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Our Ref: SCDF/HAZ/14/03/02/01

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15th June 2012

Attn: Suppliers / Distributors

Dear Sir/Madam,

IMPLEMENTATION OF ADVISORY LABEL FOR DOMESTIC REFRIGERATORS USING FLAMMABLE REFRIGERANT IN SINGAPORE

Reference to Annex A – S/No 1 of the circular on “Review on Use of Hydrocarbon Refrigerant in Singapore” dated 6th Dec 2011 (http://www.scdf.gov.sg/content/scdf_internet/en/building-professionals/publications_and_circulars.html). Since Dec 2011, SCDF has engaged the relevant industry stakeholders for feedbacks on the advisory label requirements to educate users on the inherent risks of flammable refrigerant.

2. This circular serves to inform all relevant parties on the advisory label requirements to be imposed on domestic refrigerators regulated under SPRING’s Consumer Protection (Safety Requirements) Registration Scheme (CPS Scheme). These requirements shall take **effect from 1st September 2012**. Refer to **Annex A** for the advisory label guidelines.

3 Please convey the contents of this circular to the parties concerned. For any inquiry or clarification, please contact CPT Jason Zhou at Tel. No.: 68483312 (e-mail: jason_zhou@scdf.gov.sg).

Yours faithfully,

CPT JASON ZHOU
HazMat Department
for Commissioner
Singapore Civil Defence Force

cc: **SPRING SINGAPORE**

Mr. Sim Geok Seng
Head
Consumer Product Safety and
Weights and Measures Division



ADVISORY LABEL REQUIREMENTS FOR DOMESTIC REFRIGERATOR USING FLAMMABLE REFRIGERANT

1 SCOPE

- 1.1 This document outlines the minimum requirements on advisory label which shall contain safety instructions and warning sign for domestic refrigerators when a flammable refrigerant is used.
- 1.2 The requirements in this document are in addition to the applicable requirements in the International Electrotechnical Commission (IEC 60335-2-24) safety standard, mandated under the Consumer Protection (Safety Requirements) Registration Scheme (CPS Scheme) by SPRING Singapore.

2 DEFINITION

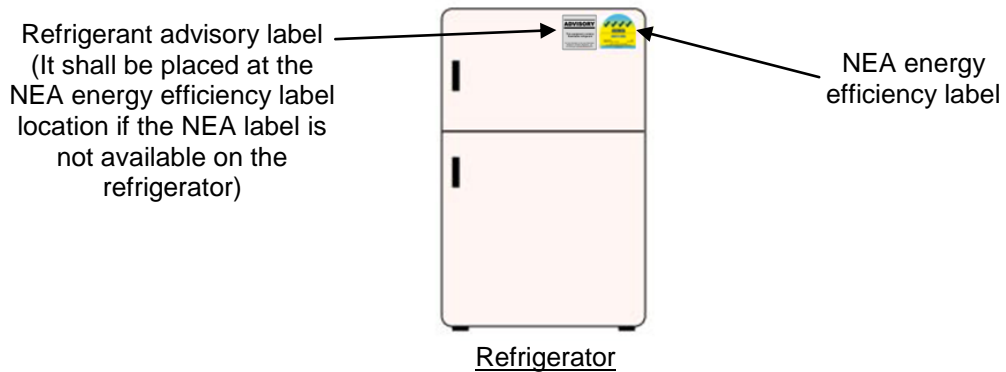
- 2.1 'Flammable refrigerant' – Refrigerant with a flammability classification of group 2 or 3 in accordance with International Organization for Standardization (ISO) 5149. For refrigerant blends which have more than one flammability classification, the most unfavourable classification shall be taken for the purpose of this definition.
- 2.2 'Household refrigerators' – Refrigerators primarily meant for domestic use and are regulated under the Consumer Protection (Safety Requirements) Registration Scheme (CPS scheme) by SPRING Singapore.
- 2.3 'Service Personnel' – Refer to personnel who are engaged by either the refrigerator supplier or user to provide after sale services, including but not limited to, delivery, servicing and disposal of the refrigerator.

3 ADVISORY LABEL REQUIREMENTS

- 3.1 Advisory Label on the Front of Refrigerator
 - 3.1.1 The advisory label shall be printed or affixed permanently on the front of the refrigerator on display (next to the NEA's energy efficiency label) at retail premises and shall be clearly visible to potential buyers when viewing the refrigerator.
 - 3.1.2 For purchased units delivered to households or any other location as determined by the buyer, the units shall also be affixed with the advisory label on the front of the refrigerator (next to the NEA's energy efficiency label).
 - 3.1.3 The advisory label shall comply with the design specifications outlined in **Appendix A1**. The advisory label shall be 90mm (length) by 90mm (height). The printed label shall be in an indelible manner and with a minimum resolution of 300 pixels per inch (ppi). An example is illustrated below.



- 3.1.4 The advisory label shall be affixed in a prominent manner on the front of the refrigerator as shown below:



3.2 Advisory Label for Service Personnel and Users

- 3.2.1 For service personnel, the advisory label shall be affixed permanently on or near the compressor unit of the refrigerator to indicate the flammability risks. The advisory label shall be clearly visible from the repair access area.
- 3.2.2 For users, the advisory label shall be affixed permanently on the interior part of the refrigerator that shall be clearly visible from the user access area.
- 3.2.3 The advisory label shall be accompanied with a triangular warning sign in accordance to latest applicable ISO standards (e.g. ISO 7010) for flammable material warning label. The perpendicular height of the triangular warning sign shall be at least 15mm. The name of the refrigerant (e.g. R-600a, Iso-butane) should also be included together with the triangular warning sign as shown below.



- 3.2.4 The advisory label shall be accompanied with cautionary statements concerning the flammability risks, safe handling, servicing and disposal of the refrigerator. The cautionary statements should be provided in both English and Chinese languages.
- 3.2.5 The advisory label shall comply with the design specifications outlined in **Appendix A2**. The printed label shall be in an indelible manner and with a minimum resolution of 300 pixels per inch (ppi).
- 3.2.6 For refrigerator with existing labels which may contain other advisory messages from the manufacturer, the advisory label outlined in part 3.2 may be provided either as a standalone label or combined with the existing labels.

(Exemption: The advisory label design specifications outlined in Appendix A2 may be exempted for refrigerator with existing advisory labels containing similar warning sign and cautionary statements as outlined in part 3.2.3 and 3.2.4. Suppliers / Distributors are to seek approval from the authorities for exemption.)

4 IMPLEMENTATION

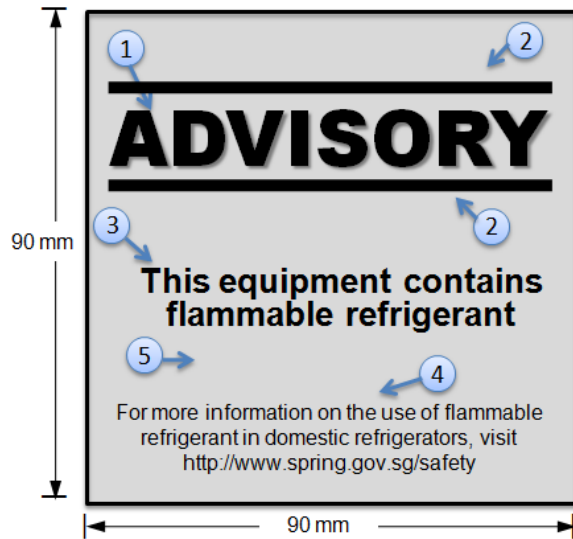
- 4.1 The advisory label specified in part 3.1 and part 3.2 shall be affixed on the refrigerator at an appropriate place and time as determined by the manufacturer / supplier / distributor which may include, but not limited to, at the manufacturing plant, at the warehouse before delivery or at the buyer specified address upon delivery. This applies to both new and existing stock.
- 4.2 The information in this document is based on the present state of authorities' knowledge and the latest safety standards and codes. The relevant authorities reserve the rights to amend the content of these guidelines at any time in future should there be a need to do so.

5 REFERENCES

- 5.1 International Electrotechnical Commission (IEC) 60335-2-24 standard
- 5.2 International Organization for Standardization (ISO) 3864-1 standard
- 5.3 Consumer Protection (Safety Requirements) Registration Scheme (CPS Scheme) by SPRING Singapore
- 5.4 Underwriters Laboratories (UL) 250 Safety Standards

Appendix A1

Full Design Specifications for Advisory Label on the Front of Refrigerator



Tag	Description
1	Main Cautionary Sign. (Arial Black, Bold, Black; Size 40)
2	Two black bars (6 pt thickness) to border the cautionary sign.
3	A general information statement to indicate the presence of flammable refrigerant in the equipment. (Arial, Bold, Black; Size 18)
4	More information available at SPRING Singapore (Product Safety) website. (Arial, Black; Size 10)
5	The background color to be light grey. (color code #CCCCCC)

Appendix A2

Full Design Specifications for Advisory Label for Service Personnel and Users

Users:



Tag	Description
①	Hazard warning symbol in accordance to applicable ISO standard. (eg. ISO 7010)
②	Main cautionary sign in English and Chinese languages. (Arial Black, Bold, Black; Size 28)
③	Flammable material warning symbol in accordance to applicable ISO standard. (eg. ISO 7010)
④	The type of refrigerant is specified here. (Arial, Bold, Black; Size 14)
⑤	Cautionary statement on the use of flammable refrigerant is specified here. (Arial, Bold, Black; Size 14)
⑥	The safety precaution and advice are specified here. (Arial, Black; Size 12)
⑦	Cautionary statement translated in Chinese. (Bold, Black; Size 14)
⑧	Safety precaution and advice translated in Chinese. (Black; Size 12)
⑨	The background color to be light grey (color code #CCCCCC).
⑩	The background to be in white (color code #FFFFFF).

Service Personnel:



Tag	Description	Tag	Description
①	Hazard warning symbol in accordance to applicable ISO standard (eg. ISO 7010)	⑥	The safety precaution and advice are specified here. (Arial, Black; Size 12)
②	Main cautionary sign in English and Chinese languages (Arial Black, Bold, Black; Size 24)	⑦	Cautionary statement translated in Chinese. (Bold, Black; Size 14)
③	Flammable material warning symbol in accordance to applicable ISO standard (eg. ISO 7010)	⑧	Safety precaution and advice translated in Chinese. (Black; Size 12)
④	The type of refrigerant is specified here. (Arial, Bold, Black; Size 12)	⑨	The background to be light grey (color code #CCCCCC).
⑤	Cautionary statement on the use of flammable refrigerant is specified here. (Arial, Bold, Black; Size 14)	⑩	The background to be in white (color code #FFFFFF).