



BEST INC. LIMITED

ROOMS 1318-20 13/F HOLLYWOOD PLAZA, 610 NATHAN ROAD, MONGKOK, KOWLOON, HONG KONG

MATERIAL SAFETY DATA SHEET

R404A

To: DAYAN REFRIGERATION SUPPLIERS LTD.
HOLON POB 1829-ZIP CODE 5811702- ISRAEL

Invoice No.: 20171211

Date: DEC.28, 2017

PO NO: PO702634

By Vessel: YM WINDOW 010W

Sales Contract No.: BEST20171211

From: NINGBO, CHINA

To: ASHDOD, ISRAEL

Composition / information on ingredients

R404A pressurised liquefied gas (mixture)

CAS No.150743-07-0

Chemical characterization

Ingredient(s) CAS No. EEC No. % (w/w) Symbol R phrase

1,1,1-Trifluoroethane (R143a) 420-46-2 206-996-5 52 F+ R12 Pentafluoroethane (R125) 354-33-6 206-557-8 44

1,1,1,2-tetrafluoroethane (R134a) 811-97-2 212-377-0 4

Hazards identification

Advice on critical hazards to man and the environment:

Low acute toxicity. High exposures may cause an abnormal heart rhythm and prove suddenly fatal. Very high atmospheric concentrations may cause anaesthetic effects and asphyxiation.

Liquid splashes or spray may cause freeze burns to skin and eyes.

First aid measures

The first aid advice given for skin contact, eye contact and ingestion is applicable following exposures to the liquid or spray. See also section 11.

If inhaled: Remove patient from exposure, keep warm and at rest. Administer oxygen if necessary. Apply artificial respiration if breathing has ceased or shows signs of failing. In the event of cardiac arrest apply external cardiac massage. Obtain immediate medical attention.

On skin contact: Thaw affected areas with water. Remove contaminated clothing. Caution: clothing may adhere to the skin in the case of freeze burns. After contact with skin, wash immediately with plenty of warm water. If irritation or blistering occur obtain medical attention

On contact with eyes: Immediately irrigate with eyewash solution or clean water, holding the eyelids apart, for at least 10 minutes. Obtain immediate medical attention.

On ingestion: Unlikely route of exposure. Do not induce vomiting. Provided the patient is conscious, wash out mouth with water and give 200-300 ml (half a pint) of water to drink. Obtain immediate medical attention.

Further medical treatment

Symptomatic treatment and supportive therapy as indicated. Adrenaline and similar



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sympathomimetic drugs should be avoided following exposure as cardiac arrhythmia may result with subsequent cardiac arrest.

Fire fighting measures

This refrigerant is not flammable in air under ambient conditions of temperature and pressure. Certain mixtures of this refrigerant and air when under pressure may be flammable. Mixtures of this refrigerant and air under pressure should be avoided. Certain mixtures of HFCs and chlorine may be flammable or reactive under certain conditions. Thermal decomposition will evolve very toxic and corrosive vapours (hydrogen fluoride). Containers may burst if overheated.

Suitable extinguishing media: As appropriate for surrounding fire. Water spray should be used to cool containers.

Fire fighting protective A self contained breathing apparatus and full protective clothing equipment: must be worn in fire conditions. See also section 8.

Accidental release measures

Ensure suitable personal protection (including respiratory protection) during removal of spillages. See also section 8.

Provided it is safe to do so, isolate the source of the leak. Allow small spillages to evaporate provided there is adequate ventilation.

Large spillages: ventilate area. Contain spillages with sand, earth or any suitable adsorbent material. Prevent liquid from entering drains, sewers, basements and workpits since the vapour may create a suffocating atmosphere.

Handling and storage

Handling: Avoid inhalation of high concentrations of vapours. Atmospheric levels should be controlled in compliance with the occupational exposure limit. Atmospheric concentrations well below the occupational exposure limit can be achieved by good occupational hygiene practice. The vapour is heavier than air, high concentrations may be produced at low levels where general ventilation is poor, in such cases provide adequate ventilation or wear suitable respiratory protective equipment with positive air supply. Avoid contact with naked flames and hot surfaces as corrosive and very toxic decomposition products can be formed. Avoid contact between the liquid and skin and eyes. For correct refrigerant composition, systems should be charged using the liquid phase and not the vapour phase.

Process hazards Liquid refrigerant transfers between refrigerant containers and to and from system can result in static generation. Ensure adequate earthing. Certain mixtures of HFCs and chlorine may be flammable or reactive under certain conditions.

Storage: Keep in a well ventilated place. Keep in a cool place away from fire risk, direct sunlight and all sources of heat such as electric and steam radiators. Avoid storing near to the intake of air conditioning units, boiler units and open drains. Cylinders and drums: keep container dry. Storing temperature (Deg C): <45

Exposure controls / personal protection

Wear suitable protective clothing, gloves and eye/ face protection. Wear thermal insulating gloves when handling liquefied gases. In cases of insufficient ventilation, where exposure to high concentrations of vapour is possible, suitable respiratory protective equipment with positive air supply should be used.



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LTEL 8hr STEL STEL Notes TWA ppm mg/m³ mg/m³

1,1,1-Trifluoroethane (R143a)

Pentafluoroethane (R 125)

1,1,1,2-tetrafluoroethane (R134a)

1000 ---COM 1000 ---COM 1000 4240 --OES

Physical and chemical properties

Form: Pressurized liquefied gas Colour: Colourless Odour: Slight ethereal Change of physical state: Boiling point/ boiling range: -47.2 to -46.4 ° C Vapour pressure: (20° C) 8270mm Hg Density: (20° C) 1.06 g/ml Solubility in water: Insoluble Solubility (other) Soluble in: chlorinated solvents, alcohols, esters Vapour density (air=1) 3.42 approx, at bubble point temperature

Stability and reactivity

Hazardous reactions with: Certain mixtures of HFCs and chlorine may be flammable or reactive under certain conditions. Incompatible materials: finely divided metals, magnesium and alloys containing more than 2% magnesium. Can react violently if in contact alkali metals alkaline earth metals– sodium, potassium, barium

Hazardous decomposition Hydrogen fluoride by thermal decomposition and hydrolysis products **Toxicological information**

Inhalation	High exposures may cause an abnormal heart rhythm and prove suddenly fatal. Very high atmospheric concentrations may cause anaesthetic effects and asphyxiation.
Skin contact	Liquid splashes or spray may cause freeze burns. Unlikely to be hazardous by skin absorption.
Eye contact	Liquid splashes or spray may cause freeze burns.
Ingestion	Highly unlikely – but should this occur freeze burns will result
Long term exposure	R143a: An inhalation study in animals has shown that repeated exposures produce no significant effects (40,000ppm in rats) R125: An inhalation study in animals has shown that repeated exposures produce no significant effects (50,000ppm in rats) R134a: A lifetime inhalation study in rats has shown that exposure to 50,000ppm resulted in benign tumours of the testis. The increased tumour incidence was observed only after prolonged exposure to high levels, and is considered not to be of relevance to humans occupationally exposed to R 134a at or below the occupational exposure limit.

Transportation Information:

CLASS: 2.2

UN NO.: 3337

For and on behalf of
BEST INC. LIMITED
卓越興業有限公司

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Authorized Signature(s)

