



COSHH ASSESSMENT

REFRIGERANTS

R12, R22, R502, R 404A, R507, R134a, R125, R407C, R401A, R408A, R409A, 410A

ISCEON 89, 49 (R413A), 69L (R403B), 69S (R403A), 59 (R417A).

Health Hazards :

LIQUID CAN CAUSE COLD BURNS TO SKIN AND EYES
 HIGH CONCENTRATIONS OF GAS MAY CAUSE HEADACHES, DIZZINESS OR CARDIAC SENSITISATION
 VERY HIGH CONCENTRATIONS CAN ASPHYXIATE
 HEATING WILL CAUSE A RISE IN PRESSURE WITH THE RISK OF BURSTING
 ON COMBUSTION TOXIC GASES ARE RELEASED

Department/ Work area: Various

Approved use: As a Refrigerant in a closed system

Duration of use: N/A

Who is exposed and when? Handlers during transport, charging, decanting and service work

No of People exposed? Dependant on type of work

How is/could anyone be exposed?

Splashes to the hands, body and face are possible during charging, decanting or when opening up a system during service work. High concentrations of gas in a confined area or catastrophic leak situation can exclude enough oxygen to be an asphyxiation hazard particularly at low level as refrigerant is heavier than air. Breathing high levels of gas can lead to cardiac sensitisation.

Risk assessment: **Low Risk** Providing that the following controls are followed

Control measures	Yes	No	Description/approved type
Process enclosure	Y		The product will be transported, used and transferred in a sealed system
Local exhaust ventilation		N	
Other ventilation	Y		Ensure good natural or forced general ventilation during handling
Method of work	Y		Use appropriate charging lines when charging. Use appropriate recovery pumps and recovery cylinders when recovering.
Personal protective equipment	Y		For charging and breaking into a system Goggles to BSEN 166-349B Gloves - Nitrile impervious gloves Approved Pattern Overalls to be worn
Respirators		N	
Welfare	Y		Hand washing facilities must be available Eye wash must be available
Hygiene	Y		Do not smoke, eat or drink whilst handling
Other			N/A

Transport:

In manufacturers/suppliers cylinders with valves and caps tightly closed.
 The Transport of dangerous goods regulations may apply, dependant on quantity carried. Product Classed as NON - FLAMMABLE COMPRESSED GAS

Storage: Keep cylinders:-

Upright but secure to prevent from toppling.
 Tightly closed and dry
 In a cool well ventilated area, at temperatures not exceeding 45°C
 Away from sources of heat
 Away from sources of ignition
Storage areas: must be secure and equipped with ventilation at low level

Spillage: - Leaks from cylinders or plant:-

Avoid contact with skin and eyes
 Shut off at source if possible
 Ventilate area
 Heavy vapours. Shut off low level openings to prevent the product from entering cellars, basements or pits
 Prevent product from entering drains by bunding. Allow residual product to evaporate.
 Do not enter a poorly ventilated area where a leak is suspected as BA or portable forced ventilation may be required.

First aid:

Inhalation - remove patient to fresh air and rest. If breathing stops give artificial respiration and call for medical assistance.

Skin contact - Rinse with plenty of tepid water. Remove contaminated clothing. If it sticks do not pull it off. Consult a doctor immediately.

Eye contact - Irrigate with water for at least 15 minutes. Get prompt medical attention.



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Fire fighting measures:

All extinguishing media are suitable.
Keep cylinders cool if exposed to fire by spraying with water.

Disposal of packaging and unused substance:

Do not release refrigerant to atmosphere
Waste product must be disposed of by special means and classed as controlled waste.
Empty containers must be returned to the supplier or manufacturer.
Unused product may be returned to the manufacturer or stored long term as above

Manufacturer/supplier: There are a number of producers and suppliers of refrigerants, four main ones are listed below:-

- | | |
|-----------------------------------------------------------------------------------------|----------------------------------------------|
| 1. ICI KLEA Room A121. PO Box 14, The Heath, Runcorn, Cheshire WA7 4QG. Tel 0800 262221 | Emergency Tel 01928 572000 |
| 2. Isceon Distribution Services. PO Box 46, Avonmouth, Bristol BS11 9YF | Tel 0117 948 4242 Emergency Tel 0117 9381289 |
| 3. HRP Refrigerants Ltd. Gellihirion Ind Est, Pontypridd CF37 55X | Tel 0800 134404 Emergency Tel 0378 215502 |
| 4. BOC Priestley Road, Worsley, Manchester M28 2UT | Tel 0800 020800 Emergency Tel 0800 111333 |

Substance: See relevant MSDS

Data sheet ref: N/A

Hazardous components: None

Risk No and phrase: No R phrases

Safety No and phrase:
S24/25: Avoid contact with skin or eyes,
S41: In case of fire and/or explosion do not breathe fumes.
S59: Refer to manufacturer/supplier for information on recovery/recycling

EEC Labelling Classification :
Very toxic () Toxic () Irritant () Harmful () Corrosive () Flammable ()

OEL:MEL or OES vapour 1000 ppm long term
1250 ppm short term (15 minutes)

Any other comments:

Assessor:

Date:

Date for review: