HYSCENT

HYscent Versus The Rest

HYscent Fragrance Cartridges

HYscent fragrance refills are made from pure essential oils and a proprietary polymer blend ideal for fragrance housing. The refills release a dry vapor absent of propellants, petroleum distillates and harmful solvents. The essential oils migrate to the surface of the refill and are then dispersed into the area to be fragranced via the specially designed centrifugal fans.

Aerosol

Aerosol air freshening cans are used in automated dispensing cabinets that operate via a system of a motor and gears whose function is to depress an elbow actuator. This releases a tiny dose of heavily laden chemical based product into the environment.

Hydrogen Cell

A fuel cell is a device that converts the chemical energy from a fuel into electricity through a chemical reaction with oxygen or another oxidizing agent. Hydrogen is the most common fuel, but hydrocarbons such as natural gas and alcohols like methanol are sometimes used.

Liquid Wick and Wafer

Wicks and Wafers are two forms of odor control emanators used in motor operated fan diffusers. Both emanators absorb an oil mixture to maximum saturation relying on evaporation to release fragrance into the air.

Urinal Screens

Urinal screens are formulated to eliminate urine odor, provide a scent and help reduce mold growth. Solid products are cost driven, inferior products that provide minimal fragrance release and ineffective odor control.

Aerosol analysis and known product complaints and issues in comparison to HYscent.

INGREDIENTS AND POTENTIAL HEALTH HAZARDS — A typical aerosol refill displays a photo/graphic image of the named product. For example, a mango refill will display an image of a fresh mango. This implies that the ingredients contain mango product. They do not. Analysis of the aerosol refill can show a combination of toxic and respiratory harmful chemicals.
Deodorizing / fragrance aerosols contain a variety of products that are unhealthful to the environment and present an aspiration hazard.
All propellant driven aerosols typically contain **Acetone** Acetone is a good solvent for many plastics and some synthetic fibers. It is used for thinning polyester resin, cleaning tools, and dissolving two-part epoxies and superglue before they harden. It is used as one of the volatile components of some paints and varnishes . As a heavy-duty degreaser, it is useful in the preparation of metal prior to painting. **Propane** is also found in aerosol products. Propane is replacing wood and other traditional fuel sources, where it is now sometimes called "cooking gas." The "propane" sold outside North America is actually a mixture of propane and butane. Propane is used as fuel in furnaces for heat, in cooking, as an energy source for water heaters, laundry dryers, barbecues , portable stoves , and motor vehicles.
Diethylene Glycol Monoethyl Ether also a key ingredient in aerosols, is an industrial solvent. It is a clear, colorless, hygroscopic liquid. Structurally it is an alcohol and an ether . At direct contact it causes drying of skin by leaching fats, and is mildly irritating to the eyes. It is flammable. Finally, **Isobutane** (i-butane), is found in aerosol products. Isobutane is also known as methylpropane, is an isomer of butane. It is the simplest alkane with a tertiary carbon . Concerns with depletion of the ozone layer by freon gases have led to increased use of isobutane as a gas for refrigeration systems, especially in domestic refrigerators and freezers , and as a propellant in aerosol sprays . Isobutane is used as a feedstock in the petrochemical industry, for example in the synthesis of isooctane . Isobutane is highly flammable.

HYscent only uses the highest quality essential oils infused into the blended polymer to achieve a superior retail quality fragrance release.

OPERATIONAL PRINCIPLE — The Aerosol dispensing system design works on the principle : At preset intervals, a system of a motor and gears depress an elbow actuator valve. This releases 0.1ml of the product through the valve via a 0.3 second spray. The spray pattern determines the square footage of the area to be deodorized. Typically, a 400 sq ft restroom requires 2 aerosol dispensers.

Depending on the dispenser used HYscent devices will fragrance a space from 220 sq ft to 750 sq ft.

LAG TIME — The intervals between sprays are typically 7, 15 and 30 minutes. Once the dispenser has sprayed, fragrance is evident for approximately 90-120 seconds. After this period, no fragrance is evident. This suggests that the area in which the aerosol dispenser is being used only provides fragrancing (depending on the setting) for approximately 28% at 7 minutes, 13% at 15 minutes and 7% at 30 minutes.

HYscent devices will provide consistent and continual fragrance for the life of the refill.

POSITIONING — Aerosol dispensers must be installed in an exact vertical position. All aerosol dispensers have clear instructions to mount the device at a height that will prevent spraying onto a patron. After repeated sprayings, material will collect on the floor beneath the dispenser causing either slippage or discoloration.

HYscent refills are a completely dry product with no reactivity. Being completely dry, HYscent products can be oriented in any position which allows for unlimited placement and use. No spillage or leaks renders HYscent products free from end user liability issues.

FLAMMABILLITY — The Aerosol systems have a flammability rating of 4.

HYscent refills have a flammability rating of 0.

HEALTH HAZARDS — Because of the chemical composition of the aerosol, inhalation of the product can cause: drowsiness, dizziness, nausea, irritation to eyes, throat, lungs, and skin.

HYscent refills produce no chemical release into the air, therefore producing no adverse health effects.

Urinal screens and solid products analysis and known product complaints and issues in comparison to HYscent.

INGREDIENTS, FUNCTION AND POTENTIAL HEALTH HAZARDS — Analysis of a renowned urinal screen and odor control products in use indicate that they are made primarily of fragranced polyethylene. The fragrances used are institutional in quality and the range of fragrances that can be used are minimal due to compatibility limitations between fragrance product and Polyethylene. Polyethylene will not release fragrance efficiently or effectively as the rate of fragrance release cannot be controlled and therefore loses efficacy well before the claimed longevity period. The addition of fragrance to Polyethylene is done at a high heat, so the loss factor of the fragrance is considerable in the manufacturing process. The properties of Polyethylene also prevent complete fragrance release and a high amount of fragrance remains in the screen. Analysis also shows that the urinal screen contains 0.5% of Octhilinone which acts as an anti-bacterial agent reducing mold growth. The US EPA considers this material highly toxic so using the screen for any purpose other than placement in a urinal is a health hazard.

The HYscent refill is made from a proprietary polymer blend infused with pure essential oils. Fragrance release is achieved through molecular migration of the fragrance molecules throughout the blended polymer to the exterior surfaces. This molecular migration will continue throughout the life of the refill. The rate of migration is known, therefore the longevity of each fragrance has been accurately measured.

Liquid Wick and Wafer analysis and known product complaints and issues in comparison to HYscent.

INGREDIENTS AND POTENTIAL HEALTH HAZARDS — Analysis of both products indicate that they are cheap industrial compositions containing health hazard materials and low cost fragrance oil.
The base in both products are either a heavy unfiltered petroleum distillate OR a lighter more refined petroleum distillate that speeds up the evaporation process. Harmful solvents are used to force the fragrance through the wick/wafer such as Naphtha and/or Stoddard (commonly known as white spirit). Both Naphtha and Stoddard are petroleum-derived, clear, transparent liquids which are common solvents used in painting and decorating. These solvents are also used for cleaning and degreasing machine tools and parts. They may also be used in conjunction with cutting oil as a thread cutting, and reaming lubricant .
To bind the oil products together, a surfactant is used in the form of Triton X-100. Triton X-100 is classified as a **Nonyl Phenol Ethoxylate** or **NPE**. Surfactants are compounds that lower the surface tension (or interfacial tension) between two liquids or between a liquid and a solid. Surfactants may act as detergents , wetting agents , emulsifiers , foaming agents , and dispersants.

HYscent only uses the highest quality essential oils infused into the blended polymer to achieve a superior retail quality fragrance release.

OPERATIONAL PRINCIPLE — The Wick/Wafer design works on the principle :

WICK - A wick is submerged into a reservoir containing an oil/chemical mixture. The wick absorbs the mixture and fragrance, and is diffused into the air through the process of evaporation. In this function evaporation is an uncontrollable process, as the rate of evaporation is affected by ambient room temperature, room air movement and the amount of solvent in the mixture. The wick is a porous material and the moment the wick comes into contact with the viscous mixture, the pores in the wick begin to contract and gradually (over the course of only 10 days) the diffusion process becomes severely compromised.

WAFER - A wafer is typically a square/rectangular piece of compressed fiber board. The fiber board is purchased from either the building or furniture industry. The board comes in precut sizes of either 4' x 8' or 4' x 12'. The boards are then cut into 2.5" x 2.5" squares and put into 30 gallon fiber drums. They are then heat branded with the name of the fragrance. The cut wafers and a 1/2 ounce of oil material are put into a poly bag and sealed and left overnight to allow for absorption. Once removed from the sealed poly bag, the evaporated product is diffused into the air via a simple fan operating 24/7. Typically, as soon as the bag is opened, the product produces a very strong fragrance release for approximately 4-5 days after which the performance declines dramatically. The wafer is a porous material and the moment the wafer comes into contact with the viscous mixture, the pores in the wafer begin to contract and gradually (over the course of only 10 days) the diffusion process becomes severely compromised. A 30 day wafer system will typically have efficacy for approximately 14 days.

The HYscent refill is made from a proprietary polymer blend infused with pure essential oils. Fragrance release is achieved through molecular migration of the fragrance molecules throughout the blended polymer to the exterior surfaces. This molecular migration will continue throughout the life of the refill. The rate of migration is known, therefore the longevity of each fragrance has been accurately measured.

BACTERIAL WARNING — When the Wick / Wafer begin to dry out they can become host to bacterial growth.

HYscent's Fragrance oils are predominantly water insoluble and the perfume oils used in the HYscent refills are completely hydrophobic. Fragrance oils have a high phenol coefficient which renders them incapable of bacterial growth or propagation of biological activity.

POSITIONING — The Wick / Wafer diffusers must be installed in an exact vertical position. Straying from this position will cause gradual leaking. The solvents can react to certain plastics and assorted wall finishes. End user interference with either system can cause spillage and contact with the skin.

HYscent refills are a completely dry product with no reactivity. Being completely dry, HYscent products can be oriented in any position which allows for unlimited placement and use. No spillage or leaks renders HYscent products free from end user liability issues.

LONGEVITY — The Wick / Wafer systems claim longevity of 30 days. End user market analysis has shown that the efficacy of either system is limited to 12 - 22 days.

HYscent refills claim and achieve a longevity between 45 - 60 days. End user market analysis has shown that the efficacy of all HYscent fragrances last between 40 and 85 days.

REFILL CHANGING — Changing the refills in the Wick / Wafer systems is a messy business.
When changing out the refills of either product, in many cases the remaining material oil will come into contact with the hands. The high volatile elements will remain on the affected area for hours after hand washing.

HYscent refills are completely dry and encased in a recyclable cartridge. Touching the blended polymer leaves no fragrance on the hands.

FLAMMABILITY — The Wick / Wafer systems have a flammability rating of 2.

HYscent refills have a flammability rating of 0.

HEALTH HAZARDS — Because of the chemical composition of the wick / wafer refills, inhalation of the product can cause: Drowsiness, dizziness, nausea, irritation to eyes, throat, lungs, and skin.

HYscent refills produce no chemical release into the air, therefore producing no adverse health effects.

Hydrogen Cell analysis and known product complaints and issues in comparison to HYscent.

INGREDIENTS AND POTENTIAL HEALTH HAZARDS — Analysis of 2 Hydrogen cell fragrances indicate that they are very cheap industrial compositions with approximately 40% hydrocarbon solvent (which by itself makes them aspiration hazards [R65 warning] – big safety issue). The aroma chemical portion contains a huge amount of **Dihyrdo Myrcenol** which is a low cost green note that gives a technical/institutional impression.

HYscent only uses the highest quality essential oils infused into the blended polymer to achieve a superior retail quality fragrance release.

OPERATIONAL PRINCIPLE — The Hydrogen Cell design works on the principle: Micro drops of perfume oil are pushed onto an emanator pad through vapor displacement. The reservoir in the Hydrogen Cell is 48 ml. The Hydrogen Cell design is limited in that non-volatile fragrance ingredients will clog the emanator pad and reduce its efficiency. Perfume oil viscosity is also a concern in that it requires a high percentage of solvent to be able to form a fine droplet in order to be dosed onto the emanator.

The HYscent refill is made from a proprietary polymer blend infused with pure essential oils. Fragrance release is achieved through molecular migration of the fragrance molecules to the exterior surfaces of the blended polymer. This molecular migration will continue throughout the life of the refill.

BACTERIAL WARNING — When The Hydrogen Cell emanator pad begins to dry out it, can become host to bacterial growth.

HYscent's Fragrance oils are predominantly water insoluble and the perfume oils used in the HYscent refills are completely hydrophobic. Fragrance oils have a high phenol coefficient which renders them incapable of bacterial growth or propagation of biological activity.

POSITIONING — The Hydrogen cell must be installed in an exact vertical position. Straying from this position will cause gradual leaking of the Hydrogen cell. The solvents can react to certain plastics and assorted wall finishes. End user interference with a Hydrogen Cell can cause spillage and contact with the skin. The high volatile elements will remain on the affected area for hours after hand washing.

HYscent refills are a completely dry product with no reactivity. Being completely dry, HYscent products can be oriented in any position which allows for unlimited placement and use. No spillage or leaks renders HYscent products free from end user liability issues.

LONGEVITY — The Hydrogen Cell claims a longevity of 60 days. End user market analysis has shown that the efficacy of a Hydrogen Cell's fragrance release is limited to 18 - 22 days. Typically, as soon as the protective packaging is opened, the product produces a very strong fragrance release for approximately 4-5 days after which the performance declines dramatically. The emanator pad is a porous material and the moment the pad comes into contact with the viscous mixture, the pores in the pad begin to contract and gradually (over the course of only 10 days) the diffusion process becomes severely compromised.

HYscent refills claim and achieve a longevity between 45 - 60 days. End user market analysis has shown that the efficacy of all HYscent fragrances last between 40 and 85 days.

MESSY — Changing the refills in the Hydrogen Cell system is a messy business.
When changing out the refill, in many cases the remaining material oil will come into contact with the hands. The high volatile elements will remain on the affected area for hours after hand washing.

HYscent refills are completely dry and encased in a recyclable cartridge. No Touching the blended polymer leaves no fragrance on the hands.

FLAMMABILITY — The Hydrogen Cell systems have a flammability rating of 2.

HYscent refills have a flammability rating of 0

FRAGRANCE THROW — The Hydrogen Cell systems claim to fragrance a space of up to 600 sq ft. Tests show that a cell will fragrance a space of approximately 225 sq ft.

With HYscent's unique automated cylindrical fan airflow, depending on the HYscent device used, an area between 220 sq ft to 750 sq ft can be adequately fragranced.

HEALTH HAZARDS — Because of the chemical composition of the Hydrogen Cell, inhalation of the product can cause:
Drowsiness, dizziness, nausea, irritation to eyes, throat, lungs, and skin.

HYscent refills produce no chemical release into the air, therefore producing no adverse health effects .

eco happy.

HYSO®
HYGIENIC SOLUTIONS.

HYSO LLC | 430 Gotham Parkway | Carlstadt, NJ 07072
Phone: +1.201.635.9555 | Fax: +1.866.682.8078
sales@hyso.com | internationalsales@hyso.com

Visit us online: www.HYscent.com