SPECIAL EFFECTS EVENT INFORMATION

EVENT NAME:	**Field of Dreams Concert Series**
EVENT SITE:	**Field of Dreams Movie Site**
SITE ADDRESS:	**28995 Lansing Rd. Dyersville, IA 52040**
PERFORMANCE DATE(S) & TIME(S):	August 30, 2025 @1900 hrs
	August 31, 2025 @1200 hrs
REHEARSAL DATE(S) & TIME(S):	TBD
DEMONSTRATION DATE & TIME:	August 29, 2025 @1800 hrs
SFX TECHNICIANS:	John Hofmann
	Preston Kennedy
	Matthew Dillingham

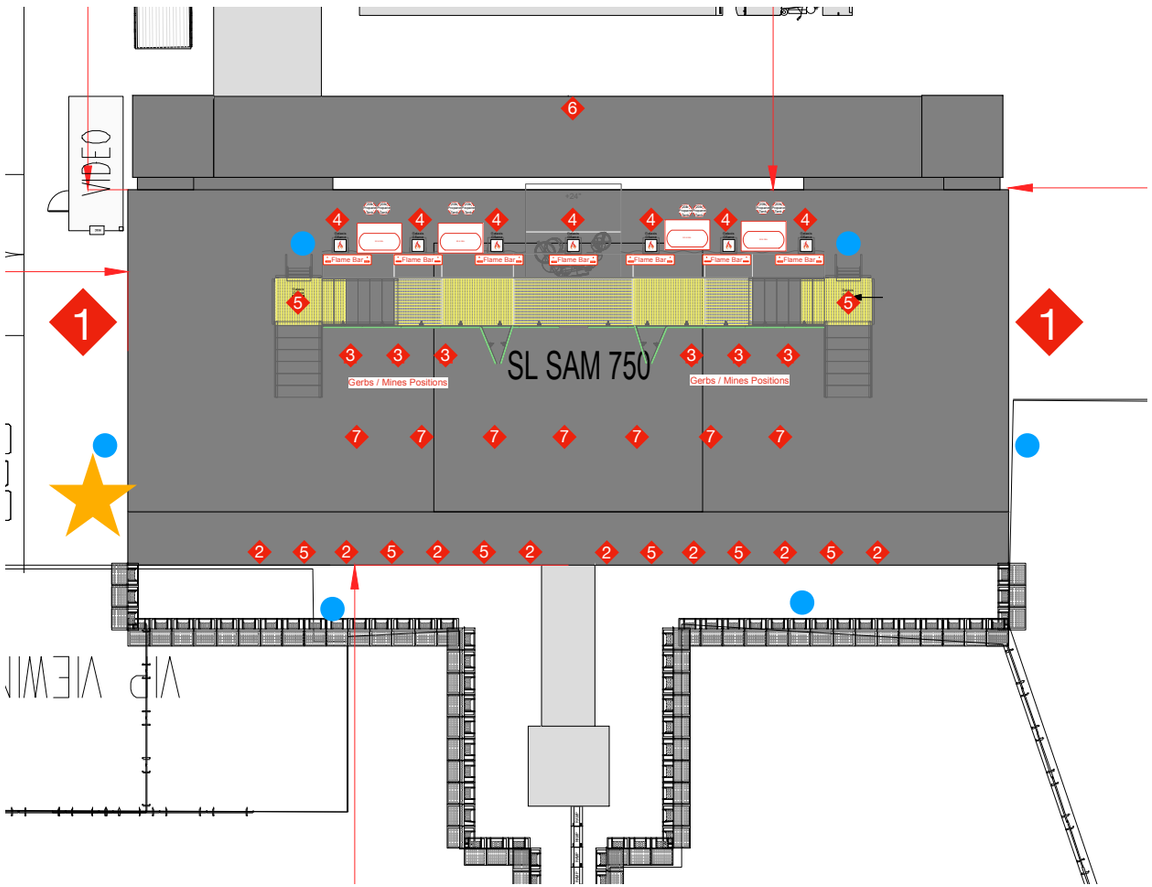
NOTES

1	All effects conform to NFPA 1126 & 160 where applicable.
2	Quantities specified within this packet represent the maximum number of effects of each type used per performance.
3	All pyrotechnic effects are classified as “Close Proximity 1.4G”
4	This performance **does not** contain any material classified as 1.3 explosive
5	For questions concerning the special effects this event, or the information contained in this packet, please contact Hattie Whitby at hwhitby@aespyro.com

Field of Dreams Concert Series

EFFECT NAME	DESCRIPTION	TOTAL QTY	PYRO ZONE
Post Concert Display; 8/30 & 8/31; Approximate duration 30 seconds			
Comet; Multiple Colors	250’ Maximum Height	128	1
Mine; Multiple Colors	250’ Maximum Height	64	
Crossette Comet; Multiple Colors	250’ Maximum Height	24	
Aerial Break; Multiple Colors	300’ Maximum Height	24	
Comet; Multiple Colors	25’ Maximum Height	24	2
Mine; Multiple Colors	25’ Maximum Height	24	
Pre-Loaded Flash	5’ Maximum Height	18	
Fountain Gerb	Various durations; 30’ Maximum Height	18	
In Concert Effects; 8/30 & 8/31			
Comet; Multiple Colors	25’ Maximum Height	24	2 & 3
Mine; Multiple Colors	25’ Maximum Height	24	
Fountain Gerb	Various durations; 30’ Maximum Height	24	
Pre-Loaded Flash	5’ Maximum Height	18	
Concussion Mortar	.75 oz; 5’ Maximum Height	6	6
Inverted Comet; Multiple Colors	25’ Maximum Drop	21	7
In Concert Effects; 8/31 Only			
Flame Bars	Propane fuel; 6’ wide; 5’ Maximum Height	7	4
Mechanical Flame Machine	Propane fuel; 18’ Maximum Height	6	5

Field of Dreams Concert Series
August 30 & 31, 2025
Pyrotechnic & Flame locations



1 — Pyro Zone 1; Located on a scissors lift approximately 25’ high from ground level

2 — Pyro Zone 2; Eight locations across the front edge of the stage

3 — Pyro Zone 3; Six locations midstage in front of the band riser; Used on 8/31 only

4 — Pyro Zone 4; Seven locations midstage on top of the band riser; Used on 8/31 only

5 — Pyro Zone 5; Ten locations on top of the midstage band riser, remote risers, and across downstage edge

6 — Pyro Zone 6; Six devices; Concussion mortar location TBD

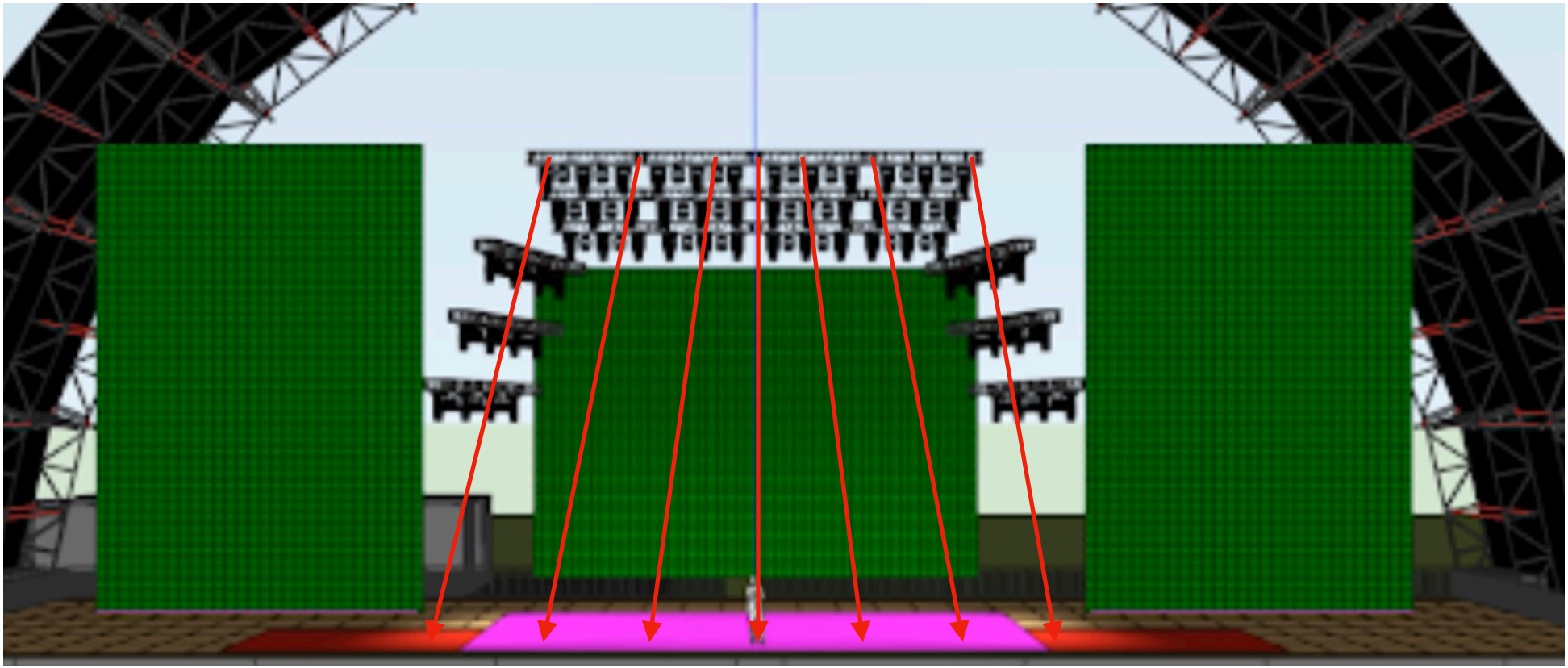
7 — Pyro Zone 7; Seven locations attached to the overhead lighting truss; Inverted comets shooting downwards

E — Extinguisher Location; 1- H20 & 1 Co2

SFX Operator

FIELD OF DREAMS
AUGUST 2025

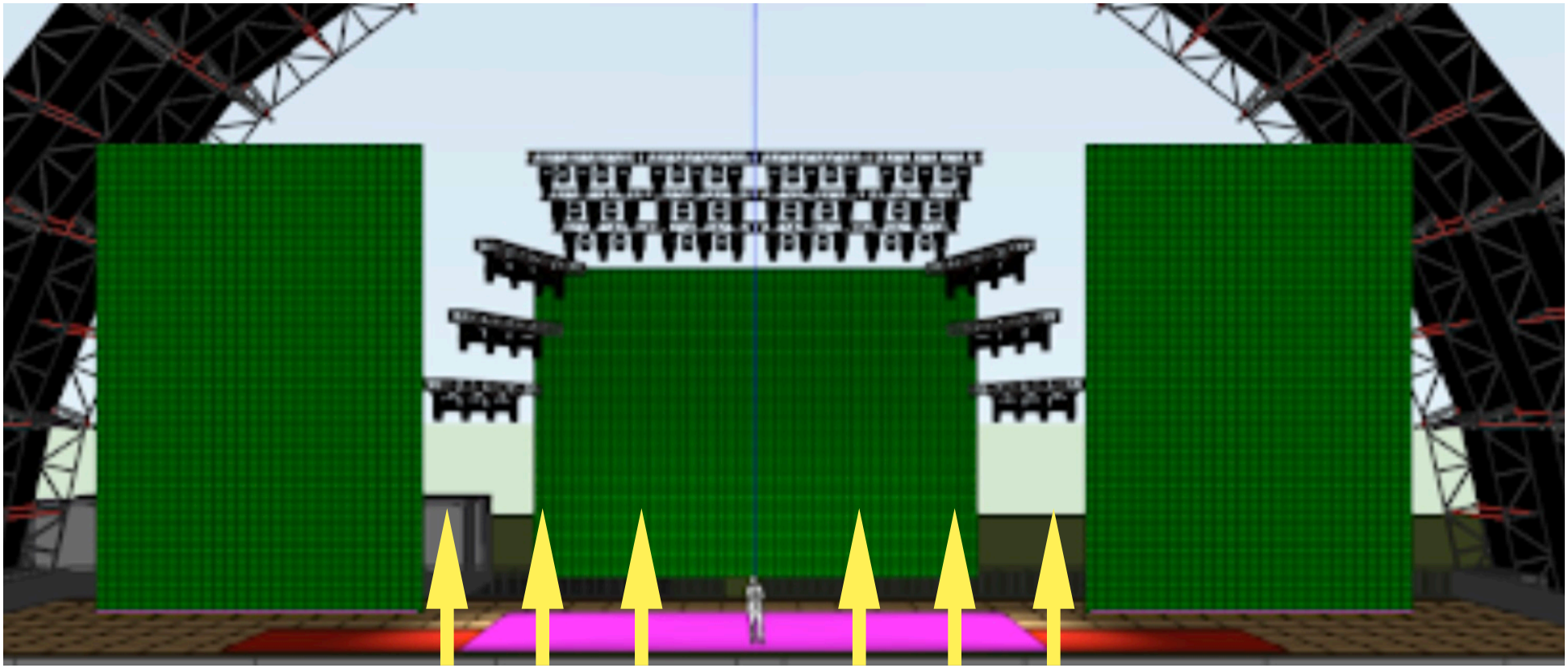
Pyro Zone #7



The segment will commence with 14 inverted red comets discharging from the overhead lighting truss, and directed downward towards the from edge of the stage. The first group of 14 will be fired in a rapid sequence, with the last set of 7 fired simultaneously.

FIELD OF DREAMS
AUGUST 2025

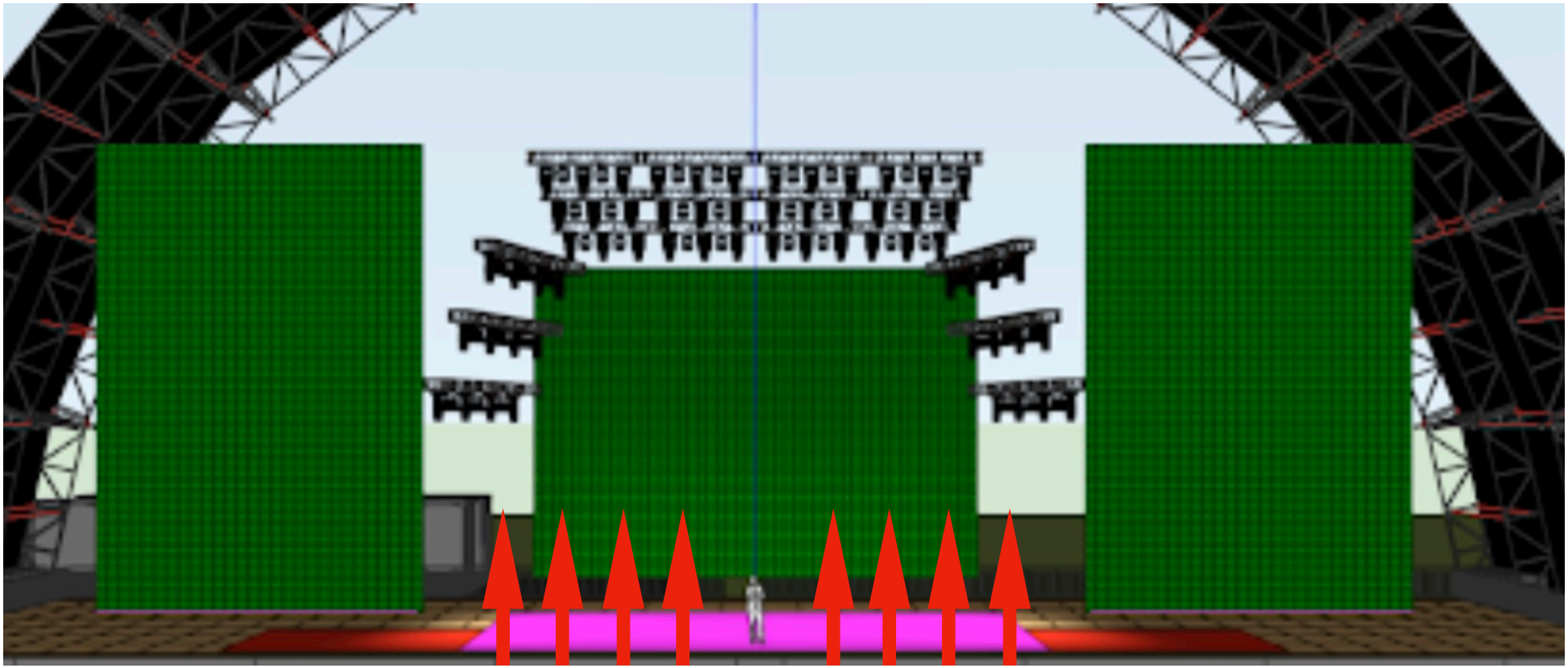
Pyro Zone #5



Flame systems located across the downstage edge.

FIELD OF DREAMS
AUGUST 2025

Pyro Zone #2



Pyro locations placed across of the edge of the stage. Each location with be loaded with comets, mines, gerbs, and flash effects. Colors and sizes TBD as the creative content is developed. 8 locations

U.S. Department of Justice
Bureau of Alcohol, Tobacco, Firearms and Explosives

Federal Explosives License/Permit
(18 U.S.C. Chapter 40)

In accordance with the provisions of Title XI, Organized Crime Control Act of 1970, and the regulations issued thereunder (27 CFR Part 555), you may engage in the activity specified in this license or permit within the limitations of Chapter 40, Title 18, United States Code and the regulations issued thereunder, until the expiration date shown. **THIS LICENSE IS NOT TRANSFERABLE UNDER 27 CFR 555.53.** See "WARNINGS" and "NOTICES" on reverse.

Direct ATF Correspondence To	ATF - Chief, FELC 244 Needy Road Martinsburg, WV 25405-9431	License/Permit Number	**9-NV-003-21-7J-12126**
Chief, Federal Explosives Licensing Center (FELC)	Marna Howard	Expiration Date	**September 1, 2027**

Name
ADVANCED ENTERTAINMENT SERVICES

Premises Address (Changes? Notify the FELC at least 10 days before the move.)
4325 W RENO AVE
LAS VEGAS, NV 89118-0000

Type of License or Permit
21-MANUFACTURER OF EXPLOSIVES

Purchasing Certification Statement

The licensee or permittee named above shall use a copy of this license or permit to assist a transferor of explosives to verify the identity and the licensed status of the licensee or permittee as provided by 27 CFR Part 555. The signature on each copy must be an original signature. A faxed, scanned or e-mailed copy of the license or permit with a signature intended to be an original signature is acceptable. The signature must be that of the Federal Explosives Licensee (FEL) or a responsible person of the FEL. I certify that this is a true copy of a license or permit issued to the licensee or permittee named above to engage in the business or operations specified above under "Type of License or Permit."

Mailing Address (Changes? Notify the FELC of any changes.)

ADVANCED ENTERTAINMENT SERVICES INC
ADVANCED ENTERTAINMENT SERVICES
4325 W RENO AVE ATT: KELLY MCGINNIS
LAS VEGAS, NV 89118-0000

Licensee/Permittee Responsible Person Signature	President	
Printed Name: Matthew Dillingham	Position/Title	Date: 09.24.2024

Previous Edition is Obsolete

ADVANCED ENTERTAINMENT SERVICES INC:4325 W RENO AVE:89118:9-NV-003-21-7J-12126:September 1, 2027:21-MANUFACTURER OF EXPLOSIVES

ATF Form 5400.14/5400.15 Part I
Revised September 2011

Federal Explosives License (FEL) Customer Service Information

Federal Explosives Licensing Center (FELC)
244 Needy Road
Martinsburg, WV 25405-9431

Toll-free Telephone Number: (877) 283-3352
Fax Number: (304) 616-4401
E-mail: FELC@atf.gov

ATF Homepage: www.atf.gov

Change of Address *(27 CFR 555.54(a)(1))*. Licensees or permittees may during the term of their current license or permit remove their business or operations to a new location at which they intend regularly to carry on such business or operations. The licensee or permittee is required to give notification of the new location of the business or operations not less than 10 days prior to such removal with the Chief, Federal Explosives Licensing Center. The license or permit will be valid for the remainder of the term of the original license or permit. **(The Chief, FELC, shall, if the licensee or permittee is not qualified, refer the request for amended license or permit to the Director of Industry Operations for denial in accordance with § 555.54.)**

Right of Succession *(27 CFR 555.59)*. (a) Certain persons other than the licensee or permittee may secure the right to carry on the same explosive materials business or operations at the same address shown on, and for the remainder of the term of, a current license or permit. Such persons are: (1) The surviving spouse or child, or executor, administrator, or other legal representative of a deceased licensee or permittee; and (2) A receiver or trustee in bankruptcy, or an assignee for benefit of creditors. (b) In order to secure the right provided by this section, the person or persons continuing the business or operations shall furnish the license or permit for for that business or operations for endorsement of such succession to the Chief, FELC, within 30 days from the date on which the successor begins to carry on the business or operations.

(Continued on reverse side)

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Federal Explosives License/Permit (FEL) Information Card

License/Permit Name: **ADVANCED ENTERTAINMENT SERVICES INC**

Business Name: **ADVANCED ENTERTAINMENT SERVICES**

License/Permit Number: **9-NV-003-21-7J-12126**

License/Permit Type: **21-MANUFACTURER OF EXPLOSIVES**

Expiration: **September 1, 2027**

Please Note: Not Valid for the Sale or Other Disposition of Explosives.

WARNINGS

1. As provided in Title XI of the Organized Crime Control Act of 1970 (U.S.C. § 842(i)), it is unlawful for any person who (1) is under indictment for, or has been convicted in any court of, a crime punishable by imprisonment for a term exceeding 1 year, (2) is a fugitive from justice, (3) is an unlawful user of, or addicted to any controlled substance *(as defined in section 102 of the Controlled Substances Act (21 U.S.C. 802))*, (4) has been adjudicated as a mental defective or has been committed to a mental institution, to ship, transport, or receive any explosive materials in interstate or foreign commerce, (5) is an alien, other than an alien who is lawfully admitted for permanent residence *(as that term is defined in section 101(a)(20) of the Immigration and Naturalization Act)*, or meets any other exception under section 842(i)(5), (6) has been discharged from the armed forces under dishonorable conditions, or (7) having been a citizen of the United States, has renounced the citizenship of that person.
2. **Federal Regulation 27 CFR 555.53 - Licensees and permits issued under this part are not transferable to another person. In the event of the lease, sale, or other transfer of the business or operations covered by the license or permit, the successor must obtain the license or permit required by this part before commencing business or operations.**
3. **Alteration or Changes to the License or Permit. Alterations or changes in the original license or permit or in duplications thereof violates 18 U.S.C. 1001, an offense punishable by imprisonment for not more than 5 years and/or a fine of not more than $250,000.**

NOTICES

1. Any change in trade name or control of this business or operations MUST be reported within 30 days of the change to the Chief, Federal Explosives Licensing Center (FELC), 244 Needy Road, Martinsburg, WV 25405-9431. (27 CFR 555.56-555.57). A licensee or permittee who reports a Change of Control must, upon expiration of the license or permit, file an ATF Form 5400.13/5400.16.
2. Under § 555.46, Renewal of License/Permit, if a licensee or permittee intends to continue the business or operations described on a license or permit issued under this part during any portion of the ensuing year, the licensee or permittee shall, unless otherwise notified in writing by the Chief, FELC, execute and file with ATF prior to the expiration of the license or permit an application for a license or permit renewal, ATF Form 5400.14/5400.15 Part III, in accordance with the instructions on the form, and the required fee. In the event the licensee or permittee does not timely file an ATF Form 5400.14/5400.15 Part III, the licensee or permittee must file an ATF Form 5400.13/5400.16 as required by § 555.45, and obtain the required license or permit before continuing business or operations. A renewal application will automatically be mailed by ATF to the "mailing address" on the license or permit approximately 60 days prior to the expiration date of the license or permit. If the application is not received 30 days prior to the expiration date, the licensee or permittee should contact the FELC. **Note:** The user-limited permits are not renewable.
3. This license or permit is conditional upon compliance by you with the Clean Water Act (33 U.S.C. § 1341(a)).
4. THIS LICENSE OR PERMIT MUST BE POSTED AND KEPT AVAILABLE FOR INSPECTION (27 CFR 555.101).

ATF Form 5400.14/5400.15 Part I
Revised October 2011

Federal Explosives License (FEL) Customer Service Information

(Continued from front)

Discontinuance of Business *(27 CFR 555.61)(27 CFR 555.128)*. Where an explosives materials business or operations is succeeded by a new licensee or permittee, the records prescribed by this subpart shall appropriately reflect such facts and shall be delivered to the successor, or may be, within 30 days following business discontinuance, delivered to the ATF Out-of-Business Records Center, 244 Needy Road, Martinsburg, WV 25405, or to any ATF office in the division in which the business was located. Where discontinuance of the business is absolute, the records shall be delivered within 30 days following the business discontinuance to the ATF Out-of-Business Records Center, 244 Needy Road, Martinsburg, WV 25405, or to any ATF office in the division in which the business was located.

Explosive materials must be stored in conformance with requirements set forth in 27 CFR, Part 55. It is unlawful for any person to store any explosive materials in a manner not in conformity with these regulations.

TO REPORT LOST OR STOLEN EXPLOSIVES, YOU MUST IMMEDIATELY NOTIFY ATF:
CALL TOLL FREE - (888) ATF-BOMB

Cut Here

Federal Explosives Licensing Center (FELC)
244 Needy Road
Martinsburg, WV 25405-9431

Toll-free number: (877) 283-3352
Fax number: (304) 616-4401
E-mail: FELC@atf.gov

ATF Hotline Numbers

Arson Hotline: 1-888-ATF-FIRE (1-888-283-3473)
Bomb Hotline: 1-888-ATF-BOMB (1-888-283-2662)
Report Illegal Firearms Activity: 1-800-ATF-GUNS (1-800-283-4867)
Firearms Theft Hotline: 1-888-930-9275
Report Stolen, Hijacked or Seized Cigarettes: 1-800-659-6242
Other Criminal Activity: 1-888-ATF-TIPS (1-888-283-8477)

CERTIFICATE OF REGISTRATION

Name: MATTHEW S DILLINGHAM

Mailing Address: 4325 W RENO AVE

City: LAS VEGAS

State: NV **Zip:** 89118

Birth Date: 9/1/1958 **Age:** 67 **Sex:** Male

Height: 5'10 **Weight:**215

Hair: Gray **Eyes:** Blue

PROPERTY OF THE NEVADA STATE FIRE MARSHAL

NON-TRANSFERABLE

Written notice must be given to the Nevada State Fire Marshal within 7 days of change of address. Please review the codes and fees regulating this card at our website: http://fire.nv.gov or call our office at (775) 684-7530

Date Issued: 5/1/2025 **Date Expired:** 4/30/2026

CERTIFICATE OF REGISTRATION

Authorized Certifications	C of R # C 509 F
Flame Effect Operator	• Natural Gas • Propane • Alcohol • Liquid • Gel
Pyrotechnic Operator	• Indoor Stage • Outdoor Aerial

NON-TRANSFERABLE | PROPERTY OF THE NEVADA STATE FIRE MARSHAL

CALIFORNIA PYROTECNIC OPERATOR

THEATRICAL

2508-10

MATTHEW DILLINGHAM

Ht: 5'10", Wt: 195Hair: Brn, Eyes: Blu

D.O.B.: 09/01/1958

The Bearer, whose photo and signature appear hereon, is authorized to perform as a Pyrotechnic Operator within the limits set forth on the reverse.

Signature

CERTIFICATE OF REGISTRATION

Name: JOHN W HOFMANN

Mailing Address: 5048 DESERT DANDELION CT

City: LAS VEGAS

State: NV **Zip:** 89139

Birth Date: 12/11/1981 **Age:** 44 **Sex:** Male

Height: 5'10 **Weight:**190

Hair: Brown **Eyes:** Brown

NEVADA STATE FIRE MARSHAL

PROPERTY OF THE NEVADA STATE FIRE MARSHAL

NON-TRANSFERABLE

Written notice must be given to the Nevada State Fire Marshal within 7 days of change of address. Please review the codes and fees regulating this card at our website: http://fire.nv.gov or call our office at (775) 684-7530

Date Issued: 5/1/2025	**Date Expired:** 4/30/2026

CERTIFICATE OF REGISTRATION

NEVADA STATE FIRE MARSHAL

Authorized Certifications	C of R # C 2700
Flame Effect Operator	• Natural Gas • Propane • Alcohol • Liquid
Pyrotechnic Operator	• Indoor Stage • Outdoor Aerial • Special Effects

NON-TRANSFERABLE	PROPERTY OF THE NEVADA STATE FIRE MARSHAL

CERTIFICATE OF REGISTRATION

Name: DANIEL P KENNEDY

Mailing Address: 9061 CAPTIVATING AVE

City: LAS VEGAS

State: NV **Zip:** 89149

Birth Date: 3/27/2000 **Age:** 25 **Sex:** Male

Height: 5'9 **Weight:**180

Hair: Brown **Eyes:** Brown

NEVADA STATE FIRE MARSHAL

NON-TRANSFERABLE

PROPERTY OF THE NEVADA STATE FIRE MARSHAL

Written notice must be given to the Nevada State Fire Marshal within 7 days of change of address. Please review the codes and fees regulating this card at our website: http://fire.nv.gov or call our office at (775) 684-7530

Date Issued: 5/1/2025 **Date Expired:** 4/30/2026

CERTIFICATE OF REGISTRATION

NEVADA STATE FIRE MARSHAL

Authorized Certifications	C of R # C 14292
Flame Effect Operator	• Natural Gas • Propane • Alcohol • Liquid • Gel
Pyrotechnic Operator	• Indoor Stage

NON-TRANSFERABLE PROPERTY OF THE NEVADA STATE FIRE MARSHAL

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 07.11.2016 *Version number 7* *Revision: 18.06.2015*

Trade Name: SPRAY FLAME 500 ML.

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier
Trade name: Spray Flame 500 ml.
Article number: GS0007

1.2 Relevant identified uses of the substance or mixture and uses advised against
No further relevant information available.
Application of the substance / the mixture Fire canister

1.3 Details of the supplier of the safety data sheet
Manufacturer/Supplier:
Green Star
Steenpad 21H
NL-4797 SG Willemstad
Tel: +31 (0)168-473194
Fax: +31 (0)168-473176
E-mail: info@green-star.nl
Http://www.green-star.nl
Further information obtainable from: QHSE Department

1.4 Emergency telephone number:
Emergency phone number : België : Antipoison Center – Brussels
TEL: +32(0)70/245.245

The Netherlands : National Poisoning Information Center - Bilthoven
TEL: +31(0)30/274.88.88 (Only for the purpose of informing medical personnel in cases of acute intoxications)

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
Classification according to Regulation (EC) No 1272/2008

GHS02 flame

Flam. Aerosol 1 H222-H229 Extremely flammable aerosol. Pressurised container: May burst if heated.

(Contd. on page 2)

(Contd. of page 1)

Trade Name: SPRAY Flame 500 ml.

2.2 Label elements
Labelling according to Regulation (EC) No 1272/2008
The product is classified and labelled according to the CLP regulation.
Hazard pictograms

GHS02

Signal word Danger

Hazard statements
H222-H229 Extremely flammable aerosol. Pressurised container: May burst if heated.

Precautionary statements
P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
P103 Read label before use.
P260 Do not breathe spray.
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P251 Pressurized container: Do not pierce or burn, even after use.
P211 Do not spray on an open flame or other ignition source.
P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.
P501 Dispose of contents/container in accordance with local regulations.

2.3 Other hazards
Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Chemical characterization: Mixtures
Description: Mixture of substances listed below with nonhazardous additions.

Dangerous components:		
CAS: 74-98-6 EINECS: 200-827-9 Index number: 601-003-00-5 Reg.nr.: 01-2119486944-21-xxxx	Propane Flam. Gas 1, H220; Flam. Liq. 1, Press. Gas, H280	25-50%
CAS: 106-97-8 EINECS: 203-448-7 Index number: 601-004-00-0 Reg.nr.: 01-2119474691-32-xxxx	Butane Flam. Gas 1, H220; Flam. Liq. 1, Press. Gas, H280	25-50%
CAS: 75-28-5 EINECS: 200-857-2 Index number: 601-004-00-0 Reg.nr.: 01-2119485395-27-xxxx	Isobutane Flam. Gas 1, H220; Flam. Liq. 1, Press. Gas, H280	25-50%

Additional information: For the wording of the listed risk phrases refer to section 16.

(Contd. on page 3)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 07.11.2016 Version number 7 Revision: 18.06.2015

(Contd. of page 2)

Trade Name: SPRAY Flame 500 ml.

4. FIRST AID MEASURES

4.1 Description of first aid measures
After inhalation: Supply fresh air; consult doctor in case of complaints.
After skin contact: Generally the product does not irritate the skin.
After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.
After swallowing: Drink plenty of water and provide fresh air. Call for a doctor immediately.

4.2 Most important symptoms and effects, both acute and delayed: No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed: No further relevant information available.

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media
Suitable extinguishing agents:
CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
For safety reasons unsuitable extinguishing agents: Water with full jet

5.2 Special hazards arising from the substance or mixture: No further relevant information available.

5.3 Advice for firefighters
Protective equipment: No special measures required.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
Ensure adequate ventilation
Keep away from ignition sources.

6.2 Environmental precautions:
Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.

6.3 Methods and material for containment and cleaning up: Ensure adequate ventilation.

6.4 Reference to other sections
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling
No special measures required.
Ensure good ventilation/exhaustion at the workplace.
Information about fire - and explosion protection:
Do not spray onto a naked flame or any incandescent material.
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50 °C, i.e. electric lights. Do not pierce or burn, even after use.

(Contd. on page 4)

(Contd. of page 3)

Trade Name: SPRAY Flame 500 ml.

7.2 Conditions for safe storage, including any incompatibilities
Storage:
Requirements to be met by storerooms and receptacles:
Store in a cool location.
Observe official regulations on storing packagings with pressurized containers.
Information about storage in one common storage facility: Not required.
Further information about storage conditions: Protect from heat and direct sunlight.

7.3 Specific end use(s) No further relevant information available.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Additional information about design of technical facilities: No further data; see item 7.
8.1 Control parameters

Ingredients with limit values that require monitoring at the workplace:	
106-97-8 butane	
WEL ()	Short-term value: 1810 mg/m³, 750 ppm Long-term value: 1450 mg/m³, 600 ppm Carc (if more than 0.1% of buta-1.3-diene)

Additional information: The lists valid during the making were used as basis.

8.2 Exposure controls
Personal protective equipment:
General protective and hygienic measures:
Wash hands before breaks and at the end of work.
Do not inhale gases / fumes / aerosols.
Respiratory protection: Not required.
Protection of hands: Not required.
Material of gloves Not required.
Penetration time of glove material Not required.
Eye protection: Not required.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties
General Information
Appearance:

Form:	Aerosol
Colour:	According to product specification
Odour:	Characteristic
Odour threshold:	Not determined.
pH-value:	Not determined.
Change in condition	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	Not applicable, as aerosol.
Flash point:	< 0 °C (< 32 °F) Not applicable, as aerosol.
Flammability (solid, gaseous):	Not applicable.
Ignition temperature:	365 °C (689 °F)
Decomposition temperature:	Not determined.
Self-igniting:	Product is not selfigniting.
Danger of explosion:	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

(Contd. on page 5)

(Contd. of page 4)

Trade Name: SPRAY Flame 500 ml.

Explosion limits:
Lower: 1.5 Vol %
Upper: 10.9 Vol %
Vapour pressure at 20 °C (68 °F): 3500 hPa (2625 mm Hg)
Density at 20 °C (68 °F): 0.54 g/cm³ (4.506 lbs/gal)

Relative density Not determined.
Vapour density Not determined.
Evaporation rate Not applicable.
Solubility in / Miscibility with water: Not miscible or difficult to mix.

Partition coefficient (n-octanol/water): Not determined.
Viscosity:
Dynamic: Not determined.

Kinematic: Not determined.
Solvent content:
Organic solvents: 100 %

EU-VOC: 540.0 g/l
EU-VOC in %: 100 %

9.2 Other information No further relevant information available.

10. STABILITY AND REACTIVITY

10.1 Reactivity

10.2 Chemical stability
Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.

10.3 Possibility of hazardous reactions No dangerous reactions known.

10.4 Conditions to avoid No further relevant information available.

10.5 Incompatible materials: No further relevant information available.

10.6 Hazardous decomposition products: No dangerous decomposition products known.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects
Acute toxicity:

LD/LC50 values relevant for classification:		
106-97-8 butane		
Inhalative	LC50/ 4 h	658000 mg/m3 (rat)

Primary irritant effect:
on the skin: No irritant effect.
on the eye: No irritating effect.
Sensitization: No sensitizing effects known.

(Contd. on page 6)

(Contd. of page 5)

Trade Name: SPRAY Flame 500 ml.

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Aquatic toxicity: No further relevant information available.

12.2 Persistence and degradability No further relevant information available.

12.3 Bioaccumulative potential No further relevant information available.

12.4 Mobility in soil No further relevant information available.
Additional ecological information:
General notes: Generally not hazardous for water

12.5 Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.

12.6 Other adverse effects No further relevant information available.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods
Recommendation
Must not be disposed together with household garbage. Do not allow product to reach sewage system.

European waste catalogue
20 01 13* solvents
15 01 04 metallic packaging

Uncleaned packaging:
Recommendation: Non contaminated packagings may be recycled.

14. TRANSPORT INFORMATION

14.1 UN-Number
ADR, IMDG, IATA UN1950

14.2 UN proper shipping name
ADR 1950 AEROSOLS
IMDG AEROSOLS
IATA AEROSOLS, flammable

14.3 Transport hazard class(es)
ADR

Class 2 5F Gases.
Label 2.1

IMDG, IATA

Class 2.1
Label 2.1

(Contd. on page 7)

(Contd. of page 6)

Trade Name: SPRAY Flame 500 ml.

14.4 Packing group
ADR, IMDG, IATA Void

14.5 Environmental hazards:
Marine pollutant: No

14.6 Special precautions for user Warning: Gases.
Danger code (Kemler): -
EMS Number: F-D,S-U

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable.

Transport/Additional information:
ADR
Limited quantities (LQ) 1L

Transport category 2
Tunnel restriction code D

UN "Model Regulation": UN1950, AEROSOLS, 2.1

15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
No further relevant information available.

15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16. OTHER INFORMATION

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Relevant phrases
H220 Extremely flammable gas.
H280 Contains gas under pressure; may explode if heated.

Department issuing MSDS: QHSE Department
Contact: Mr. W. Dangerman

Abbreviations and acronyms:
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
ICAO: International Civil Aviation Organization
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
Flam. Gas 1: Flammable gases, Hazard Category 1
Flam. Aerosol 1: Flammable aerosols, Hazard Category 1
Press. Gas: Gases under pressure: Compressed gas
Flam. Liq. 1: Flammable liquids, Hazard Category 1
Flam. Liq. 2: Flammable liquids, Hazard Category 2
Data compared to the previous version altered.

PROPANE MSDS

ProductName: Propane
ChemicalName: Propane
Formula: C_3H_8
ChemicalFamily: Alkane (hydrocarbon)
Use: Various
Synonyms: Dimethylmethane, LP-Gas, Liquified petroleum gas (LPG)

4
1 0

NFPA Fire:	4	**HMIS Fire:**	4	**Acute:**	No
NFPA Health:	1	**HMIS Health:**	0	**Chronic:**	No
NFPA Reactivity:	0	**HMIS Reactivity:**	0	**Fire:**	Yes
NFPA Special Hazard:		**Mixture:**	No	**Reactive:**	No
				Sudden Release Pressure:	Yes

02. INGREDIENTS - COMPOSITION & INFORMATION

COMPONENT	CAS No.	PERCENT (BY WT.)		EXPOSURE GUIDELINES OSHA - TWA	ACGIH - STEL
Propane	74-98-6	99.0%	100.0%	1000	Simple Asphyxiant

LD50: None. LC50: None.

03. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:

Warning: Flammable liquid gas under pressure.
Can form explosive mixtures with air.
May cause frostbite.

Potential Health Effects Information:

Routes of Exposure:

Inhalation: Simple asphyxiant. It should be noted that before suffocation could occur, the lower flammability limit of propane in air would be exceeded; possibly causing both an oxygen-deficient and explosive atmosphere. Exposure to concentrations (> 10%) may cause dizziness. Exposure to atmospheres containing 8-10% or less oxygen will bring about unconsciousness without warning, and so quickly that the individuals cannot help or protect themselves. Lack of sufficient oxygen may cause serious injury or death.

Eye Contact: Contact with liquid or cold vapor can cause freezing of tissue.

Skin Contact: Contact with liquid or cold vapor can cause frostbite.

Chronic Effects: None.

Medical Conditions Aggravated By: None.

Overexposure:

Other Effects Of Overexposure: None.

Carcinogenicity: Propane is not listed by NTP, OSHA or IARC.

04. FIRST AID MEASURES

Inhalation: Persons suffering from lack of oxygen should be removed to fresh air. If victim is not breathing, administer artificial respiration. If breathing is difficult, administer oxygen. Obtain prompt medical attention.

Eye: Contact with liquid or cold vapor can cause freezing of tissue. Gently flush eyes

with lukewarm water. Obtain medical attention immediately.

Skin: Contact with liquid or cold vapor can cause frostbite. Immediately warm affected area with lukewarm water not to exceed 105°F (40°C).

Ingestion: None.

Notes To Physician: None.

05. FIRE FIGHTING MEASURES

Flash Point: -156F (-104C)

Autoignition: 842F (432C)

Flammable Limits - Lower: 2.2%

Flammable Limits - Upper: 9.5%

Extinguishing Media: CO2, dry chemical, water spray or fog for surrounding area. Do not extinguish until propane source is shut off.

Fire Fighting Instructions: Evacuate all personnel from danger area. Immediately cool container with water spray from maximum distance, taking care not to extinguish flames. If flames are accidentally extinguished, explosive re-ignition may occur. Stop flow of gas if without risk while continuing cooling water spray.

Fire And Explosion Hazards: Propane is easily ignited. It is heavier than air, therefore, it may collect in low areas or travel along the ground where an ignition source may be present. Pressure in a container can build up due to heat, and it may rupture if pressure relief devices should fail to function.

Hazardous Combustion Products: None known.

Sensitivity To Static Discharge: Possible, container should be grounded.

Sensitivity To Mechanical Impact: None.

06. ACCIDENTAL RELEASE MEASURES

Evacuate: Evacuate the immediate area. Eliminate any possible sources of ignition, and provide maximum explosion-proof ventilation. Shut off source of propane, if possible. If leaking from cylinder, or valve, contact your supplier. Never enter a confined space or other area where the concentration is greater than 10% of the lower flammable limit which is 0.22%.

07. HANDLING AND STORAGE

Storage: Specific requirements are listed in NFPA 58. Cylinder storage locations should be well-protected, well-ventilated, dry, and separated from combustible materials. Cylinders should never knowingly be allowed to reach a temperature exceeding 125°F (52°C). Cylinders of propane should be separated from oxygen cylinders or other oxidizers by a minimum distance of 20 ft., or by a barrier of non-combustible material at least 5 ft. high having a fire resistance rating of at least ½ hour. Full and empty cylinders should be segregated. Use a first-in, first-out inventory system to prevent full containers from being stored for long periods of time.

Cylinders should be stored upright with valve protection cap in place and firmly secured to prevent falling or being knocked over. Protect cylinders from physical damage; do not drag, roll, slide or drop. Use a suitable hand truck for cylinder movement. Post "No Smoking or Open Flames" signs in the storage areas. There should be no sources of ignition. All electrical equipment should be explosion proof in the storage and use areas. Storage areas must meet national electric codes for class 1 hazardous areas.

Handling: Propane is heavier than air and may collect in low areas that are without proper ventilation. Leak check system with leak detection solution, never with flame. If user experiences difficulty operating cylinder valve, discontinue use and contact supplier. Never insert an object (e.g., wrench, screwdriver, pry bar, etc.) into valve cap openings. Doing so may damage valve, causing a leak to occur. Use an adjustable strap wrench to remove over-tight or rusted caps. Non-sparking tools should be used. Never strike an arc on a compressed gas cylinder or make a cylinder a part of an electrical circuit. Electrically bond and ground cylinder when transferring liquid product. For additional precautions in using propane see Section

16 - Other Information.

08. EXPOSURE CONTROLS - PERSONAL PROTECTION

Engineering Controls:

Ventilation:	Natural or mechanical to prevent accumulation in worker's breathing zone above exposure limits. (See Section 2).

Personal Protective Equipment (PPE):

Clothing:	Cotton Clothing is recommended for use to prevent static electric buildup.
Glasses:	Safety glasses are recommended when handling cylinders.
Shoes:	Safety shoes are recommended when handling cylinders.
Gloves:	Work gloves are recommended when handling cylinders.
Respirator:	None required in general use.
Emergency Use:	Self-contained breathing apparatus (SCBA) or positive pressure airline with mask are to be used in oxygen-deficient atmosphere. Respirators will not function. Before entering area, you must check for flammable and oxygen deficient atmospheres.

09. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Gas
Color:	Colorless
Odor:	Unodorized propane has a slightly sweet odor. If an odorant has been added it will have a strong unpleasant odor.
Molecular Weight:	44.097
Boiling Point:	-43.67°F (-42.04°C) @ 1 atm
Specific Gravity:	1.5223 At 70°F (21.1°C) @ 1 atm, Air = 1
Freezing/Melting Point:	-305.84F (-187.69C) at 1 atm
Vapor Pressure:	109.73 psig, (756.56 kPa) at 70°F (21.2°)
Vapor Density:	0.110 lb./cu ft (1.1.77kg/CuM), At 70°F (21.1°C) @ 1 atm
Water Solubility:	.065 Vol./Vol. At 100° F (37.8°C)
Expansion Ratio:	1 to 290 at 70°F (21.1°C)
pH:	Not applicable
Odor Threshold:	1800 mg/CuM
Evaporation Rate:	Not Applicable - Gas
Coefficient Of Water/Oil Distribution:	Information not available

10. STABILITY AND REACTIVITY

Chemical Stability:	Stable
Conditions To Avoid:	None.
Incompatibility With Other Materials:	Oxidizing agents.
Hazardous Decomposition Products:	None.
Hazardous Polymerization:	Will not occur

11. TOXICOLOGICAL INFORMATION

Other Studies Relevant To Material:	Propane is nontoxic and is a simple asphyxiant, however it does have slight anesthetic properties and higher concentrations may cause dizziness.
Irritancy Of Material:	None.
Reproductive Effects:	None.
Teratogenicity:	None.
Synergistic Materials:	None.
Sensitization To Material:	None.
Mutagenicity:	None.

12. ECOLOGICAL INFORMATION

ECOTOXICITY:	No adverse ecological effects are expected. Propane does not contain any Class I or Class II Ozone depleting chemicals (40 CFR Part 82). Propane is not listed as a marine pollutant by DOT (49 CFR Part 171).

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method:	Do not attempt to dispose of residual or unused quantities. Return cylinder to supplier. Residual product within process system may be burned at a controlled rate, if a

suitable burning unit (flare stack) is available on site. This shall be done in accordance with federal, state, and local regulations.

14. TRANSPORT INFORMATION

DOT/IMO Shipping Name:	Propane
HAZARD CLASS:	2.1 (Flammable gas.)
Identification Number:	UN 1978*
PIN:	1978
Product RQ:	None.
Shipping Label:	Flammable Gas.
Placard (When Required):	Flammable gas.
Special Shipping Information:	Cylinders should be transported in a secure position, in a well ventilated vehicle. The transportation of compressed gas cylinders in automobiles or in closed-body vehicles can present serious hazards and should be discouraged.
Special Shipping Information	*For domestic transportation only: The identification number UN 1075 may be used in place of the identification number UN 1978. The identification number used must be consistent on package markings, shipping papers, and emergency response information (Special provision 19 from 49 CFR 172.101).

SAFETY DATA SHEET

30mm Mine

Date Issued: 02-01-12

Revision Date: 01-09-19

Revision Number: 3

Product / Company Identification

General Use: Theatrical Special Effects / Pyrotechnics
Classification: UN0431, Articles, pyrotechnic, 1.4G Explosive
Manufacturer: Evolution Pyrotechnics MFG, Inc.
1 Nickel Way
Columbus, MT 59019
833-386-7976

24 HR. Emergency Telephone Number

INFOTRAC: 800 535 5053

Hazardous Ingredients / Identity Information

Hazardous Components (Specific Chemical Identity: Common Name(s)	OSHA PEL	ACGIH TLV	Other Limits Recommended
Pyrotechnics Composition (may contain one or more of the following)	**N/A**	**N/A**	**Not Established**

Potassium Nitrate	Copper Oxide	Potassium Benzoate	Sodium Oxalate	Titanium
Barium Nitrate	Magnalium	Potassium Perchlorate	Strontium Nitrate	Aluminum
Barium Sulfate	Magnesium	Saran Resin	Strontium Carbonate	Dextrin
Charcoal	Magnesium Carbonate	Sodium Benzoate	Barium Carbonate	Parlon
Barium Carbonate	Ammonium Perchlorate	Strontium Sulfate	Barium Sulfate	Sulfur

Physical / Chemical Characteristics

Boiling Point: N/A **Specific Gravity: N/A** **Vapor Pressure (mm Hg.): N/A** **Melting Point: N/A**
Vapor Density (AIR=1): N/A **Evaporation Rate (Butyl Acetate = 1): N/A** **Solubility in Water: Soluble**
Appearance: cardboard tube, all component securely contained
Odor: Slight sulfurous odor or orderless

Fire and Explosion Hazard Data

Flash Point (Method Used)	Flammable Limits	LEL	UEL
328° C ignition temperature (no vapor flashpoint)	all concentrations	N/A	N/A

Extinguishing Media

None, material provides its own oxygen. Use water to cool surrounding materials to prevent spread of fire.

Special Fire Fighting Procedures

Firefighters should use approved breathing and protective equipment when fighting a pyrotechnic fire. Fire should be isolated by removal or water cooling of other flammable materials in the area, and the fire should be allowed to burn out.

Unusual Fire and Explosion Hazards

Burning pyrotechnics effects may project burning projectiles as far as 200'. Products in factory packaging will not mass detonate. Combustion may cause productions of hazardous decomposition products.

Reactivity Data

Stability	Conditions to Avoid	Hazardous Polymerization
Stable	Exposure to water. Open flame and other ignition sources.	Will not occur

Incompatibility

Strong acids, water (may initiate decomposition or cause material leakage)

Hazardous Decomposition or By-products

Sulfur dioxide, potassium oxide fumes, barium oxide fumes, antimony fume metal, copper fume metal.

Health Hazard Data

Route(s) of Entry:
Inhalation Skin

Health Hazards:
Inhalation: May irritate nose, throat or lungs. (combustible products)
Ingestion of Products: See MSDS of constituent chemicals.

Carcinogenicity:
NTP – No ARC Monographs – No OSHA Regulated – No

Signs and Symptoms of Exposure:
Respiratory irritation, difficulty breathing. Eye irritation. Nausea (ingestion)

Medical Conditions Generally Aggravated by Exposure:
Persons with pre-existing or impaired respiratory functions may be more susceptible to the effects of exposure to combustion by-products.

Precautions for Safe Handling and Use

Steps to be taken in the event material is released or spilled:
Pick up intact product and return in to packages, or re-package. Broken product: Sweep up loose material and package in paper or cardboard container. Dispose by hazardous materials process, or return to manufacturer for proper handling. Avoid raising dust while sweeping. Flush residues with plenty of water.

Waste Disposal Method:
Approved incineration in accordance with local, state and federal regulations.

Precautions to be taken in handling and storage:
Store in cool, dry, well-ventilated area protected from moisture and away from open flame or other heat sources.

Other Precautions:
None

Control Measures

Respiratory Protection:
NIOSH/MSHA approved mask – TC214-279

Special:
None Required

Other:
N/A

Ventilation:
Yes – Local exhaust

Mechanical:
None Required

Protective Gloves:
Rubber

Eye Protection:
Safety Goggles

Other Protective Clothing or Equipment:
Appropriate body protection.

Other Protective Clothing or Equipment:
Use good chemical hygiene practice.

WARNING

Burn, eye, skin, respiratory irritation, ingestion, acute or chronic exposure BURN:
Wash affected area.
EYE: Flush eyes with water for several minutes.
SKIN: Wash with soap and water
RESPIRATORY: Move to fresh air and consult physician.
INGESTION: DO NOT INDUCE VOMITING, Contact poison control
ACUTE OR CHRONIC EXPOSURE: Seek medical attention immediately
SEEK MEDICAL ATTENTION IF YOU FEEL UNWELL
Keep away from heat, sparks, open flame and hot surfaces
NO SMOKING
Store in a cool dry approved area

Dispose of content/container in accordance with local/regional/national regulations

This safety data sheet has been prepared to comply with OSHA's Hazard Communication Standard, the requirements of NFPA 1123, NFPA 1126 and IFC section 3308. Users should consult current standards prior to any intended use of these products.

Evolution Pyrotechnics MFG, Inc.
1 Nickel Way
Columbus, MT 59019

Emergency Number: 800 535 5053 INFOTRAC

Information: 833-386-7976

Product:	30mm Mine
EX#:	See product label
Shipping Name:	UN0431, Articles, pyrotechnic, (1.4G Explosive)

- Product must be firmly mounted so it cannot move or be accidently re-aimed by vibrations or concussion from other effects.
- Keep away from open flames. No smoking within 50' of these materials.
- NEVER place any body part over the discharge end of the effect.
- Assure that audience setbacks, distances to flammable materials and overhead clearance adequate to the effect are maintained at all times.
- NEVER attempt to disassemble, modify or combine effects mechanically.
- Mount effects so that they are always visible to the firing technician. If malfunctions or unintentional re-aiming of effects occurs, STOP FIRING.
- All effects should be tested for specific performance before selecting them for a venue.
- Product is for professional use only!

Health Warning / First Aid

Inhalation of the smoke produced by this effect may cause irritation. In normal use, smoke dissipates quickly and does not present a problem. Persons found to be suffering from smoke inhalation should be removed to fresh air and medical assistance should be sought. **BURNS:** Treat for shock. Cover wounds with sterile dressings and seek medical attention immediately.

Malfunction or Mis-Fire (hang fire)

If an effect fails to fire, isolate it from the firing system and ascertain if it was connected correctly. Repeat the attempt to fire. If the effect fails again, remove the firing system; allow a minimum of 30 minutes standby, return to manufacturer.

Disposal Procedures

Submerge effect in water. Soak for 48 hours, then dispose of according to regulations.

Spills or Broken Packages

Return intact to the original packaging, or re-package. Sweep up broken product contents, avoid raising dust while sweeping. Package sweepings in paper or cardboard container and dispose by proper hazmat procedures. Flood residues with plenty of water.

Storage

Store in a cool, dry location away from open flame or other heat sources. Avoid freezing. High humidity (up to 95% non-condensing) for short durations before firing is acceptable. Storage humidity should remain below 70%, non-condensing.

Handling

Product should be handled with care during shipping and use. Avoid contact with rain or groundwater. Damaged products should not be used, they should be returned to manufacturer for repair or proper disposal.

SAFETY DATA SHEET

19mm Laser Comet

Date Issued: 02-01-12

Revision Date: 01-09-19

Revision Number: 3

Product / Company Identification

General Use: Theatrical Special Effects / Pyrotechnics
Classification: UN0431, Articles, pyrotechnic, 1.4G Explosive
Manufacturer: Evolution Pyrotechnics MFG, Inc.
1 Nickel Way
Columbus, MT 59019
833-386-7976

24 HR. Emergency Telephone Number

INFOTRAC: 800 535 5053

Hazardous Ingredients / Identity Information

Hazardous Components (Specific Chemical Identity: Common Name(s)	OSHA PEL	ACGIH TLV	Other Limits Recommended
Pyrotechnics Composition (may contain one or more of the following)	**N/A**	**N/A**	**Not Established**

Potassium Nitrate	Copper Oxide	Potassium Benzoate	Sodium Oxalate	Titanium
Barium Nitrate	Magnalium	Potassium Perchlorate	Strontium Nitrate	Aluminum
Barium Sulfate	Magnesium	Saran Resin	Strontium Carbonate	Dextrin
Charcoal	Magnesium Carbonate	Sodium Benzoate	Barium Carbonate	Parlon
Barium Carbonate	Ammonium Perchlorate	Strontium Sulfate	Barium Sulfate	Sulfur

Physical / Chemical Characteristics

Boiling Point: N/A **Specific Gravity: N/A** **Vapor Pressure (mm Hg.): N/A** **Melting Point: N/A**
Vapor Density (AIR=1): N/A **Evaporation Rate (Butyl Acetate = 1): N/A** **Solubility in Water: Soluble**
Appearance: cardboard tube, all component securely contained
Odor: Slight sulfurous odor or orderless

Fire and Explosion Hazard Data

Flash Point (Method Used)	Flammable Limits	LEL	UEL
328° C ignition temperature (no vapor flashpoint)	all concentrations	N/A	N/A

Extinguishing Media

None, material provides its own oxygen. Use water to cool surrounding materials to prevent spread of fire.

Special Fire Fighting Procedures

Firefighters should use approved breathing and protective equipment when fighting a pyrotechnic fire. Fire should be isolated by removal or water cooling of other flammable materials in the area, and the fire should be allowed to burn out.

Unusual Fire and Explosion Hazards

Burning pyrotechnics effects may project burning projectiles as far as 200'. Products in factory packaging will not mass detonate. Combustion may cause productions of hazardous decomposition products.

Reactivity Data

Stability	Conditions to Avoid	Hazardous Polymerization
Stable	Exposure to water. Open flame and other ignition sources.	Will not occur

Incompatibility

Strong acids, water (may initiate decomposition or cause material leakage)

Hazardous Decomposition or By-products

Sulfur dioxide, potassium oxide fumes, barium oxide fumes, antimony fume metal, copper fume metal.

Health Hazard Data

Route(s) of Entry:
Inhalation Skin

Health Hazards:
Inhalation: May irritate nose, throat or lungs. (combustible products)
Ingestion of Products: See MSDS of constituent chemicals.

Carcinogenicity:
NTP – No ARC Monographs – No OSHA Regulated – No

Signs and Symptoms of Exposure:
Respiratory irritation, difficulty breathing. Eye irritation. Nausea (ingestion)

Medical Conditions Generally Aggravated by Exposure:
Persons with pre-existing or impaired respiratory functions may be more susceptible to the effects of exposure to combustion by-products.

Precautions for Safe Handling and Use

Steps to be taken in the event material is released or spilled:
Pick up intact product and return in to packages, or re-package. Broken product: Sweep up loose material and package in paper or cardboard container. Dispose by hazardous materials process, or return to manufacturer for proper handling. Avoid raising dust while sweeping. Flush residues with plenty of water.

Waste Disposal Method:
Approved incineration in accordance with local, state and federal regulations.

Precautions to be taken in handling and storage:
Store in cool, dry, well-ventilated area protected from moisture and away from open flame or other heat sources.

Other Precautions:
None

Control Measures

Respiratory Protection:
NIOSH/MSHA approved mask – TC214-279

Special:
None Required

Other:
N/A

Ventilation:
Yes – Local exhaust

Mechanical:
None Required

Protective Gloves:
Rubber

Eye Protection:
Safety Goggles

Other Protective Clothing or Equipment:
Appropriate body protection.

Other Protective Clothing or Equipment:
Use good chemical hygiene practice.

WARNING

Burn, eye, skin, respiratory irritation, ingestion, acute or chronic exposure BURN:
Wash affected area.
EYE: Flush eyes with water for several minutes.
SKIN: Wash with soap and water
RESPIRATORY: Move to fresh air and consult physician.
INGESTION: DO NOT INDUCE VOMITING, Contact poison control
ACUTE OR CHRONIC EXPOSURE: Seek medical attention immediately
SEEK MEDICAL ATTENTION IF YOU FEEL UNWELL
Keep away from heat, sparks, open flame and hot surfaces
NO SMOKING
Store in a cool dry approved area

Dispose of content/container in accordance with local/regional/national regulations

This safety data sheet has been prepared to comply with OSHA's Hazard Communication Standard, the requirements of NFPA 1123, NFPA 1126 and IFC section 3308. Users should consult current standards prior to any intended use of these products.

Evolution Pyrotechnics MFG, Inc.
1 Nickel Way
Columbus, MT 59019

Emergency Number: 800 535 5053 INFOTRAC

Information: 833-386-7976

Product:	19mm Laser Comet
EX#:	See product label
Shipping Name:	UN0431, Articles, pyrotechnic, (1.4G Explosive)

- Product must be firmly mounted so it cannot move or be accidently re-aimed by vibrations or concussion from other effects.
- Keep away from open flames. No smoking within 50' of these materials.
- NEVER place any body part over the discharge end of the effect.
- Assure that audience setbacks, distances to flammable materials and overhead clearance adequate to the effect are maintained at all times.
- NEVER attempt to disassemble, modify or combine effects mechanically.
- Mount effects so that they are always visible to the firing technician. If malfunctions or unintentional re-aiming of effects occurs, STOP FIRING.
- All effects should be tested for specific performance before selecting them for a venue.
- Product is for professional use only!

Health Warning / First Aid

Inhalation of the smoke produced by this effect may cause irritation. In normal use, smoke dissipates quickly and does not present a problem. Persons found to be suffering from smoke inhalation should be removed to fresh air and medical assistance should be sought. **BURNS:** Treat for shock. Cover wounds with sterile dressings and seek medical attention immediately.

Malfunction or Mis-Fire (hang fire)

If an effect fails to fire, isolate it from the firing system and ascertain if it was connected correctly. Repeat the attempt to fire. If the effect fails again, remove the firing system; allow a minimum of 30 minutes standby, return to manufacturer.

Disposal Procedures

Submerge effect in water. Soak for 48 hours, then dispose of according to regulations.

Spills or Broken Packages

Return intact to the original packaging, or re-package. Sweep up broken product contents, avoid raising dust while sweeping. Package sweepings in paper or cardboard container and dispose by proper hazmat procedures. Flood residues with plenty of water.

Storage

Store in a cool, dry location away from open flame or other heat sources. Avoid freezing. High humidity (up to 95% non-condensing) for short durations before firing is acceptable. Storage humidity should remain below 70%, non-condensing.

Handling

Product should be handled with care during shipping and use. Avoid contact with rain or groundwater. Damaged products should not be used, they should be returned to manufacturer for repair or proper disposal.

Flash Tube
Safety Data Sheet

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name : Flash Tube

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Pyrotechnic Article

1.3. Details of the supplier of the safety data sheet

RES Specialty Pyrotechnics, Inc.
21595 286th Street
Belle Plaine, MN 56011

1.4. Emergency telephone number

Emergency number : 952-873-3113

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (GHS-US)

Expl. 1.4	H204
Flam. Sol. 2	H228
Ox. Sol. 3	H272
Acute Tox. 4 (Oral)	H302
Skin Sens. 1	H317

Full text of H-phrases: see section 16

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US) :

GHS01 GHS02 GHS03 GHS07

Signal word (GHS-US) : Warning

Hazard statements (GHS-US) :
H204 - Fire or projection hazard
H228 - Flammable solid
H272 - May intensify fire; oxidizer
H302 - Harmful if swallowed
H317 - May cause an allergic skin reaction

Precautionary statements (GHS-US) :
P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking
P220 - Keep/Store away from clothing/combustible materials
P221 - Take any precaution to avoid mixing with combustibles
P240 - Ground/bond container and receiving equipment
P241 - Use explosion-proof electrical/ventilating/lighting equipment
P250 - Do not subject to grinding/shock/friction
P261 - Avoid breathing dust/fume/gas/mist/vapors/spray
P264 - Wash thoroughly after handling
P270 - Do not eat, drink or smoke when using this product
P272 - Contaminated work clothing must not be allowed out of the workplace
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P301 + P312 - If swallowed: Call a poison center/doctor if you feel unwell
P302 + P352 - If on skin: Wash with plenty of water
P330 - Rinse mouth
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention
P362+P364 - Take off contaminated clothing and wash it before reuse
P370+P378 - In case of fire: Use water to extinguish
P370+P380 - In case of fire: Evacuate area
P372 - Explosion risk in case of fire
P373 - DO NOT fight fire when fire reaches explosives
P374 - Fight fire with normal precautions from a reasonable distance
P401 - Store locked up
P501 - Dispose of contents/container in accordance with local/regional/national/international

regulations.

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS-US)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Pyrotechnic mixtures in solid form containing fuels and oxidizers, pyrotechnic substances or a mixture of substances designed to produce an effect by heat, light, sound, gas, or smoke or a combination of these as the result of non-detonative self-sustaining exothermic chemical reactions. These items are classified as explosives 1.4G by the U.S. DOT. No chemical composition is exposed during normal handling, transportation and storage. The following components are present in these products as a pyrotechnic composition:

Name	Product identifier	%	Classification (GHS-US)
Magnesium	(CAS No) 7439-95-4	0 - 84.8	Not classified
Aluminum	(CAS No) 7429-90-5	0 - 84.8	Not classified
Strontium nitrate	(CAS No) 10042-76-9	0 - 40	Not classified
Barium nitrate	(CAS No) 10022-31-8	0 - 40	Acute Tox. 4 (Oral), H302
Potassium nitrate	(CAS No) 7757-79-1	0 - 20	Ox. Sol. 3, H272 Aquatic Acute 3, H402
Titanium	(CAS No) 7440-32-6	0 - 20	Not classified
1,3,5,7-Tetraazatricyclo[3.3.1.13,7]decane	(CAS No) 100-97-0	0 - 10	Not classified
Vinyl chloride-vinylidene chloride copolymer	(CAS No) 9011-06-7	0 - 10	Not classified
Ethanedioic acid, disodium salt	(CAS No) 62-76-0	0 - 10	Not classified
Carbon black	(CAS No) 1333-86-4	0 - 4	Not classified
Sulfur	(CAS No) 7704-34-9	0 - 3	Skin Irrit. 2, H315

Full text of H-phrases: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : Medical attention is required. Remove to fresh air. Professional assistance by a doctor is needed if irritation develops or persists.

First-aid measures after skin contact : No immediate medical attention is required. Remove contaminated clothing as needed and launder before reuse. Wash skin thoroughly with mild soap/water. Professional assistance by a doctor is needed if irritation develops or persists.

First-aid measures after eye contact : Medical attention is required. Immediately flush eyes with plenty of water for 15 minutes. An eye wash kit is required at the workplace. Professional assistance by a doctor is needed if irritation persists.

First-aid measures after ingestion : Medical attention is required. Professional assistance by a doctor is needed. Induce vomiting immediately (as directed by medical personnel). Never give anything by mouth to an unconscious person.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries after inhalation : Not anticipated under normal use conditions. If casing is broken, dusts may cause irritation.

Symptoms/injuries after skin contact : Not anticipated under normal use conditions. If casing is broken, dusts may cause irritation.

Symptoms/injuries after eye contact : Not anticipated under normal use conditions. If casing is broken, dusts may cause irritation.

Symptoms/injuries after ingestion : Not anticipated under normal use conditions. If casing is broken, ingested dusts may cause irritation.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Pyrotechnics are self oxidizing. Flood with water. Fire extinguisher (Class A) may be used. Do not use suffocation methods.

Unsuitable extinguishing media : None.

5.2. Special hazards arising from the substance or mixture

Fire hazard : May cause fire or explosion; strong oxidizer.

Explosion hazard : These products will burn rapidly in the event of a fire. Fiery debris may be projected. Large quantities may explode in a fire.

5.3. Advice for firefighters

Protection during firefighting : Firefighters should wear full protective gear.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

No additional information available

6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment : Spilled composition is highly combustible. In case a device is broken open and pyrotechnic composition is spilled: Keep away any possible ignition source such as open flames, sparks and lit cigarettes. Prevent possible electrostatic discharges (for example: do not use a synthetic dustpan and brush).

Methods for cleaning up : Carefully pick up the material and place in a cardboard container. For dusts which may be released from a broken device, use dustless methods and place into a closed container for disposal. Take up wet and do not dry sweep or blow with compressed air. Care must be taken when using or disposing of chemical materials and/or their containers to prevent environmental contamination.

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : All pyrotechnic devices should be handled with caution. Avoid open flames, smoking, friction, impact, excessive heat, electrostatic discharges, radio frequent interference and moisture.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in dry, cool, well-ventilated area.

7.3. Specific end use(s)

Pyrotechnics

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Strontium nitrate (10042-76-9)	
ACGIH	Not applicable
OSHA	Not applicable

Potassium nitrate (7757-79-1)	
ACGIH	Not applicable
OSHA	Not applicable

Magnesium (7439-95-4)	
ACGIH	Not applicable
OSHA	Not applicable

Aluminum (7429-90-5)		
ACGIH	ACGIH TWA (mg/m³)	1 mg/m³ (respirable fraction)
OSHA	OSHA PEL (TWA) (mg/m³)	15 mg/m³ (total dust) 5 mg/m³ (respirable fraction)

Vinyl chloride-vinylidene chloride copolymer (9011-06-7)	
ACGIH	Not applicable
OSHA	Not applicable

1,3,5,7-Tetraazatricyclo[3.3.1.13,7]decane (100-97-0)	
ACGIH	Not applicable
OSHA	Not applicable

Sulfur (7704-34-9)	
ACGIH	Not applicable
OSHA	Not applicable

Carbon black (1333-86-4)		
ACGIH	ACGIH TWA (mg/m³)	3 mg/m³ (inhalable fraction)
OSHA	OSHA PEL (TWA) (mg/m³)	3.5 mg/m³

Barium nitrate (10022-31-8)	
ACGIH	Not applicable
OSHA	Not applicable

Titanium (7440-32-6)	
ACGIH	Not applicable
OSHA	Not applicable

Ethanedioic acid, disodium salt (62-76-0)	
ACGIH	Not applicable
OSHA	Not applicable

8.2. Exposure controls

Appropriate engineering controls : None required under normal product handling conditions.
Hand protection : None required under normal product handling conditions.
Eye protection : None required under normal product handling conditions.
Skin and body protection : Wear suitable working clothes.
Respiratory protection : None required under normal product handling conditions.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Solid
Appearance : Contained in cardboard casing.
Odor : None
Odor threshold : Not Applicable
pH : Not Applicable
Relative evaporation rate (butyl acetate=1) : Not Applicable
Melting point : Not Applicable
Freezing point : Not Applicable
Boiling point : Not Applicable
Flash point : Not Applicable
Auto-ignition temperature : >150°C
Decomposition temperature : Not Applicable
Flammability (solid, gas) : No data available
Vapor pressure : No data available
Relative vapor density at 20 °C : No data available
Relative density : No data available
Solubility : Not Applicable

Log Pow	:	No data available
Log Kow	:	No data available
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	No data available
Explosive properties	:	No data available
Oxidizing properties	:	No data available
Explosive limits	:	No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

The product is stable at normal handling and storage conditions.

10.3. Possibility of hazardous reactions

Will not occur.

10.4. Conditions to avoid

Open flames, sparks, high temperatures, friction or impact, electrostatic discharges and radio frequent radiation.

10.5. Incompatible materials

None known.

10.6. Hazardous decomposition products

Decomposition does not occur under normal circumstances during storage, transport and handling.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Oral: Harmful if swallowed.

Flash Tube	
ATE US (oral)	887.500 mg/kg body weight

Strontium nitrate (10042-76-9)	
LD50 oral rat	2750 mg/kg

Potassium nitrate (7757-79-1)	
LD50 oral rat	3015 mg/kg
ATE US (oral)	3015.000 mg/kg body weight

Magnesium (7439-95-4)	
LD50 oral rat	230 mg/kg

1,3,5,7-Tetraazatricyclo[3.3.1.13,7]decane (100-97-0)	
LD50 oral rat	9200 mg/kg
ATE US (oral)	9200.000 mg/kg body weight

Sulfur (7704-34-9)	
LD50 oral rat	> 3000 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
LC50 inhalation rat (mg/l)	> 9.23 mg/l/4h

Carbon black (1333-86-4)	
LD50 oral rat	> 15400 mg/kg

Barium nitrate (10022-31-8)	
LD50 oral rat	355 mg/kg
ATE US (oral)	355.000 mg/kg body weight

Ethanedioic acid, disodium salt (62-76-0)	
LD50 oral rat	11160 mg/kg

Skin corrosion/irritation : Not classified
Serious eye damage/irritation : Not classified
Respiratory or skin sensitization : May cause an allergic skin reaction.
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified

Vinyl chloride-vinylidene chloride copolymer (9011-06-7)	
IARC group	3 - Not classifiable

Carbon black (1333-86-4)	
IARC group	2B - Possibly carcinogenic to humans
In OSHA Hazard Communication Carcinogen list	Yes

Reproductive toxicity : Not classified
Specific target organ toxicity (single exposure) : Not classified

Specific target organ toxicity (repeated exposure) : Not classified

Aspiration hazard : Not classified

SECTION 12: Ecological information

12.1. Toxicity

1,3,5,7-Tetraazatricyclo[3.3.1.13,7]decane (100-97-0)	
LC50 fish 1	44600 - 55600 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
EC50 Daphnia 1	29868 - 43390 mg/l (Exposure time: 48 h - Species: Daphnia magna)

Sulfur (7704-34-9)	
LC50 fish 1	866 mg/l (Exposure time: 96 h - Species: Brachydanio rerio [static])
LC50 fish 2	< 14 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Effect on the global warming : No known ecological damage caused by this product.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Dispose of contents/container in accordance with local/regional/national/international regulations.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Transport document description : UN0431 Articles, pyrotechnic (for technical purposes), 1.4, II

UN-No.(DOT) : UN0431

DOT Proper Shipping Name : Articles, pyrotechnic
for technical purposes

Department of Transportation (DOT) Hazard Classes : 1.4 - Class 1.4 - Explosives (with no significant blast hazard) 49 CFR 173.50

Hazard labels (DOT) : 1.4G - Explosive

Packing group (DOT) : II - Medium Danger

DOT Packaging Non Bulk (49 CFR 173.xxx) : 62

DOT Packaging Bulk (49 CFR 173.xxx) : None

DOT Packaging Exceptions (49 CFR 173.xxx) : None

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : Forbidden

DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 75 kg

DOT Vessel Stowage Location : 02 - The material may be stowed ''on deck'' or ''under deck'' on a cargo vessel (up to 12 passengers) and ''on deck'' in closed cargo transport units or ''under deck'' in closed cargo transport units on a passenger vessel.

DOT Vessel Stowage Other : 25 - Shade from radiant heat

SECTION 15: Regulatory information

15.1. US Federal regulations

Strontium nitrate (10042-76-9)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Potassium nitrate (7757-79-1)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Magnesium (7439-95-4)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Aluminum (7429-90-5)

Listed on the United States TSCA (Toxic Substances Control Act) inventory
Listed on SARA Section 313 (Specific toxic chemical listings)

SARA Section 313 - Emission Reporting	1.0 % (dust or fume only)

Vinyl chloride-vinylidene chloride copolymer (9011-06-7)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

1,3,5,7-Tetraazatricyclo[3.3.1.13,7]decane (100-97-0)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Sulfur (7704-34-9)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Carbon black (1333-86-4)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Barium nitrate (10022-31-8)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Titanium (7440-32-6)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Ethanedioic acid, disodium salt (62-76-0)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. US State regulations

Carbon black (1333-86-4)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significance risk level (NSRL)
Yes	No	No	No	

Strontium nitrate (10042-76-9)
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List

Potassium nitrate (7757-79-1)
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List

Magnesium (7439-95-4)
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List

Aluminum (7429-90-5)
U.S. - Massachusetts - Right To Know List U.S. - Minnesota - Hazardous Substance List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List

1,3,5,7-Tetraazatricyclo[3.3.1.13,7]decane (100-97-0)
U.S. - New Jersey - Right to Know Hazardous Substance List

Sulfur (7704-34-9)
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List

Carbon black (1333-86-4)
U.S. - Massachusetts - Right To Know List U.S. - Minnesota - Hazardous Substance List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List

Barium nitrate (10022-31-8)
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List

Titanium (7440-32-6)
U.S. - New Jersey - Right to Know Hazardous Substance List

SECTION 16: Other information

Full text of H-phrases::

Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Aquatic Acute 3	Hazardous to the aquatic environment - Acute Hazard Category 3
Expl. 1.4	Explosive Category 1.4
Flam. Sol. 2	Flammable solids Category 2
Ox. Sol. 3	Oxidizing solids Category 3
Skin Irrit. 2	Skin corrosion/irritation Category 2
Skin Sens. 1	Skin sensitization Category 1
H204	Fire or projection hazard
H228	Flammable solid
H272	May intensify fire; oxidizer
H302	Harmful if swallowed
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H402	Harmful to aquatic life

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product

Proximate Gerb Series: All Types

Safety Data Sheet

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name : Proximate Gerb Series: All Types

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Pyrotechnic Article

1.3. Details of the supplier of the safety data sheet

RES Specialty Pyrotechnics, Inc.
21595 286th Street
Belle Plaine, MN 56011

1.4. Emergency telephone number

Emergency number : 952-873-3113

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (GHS-US)

Expl. 1.4	H204
Ox. Sol. 3	H272
Acute Tox. 4 (Oral)	H302
Skin Irrit. 2	H315

Full text of H-phrases: see section 16

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US) :

GHS01 GHS03 GHS07

Signal word (GHS-US) : Warning

Hazard statements (GHS-US) :
H204 - Fire or projection hazard
H272 - May intensify fire; oxidizer
H302 - Harmful if swallowed
H315 - Causes skin irritation

Precautionary statements (GHS-US) :
P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking
P220 - Keep/Store away from clothing/combustible materials
P221 - Take any precaution to avoid mixing with combustibles
P240 - Ground/bond container and receiving equipment
P250 - Do not subject to grinding/shock/friction
P264 - Wash thoroughly after handling
P270 - Do not eat, drink or smoke when using this product
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P301 + P312 - If swallowed: Call a poison center/doctor if you feel unwell
P302 + P352 - If on skin: Wash with plenty of water
P330 - Rinse mouth
P332+P313 - If skin irritation occurs: Get medical advice/attention
P362 - Take off contaminated clothing and wash before reuse
P370+P378 - In case of fire: Use water to extinguish
P370+P380 - In case of fire: Evacuate area
P372 - Explosion risk in case of fire
P373 - DO NOT fight fire when fire reaches explosives
P374 - Fight fire with normal precautions from a reasonable distance
P401 - Store locked up
P501 - Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS-US)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Pyrotechnic mixtures in solid form containing fuels and oxidizers, pyrotechnic substances or a mixture of substances designed to produce an effect by heat, light, sound, gas, or smoke or a combination of these as the result of non-detonative self-sustaining exothermic chemical reactions. These items are classified as explosives 1.4G by the U.S. DOT. No chemical composition is exposed during normal handling, transportation and storage. The following components are present in these products as a pyrotechnic composition:

Name	Product identifier	%	Classification (GHS-US)
Potassium nitrate	(CAS No) 7757-79-1	0 - 75	Ox. Sol. 3, H272 Aquatic Acute 3, H402
Barium nitrate	(CAS No) 10022-31-8	0 - 43	Acute Tox. 4 (Oral), H302
Strontium nitrate	(CAS No) 10042-76-9	0 - 43	Not classified
Titanium	(CAS No) 7440-32-6	0 - 29.75	Not classified
Sulfur	(CAS No) 7704-34-9	0 - 25	Skin Irrit. 2, H315
Magnesium	(CAS No) 7439-95-4	0 - 20	Not classified
Vinyl chloride-vinylidene chloride copolymer	(CAS No) 9011-06-7	0 - 17	Not classified
Starch	(CAS No) 9005-25-8	0 - 14	Not classified
Benzoic acid, potassium salt	(CAS No) 582-25-2	0 - 14	Not classified
Nitrocellulose	(CAS No) 9004-70-0	0 - 11	Not classified
Iron	(CAS No) 7439-89-6	0 - 10.54	Acute Tox. 4 (Oral), H302
Carbon black	(CAS No) 1333-86-4	0 - 10	Not classified
Red Gum	None	0 - 9	Not classified
Copper oxide (CuO)	(CAS No) 1317-38-0	0 - 5	Not classified
Aluminum	(CAS No) 7429-90-5	0 - 3.85	Not classified
Sodium bicarbonate	(CAS No) 144-55-8	0 - 3	Not classified
Silicon	(CAS No) 7440-21-3	0 - 2.38	Not classified
Carbon	(CAS No) 7440-44-0	0 - 0.34	Not classified

Full text of H-phrases: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : Medical attention is required. Remove to fresh air. Professional assistance by a doctor is needed if irritation develops or persists.

First-aid measures after skin contact : No immediate medical attention is required. Remove contaminated clothing as needed and launder before reuse. Wash skin thoroughly with mild soap/water. Professional assistance by a doctor is needed if irritation develops or persists.

First-aid measures after eye contact : Medical attention is required. Immediately flush eyes with plenty of water for 15 minutes. An eye wash kit is required at the workplace. Professional assistance by a doctor is needed if irritation persists.

First-aid measures after ingestion : Medical attention is required. Professional assistance by a doctor is needed. Induce vomiting immediately (as directed by medical personnel). Never give anything by mouth to an unconscious person.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries after inhalation : Not anticipated under normal use conditions. If casing is broken, dusts may cause irritation.

Symptoms/injuries after skin contact : Not anticipated under normal use conditions. If casing is broken, dusts may cause irritation.

Symptoms/injuries after eye contact : Not anticipated under normal use conditions. If casing is broken, dusts may cause irritation.

Symptoms/injuries after ingestion : Not anticipated under normal use conditions. If casing is broken, ingested dusts may cause irritation.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Pyrotechnics are self oxidizing. Flood with water. Fire extinguisher (Class A) may be used. Do not use suffocation methods.

Unsuitable extinguishing media : None.

5.2. Special hazards arising from the substance or mixture

Fire hazard : May cause fire or explosion; strong oxidizer.

Explosion hazard : These products will burn rapidly in the event of a fire. Fiery debris may be projected. Large quantities may explode in a fire.

5.3. Advice for firefighters

Protection during firefighting : Firefighters should wear full protective gear.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

No additional information available

6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment : Spilled composition is highly combustible. In case a device is broken open and pyrotechnic composition is spilled: Keep away any possible ignition source such as open flames, sparks and lit cigarettes. Prevent possible electrostatic discharges (for example: do not use a synthetic dustpan and brush).

Methods for cleaning up : Carefully pick up the material and place in a cardboard container. For dusts which may be released from a broken device, use dustless methods and place into a closed container for disposal. Take up wet and do not dry sweep or blow with compressed air. Care must be taken when using or disposing of chemical materials and/or their containers to prevent environmental contamination.

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : All pyrotechnic devices should be handled with caution. Avoid open flames, smoking, friction, impact, excessive heat, electrostatic discharges, radio frequent interference and moisture.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in dry, cool, well-ventilated area.

7.3. Specific end use(s)

Pyrotechnics

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Potassium nitrate (7757-79-1)	
ACGIH	Not applicable
OSHA	Not applicable

Magnesium (7439-95-4)	
ACGIH	Not applicable
OSHA	Not applicable

Aluminum (7429-90-5)		
ACGIH	ACGIH TWA (mg/m³)	1 mg/m³ (respirable fraction)
OSHA	OSHA PEL (TWA) (mg/m³)	15 mg/m³ (total dust) 5 mg/m³ (respirable fraction)

Vinyl chloride-vinylidene chloride copolymer (9011-06-7)	
ACGIH	Not applicable
OSHA	Not applicable

Sulfur (7704-34-9)		
ACGIH	Not applicable	
OSHA	Not applicable	

Carbon black (1333-86-4)		
ACGIH	ACGIH TWA (mg/m³)	3 mg/m³ (inhalable fraction)
OSHA	OSHA PEL (TWA) (mg/m³)	3.5 mg/m³

Barium nitrate (10022-31-8)	
ACGIH	Not applicable
OSHA	Not applicable

Titanium (7440-32-6)	
ACGIH	Not applicable
OSHA	Not applicable

Copper oxide (CuO) (1317-38-0)	
ACGIH	Not applicable
OSHA	Not applicable

Sodium bicarbonate (144-55-8)	
ACGIH	Not applicable
OSHA	Not applicable

Strontium nitrate (10042-76-9)	
ACGIH	Not applicable
OSHA	Not applicable

Starch (9005-25-8)		
ACGIH	ACGIH TWA (mg/m³)	10 mg/m³
OSHA	OSHA PEL (TWA) (mg/m³)	15 mg/m³ (total dust) 5 mg/m³ (respirable fraction)

Benzoic acid, potassium salt (582-25-2)	
ACGIH	Not applicable
OSHA	Not applicable

Nitrocellulose (9004-70-0)	
ACGIH	Not applicable
OSHA	Not applicable

Carbon (7440-44-0)	
ACGIH	Not applicable
OSHA	Not applicable

Iron (7439-89-6)	
ACGIH	Not applicable
OSHA	Not applicable

Silicon (7440-21-3)		
ACGIH	Not applicable	
OSHA	OSHA PEL (TWA) (mg/m³)	15 mg/m³ (total dust) 5 mg/m³ (respirable fraction)

8.2. Exposure controls

Appropriate engineering controls	:	None required under normal product handling conditions.
Hand protection	:	None required under normal product handling conditions.
Eye protection	:	None required under normal product handling conditions.
Skin and body protection	:	Wear suitable working clothes.
Respiratory protection	:	None required under normal product handling conditions.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Solid
Appearance	:	Contained in cardboard casing.
Odor	:	None
Odor threshold	:	Not Applicable
pH	:	Not Applicable
Relative evaporation rate (butyl acetate=1)	:	Not Applicable
Melting point	:	Not Applicable
Freezing point	:	Not Applicable
Boiling point	:	Not Applicable
Flash point	:	Not Applicable
Auto-ignition temperature	:	>150°C
Decomposition temperature	:	Not Applicable
Flammability (solid, gas)	:	No data available
Vapor pressure	:	No data available
Relative vapor density at 20 °C	:	No data available
Relative density	:	No data available
Solubility	:	Not Applicable
Log Pow	:	No data available
Log Kow	:	No data available
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	No data available
Explosive properties	:	No data available
Oxidizing properties	:	No data available
Explosive limits	:	No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

The product is stable at normal handling and storage conditions.

10.3. Possibility of hazardous reactions

Will not occur.

10.4. Conditions to avoid

Open flames, sparks, high temperatures, friction or impact, electrostatic discharges and radio frequent radiation.

10.5. Incompatible materials

None known.

10.6. Hazardous decomposition products

Decomposition does not occur under normal circumstances during storage, transport and handling.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Oral: Harmful if swallowed.

Proximate Gerb Series: All Types	
ATE US (oral)	758.506 mg/kg body weight

Potassium nitrate (7757-79-1)	
LD50 oral rat	3015 mg/kg
ATE US (oral)	3015.000 mg/kg body weight

Magnesium (7439-95-4)	
LD50 oral rat	230 mg/kg

Sulfur (7704-34-9)	
LD50 oral rat	> 3000 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
LC50 inhalation rat (mg/l)	> 9.23 mg/l/4h

Carbon black (1333-86-4)	
LD50 oral rat	> 15400 mg/kg

Barium nitrate (10022-31-8)	
LD50 oral rat	355 mg/kg
ATE US (oral)	355.000 mg/kg body weight

Sodium bicarbonate (144-55-8)	
LD50 oral rat	4220 mg/kg
ATE US (oral)	4220.000 mg/kg

Strontium nitrate (10042-76-9)	
LD50 oral rat	2750 mg/kg

Nitrocellulose (9004-70-0)	
LD50 oral rat	> 5 g/kg

Carbon (7440-44-0)	
LD50 oral rat	> 10000 mg/kg

Iron (7439-89-6)	
LD50 oral rat	984 mg/kg
ATE US (oral)	984.000 mg/kg

Silicon (7440-21-3)	
LD50 oral rat	3160 mg/kg

Skin corrosion/irritation : Causes skin irritation.

Serious eye damage/irritation : Not classified

Respiratory or skin sensitization : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Vinyl chloride-vinylidene chloride copolymer (9011-06-7)	
IARC group	3 - Not classifiable

Carbon black (1333-86-4)	
IARC group	2B - Possibly carcinogenic to humans
In OSHA Hazard Communication Carcinogen list	Yes

Reproductive toxicity : Not classified

Specific target organ toxicity (single exposure) : Not classified

Specific target organ toxicity (repeated exposure) : Not classified

Aspiration hazard : Not classified

SECTION 12: Ecological information

12.1. Toxicity

Sulfur (7704-34-9)	
LC50 fish 1	866 mg/l (Exposure time: 96 h - Species: Brachydanio rerio [static])
LC50 fish 2	< 14 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])

Sodium bicarbonate (144-55-8)	
LC50 fish 1	8250 - 9000 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])
EC50 Daphnia 1	2350 mg/l (Exposure time: 48 h - Species: Daphnia magna)

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Effect on the global warming : No known ecological damage caused by this product.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Dispose of contents/container in accordance with local/regional/national/international regulations.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Transport document description : UN0431 Articles, pyrotechnic (for technical purposes), 1.4, II

UN-No.(DOT) : UN0431

DOT Proper Shipping Name	:	Articles, pyrotechnic for technical purposes
Department of Transportation (DOT) Hazard Classes	:	1.4 - Class 1.4 - Explosives (with no significant blast hazard) 49 CFR 173.50
Hazard labels (DOT)	:	1.4G - Explosive

Packing group (DOT)	:	II - Medium Danger
DOT Packaging Non Bulk (49 CFR 173.xxx)	:	62
DOT Packaging Bulk (49 CFR 173.xxx)	:	None
DOT Packaging Exceptions (49 CFR 173.xxx)	:	None
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	:	Forbidden
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	:	75 kg
DOT Vessel Stowage Location	:	02 - The material may be stowed ''on deck'' or ''under deck'' on a cargo vessel (up to 12 passengers) and ''on deck'' in closed cargo transport units or ''under deck'' in closed cargo transport units on a passenger vessel.
DOT Vessel Stowage Other	:	25 - Shade from radiant heat

SECTION 15: Regulatory information

15.1. US Federal regulations

Potassium nitrate (7757-79-1)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Magnesium (7439-95-4)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Aluminum (7429-90-5)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Listed on SARA Section 313 (Specific toxic chemical listings)

SARA Section 313 - Emission Reporting	1.0 % (dust or fume only)

Vinyl chloride-vinylidene chloride copolymer (9011-06-7)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Sulfur (7704-34-9)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Carbon black (1333-86-4)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Barium nitrate (10022-31-8)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Titanium (7440-32-6)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Copper oxide (CuO) (1317-38-0)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Sodium bicarbonate (144-55-8)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Strontium nitrate (10042-76-9)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Starch (9005-25-8)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Benzoic acid, potassium salt (582-25-2)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Nitrocellulose (9004-70-0)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Carbon (7440-44-0)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Iron (7439-89-6)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Silicon (7440-21-3)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. US State regulations

Carbon black (1333-86-4)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significance risk level (NSRL)
Yes	No	No	No	

Potassium nitrate (7757-79-1)
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List

Magnesium (7439-95-4)
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List

Aluminum (7429-90-5)
U.S. - Massachusetts - Right To Know List U.S. - Minnesota - Hazardous Substance List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List

Sulfur (7704-34-9)
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List

Carbon black (1333-86-4)
U.S. - Massachusetts - Right To Know List U.S. - Minnesota - Hazardous Substance List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List

Barium nitrate (10022-31-8)
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List

Titanium (7440-32-6)
U.S. - New Jersey - Right to Know Hazardous Substance List

Strontium nitrate (10042-76-9)
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List

Starch (9005-25-8)
U.S. - Massachusetts - Right To Know List
U.S. - Minnesota - Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

Nitrocellulose (9004-70-0)
U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

Silicon (7440-21-3)
U.S. - Massachusetts - Right To Know List
U.S. - Minnesota - Hazardous Substance List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: Other information

Full text of H-phrases::

Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Aquatic Acute 3	Hazardous to the aquatic environment - Acute Hazard Category 3
Expl. 1.4	Explosive Category 1.4
Ox. Sol. 3	Oxidizing solids Category 3
Skin Irrit. 2	Skin corrosion/irritation Category 2
H204	Fire or projection hazard
H272	May intensify fire; oxidizer
H302	Harmful if swallowed
H315	Causes skin irritation
H402	Harmful to aquatic life

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product

SAFETY DATA SHEET

27th June 2016

SECTION 1 – PRODUCT IDENTIFICATION

1.1 Product identifier

Product Name: FLASH REPORTS, MAROONS & MICRODETS

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses: Articles pyrotechnic for technical purposes

1.3 Details of the Supplier of the Safety Data Sheet

Supplier: Le Maitre Ltd
Street/P.O. Box: 6 Forval Close
Postcode/City: CR4 4NE, Mitcham
Country: England
Telephone number: +44 (0)20 8646 2222
Email: info@lemaitreltd.com

1.4 Emergency telephone number

Please contact: +44 (0)151 951 3317 Health and Safety Executive (HSE) Chemicals Regulation Directorate
Other comments: Only available during office hours

SECTION 2 – HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

H204: Fire or projection hazard

2.2 Label elements

Labelling according to Regulation (EC) No. 1272/2008 (CLP)

Hazard pictograms:

Signal word: EXPLOSIVE

2.3 Other hazards

There are no chronic effects from handling the product appropriately

SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substances

Name	CAS No.	EC No.
Aluminium powder	7429-90-5	231-072-3
Graphite	7782-42-5	231-955-3
Magnesium powder	7439-54-4	231-104-6
Potassium Perchlorate	7778-47-7	231-912-9
Talc	14087-96-6	238-877-9

List above covers all products within the Flash Reports, Maroons & Microdet families

SECTION 4 – FIRST AID MEASURES

4.1 Description of first aid measures

FOR LEAKING POWDER OR RELEASED SMOKE

General notes: In the case of accident or sickness, seek medical advice immediately.
Following inhalation: Remove casualty to fresh air and keep warm and at rest.
Following skin contact: Wash immediately with soap and water
Following eye contact: Immediately flush with water
Following ingestion: If accidently swallowed, rinse the mouth with plenty of water (only if the person is conscious) and obtain medical attention
Self-protection of the first aider: Pay attention to self-protection!

4.2 Most important symptoms and effects, both acute and delayed

Irritation to the eyes and irritation to the skin

4.3 Indication of any immediate medical attention and special treatment needed

First aid, decontamination, treatment of symptoms

SECTION 5 – FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media: Do not attempt to extinguish any fire. Evacuate area and contact emergency services
Unsuitable extinguishing media: N/A

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products may be produced.
Pyrotechnic devices can burn violently and the state of the fire will be dependent on composition, packaging and containment.

5.3 Advice for firefighters

Exercise extreme caution. Special protective equipment for firefighters: wear self-contained breathing apparatus and chemical protective clothing

SECTION 6 – ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

6.1.1 For non-emergency personnel: Suitable personal protective equipment. Remove ignition sources.

6.1.2 For emergency responders: Remove persons to safety. Isolate hazard area and deny entry. Ventilate closed spaces before entering.

6.2 Environmental precautions

Prevent large spillages from entering surface water or drains.

6.3 Methods and material for containment and cleaning up

Dispose of as special waste in compliance with local and national regulations.

6.4 Reference to other sections

See sections 8 and 13

SECTION 7 – HANDLING AND STORAGE

7.1 Precautions for safe handling

Protective measures: Handle with caution.
Measures to prevent fire: No smoking and no naked flames.
Measures to prevent aerosol and dust generation: Do not tamper with the item.
Advice on general occupational hygiene: Do not eat, drink or smoke in work areas. Wash hands after use.

7.2 Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions: Store in cool, dry place.
Requirments for storage rooms and vessels: Always store in original packaging with appropriate marking and labelling. Stores should be adequately secured and identified.

7.3 Specific end use(s)

The identified use for this product is detailed in section 1.2.

SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Workplace exposure limits.

8.2 Exposure controls

8.2.1 Appropriate engineering controls: Provide adequate ventilation.

8.2.2 Personal protection equipment: Appropriate Safety goggles.

8.2.3 Environmental exposure controls: No specific measures.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance: Solid sealed tube

As this is a sealed unit chemical properties are not applicable

9.2 Other information

No additional information relevant to safe use.

SECTION 10 – STABILITY AND REACTIVITY

10.1 Reactivity

No specific data related to reactivity available.

10.2 Chemical stability

Stable under recommended conditions of storage and use.

10.3 Possibility of hazardous reactions

No hazardous reaction when handled and stored according to provisions.

10.4 Conditions to avoid

Avoid high temperatures, shock, static discharge, vibrations or other physical stresses that might result in a hazardous situation.

10.5 Incompatible materials

As this is a sealed unit incompatible materials are not applicable.

10.6 Hazardous decomposition products

Decomposition does not occur during normal circumstances of storage, transport and handling.
Upon functioning various gases may be emitted including oxides.

SECTION 11 – TOXILOGICAL INFORMATION

11.1 Information on toxilogical effects

As this is a sealed unit this only applies to spillages.
May cause eye and skin irritation. Inhalation or ingestion may cause discomfort.

SECTION 12 – ECOLOGICAL INFORMATION

12.1 Toxicity

Not classified as dangerous for the environment/aquatic toxicant

12.2 Persistance and degradability N/A

12.3 Bioaccumulative potential N/A

12.4 Mobility in soil N/A

12.5 Results of PBT and vPvB assessment N/A

12.6 Other adverse effects N/A

SECTION 13 – DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

No specific regulations apply to packagings or spent devices.
Unused devices should be returned to the manufacturer or functioned in a safe manner.

SECTION 14 – TRANSPORT INFORMATION

14.1 UN number

UN0431

14.2 UN proper shipping name

Articles pyrotechnic for technical purposes

14.3 Transport hazard class(es)

1.4G (UN0431)

14.4 Packing group

N/A

14.5 Environmental hazards

None

14.6 Special precautions for user

No smoking or naked flames

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code

N/A

SECTION 15 – REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Explosives Regulations 2014 and all orders of council, HSG 36, Local Authorities and the Health and Safety Executive.
Pyrotechnic Articles European Directive 2013/29/EU

15.2 Chemical Safety Assessment

N/A

SECTION 16 – OTHER INFORMATION

Information for this safety data sheet was obtained from sources considered technically accurate and reliable. Whilst every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries or consequential damages which may result from the use of, or reliance on, any information contained in this form.