

August 30, 2021

Alberta E. Mills
Division of the Secretariat
Consumer Product Safety Commission
4330 East West Highway
Bethesda, MD 20814

Subject: Petition Requesting Rulemaking on Duster Aerosol Products
(Docket No. CP-21-1)

Dear Ms. Mills,

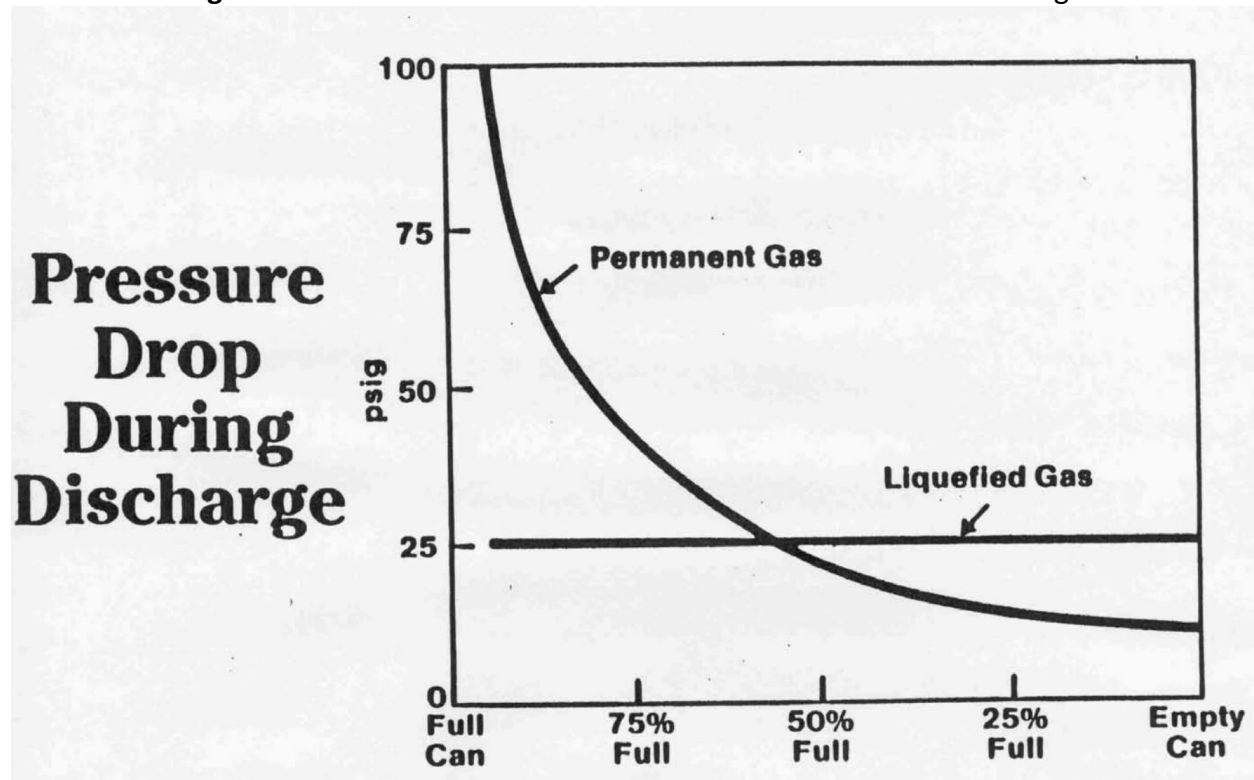
The Household & Commercial Products Association¹ (HCPA) appreciates the opportunity to provide the following comments to the U.S. Consumer Product Safety Commission (CPSC) on the petition requesting a rulemaking on duster aerosol products. HCPA represents a wide range of products, from household cleaners and air fresheners to commercial disinfectant and pest control whose use of aerosol technology makes the aerosol industry an integral part of the household and commercial products industry. HCPA has represented the U.S. aerosol products industry since 1950 through its Aerosol Products Division, representing the interest of companies that manufacture, formulate, supply and market a wide variety of products packaged in an aerosol form. Consumer products utilizing aerosol technology are safe and do not pose an unreasonable risk when the product is used in accordance with label directions. In these comments, HCPA will discuss duster aerosol products, bitterant agents, and why a rulemaking is not necessary.

Duster aerosol products are used to provide a burst of propellant, knocking loose dust, dirt and other debris. Duster aerosol products can be used in a wide variety of applications in homes, offices, automobiles and other indoor environments. Duster aerosol products are filled typically with a liquefied propellant so that the pressure of the product remains constant throughout the life of the product. In contrast, compressed gas propellants, such as carbon dioxide or nitrogen, are not often used in duster aerosol products because the high pressure of the product rapidly decreases as the product is used which would significantly change the

¹ The Household & Commercial Products Association (HCPA) is the premier trade association representing companies that manufacture and sell \$180 billion annually of trusted and familiar products used for cleaning, protecting, maintaining, and disinfecting homes and commercial environments. HCPA member companies employ 200,000 people in the U.S. whose work helps consumers and workers to create cleaner, healthier and more productive lives.

performance over time. Figure 1 shows a basic overview of how a compressed propellant, or “permanent gas”, loses pressure as the product is used whereas a liquefied propellant maintains a consistent pressure throughout usage.

Figure 1: Pressure of an Aerosol Product Over the Course of its Usage



The performance of duster aerosol products is dependent on the pressure of the propellant that comes from the container. Consequently, a compressed gas is undesirable due to the combination of the initial high pressure that may damage the area being cleaned along with the drop in pressure. Common liquified propellants for duster aerosol products include 1,1-Difluoroethane (HFC-152a) and 1,3,3,3-Tetrafluoropropene (HFO-1234ze) primarily because they are exempt from VOC regulations because they have been determined to have minimal contribution to air quality. Liquified hydrocarbon propellants are precluded from use because the volatile organic compound (VOC) content is limited to 35% by the Environmental Protection Agency (EPA)² and have even lower limits in 18 states. 1,1,1,2-Tetrafluoroethane (HFC-134a) has been used in the past, but its use has been largely phased out because it has a high global warming potential. Regardless of the choice in propellant, duster aerosol products are safe when used as intended in accordance with label directions.

HCPA supports efforts by product manufacturers to design their products as safely as they can, taking into account how a product could accidentally be misused. HCPA supports voluntary

² 40 CFR Part 59 Subpart C

efforts by manufacturers to incorporate a bitterant agent into their products but mandating a bitterant as per the petition is not advised. Bitterant agents are added to a product to make it smell or taste bitter. These substances are intended to discourage and deter the intentional misuse of a product, as well as minimize accidental product inhalation or ingestion, and make such product abuse as unpalatable as possible. None of these compounds will completely deter intentional abuse, i.e., a user will inhale some of the product before the bitterness can be detected. This restricts the utility of the aversive agent as the aversive agent cannot restrict the initial use.

HCPA questions the feasibility and effectiveness of the petition's approach without offering other bitterant agents that could technically be feasible. An optimal aversive agent needs to have a high margin of safety when looking at the concentration of the bitterant within the product and the acute toxicity. CPSC published in 1992 a report³ on their study of aversive agents which looked at toxicities of various potential bitterant agents and their relative bitterness compared to one another. Denatonium benzoate is typically used by industry as a bitterant agent because it is very bitter at low levels, such as 10 ppm, and with a very low acute toxicity LD₅₀ at 485 – 740 mg/kg in rats, providing a significant margin of safety.⁴ According to the Consumer Product Information Database (CPID),⁵ denatonium benzoate is used in over 70 consumer products including degreasers, air fresheners, laundry detergents, disinfectant sprays, glass cleaners and dusters. Other substances considered to be bittering agents include sucrose octaacetate, flavonoids, and quassinoids, but these substances present formulation challenges due to insolubility, are not as bitter as denatonium benzoate and would require a higher concentration (for example, the CPSC report shows in Table 1 that denatonium benzoate has a relative bitterness to sodium octaacetate of 500.00), and in the case of quassinoids, can be highly toxic and should not be used as a result. The petitioner requests that denatonium benzoate not be used, but an alternative is not provided. HCPA questions this because of denatonium benzoate's efficacy and margin of safety.

Inhalant abusers use products that are capable of producing a quick "high" with rapid dissipation and minimal "hangover" symptoms.⁶ According to the National Institute on Drug Abuse (NIDA), nearly 21.7 million Americans aged 12 and older have used inhalants at least once in their lives and recent surveys have revealed that 13.1 percent of 8th graders have used

³ U.S. Consumer Product Safety Commission. *Final Report Study of Aversive Agents*. 18 November 1992. Available at <https://web.archive.org/web/20110616104140/http://www.cpsc.gov/LIBRARY/FOIA/foia99/os/aversive.pdf>

⁴ Hansen SR, Janssen C, Beasley VR. Denatonium benzoate as a deterrent to ingestion of toxic substances: toxicity and efficacy. *Vet Hum Toxicol*. 1993 Jun;35(3):234-6. PMID: 8351798.

⁵ For more information, see <https://www.whatsinproducts.com/chemicals/view/1/1505/003734-33-6/Denatonium%20benzoate>

⁶ Janet F. Williams, Michael Storck, and the Committee on Substance Abuse and Committee on Native American Child Health Pediatrics May 2007, 119 (5) 1009-1017; DOI: <https://doi.org/10.1542/peds.2007-0470>

inhalants.⁷ According to the American Addiction Centers,⁸ inhalant abuse most often begins before tobacco, alcohol, marijuana, or other substance abuse. Besides duster aerosol products, many common household products such as glue, shoe polish, nail polish remover, gasoline, correction fluid, felt tip markers, and whipped cream, are commonly found in homes, garages, offices, and schools have also been abused. These products are not only readily available in a wide range of stores and online e-commerce platforms but are also inexpensive and easy to hide. Regulating one product will not change the underlying behavioral problem and abusers could readily abuse another product.

HCPA questions the petitioner's use of the source *Substance Abuse Life Tips* from 2013⁹ in that the petitioner states that "Twenty-two percent of first time Duster inhalers die, and the majority of all Duster inhalant deaths are attributed to Sudden Sniffing Death Syndrome (SSDS) (Substance Abuse Life Tips, 2013)." The reference does not appear to substantiate this claim. Inhalants do carry the risk of death, even when used for the first time; however, according to the Substance Abuse and Mental Health Services Administration (SAMHSA) utilizing the National Survey on Drug Use and Health as its data source, published that in 2015 approximately 684,000 adolescents aged 12 to 17 used inhalants within the year prior to the survey.¹⁰ Within this survey, among respondents that stated that they had at some point used inhalants, duster aerosol products was identified as fifth among household products. SAMHSA also shows that approximately 248,000 teens had intentionally misused duster aerosol products. While any deaths due to inhalant abuse needs to be prevented, the twenty-two percent used in the petition appears to vastly overestimate that value.

While restricting access to products such as duster aerosol products and labelling changes may seem like good ideas to addressing inhalation abuse, these strategies may lead to unintended consequences.¹¹ Modifications to labelling makes substances easier to identify and reducing availability of products can increase use of more available products or create a black market. There is limited information on the actual effectiveness of legislating inhalant abuse, but one such study¹² analyzed the available data from studies on inhalant abuse and concluded that with the data available that legislating inhalant abuse had no statistically significant effects on inhalant abuse rates.

⁷ NIDA. 2020, May 28. Letter from the Director. Retrieved from

<https://www.drugabuse.gov/publications/research-reports/inhalants/letter-director>

⁸ American Addiction Centers Editorial Staff. 2021, July 9. The Dangers of Inhalant Abuse. Retrieved from

<https://americanaddictioncenters.org/inhalant-abuse>

⁹ <https://substanceabuse.lifetips.com/tip/135338/substance-abuse-statistics/substance-abuse-statistics/inhalant-statistics.html>

¹⁰ Rachel N. Lipari, Ph.D. SAMHSA. 2017 June 12. Understanding Adolescent Inhalant Use. Retrieved from

<https://www.samhsa.gov/data/report/understanding-adolescent-inhalant-use>

¹¹ Nguyen, J., O'Brien, C., Schapp, S. Adolescent inhalant use prevention assessment, and treatment: A literature synthesis. *International Journal of Drug Policy*. 2016, May; 31: 15-24.

¹² Jeffery C. Batis (2017) Effectiveness of Inhalant Abuse Legislation, *Substance Use & Misuse*, 52:2, 175-181, DOI: 10.1080/10826084.2016.1223135

HCPA and our member companies are saddened any time injuries and deaths occur during misuse of our products. HCPA believes that education is the best preventative measure, which is why HCPA's foundation the Alliance for Consumer Education (ACE) focuses on inhalant abuse. ACE provides families and schools with critical information to educate children, teens and adults to not intentionally misuse products and look out for the warnings signs that someone is abusing products. But industry can't do this alone and needs parents and teachers to have the difficult conversations with teenagers so that they understand the dangers of inhalants and recognize the signals or symptoms to get help for those in need. If more people discuss the issues of inhalant abuse, more people will be aware of the danger that intentionally misusing products poses.

HCPA appreciates the opportunity to provide these comments. When used as directed, duster aerosol products are safe, effective for their intended use and do not pose an unreasonable risk. A rulemaking on duster aerosol products will not reduce inhalant abuse as the user will abuse other products. As such, a rulemaking is not necessary.

Respectfully submitted,

A handwritten signature in cursive script that reads "Nicholas Georges".

Nicholas B. Georges

Vice President, Scientific & International Affairs