



System Certifications: 14001/9001/18001

DAIKIN ARKEMA
REFRIGERANTS ASIA LIMITED

ISO 14001 : 2004standard ISO 9001 : 2008standard OHSAS 18001 : 2007standard

 **DNV BUSINESS ASSURANCE**
MANAGEMENT SYSTEM CERTIFICATE

DNV Business Assurance
Post Office Box No. 14001/2014/04/02/04
Post Office Code No. 04001/2014/04/02/04

This is a single site

Arkema Daluis Advanced Phorochemicals (Changshu) Co., Ltd.
No. 11 Changshu Road, Puzhuo Industrial Zone of Changshu, Jiangsu Province, China.
Changshu, Jiangsu 215125, P.R. China

ISO 14001 (2004)

This Certificate is valid for the following product or service range:
**Manufacture and Delivery of Perfluorobutane (PF2B),
Manufacture and Delivery of Perfluorobutane (PF2B),
Manufacture and Delivery of Perfluorobutane (PF2B)**

Product Name:
Perfluorobutane
Municipality, Province, P. R. China:
Wuxi, Jiangsu, P. R. China

No. of Certificates:
01/2011
Issue Date:
15/09/2011

The Management System is certified to the following Standard:
ISO 14001:2004

Let us inform you of our services and the conditions, upon which the certificate is valid.
We are pleased to be your partner in the development of your business.

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No. 11 Changshu Road, Puzhuo Industrial Zone of Changshu, Jiangsu Province, China.
Changshu, Jiangsu 215125, P.R. China

ISO 9001 (2008)

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Manufacture and Delivery of Perfluorobutane (PF2B)**

Product Name:
Perfluorobutane
Municipality, Province, P. R. China:
Wuxi, Jiangsu, P. R. China

No. of Certificates:
01/2011
Issue Date:
15/09/2011

The Management System is certified to the following Standard:
ISO 9001:2008

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No. 11 Changshu Road, Puzhuo Industrial Zone of Changshu, Jiangsu Province, China.
Changshu, Jiangsu 215125, P.R. China

ISO 18001 (2007)

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Manufacture and Delivery of Perfluorobutane (PF2B),
Manufacture and Delivery of Perfluorobutane (PF2B)**

Product Name:
Perfluorobutane
Municipality, Province, P. R. China:
Wuxi, Jiangsu, P. R. China

No. of Certificates:
01/2011
Issue Date:
15/09/2011

The Management System is certified to the following Standard:
ISO 18001:2007

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Daikin Arkema product specifications

Indicators	Unit	R404A	R407C	R410A
Appearance		No Color	No Color	No Color
Smell		No Odor	No Odor	No Odor
Nominal Components content	% by weight	R-125/143a/134a 44/52/4	R-32/125/134a 23/25/52	R-32/125 49.5/50.5
Allowable Components content	% by weight	R125:44 ± 1.0 R143a:52.0 ± 1.0 R134a:4.0 ± 1.0	R32:23 ± 1 R125:25 ± 1 R134a:52 ± 1	R32:49.5 ± 1 R125:50.5 ± 1
Purity	% by weight	≥ 99.8	≥ 99.8	≥ 99.8
Chlorinated impurity	ppm by weight	≤ 2800	≤ 1700	≤ 2800
Moisture	ppm by weight	≤ 15	≤ 15	≤ 15
High boiling residue	ppm by weight	≤ 30	≤ 30	≤ 30
Acidity	ppm by weight (as HCl)	≤ 1.0	≤ 1.0	≤ 1.0
Non-condensable gas	% by volume @25°C	≤ 1.0	≤ 1.0	≤ 1.0