

HS/PD/1022/1671

21st October 2020

Dear Esteemed Business Partners,

Refrigerant Properties and Handling of Daikin R32 Model

First and foremost, we would like to thank you for your continuous support.

2. With reference to the above matter, we would like to inform that the refrigerant properties of R32 are summarized in the table below:

	R32 Refrigerant
Ozone depletion potential (ODP)	0
Global warming potential (GWP) *1	675
Flammability (ISO 817:2014)	Slightly flammability (A2L)
Comparison with R410A	Same pressure; Service tools can be shared
R32 combustion concentration-lower limit*2	13.3%
R32 combustion concentration-Upper limit*2	29.3%
Min Ignition Energy (Unit: mJ)*3	30 - 100

*1: GWP = Global warming potential; values are specified in IPCC 4th Assessment Report.

*2: If ignition energy is applied while in the gas concentration range (between upper and lower limit), R32 may burn. However, this gas concentration condition is a level at which oxygen deficiency can occur (oxygen concentration of 18% or below) and thus is not an environment in which people generally work.

*3: With static electricity or electronic lighters (energy: several mJ), minimum ignition energy is not attained.

3. Besides that, R32 combustion does not occur under normal usage conditions for air-conditioning equipment or in a normal work environment. However, it is important to keep away ignition source (open flame) so as to prevent generating R32 combustion concentration conditions, hence reducing the risk of combustion occurrence. To ensure that the following instructions are strictly observed when handling of Daikin R32 models:

- a) The same applies to the case of brazing, ensure appropriate ventilation to prevent oxygen deficiency and R32 combustion.
Check that there are no dangerous or combustible items nearby, and ensure a fire extinguisher is close at hand.
- b) If the gas comes into contact with open flame or metal (or other material) heated to over 300 to 400°C, it will cause thermal decomposition, possibly producing toxic gas. Do not allow the gas to come into contact with such objects.
(Toxic gas generation is the same with R410A, R22, etc., and not limited to R32.)
- c) Keep a sufficient distance away from causes of fire (ignition sources) such as gas burning equipment and electric heaters in places where installation, repairs, or similar work on air-conditioning equipment is performed.

DAIKIN MALAYSIA SALES & SERVICE SDN. BHD.

198301014326 (109719-M)

Head Office : Lot 9, Jalan 13/6, Seksyen 13, 46200 Petaling Jaya, Selangor Darul Ehsan, Malaysia. • **Tel:** +603-7953 8388 • **Fax:** +603-7956 4371 • **Call Centre** : 1300-88-DAIKIN (324546)

• Johor : +607-557 7788	Fax: +607-558 8608	• Negeri Sembilan : +606-768 8969	Fax: +606-768 8696	• Sabah (KK) : +6088-722 194	Fax: +6088-722 196
• Kedah : +604-730 5670	Fax: +604-730 9164	• Pahang : +609-567 6778	Fax: +609-567 9778	• Sabah (Sandakan) : +6089-464 080	Fax: +6089-464 780
• Kelantan : +609-747 4578	Fax: +609-747 0578	• Perak : +605-548 2307	Fax: +605-548 2295	• Sarawak : +6082-333 299	Fax: +6082-333 499
• Melaka : +606-288 1133	Fax: +606-288 1155	• Penang : +604-3311 670 / 67	Fax: +604-3311 671		

All the procedures of installation and service shall follow the installation manual to ensure a safe and good standard of operation for the air conditioner unit. Enclosed with the installation manual for your reference.

4. Should there be any further inquiry, kindly refer to our respective Sales Executives/Representatives.

Thank you.

Yours sincerely,



Chan Hon Leong

General Manager, Marketing & Service

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• Melaka	: +606-288 1133	Fax: +606-288 1155	• Penang	: +604-3311 670 / 67	Fax: +604-3311 671			

www.daikin.com.my