: blisters, frostbite

long term exposure; no information on significant adverse effects

**Eye contact**:

Short term exposure: frostbite, blurred vision

Long term exposure: no info is available.

**Ingestion**:

Short term exposure: frostbite

Long term exposure: no info is available

### SECTION 4 FIRST AID MEASURES

**Inhalation** : If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. If breathing is difficult, oxygen should be administered by qualified personnel . get immediate medical attention.

**skin contact**: If frostbite or freezing occur, immediately flush with plenty of lukewarm water (41-46C, 105-115F) Do not use hot water if warm water is not available, gently wrap effected parts on blankets. Get immediate medical attention.

**Eye contact** : contact with liquid ; immediately flush eyes with plenty of water for at least 15minutes. Then get immediate medical attention.

**Ingestion**: if a large amount is swallowed, get medical attention

**Note to physician**: For inhalation, consider oxygen

## SECTION 5 FIRE FIGHTING MEASURES

**Fire and explosion hazards:** severe fire hazard. Vapor/air mixtures are explosive. The vapor is heavier than air. Vapors or gasses may ignite at distant ignition sources and flash back.

**Extinguishing media:** carbon dioxide, regular dry chemical

**Fire fighting:** move container from fire area if it can be done without risk. Cool containers with water spray until well after the fire is out. Stay away from the ends of tanks. For fires in cargo or storage area. Cool containers with water from unmanned hose holder or monitor nozzles until well after fire is out. If this is impossible then take the following precautions: keep unnecessary people away, isolate hazard area and deny entry. Let the fire burn. Withdraw immediately in case of rising sound from venting safety device or any discoloration of tanks due to fire. For tank, rail car or tank truck, stop leak if possible without personal risk. Let burn unless leak can be stopped immediately. For smaller tanks or cylinders, extinguish and isolate from other flammables. Evacuation radius: 800 Meters (1/2 mile). Stop flow of gas.

**Flashpoint :** -101°C (-150°C)

**Lower flammable limit:** 2.1%

**Upper flammable limit:** 9.3%

**Autoignition :** 460°C (860°F)

## SECTION 6 ACCIDENTAL RELEASE MEASURES

### **Occupational release:**

Avoid heat, flames, sparks and other sources of ignition. Do not touch spilled material. Stop leak if possible without personal risk. Reduce vapors with water spray. Keep unnecessary people away, isolate hazard area and deny entry. Remove sources of ignition. Ventilate closed spaces before entering.

## SECTION 7 HANDLING AND STORAGE

### **Storage:**

Store and handle in accordance with all current regulation and standards. Grounding and bonding required.

## SECTION 8 EXPOSURE CONTROLS, PERSONAL PROTECTION

Liquified petroleum gas (Lpg)

1000ppm (1800mg/m<sup>3</sup>) Osha twa

1000ppm Acgih twa

1000ppm (1800mg/m<sup>3</sup>) NIOSH recommended twa 10 hours

**Ventilation:** Ventilation equipment should be explosion-resistant if explosive concentrations of material are present. Provide local exhaust ventilation system. Ensure compliance with applicable exposure limits.

**Eye protection** For the gas: eye protection not required, but recommended. For the liquid: wear splash resistant safety goggles. Contact lenses should not be worn. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

**Clothing** for the gas: protective clothing is not required. For the liquid: wear appropriate protective, cold insulating clothing.

**Gloves:** wear insulated gloves

**Respirators:** the following respirators and maximum use concentrations are drawn from niosh and/or osha.

Any supplied – air respirator. Any self-contained breathing apparatus with full facepiece.

Escape: any appropriate escape-type, self-contained breathing apparatus. For unknown concentrations or immediately dangerous to life or health - any supplied- air respirator with full facepiece and operated in a pressure demand or other positive pressure mode in combination with a separate escape supply. Any self-contained breathing apparatus with a full facepiece.

## SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Physical state: gas

Color: colorless

Odor: petroleum odor

Molecular weight: 46.2 gr/mol

Molecular formula: C<sub>3</sub>H<sub>8</sub>/C<sub>4</sub>H<sub>10</sub>

Boiling point: -42°C / 43.6°F

Vapor pressure: 740 Kpa @ 20°C

Vapor density (air=1) : 1.8

Specific gravity (water=1) : 0.549

Water solubility : slightly soluble

Volatility : not applicable

odor threshold: not available

evaporation rate: not applicable

viscosity : not applicable

Coefficient of water/oil distribution: not applicable

Solvent solubility :

Soluble in alcohol, ether, chloroform

## SECTION 10 STABILITY AND REACTIVITY

**Reactivity**: stable at normal temperatures and pressure

**Conditions to avoid** : avoid heat, flames, sparks and other sources of ignition. Minimize contact with material. Containers may rupture or explode if exposed to heat.

**Incompatibilities**: oxidizing materials

**Hazardous decomposition**: thermal decomposition products : oxides of carbon

**Polymerization**: will not polymerize

## SECTION 11 TOXICOLOGICAL INFORMATION

**Toxicity data**: 87pph/15 min. inhalation- Rat Lc50

**Local effects**: irritant inhalation

**Acute toxicity level**: relatively non-toxic inhalation

**Target organs**: central nervous system

**Additional data**: stimulants such as epinephrine may induce ventricular fibrillation.

## SECTION 12 ECOLOGICAL INFORMATION

Not available / not applicable

## SECTION 13 DISPOSAL CONSIDERATION

Dispose in accordance with all applicable regulations.

## SECTION 14 TRANSPORT INFORMATION

**Proper shipping name**: Hydrocarbon gas mixture, liquified

### **ADR**

**UN NUMBER**: UN 1965

**UN PROPER SHIPPING NAME**: Hydrocarbon gas mixture, liquified.

**HAZARD CLASS** : 2

**LABELS**: 2.1

HAZARD N° ADR: 23

ENVIROMENTAL HAZARDS: not applicable

**RID**

UN NUMBER: UN 1965

UN PROPER SHIIPING NAME: Hydrocarbon gas mixture, liquified.

HAZARD CLASS : 2

LABEL 2.1

ENVIROMENTAL HAZARDS: not applicable

**IMDG**

UN NUMBER: UN1965

UN PROPER SHIPPING NAME: Hydrocarbon gas mixture, liquified.

HAZARD CLASS: 2.1

LABELS: 2.1

ENVIROMENTAL HAZARDS: not applicable

**IATA**

UN NUMBER: UN1965

PROPER SHIPPING NAME: Hydrocarbon gas mixture, liquified.

HAZARD CLASS: 2.1

LABELS: 2.1

ENVIROMENTAL HAZARDS: not applicable

QUANTITY LIMITATIONS:

PASSENGER AIRCRAFT : Forbidden

CARGO AIRCRAFT ONLY: Allowed (150KG)

**SECTION 15 EC RISK AND SAFETY PHRASES**

R12	EXTREMELY FLAMMABLE
S2	KEEP OUT OF REACH OF CHILDREN
S9	KEEP CONTAINER IN A WELL VENTILATED PLACE
S16	KEEP AWAY FROM SOURCES OF IGNITION – NO SMOKING

**SECTION 16 OTHER INFORMATION**

The data in this material safety data sheet related only to the specific material designated herein and does not relate to use in combination with any other material or in any process.

