

Version 2.4

A safer method of training and performing in fire arts

May 2023



#### Acknowledgements

Thanks to those who contributed in any ways for making this document possible: Patrick Lagacé, Joannie Olivier, Sonia Legault, Francis Dubé, Alexandre Tanguay, Fannie Lagrange, Valérie Archambault, Jacquelin Duchesne, Sarah Guilbault, Tedward LeCouteu de la NAFAA (North American Fire Arts Association), Service de Sécurité Incendie de Montréal (SIM) – Division des effets spéciaux, Vezina Assurance, Mireille Bergeron, Curtis Lin, Samuel Létourneau, Pascal Duguay Gosselin.

#### Property

This document is GardeFeu's intellectual property. It shall not be used, reproduced, distributed, modified in part or in whole without authorization.

#### Linguistic note

Some of the emergency words are used in both english and french protocols to avoid confusion or delay of action if something happens. Words such as « safety », « shutdown », « wipe », « medic » must stay in their english form, even if the majority of artists are french speaking.



### Table of contents

Sı	ummary	6
	propos de GardeFeu	
1.	Essential rules in fire arts	
	1.1 Never practice alone with fire	7
	1.2 Never try a new discipline without a mentor	7
	1.3 Check the flammability of your clothes	7
	1.4 Never smoke near the soaking area	7
	1.5 Never light up your props near the soaking area	7
	1.6 All participants must enforce safety	7
2.	Configuration of a fire scene	
	2.1 Yellow area – restricted	8
	2.2 Orange area - performance	
	2.3 Zone bleu – sécurité	
	2.4 Green area – equipement	9
	2.5 Red area – dipping	
3.	Feneral rules in the fire scene	
	3.1 Ecology and cleanliness	
	3.2 Police and firefighters	
	3.3 Photographers and musicians	
	3.4 Safety ratio	
	3.5 Liquid identification	
	3.6 Projectile	
	3.7 Ignition policy	
	3.8 Last call	
4.	Emergency measures	
	4.1 Emergency codes	
	4.1.1 SHUTDOWN	
	4.1.2 ORANGE	
	4.1.3 WIPE	
	4.1.4 MEDIC	
	4.1.5 SAFETY	
	4.2 Artist on fire	
	4.3 Equipment failure	
	4.4 An intruder enters the restricted area	
	4.5 Medical emergency	
	4.6 Fuel spillage	
5.	Roles and responsibilities of paticipants	
	5.1 1 Responsibilities that apply to all	
	5.2 Safety	
	5.3 Artist	15



5.4 Fire breathers	16
5.5 Photographers	16
5.6 Supervisor	16
6. Understanding fire	17
6.1 Fire tetrahedron	17
6.2 Types of fire	17
7 Extinguishing a Type A or B fire	18
7.1 Fire extinguishers	18
7.2 Wet towels	19
7.3 Fire blanket	19
8 Combustibles et technics	20
The 3 main fuels	21
8.1 Isopar-k (Default fuel)	21
8.2 Naphta	21
8.3 Paraffin	21
Authorized	22
8.4 Lycopodium	22
8.5 Titanium	22
8.6 Butane foam	22
8.7 Flash papper, cotton flash	22
With special permission	
8.8. Charbon	23
Prohibited	23
8.9 Kerosene	
8.10 Gasoline/Diesel	
8.11 Steel wool	24
8.12 Propane	
8.13 Rubbing alcohol	
8.15 Méthanol (Color)	
8.15 Grinder	
8.16 Pyrotechnics	
9 Health and hygiene	
9.1 burn injuries	
9.2. Chemical pneumonia	
9.3 Prevention	
10 Equipment and clothing	
10.1 Equipements	
10.2 Vêtements	
11 Application for a fire performance permit	
12 Continuing education	
12.1 GardeFeu fire arts safety course	31



12.2 Publications of GardeFeu	
12.3 Secret Facebook group	
Appendix	
Annexe - Historique des modifications	



### Summary

GardeFeu's protocol allows many artists of different experience levels and who practice a variety of disciplines to safely share a stage. This protocol incorporates all of the requirements of the SIM (Service Sécurité Incendie de Montréal, the Montreal Fire Department) regarding fire performances. It also includes multiple levels of safety measures based on the years of experience acquired over the years as well as the industry's best practices.

This protocol works in harmony with GardeFeu's fire art safety course where participants learn how to use the different safety mechanisms mentioned in this document, as well as how to act in the fire arts community. This safety course is akin to a driver's license training program which allows drivers of all types to share the road safely. Having all the artists operate with the same protocol the risk of accidents is greatly reduced.

The guiding principle is that each fire artist is first a safety and that each safety must also be a fire artist. This complementariness is **essential**.

"A fire artist's worst enemy is his ego"

### À propos de GardeFeu

A non-profit which develops and teaches the best standards in matters of fire arts. We allow fire artists and troupes of all levels to safely develop themselves and help them achieve their highest potential.

- 2016-05-31 GardeFeu is founded
- 2016-11-23 The first legally allowed drop in fire arts training in Canada. From then onwards we've held weekly dropin training.
- 2018-12-15 The first production of Cabaret Ardent allows fire artists to perform in a professional show for a large audience.



To this day, more than 450 fire artists have been trained with GardeFeu's protocol.



### **1. Essential rules in fire arts**

#### 1.1 Always practice with another fire artists

Another fire artist must be present. A person who is not a fire artist may panic in an emergency involving fire.

# **1.2 Never try a new discipline without a mentor (Youtube is not a mentor!)**

To reduce the risk of injury and accidents, it is important to learn from an expert who supervises the learning process. The GardeFeu staff can redirect fire artists to professional and safe artists in each fire art discipline.

#### **1.3 Check the flammability of your clothes**

It is customary to make a "fire suit" which consists of clothing that has been tested, mainly made of natural fibers and will act consistently and safely when in contact with flame.

#### 1.4 Never smoke near the soaking area

The soaking area may contain volatile materials, it is essential to keep it free of flames. It is good practice for smokers to consider the entire fire scene as a non-smoking area.

#### **1.5 Never light up your props near the soaking area**

To protect the soaking area from any flames, avoid lighting up too close to it. This is why the ignition must be done on ignition pilots already positioned at a safe distance.

#### **1.6 All participants must enforce safety**

Everyone in the fire scene, regardless of their roles, is responsible for safety and is obligated to intervene if there is a problem.



### 2. Configuration of a fire scene

The fire scene requires the establishment of 5 areas that are identified by different colors. Depending on the site's configuration, the red and the blue areas can be reversed, but they are always separated by the green area.

#### 2.1 Yellow area – restricted

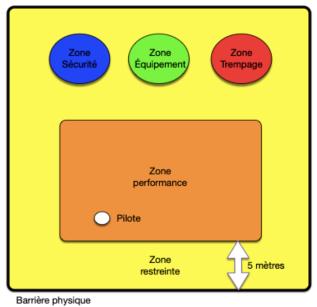
Defines the area beyond the reach of the public.

- Must have a physical boundary (a child who wants to run across it has to hold on to something).
- Only authorized participants may be in this area, no access to the public
- No consumption in this area

#### 2.2 Orange area - performance

Defines the area where the artists can perform

- The only area where the fire can be used
- Light equipment on the pilot(s)





• All of these points must be a minimum of 5 meters from the outer perimeter of the yellow zone to ensure a minimum distance of 5 meters between the flame and the public at all times.

#### 2.3 Zone bleu – sécurité

Storage area for safety equipment

- Big blue wet towels
- (When they are not in the safeties' hands)
- Small red washcloths
- (for the fire breathers and for wiping fuel)
- Fiberglass fire blanket
- Safety bibs (when they are not being used by safeties)
- At least one ABC fire extinguisher
- Water container with blue ribbon



- First aid kit
- Blue and red masking tape

#### 2.4 Green area – equipment

Storage area for all stage art equipment.

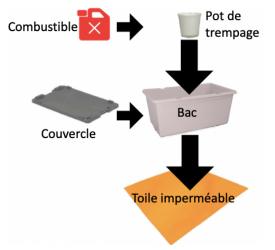
- Contains the hot and/or cold equipment of the artists
- Lost objects/equipment are found there
- No one plays with other people's equipment without the owner's permission
- Always between the blue and red areas

In some events, there may be a dry green area (for used equipment) and a wet green area (for equipment that has been soaked before the service). Depending on the performance configuration, there may be several green areas to pick up or drop off equipment.

#### 2.5 Red area – dipping

The area where artists will add fuel to their equipment.

- Dipping artists only
- 3-level ground protection
- No flames in this area
- The lid on the soaking tank
- Absorbent material
- No hot equipment
- CO2 extinguisher
- Contains the fuels
- The cover of the soaking tank must always be replaced after soaking





### 3. General rules in the fire scene

#### 3.1 Ecology and cleanliness

- Ecologic politic « Leave no trace »
- No waste at the end of the activity
- In case of a spill, use absorbent material and notify the supervisor
- Checking before final departure to make sure the site is clean

#### **3.2 Police and firefighters**

In the event of a visit from authorities, participants must:

- 1) Notify the supervisor of the presence of the authorities
- 2) Move away from the authorities so as not to encircle them
- 3) Participants who are already ignited continue their performance
- 4) Let the supervisor negotiate with the authorities

#### 3.3 Photographers and musicians

Musicians must always be outside the restricted area. By default, the photographers must also be outside the restricted area.

In exceptional cases, the supervisor may allow a photographer to be present in the restricted area. In this case :

- The supervisor will notify all participants of the photographer's presence
- The photographer must wear a yellow vest to be visible without being identified as a lifeguard who wears an orange vest
- The photographer must have received fire art safety training
- A lifeguard will be dedicated to the photographer and will stay next to him at a distance of less than one meter

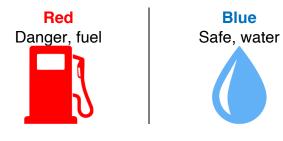


#### 3.4 Safety ratio

- 1 beginner or
- o 2 intermediates or
- o 3 advanced
- The safety must be dedicated to fire breathers when they are active
- The safety must be dedicated to a photographer in case of special authorization for the photographer
- In the show, the number of rescuers is predefined and their positions identified on a map.

#### 3.5 Liquid identification

Liquids in the area must be identified with red or blue tape.



A bottle of water, even if identified in blue, that ends up in the red zone should be considered contaminated.

#### 3.6 Projectile

No equipment with projectile is allowed.



#### 3.7 Dipping policy

- QuickDip Method
- No fuel should drip
- No spinning or spin off should be necessary
- No hot re-dipping
- Overriding equipment: whips, oversized, swallowing torch

#### 3.9 Ignition policy

- No ignition without an active safety
- Light equipment on pilots only, they are previously installed at a safe distance from the soaking area
- No fire sharing between artists to avoid ignition too close to the red area.



• There can be several drivers

#### 3.8 Last call

Shortly before the end of the activity, the supervisor will announce "Last call".

- For the artists who are already lit, it means that this is their last burn of the night. Ideally, they become safeties after their performance.
- For unlit artists, this means they can do a final burn in the next 10 minutes.



### 4. Emergency measures

#### 4.1 Emergency codes

The following emergency codes can be shouted by participants:

#### 4.1.1 SHUTDOWN

Immediately stops all activities, artists drop their equipment on the ground and remain motionless awaiting instructions.

#### 4.1.2 ORANGE

Some artist is on fire and the person calling the emergency code doesn't know his name. All working artists must inspect themselves on an ORANGE. The part of the body affected is mentioned, ex: ORANGE LEG ON FIRE

#### 4.1.3 WIPE

A fire breather starts to get too much paraffin on the chin or neck and needs to be wiped off. The fire breather then crosses in front of their safety to be wiped or they wipe themself with their own washcloth.

#### 4.1.4 MEDIC

A medical emergency is detected, the rescuers rush to the person who invoked the emergency code.

#### 4.1.5 SAFETY

An artist requests the intervention of the safety, the safety then goes to the artist to inquire about what is wrong.



#### 4.2 Artist on fire

A participant shouts "(Artist's name), (body part), on fire". In 95% of the cases, the artist will put himself out by tapping the fire with his hand.

- The safety stands within one second of the artist he is watching
- If the body part is the back of the head, the artist drops his equipment and immediately presents the inaccessible part to his safety
- If the artist has not reacted within a second, the safety immediately jumps on the artist to put him out

Example: « Julie, your shoulder is on fire! »

#### 4.3 Equipment failure

A safety will light off the equipment and bring it back to the green zone, the artist's performance stops. Rescue priority:

- 1. Public
- 2. Room
- 3. Artist

#### 4.4 An intruder enters the restricted area

A participant intervenes immediately to remove him, if there is resistance, a "Shutdown" can be invoked while waiting for security or the police.

#### 4.5 Medical emergency

Call of 9-1-1

#### 4.6 Fuel spillage

- Call the supervisor
- Immediate application of absorbent material
- Allow time to soak in
- Recovery of the absorbent material once the fuel has been absorbed

### 5. Roles and responsibilities of paticipants

#### 5.1 1 Responsibilities that apply to all

- 1. Invoke emergency codes as needed
- 2. Have all his faculties (alcohol, drugs, fatigue, anger)
- 3. Participate in the assembly/disassembly of the site
- 4. Paying attention to the clouds of fire breathers
- 5. Enforce safety rules
- 6. Protecting the perimeter of the fire scene

Each participant assumes one of the following roles:

#### 5.2 Safety

Ensures the safety of the public, the premises, and the artists

- Wear an orange safety vest to indicate that he is active
- Hold a wet blue towel with both hands
- If he is watching fire breathers, he must have a red washcloth
- Know the identity of the artists he is monitoring
- Stand within one second of reach
- Shout out to the artist when a problem arises and intervene quickly if he or she does not act within a second.
- Intervene quickly on emergency measures
- Turn off the artists and their equipment
- Be completely focused on the artists he is monitoring

#### 5.3 Artist

Train with fire or deliver his performance

- Obey the rescuers
- Wear clothing that has been tested for flammability
- Participate in safeties rotations
- Stop immediately on a SHUTDOWN
- Inspecting yourself on an ORANGE
- Dip in quick dip or use an ecological spinoff
- The roles of artists and rescuers are interchangeable during practices and free performances.









#### 5.4 Fire breathers

In addition to all the obligations of an artist, the fire breather must also comply with these:

- Control your cloud to avoid contaminating the public or other participants
- Leave your paraffin in the red zone
- Put a red ribbon around your paraffin bottle
- Making the cross in front of your rescuer on a WIPE
- If the paraffin soaks his clothes, he must stop

#### 5.5 Photographers

Access to the fire scene by a photographer is not a right but a rare privilege. The fire scene exists first and foremost for fire artists.

- Obtain prior permission from the supervisor to enter the area as a photographer
- Wear a yellow vest (not orange, which is reserved for safeties)
- Obey your dedicated safety
- Giving priority to artists
- Not to be cumbersome
- Must have a dedicated safety standing within 3 feet of him while in the fire scene
- All participants must be notified of its presence by the supervisor

#### 5.6 Supervisor

Conducts training or performance in line with the applicable license.

- Hold the documents related to the activity
  - Proof of authorization from the owner of the premises
  - A copy of the insurance certificate
  - A map of the premises
  - A permit from the local fire department
  - A copy of this protocol
- Take charge of the newcomers
- Responds to the authorities, the client, the public
- Make decisions that may affect the flow of the evening
- Invoking the last call

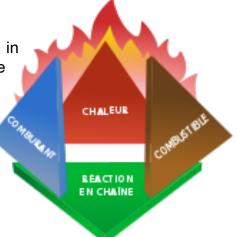


### 6. Understanding fire

#### 6.1 Fire tetrahedron

Fire requires 4 elements to exist which are represented in the fire tetrahedron model. If it is deprived of one of these elements, the fire goes out.

- Oxidizer: Ambient oxygen
- Heat: Initiated by the ignition pilot or the torch
- Fuel: Isopar-K, Naphtha, or Paraffin
- Chain reaction: Maintains and spreads the fire



#### 6.2 Types of fire

In the practice of fire art, artists use type B fires based on Isopar-K, Naphtha, or paraffin.

In the event of an incident, they may be required to control Type A fires.

Categorie d'incendie		Type d'incendie	Extincteur approuvé
	bustibles dinaires	Bois, papier, chiffon	Туре А; Туре А-В
	quides mmables h	Essence, peintures, nuiles, graisse	Type A-B; Type B-C; Type A-B-C
Équi	ipement ctrique	Câblage, coffret à fusibles	Type B-C; Type A-B-C
	létaux bustibles	Métaux	Seau de sable
de Konstantin de	ipement cuisson nmercial	Friteuses commerciales	*Produit chimique mouillant

\*Class K extinguishers may require specific training, including when they should be used or not used. For example, the extinguishing agents in many Class K extinguishers are electrically conductive and should only be used after electrical power to the kitchen appliance has been shut off.



### 7 Extinguishing a Type A or B fire

#### 7.1 Fire extinguishers

ABC extinguishers are reserved for Type A fires that could occur in the event of an accident. They can also be used on a type B fire if CO<sub>2</sub> extinguishers are not available.

CO2 extinguishers are reserved for type B fires.

Water extinguishers are not present at the fire scene but could be present nearby in the case of a performance at an event. They are to be avoided for type B fires.



**Powder extinguisher** Type ABC Sprays a fine powder Stored in the blue zone

Flexible hose, pressure dial



**CO2 extinguisher** Type BC Projection of CO<sub>2</sub> at -80°C Stored in the red zone

Rigid horn, no pressure dial



Water extinguisher Type A Sprays water Not for fire arts

Often silver in color

These extinguishers are all used in the same way:





#### 7.2 Wet towels

Fire Fighting Tools #1 in Fire Arts

- Large size (beach or bath)
- Standard cotton bath towel
- No fiberglass/jeans
- The blue color is mandatory for training
- (Often black for shows)
- Wet without dripping



#### 7.3 Fire blanket

The fire blankets used are made of either fiberglass or 7171-R (Robco). Fire blankets should only be used if wet towels do not work.

Fiberglass is irritating to the hands, while 7171-R is not. Please note that the 7171-R is only available in red, which is why it is often used as a floor protection cloth in the case of a small soaking area or as a mat in the red area to protect the floor protection cloth.

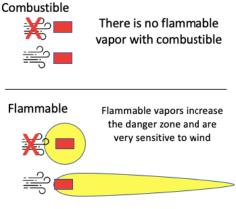
Fire blankets should be avoided for extinguishing equipment since, being dry, they do not cool the exposed metal parts, which increases the risk of burns for the safeties.





### 8 Combustibles et technics

- All fuels not specifically authorized in this document are prohibited
- To minimize the amount of fuel on the fire scene, the organization provided Isopar-K and naphtha
- Fire breathers must bring their own paraffin and must leave it in the red zone with a red ribbon
- It is important to avoid mixing products
- A product whose temperature is higher than its flashpoint at the time of its ignition is considered to be flammable, i.e. it is its vapors that ignite
- A product whose temperature is below its flashpoint at the time of ignition is considered combustible, i.e. it is the product itself that ignites and not its vapors
- Combustible are preferred and flammables are reserved only for practices that absolutely require a flammable to reduce the danger zone near the soaking area, reduce the risk of fire transfer to clothing, and reduce the risk of contamination of safety towels.



#### The 3 main fuels

8.1 Isopar-k (Default fuel) Also known as Misol Flashpoint 58°C Authorized, Provided as needed

Use: Pois, staff, hula-hoop, fans, fire fingers, and any other fire handling equipment in general. Isopar-K is the standard fuel for equipment that does not require a vapor effect.

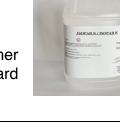
**8.2 Naphta** Also known as White gas, Camp fuel Flashpoint -7°C **Authorized, Provided and limited** 

Use: Fire swallowing, fleshing, whipping, any practice requiring vapor effects.

**8.3 Paraffin** Also known as UPLO (Ultra Pur Lamp Oil) Flashpoint 118°C **Authorized. Not provided** 

Use: Fire breathers

Note: Fire breathers must bring their own paraffin. Avoid kerosene-based lamp oil, the bottle of which often looks like paraffin-based lamp oil. A red ribbon should be placed around the bottle



CAUTION

Never breathe

with this or any other product in a

flammable state









#### Authorized

8.4 Lycopodium
Also known as Lycopod powder
Authorized, Not provided
Non-flammable as long as it is not dispersed in the air.

#### **8.5 Titanium** Also known as Titanium powder **Authorized, Not provided**

Non-flammable at all times, used by sprinkling on soaked equipment to cause sparks.



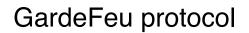


#### 8.6 Butane foam Authorized, Not provided

Produced by emptying a small butane cylinder into soapy water, which produces foam whose bubbles are filled with butane. The combustion residue is simply soapy water.

8.7 Flash papper, cotton flash Authorized, Not provided

Paper that ignites immediately when exposed to flame





#### With special permission

8.8. Charbon Also known as Coal spark fx Special request required, Not provided

A special request will have to be made to the fire department to add coal on the stage. Wind is an essential element in the use of coal. Coal-fired equipment should be preheated for about 20 minutes. They should be away from the red zone and should then air cool for more than 30 minutes after use. Causes a lot of ash and soot on the floor.



#### Prohibited

**8.9 Kerosene** Flashpoint 40°C Prohibited

Pollutant gives off a lot of black smoke

8.10 Gasoline/Diesel Aussi appelé : Essence automobile, gaz à char Flashpoint -46°C Prohibited Far too volatile







8.11 Steel wool Prohibited Sprays molten metal 8.12 Propane Flashpoint -104°C Prohibited Requires certification from the Régie du bâtiment du Québec 8.13 Rubbing alcohol Also known as Isopropyl alcohol Flashpoint 11°C Prohibited Unstable product for fire arts. Also includes all drinkable alcohol 8.15 Méthanol (Color) Also known as melt, methyl alcohol, methanol, methyl hydrate, wood alcohol Flashpoint 11°C Prohibited Produces a blue flame that turns green when boric acid is added. Unstable product for fire arts

8.15 Grinder Prohibited Hardware tools for cutting or polishing metal

8.16 Pyrotechnics

#### Prohibited

Pyrotechnics are prohibited by default; a special addition should be made to the fire art permit if not.





### 9 Health and hygiene

#### 9.1 burn injuries

#### **First-degree**

Like a sunburn

• Coldwater and a little aloe can help if needed

#### Second-degree

Blister and blistering

- Rapid heat transfer through exposed metal
- Coldwater or ideally Flamazine can be used (Talk to your physician!)



#### **Third-degree**

Carbonization of the skin

 It would take a VERY prolonged exposure to fire to cause this type of burn on an artist (an artist usually extinguishes himself and in the worst case, a safety acts in the second)

#### 9.2. Chemical poisoning

Chemical poisoning can occur when fuel is swallowed. It can also be absorbed through the mucous membranes of the mouth. It manifests itself by discomfort, headaches, nausea, vomiting, within 48 hours of exposure. A physician should be consulted immediately and advised that there is a risk of chemical poisoning.

#### 9.3. Chemical pneumonia

Chemical pneumonia can occur when fuel is inhaled. Fire breathers are particularly vulnerable to contaminating themselves, but they can also contaminate other performers or even the audience without good control of their cloud. The risk of chemical pneumonia is higher when the spit cloud has not been properly ignited. Depending on the atmospheric conditions, the paraffin cloud can then move up, down, or stay at the same altitude. This infection manifests itself by discomfort, headaches, nausea, vomiting, within 48 hours of exposure. A physician should be consulted immediately and advised that there is a risk of chemical pneumonia



#### 9.3 Prevention

#### Gargle after breathing

A soft drink helps to clean the mucous membranes of the mouth and reduce the risk of intoxication. Coke/Pepsi is particularly effective in breaking down paraffin molecules.

#### Take a shower after training

Ensures that there is no fuel left on the skin, avoids skin contamination.

#### Blowing your nose after training

Cleaning your nose can reduce the risk of intoxication.



### **10 Equipment and clothing**

#### **10.1 Equipment**

- The inflamed parts must be made of Kevlar
- No plastic
- No key ring
- No projectile gear
- Be careful with the exposed metal, the heat transfer is important and quickly causes a 2nd-degree burn
- Must be VERY sturdy

#### **10.2 Clothing**

- Favor Kevlar, Nomex, leather, cotton, wool, or other natural materials.
- No synthetics that are not specifically designed for fire, polyester is dangerous!
- Mixtures of natural fibers with polyester or other synthetics must be tested, if it shrinks or makes a black jelly it is to be avoided!
- The thicker the better! An extremely thin cotton fabric will easily catch fire.
- Some synthetics are designed specifically for fire such as Nomex, Kevlar.
- Flame retardant fabrics should be avoided because the flame retardant must be reapplied after each wash, which is rarely the case.
- It is essential to test the clothes and not to rely on the label.
- It is customary to make a "fire uniform" in which all the pieces have been tested beforehand and which is worn regularly during training sessions.





### **11 Application for a fire performance permit**

#### **11.1 Fire artists permits in Canada**

Canadian firefighters are ALL governed by the National Fire Code.

However, with respect to fire licensing, it is each local fire department that can issue a license.

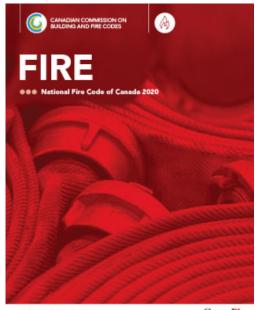
The local authority that can issue a permit is the fire department of the municipality where the service will be held.

Many small municipalities do not have a specific bylaw for fire performers and refer to the bylaw of a large city.

Documents to be provided in general:

- Written permission from the owner of the premises
- Certificate of insurance for the fire artist
- Site plan showing safety features (perimeter, fuel, distance, performance area, etc.)
- Description of activities
- Safety measures (PDF of the Fire Guard Protocol)
- Proof of successful completion of the pyrotechnician or fire arts safety course is often appreciated by the fire department.

The fire department of the municipality where the fire art performance will take place has the authority to issue the permit.



Hational Research Canael national de Council Canaels Robeches Canaels

Canada



#### **11.1 Montréal fire artist permit**

It is the fire department, of the municipality where the fire art is to be performed, that has the authority to issue the permit.

In Montreal, it is the Special Effects Division of SIM (Service Sécurité Incendie de Montréal) <u>https://ville.montreal.qc.ca/sim/en/special-effects</u>

The request must be made at least 10 days before the event.

Documents to be included:

- Written authorization from the owner of the premises
- Proof of Fire Artist Insurance
- Site plan identifying security features (perimeter, fuel, distance, delivery area, etc.)
- Description of the activities
- Security measures
- Proof of successful completion of the pyrotechnician course or a GardeFeu certification is often appreciated by firefighters

Each year, GardeFeu organizes pyrotechnician training for artists wishing to obtain this certification.

The GardeFeu protocol meets all safety requirements for special effects performances by SIM. See **Appendix - Safety Requirements for Special Effects Performances by Fire Artists** 

GardeFeu's "My First Gig" guide can help you prepare your permit application.







### **12 Certification**

The Fire Artist Card from GardeFeu comes in two versions, normal and senior. The senior endorsement is added for performers with more than 3 years of professional performing experience or more than 20 professional performances. A professional show is defined as an insured event with a fire department permit where the artist has performed as a fire artist. Festival fire jams are not considered professional performances.



### 13 Continuing education

The fire arts are a constantly evolving field where it is important to stay up to date with new practices, new regulations, new safety products, and new ways of doing things.



#### 13.1 GardeFeu fire arts safety course

Safety course based on the GardeFeu protocol, mandatory to participate in GardeFeu activities.

- 1) Pre-reading of the latest version of the FireGuard protocol
- 2) Fire arts safety course with an instructor
- 3) (the theoretical part with exercises without fire and demonstration)
- 4) Theoretical exam
- 5) Practical exercises with fire
- 6) The first round of safety during a real training session

#### **13.2 Publications of GardeFeu**

The GardeFeu organization is dedicated to the development of best practices in fire arts to ensure an optimal level of safety. The GardeFeu protocol is updated as the field progresses and is published free of charge.

https://www.gardefeu.ca/formation/gardefeu-protocol?lang=en

GardeFeu refresher courses also help improve safety skills.

Web site	www.gardefeu.ca	
Email	<u>info@gardefeu.ca</u>	
Facebook	www.facebook.com/gardefeu	@GardeFeu
Instagram	https://www.instagram.com/gardefeu	#GardeFeu

#### 13.3 Secret Facebook group

Ask a fire artist to add you, this group is for fire artists **only**. This is the perfect place to ask all your fire art questions.



### Appendix

#### **Appendix - Safety Requirements for Fire Performers**

The following safety requirements apply to any handling of flames for artistic or theatrical purposes during a special event.

- 1. Have a copy of the specifications for the flame effects and all planned activities.
- 2. The artist must work in an area that is free of any obstacles (minimum 5 m) and the performance may not be carried out under a roof or near a shelter or any combustible material.
- 3. The security perimeter must be physically marked off. A distance of at least 5 m must be maintained between the flame and the public at all times.
- 4. The use of flammable liquids is strictly prohibited.
- 5. The container of combustible liquid used during the performance must be kept within the security perimeter and must not be accessible to the public.
- 6. Have a minimum quantity of combustible liquid for carrying out the planned fireworks during the entire presentation.
- 7. Have a secure soaking and shaking area that is inaccessible to the public.
- 8. Provide ground protection in the soaking area to prevent contamination.
- 9. An artist may only have a maximum of two liters of fuel. He/she must keep absorbent material near the soaking area and must ensure that it is disposed of safely.
- 10. Ensure that the accessories used during the performance are in good condition.
- 11. Keep a fire blanket or wet towels within the security perimeter.
- 12. Keep an approved class 3A-10BC portable fire extinguisher near the security perimeter.
- 13. Ensure that the flame effect display performed inside a building in no way hinders the operations of the fire safety and ventilation installations.

Source: https://ville.montreal.qc.ca/sim/en/fire-artists



#### Annexe - Historique des modifications

Version	Chan	ges
1.0	June 16th, 2016	
	1.	Initial version
1.1	June 21st, 2016	
	1.	Added block: Last-call
	2.	Added block: For other fire jams
	3.	Added block: Photographers and musicians
	4.	Added block: Facebook group
	5.	Numbering of blocks to facilitate discussions
	1.	Corrected the description image of a fire zone
1.2	June 2	3rd, 2016
	1.	Added block: Equipment verification during new performer's training
1.3	Septen	nber 15th, 2016
	1.	Linguistic correction
	2.	Added block: Code to stop a performance immediately
	З.	Added block: To apply for a fire show permit
	4.	Added: Fatigue factor in faculty items
	1.	Added: Acknowledgements
1.4	Septen	nber 18th, 2016
	1.	Correction of the police protocol
1.5	August	24th, 2017
	1.	
	2. 3.	- h
	3. 4.	
	5.	
		Added a statement to never breathe with naphtha
		Added mention of when to invoke the Wipe Added mention of when to invoke Shutdown
	8. 9.	Added mention of when to invoke shutdown Added mention to drop equipment on the ground in case of back or head
		fire
2.0	Octobe	er 12th, 2021
	1.	Addition of the pilot in the orange zone
	2.	Adding spill mentions in ecology and cleanliness
	3.	Formalization of the role of the photographers
	4.	Addition of the liquid identification system
	5.	Addition of the ignition policy
	6.	Addition of the MEDIC emergency code



	7. Formalization of the SAFETY emergency code	
	8. Restructured emergency actions/situations	
	9. Added roles of supervisor, photographer	
	10. Added fire breathes responsibilities	
	11. Addition of the concept of cloud to be checked	
	12. Formalization of the ban on fireworks and projectiles	
	13. Added the following fuels: lycopodium, titanium, coal, steel wool, propane, rubbing alcohol, methanol	
	Added chapters 6 Understanding Fire, 7 Extinguishing Type A and B Fires, 9 Health and Hygiene, 10 Equipment and Clothing, 12 Continuing Education	
2.1	1 May 7th 2022	
	<ol> <li>Addition of the grinder in the prohibited techniques</li> <li>Addition of the flash paper in the authorized techniques</li> <li>Added a mention of drinking alcohol in rubbing alcohol</li> <li>Moved pyrotechnics to Fuels and Techniques</li> </ol>	
	5. Renamed the "Fuels and Flammables" section to "Fuels and Techniques".	
2.2	February 27th 2023	
	<ol> <li>Addition of the soaking policy</li> <li>Added explanation and graphic in section 8 to promote use of fuel vs. flammables.</li> <li>Added mention of course re-take in continuing education.</li> </ol>	
2.3	Avril 15th 2023	
2.5	<ol> <li>Added explanation of the expansion of the danger zone with flammables</li> <li>Reworded the basic rules to make it more positive</li> <li>Mention of not using Youtube as a mentor</li> <li>Added the importance of testing clothes</li> <li>Added chemical poisoning</li> <li>Added mention of not testing fire extinguishers</li> <li>Added mention of slippery floor in case of Isopar-K or paraffin spill</li> <li>Added mention of primer on naphtha</li> <li>Changed 10 days to 30 days for SIM permit applications</li> <li>Added explanation of protocol focus on risk reduction.</li> <li>Added "allow time to soak" in case of a spill</li> </ol>	
2.4	May 4th 2023 1. Moved chapiter 12 and 13 2. Added chapiter 12 for certification	