

S. C. Johnson & Son, Inc.
1525 Howe Street
Racine
WI 53403-2236
262.260.2000

Private & Confidential

Robert Chapman
HM Assistant Coroner
Fairfield
Station Road
Cockermouth
CA13 9PT

Thank you for your letter dated September 18, 2017 enclosing the Regulation 28 Report concerning the death of Kathleen Erica Holme who died tragically in the fire at [REDACTED] on March 26, 2017 (**Report**).

On behalf of SC Johnson & Son and all companies in the SC Johnson group (including SC Johnson Ltd¹) (**SC Johnson**), we take this opportunity to express our sincere condolences to the family of Mrs. Holmes who so sadly lost her life in this incident.

Introductory comments

Within SC Johnson it is the responsibility of the Global Safety Assessment and Regulatory Affairs division (**GSARA**) to ensure the safety and regulatory compliance for SC Johnson's products. This responsibility is for the complete product lifecycle from development to placement in the marketplace and onto use in consumers' homes.

GSARA reviewed the safety and regulatory labelling requirements of the Glade® Automatic Air Freshener prior to marketing, on an on-going basis, and it has done so again in light of this tragic incident.

We have carefully considered your concerns as set out in section 5 of the Report and offer the following response.

¹ The recipient of the Report

Background regarding Glade® Automatic Air Freshener

The Glade® Automatic Air Freshener (the “air freshener” in the Report) is a battery powered, motorized indoor air freshener **device** that uses an aerosol **refill canister** to fragrance an area within a home.

The air freshener **device** has been thoroughly tested to a comprehensive test plan, based on tests taken from standards UL 283², IEC 60335-1³ and IEC 60335-2-101⁴ that included tests for drop, over-temperature conditions, motor locked rotor, and electromagnetic compatibility & radio-frequency emission testing (EN 55014-1 and EN 55014-2)⁵, chemical compatibility, and other tests to verify that the device meets all of the electrical device physical safety requirements. All the tests performed on the device had acceptable results. The purpose of the test plan was to minimize the fire, thermal burn, and mechanical hazards (such as laceration) of the newly developed Glade® air freshener device.

The air freshener device meets all applicable safety regulations and industry guidelines related to Low Voltage Directive (2014/35/EU), Restriction of the use of Hazardous Substances (RoHS) Directive (2011/65/EU), Electromagnetic Compatibility (2014/30/EU), and Waste Electrical & Electronic Equipment (2012/19/EU).

Similarly, the air freshener **refill canister** has been thoroughly tested to a comprehensive test plan that includes tests for flammability (ASTM D 3065⁶ - Flame Projection and Closed Drum tests, UN 31.4 & 31.5⁷ - Ignition Distance & Enclosed Space Ignition tests, and ASTM D93-08⁸ – Flash Point Measurement), canister rupture (FEA 621 E⁹ - can pressure test), general product safety (ASTM F963 – consumer safety¹⁰), as well as corrosion and weight loss (ASTM G1 and G46)¹¹, and gasket swell (ISO 500-011 – solvent immersion)¹² testing. The tests evaluate the air freshener refill canister for the risk of fire, canister rupture, and mechanical hazards such as laceration.

² UL, “Standard For Safety, Air Fresheners and Deodorizers” (UL 283)

³ IEC, “Household and similar electrical appliances – Safety Part 1: General requirements” (IEC 60335-1)

⁴ IEC, “Household and similar electrical appliances – Safety Part 2-101: Particular requirements for vaporizers” (IEC 60335-2-101)

⁵ CENELEC, “Electromagnetic compatibility. Requirements for household appliances, electric tools and similar apparatus” (EN 55014-1 and EN 55014 – 2)

⁶ ASTM, “Standard Test Methods for Flammability of Aerosol Products”, (ASTM D 3065)

⁷ UN, “Classification Procedures, Test Methods and Criteria Relating to Class 2, Class 3, Class 4, Division 5.1, Class 8 and Class 9”, (UN 31.4 & 31.5) (UN 31.4 & 31.5)

⁸ ASTM, “Standard Test Methods for Flash Point by Pensky-Martens Closed Cup Tester”, (ASTM D93-08)

⁹ FEA, “Measurement of internal pressure resistance of empty containers without valves”, (FEA 621 E)

¹⁰ ASTM, “Standard Consumer Safety Specification for Toy Safety”, (ASTM F9653)

¹¹ ASTM, “Standard Practice for Preparing, Cleaning, and Evaluating Corrosion Test Specimens, G1, Annual Book of ASTM Standards, 03.02. & Standard Guide for Examination and Evaluation of Pitting Corrosion, G46, Annual Book of ASTM Standards, 03.02.”, (ASTM G1 and G46)

¹² Action Technology Company, “Thickness Swell”, (ISO 500-011)

The air freshener refill canister also meets the applicable safety regulations and industry guidelines related to the Aerosol Dispensers Directive¹³.

The air freshener refill canister has a metered-valve that was tested for flame projection (ASTM D 3065¹⁴ - Flame Projection) to minimize the risk to consumers of inadvertent leakage of the canister contents. The metered-valve design dispenses just 90µl (equivalent to less than 2 drops) of the refill contents every 9, 18 or 36 minutes.

To educate and warn consumers about the dangers of using the air freshener refill canister near to naked flames, we mark the refill with safety warnings and labelling.

The warnings and labelling that we apply to the air freshener refill canister (and to the packaging of the Glade® Automatic Air Freshener) meet Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on Classification, Labelling and Packaging of Substances and Mixtures (**CLP Regulation**).

Importantly, more than **5 million** of these air fresheners and refill canisters have been sold over the past 12 months throughout the UK. We would wish to emphasise that SC Johnson has never received any report, consumer complaint or allegation of a similar nature related to the air freshener device or refill.

Based on the comprehensive testing of the air freshener device and the refill canisters, their history of safe use, the regulatory standards and industry guidelines that are followed for the warnings and labelling, it is SC Johnson's considered view that the risk posed to consumers by the Glade® Automatic Air Freshener and refill even near to naked flames is extremely low. That is all to say: SC Johnson is fully aware of how our product performs and its safety in relation to exposure to a wide variety of environments, uses and potential misuses, and SC Johnson firmly believes that the air freshener has always been, and remains, safe.

The Coroner's Concerns (section 5 of the Report)

For ease of reference your concerns as set out in section 5 of the Report are set out immediately below:

¹³ The Council Directive of 20 May 1975 on the law of Member States relating to aerosol dispensers (75/324/EEC).

¹⁴ ASTM, "Standard Test Methods for Flammability of Aerosol Products", (ASTM D 3065)

- *Whether the manufacturer is aware and understands the extent of the risks of the use of a Glade Automatic Air Freshener Spray near to naked flames, and specifically the distance which the flame can extend. (Concern 1)*
- *Whilst there are both warnings signs and wording on the box containing a new spray and on the aerosol to be fitted to it, I am concerned that the words warning of the dangers of use near a naked flame is not sufficiently large and prominent to draw the dangers to the user's attention. (Concern 2)*
- *There were no warning signs on the body of the automatic air freshener. Once the box containing the new air freshener was discarded a user would have only the information printed on the aerosol as a warning. (Concern 3)*

Concern 1: Evaluation of the fire risks associated with Glade® Air Freshener

SC Johnson considers that as a result of the testing regime for the product as detailed above, it is fully aware and understands the extent of the risks of the use of the air freshener near to naked flames, and specifically the distance which the flame can extend. In this regard, SC Johnson refers specifically to the refill's "extremely flammable" classification listed on the refill canisters' safety data sheet and the ASTM D 3065 – Flame Projection Test¹⁵ that was conducted during aerosol refill development.

Further, as a result of the air freshener refill having a metered-valve that only releases 90µl of flammable material with each valve actuation (as referred to above), this also ensures that any flame is limited.

While SC Johnson does not in any way seek to challenge the findings of the Coroner concerning the circumstances of the death of Mrs Holme as set out in section 4 of the Report, SC Johnson would respectfully ask the Coroner to note that it did not have an opportunity to give evidence or be represented at the Inquest and therefore was not able to consider with the Coroner the findings of Roger Exley, the Fire Investigator with the Cumbria Fire and Rescue Service who attended and investigated the fire and who gave evidence at the Inquest. If it had done so SC Johnson would have raised its concerns about the [REDACTED] findings as set out in the Report that based on "the position of the candles, the automatic air freshener and the clothes, the spray from the automatic air freshener could have been ignited by the candles and the resultant flame then

¹⁵ See footnote 6 above.

ignite the clothes” in light of what SC Johnson considers to be the significant uncertainties in the evidence as to, among other things:

- The pre-fire location of the candle or candles;
- The pre-fire position of the clothing;
- Whether a single or multiple candles were lit;
- The pre-fire position of the air freshener device;
- Whether the air freshener device was activated;
- The time interval the air freshener device was set at;
- The proximity of the air freshener device to a lit candle;
- The proximity of any clothing to the candle and air freshener device;
- The first material ignited; and
- Whether the first fuel ignited was competent to spread the fire to the secondary fuel.

Concerns 2 and 3: Evaluation of the warning signs and labels associated with Glade® Air Freshener

The labelling on the Glade® Automatic Air Freshener has been assessed against the regulatory requirements and guidelines and industry standards to address Concerns 2 and 3 in the Report:

The labelling requirements for the Glade® Automatic Air Freshener are governed by the CLP Regulation and the Council Directive of 20 May 1975 on the law of Member States relating to aerosol dispensers (75/324/EEC). A detailed review of the labelling requirements is set out within Appendix 1.

Glade® Automatic Air Fresheners (on the packaging and on the refill canister itself) are labelled in accordance with the applicable regulatory requirements. To ensure the legibility of the label, the safety text is high contrast black font on white background. The font used is not italicised nor compressed and is in line with regulatory guidance and with industry practice. The hazard pictograms are black within a red frame. It is important to note that the ‘flammable’ hazard pictograms used on the Glade® Automatic Air Fresheners are larger than required by the regulation guideline.

It is to be noted that the device itself is not labelled as this is not a requirement of the CLP Regulation. Article 31 of the CLP Regulation states that the labels shall be firmly affixed to one or more surfaces of the packaging immediately containing the substance or mixture. The device is classed as the dispenser and not the container. This is the case because the regulators recognise the fact that formulations (and their classifications) may change between the various fragrance variants or over time. Labelling a dispenser (the device) could therefore eventually lead to mis-labelling, creating both an out of compliance situation and mis-information to the consumer on the hazard and safety requirements of the product – especially when all packaging layers are labelled.

Concluding comments

To conclude, SC Johnson is fully aware of the extent of the risks of the use of a Glade® Automatic Air Freshener near to naked flames and specifically the distance which the flame can extend.

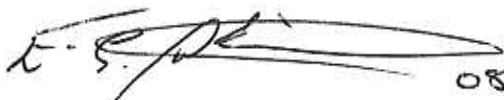
The text and symbols warning of the dangers of use near a naked flame on the aerosol refill are high contrast black-on-white text. The 'flammability' pictogram is black within a red frame. Importantly, the pictograms used on the Glade® Automatic Air Fresheners are larger than legislative requirements.

The device itself is not labelled, as this could be misleading and it is not a requirement of the CLP Regulation. The Glade® Automatic Air Fresheners and refills meet or exceed the current regulatory requirements regarding labelling and classification.

Finally, SC Johnson notes that section 7 of the Report asks that the response to the Report includes "*details of any action taken or proposed to be taken ... [or] you must explain why no action is proposed.*" Having regard to the matters set out in this letter and the accompanying appendix SC Johnson respectfully considers that no action needs to be taken by it in response to the matters of concern raised in the Report. However, we would wish to assure you (and all other recipients of the Report noted in Section 8) that the GSARA will continue to keep this matter under review and that we remain fully committed to working with all relevant stakeholders to respond to any matters they may wish to raise with us.

We trust that this letter together with its appendix responds fully to your concerns as set out in the Report. However, we remain available to assist with any further questions you may have and you should not hesitate to contact us.

Yours sincerely



08 December 2017

[REDACTED]
Director, Global Product Safety
Global Safety Assessment and Regulatory Affairs
SC Johnson