



Be Vigilant When Purchasing Refrigerants

The South African market has seen an influx in the variety of available sources for the supply of disposable refrigerant cylinders. Quality and value for money should remain key considerations when purchasing refrigerant in disposable cylinders. The criteria below can be used as a guide to ensure peace of mind and ultimate satisfaction with product and cylinders purchased.

DISPOSABLE PACKAGING

1 BRANDING

Always purchase refrigerant that is in a branded disposable cylinder, because generic disposable cylinders are difficult to trace back to the source of manufacture. Branded disposables will carry either the manufacturer's or the importer's details

2 D.O.T. 39

This is the required specification that appears in SANS 10019 for disposable cylinders entering South Africa and should appear on all refrigerant disposable cylinders.

3 PRODUCT BATCH NUMBER

Ensure the batch number of the product appears on the disposable; this batch number is specific to the batch of refrigerant in the disposable cylinder and is used as a reference between the disposable cylinder and the Certificate of Analysis. This batch number also appears on our box

4 Manufacturing Codes and Disposable Batch Number

The code starts with an M and is followed by 4 digits, which is the disposable cylinder manufacturer's code. This confirms full compliance with D.O.T. 39. The batch number printed on the shoulder of the disposable allows traceability of the disposable cylinder.



Packaging Details

Labelling legislation requires all labelling on packages to contain:

Identity of product

- Name and address of local manufacturer, packer, distributor or importer

Net weight of product

Warnings and usage directions, in plain and understandable language Net Weight versus Gross Weight The weight of the product stipulated on the packaging is the net weight and not the gross weight (which would include the packaging)



Samples of generic disposables which do not comply with local legislation



Documentation:

Safety Data Sheet (SDS)

It is a requirement that you have in your possession a Safety Data Sheet when using refrigerants. Ensure that the SDS coincides with the product being purchased and that the branding is the same. Should you change suppliers, or your supplier changes suppliers, you should request a new SDS as an SDS from one supplier cannot be used for product from another supplier

Certificate of Analysis (COA)

A COA should be requested for every purchase of refrigerants so as to check that the purity of the product conforms to AHRI 700 Standards.

Make sure that the batch number on the COA is the same as the batch number on the disposable cylinder.

We have come across a number of COAs being distributed in the market where the batch number on the COA does not match the batch number on the disposable cylinder. In some instances the results on the COA itself actually shows the product failing the requirements, yet the product and COA are still being distributed!

For this reason we feel it is necessary to list the testing criteria of refrigerants according to AHRI 700 Standards which can be used for comparison.

Please note that the below criteria are for the following refrigerants: R22, R134a, R404A, R406A, R407C, R408A, R410A and R507.

AHRI 700 Standard Requirements for the Purity of Refrigerants

The tables alongside show the blend ratio of the various components in the refrigerant. The tolerance level is only 2%



Refrigerant Product	Refrigerant Components	
	Prod. Blend	Nominal Comp.
	R22	R22
R134a	R134a	>=99.50%
R404A	R125	44%
	R143a	52%
	R134a	4%
R406A	R22	55%
	R142b	41%
	R600a	4%

Refrigerant Product	Refrigerant Components	
	Prod. Blend	Nominal Comp.
	R407C	R32
R125		25%
R134a		52%
R408A	R22	47%
	R143a	46%
	R125	7%
R410A	R32	50%
	R125	50%
R507	R125	50%
	R143a	50%

The table below gives the maximum allowances for the characteristics allowed in the above refrigerants and should appear on the COA.



Characteristics	Maximum Allowance
Water content ppm by weight	10
Chloride ppm – level for pass or fail	±3
Acidity ppm by weight (as HCl)	1.0
High boiling residue % by volume or weight	0.01
Particulates/solids	Visually clean to pass
All other volatile impurities	0.5
Air/other non-condensable % by volume @ 25°C	1.5



We encourage you to be vigilant when purchasing your refrigerant by challenging your current supplier on the above criteria.

