

GEBAUER'S GUIDE TO

ETHYL CHLORIDE





Ethyl Chloride:

The Original Patient Comfort Solution

Your patients have a lot on their mind. Whether their injury or condition is acute or chronic, nearly all patients fear the discomfort associated with current or future clinical procedures—and they trust you to ease their concerns and offer the best experience possible.

Gebauer's Ethyl Chloride[®], the world's first topical anesthetic skin refrigerant, is FDA-cleared to instantly and temporarily control the pain associated with needle procedures, minor surgical procedures and minor sports injuries. It has been trusted by physicians for over 100 years and is used by healthcare facilities across the country.

Topical anesthetic sprays can have a big impact on patient comfort. They can help control the pain and discomfort related to various procedures and, in turn, may ease patient anxiety. With the ever-increasing importance of patient satisfaction and HCAHPS surveys, every measure healthcare providers take to improve the patient experience can be valuable.

To equip healthcare practitioners with important information about Ethyl Chloride, we developed this guide exploring Gebauer's original patient comfort solution.



Indications and Usage

Gebauer's Ethyl Chloride is a vapocoolant (skin refrigerant) intended for topical application to temporarily control pain associated with:

- Immunizations
- Intramuscular or subcutaneous injections
- IV starts and venipunctures
- Minor surgical procedures (such as lancing boils or incision and drainage of small abscesses)
- Minor sports injuries (such as contusions and sprains)

When topically applied to the skin, Ethyl Chloride creates an instantaneous cooling effect on the surface of the application site by the immediate evaporation of the product from the skin surface. The cooling sensation produced is directly related to the type of stream and the distance from the point of contact.



DIRECTIONS FOR General Use

The application directions vary slightly based on the type of container used. Below are instructions for the traditional amber bottle and the aerosol can.



Amber Bottle

1. Hold the bottle inverted, 3 to 9 inches from the treatment site (about a bottle's length away).
2. Depress the dispenser spring valve completely allowing the Ethyl Chloride to flow from the bottle.
3. Spray the treatment site for 3 to 7 seconds or until the skin begins turning white, whichever comes first.
4. Do not frost the skin.
5. Do not spray longer than 7 seconds.



Mist Spray Can

1. Hold the can upright 3 to 9 inches from the treatment site (about a can's length away)*.
2. Depress the actuator completely allowing Ethyl Chloride to spray from the can.
3. Spray the treatment site for 4 to 10 seconds or until the skin begins turning white, whichever comes first.
4. Do not frost the skin.
5. Do not spray longer than 10 seconds.

***NOTE:** The Accu-Stream 360 Spray Can may be held in any direction.

DIRECTIONS FOR USE IN Common Procedures



INJECTIONS

1. Prepare the syringe
2. Prepare the site per your facility's protocol
3. Apply Ethyl Chloride
4. With skin taut, quickly introduce the needle



MINOR SURGICAL PROCEDURES

1. Clean the procedure site with a suitable antiseptic
2. Prepare the site per your facility's protocol
3. Apply Ethyl Chloride
4. Promptly begin the procedure



TEMPORARY RELIEF OF MINOR SPORTS INJURIES

1. Determine the extent of the injury (sprains, strains, and contusions)
2. Apply Ethyl Chloride
3. Use as you would ice

*See instructions for use for complete application instructions, warnings and precautions.

IMPORTANT RISK AND SAFETY INFORMATION FOR

Gebauer's Ethyl Chloride

Published clinical trial results support the use in children three years of age and older. Ethyl Chloride is FLAMMABLE and should never be used in the presence of an open flame or electrical cautery equipment. Inhalation should be avoided as it may produce narcotic and general anesthetic effects, and may produce deep anesthesia or fatal coma or cardiac arrest. Do not spray in eyes. Overspraying may cause frostbite. Freezing may alter skin pigmentation. The thawing process may be painful and freezing may lower resistance to infection and delay healing. Cutaneous sensitization may occur, but appears to be extremely rare. Long-term exposure may cause liver or kidney damage. CAUTION: Federal law restricts this device to sale by or on the order of a licensed healthcare practitioner.

FACTS ABOUT

Application and Duration

- Ethyl Chloride should be used in well-ventilated areas in order to minimize the inhalation of vapors.
- There are approximately 50 five-second spray applications per bottle or can of Ethyl Chloride.
- The anesthetic effect of Ethyl Chloride lasts up to 60 seconds.
- The duration of application of Ethyl Chloride will depend on a number of variables, including:
 - Skin sensitivity - Blood flow
 - Sensory perception
 - Weight, fat content, metabolism
- Ethyl Chloride is indicated for intact skin only.

Contraindications

- Ethyl Chloride is contraindicated in individuals with a history of hypersensitivity to Ethyl Chloride

Precautions

- For external use only
- Do not use near temperatures above 120°F (50°C)
- Keep out of reach of children
- When Ethyl Chloride is used to produce local freezing of tissues, adjacent skin areas should be protected by an application of petrolatum

Storage

- Ethyl Chloride is flammable and should be stored per your facility's protocol.
- Joint Commission states to refer to the manufacturer's Safety Data Sheet (SDS) for storage requirements and does not require storage of Ethyl Chloride in a flammable cabinet.
- Occupational Safety and Health Administration (OSHA) states flammable liquids in glass containers less than 1 pint (Ethyl Chloride bottles) can be left outside of the flammable cabinet. Flammable liquids in metal containers less than 1 gallon (Ethyl Chloride cans) may also be kept outside of the flammable cabinet. [29 CFR 1910.106]
- Do not store Ethyl Chloride near high-frequency ultrasound equipment or non-explosion proof electrical equipment
- Do not subject to temperatures above 120°F (50°C)
- Protect against physical damage to container
- Store in cool, dry, well-ventilated area

Disposal

- Dispose of Ethyl Chloride in accordance with local, state and national regulations for hazardous waste.
- Ethyl Chloride can be disposed of in the same manner as a variety of other hazardous goods such as sharps and expired pharmaceuticals.

Toxicity

- Ethyl Chloride falls under California's Proposition 65. Ethyl Chloride has the same labelling requirements under this proposition as many drugs, cosmetics, food, and consumer products. This list includes ingredients such as estrogen and iron dextran.
- When Gebauer's Ethyl Chloride is used as intended, the long-term toxicity due to exposure is low. Many of studies for prop 65 were done at high dosing and chronic exposure levels and are not representative of Gebauer's Ethyl Chloride's intended uses.
- There is no recorded data of carcinogenicity in humans. The U.S. EPA has not classified ethyl chloride as a carcinogen.

Flammability

- As stated, Ethyl Chloride is flammable. When used correctly in a well ventilated area, risk is low.
- A review of FDA's MAUDE database identifies no reports of fire related complaints in the last 10 years.
- A hazardous shipping fee may apply to an Ethyl Chloride order. Always ask your distributor to see if they can deliver direct.

CLINICAL STUDY

Ethyl Chloride

Topical ethyl chloride to reduce pain associated with venous catheterization: a randomized crossover trial
(Fossum K, Love SL, et al. Am J Emerg Med 34 (2016) 845–850)

OBJECTIVE

To compare pain associated with venous catheterization after administration of topical ethyl chloride vs placebo among emergency department health care providers.

METHODS

We conducted a randomized, double-blind, placebo-controlled, crossover trial among a convenience sample of health care provider volunteers in a tertiary care urban emergency department. We randomly allocated subjects to initial treatment (ethyl chloride v. sterile water aerosol spray) and catheterization site (left or right antecubital fossa). After venous catheterization placement and discontinuation, subjects underwent a 5-minute washout period. All subjects then underwent venous catheterization in the contralateral antecubital fossa after administration of the alternative agent. We measured all outcomes after discontinuation of the second catheter.

The primary outcome was difference in pain verbal numeric rating scale score (0-10) between the 2 agents. Secondary outcomes included preferred agent (binary) and future willingness to use agent on patients (5-point Likert scale).

RESULTS

Thirty-eight health care providers were recruited; all completed the study. Median pain verbal numeric rating scale scores were 4 (interquartile range, 2-5) for placebo vs 2 (1-4) for ethyl chloride. The effect size for pain reduction with ethyl chloride compared with placebo was 2 (95% confidence interval, 0.5-2; $P = .001$).

Most subjects (68.4%) preferred ethyl chloride to placebo. Five-point Likert scale scores measuring willingness to use preferred product on future patients were higher by 2 (95% confidence interval, 1-3) among subjects preferring ethyl chloride vs placebo.

CONCLUSIONS

We found that topical ethyl chloride yields a greater reduction in pain associated with venous catheterization compared with topical placebo.

ETHYL CHLORIDE IS ESSENTIAL TO A POSITIVE PATIENT EXPERIENCE

AND CAN HELP CALM YOUR PATIENTS' PRE-PROCEDURE JITTERS.



It may create a more comfortable experience for patients in only three to seven seconds and can be used on children as young as three. Additionally, Ethyl Chloride is available in mist, medium and fine sprays, allowing clinicians to choose their preferred method of application.

If you're interested in adding Ethyl Chloride to your practice, get in touch. We'd love to hear from you.

Contact Gebauer