

13576 Desmond Street
Pacoima, CA 91331 - USA

Section -1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

1.1. Product Identifier: CS-1900 Part A Fire Retardent
 - Product Name: Fire Retardent / Base compound Part-A
 - Product reference: CS-1900 Part A Base

1.2. Product Use:
 - Flame Retardent

1.3. Manufacturer's Name:
CAGE Code: 14439
Flamemaster Corp.
Chem Seal Division
13576 Desmond Street
Pacoima, CA 91333 – USA

1.3.1 Suppliers Name (if not manufacturer)

Technical Contact:
Flamemaster Corp.
Tel: 818-890-1401
Fax: 818-890-6001
www.flamemaster.com

1.4. Emergency Telephone:
 Chemtrec – Chemtrec International
 800-424-9300 (North America)
 703-527-3887 (Outside North America))

Specification

MIL-S-38249

Base PART A

NSN:	8030-00-783-8886 6 oz cartridge(3.5 oz)	8030-00-783-8898 1/2 pint kit (6oz)	8030-00-723-5345 pint kit (12oz)	8030-01-033-3485 gallon kit (96oz)	8030-01-364-7359 2 1/2 oz cart. (2oz)
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Section -2. HAZARD (S) IDENTIFICATION

OSHA/HCS STATUS: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

CLASSIFICATION OF THE MIXTURE:

FLAMMABLE LIQUIDS - Category 2

ASPIRATION HAZARD - (CATEGORY 1)

ACUTE TOXICITY (INHALATION) - CATEGORY 4

SKIN SENSITIZATION - Category 1

SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2A

CARCINOGENICITY - Category 2

TOXIC TO REPRODUCTION (UNBORN CHILD) - Category 2

SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (RESPIRATORY TRACT IRRITATION) - Category 3

GHS LABEL REQUIREMENTS

HAZARD PICTOGRAMS



SIGNAL WORD : DANGER

HAZARD STATEMENTS:

HIGHLY FLAMMABLE LIQUID AND VAPOR - (H225)

MAY BE FATAL IF SWALLOWED AND ENTERS AIRWAYS - (H304)

HARMFUL IF INHALED - (H332)

CAUSES SERIOUS EYE IRRITATION - (H319)

MAY CAUSE AN ALLERGIC SKIN REACTION - (H317)

SUSPECTED OF DAMAGING THE UNBORN CHILD - (H361d)

SUSPECTED OF CAUSING CANCER - (H351)

MAY CAUSE RESPIRATORY IRRITATION - (H335)

PRECAUTIONARY STATEMENTS:

- P101+P102+P103: If medical advice is needed, have product container or label at hand. Keep out of reach of children.
- Read label before use
- P202: Do not handle until all safety precautions have been read and understood
- P210: Keep away from heat/sparks/open flames and hot surfaces-No Smoking
- P240:Ground/bond container and receiving equipment
- P261+P262+P263+P264:Avoid breathing dust/fumes/gas/mist/vapours/spray.Do not get in eyes , on skin, or on clothing. Avoid contact during pregnancy/while nursing. Wash thoroughly after handling.
- P270+P271+P273: Do not eat drink or smoke when using this product. Use only outdoors or in a well ventilated area. Avoid release to the environment.
- P281+P280: Use personal protective equipment as required. Wear protective gloves/ protective clothing/ eye protection/face protection
- P301+P310+P331: If swallowed: Immediately call a POISON CENTER or doctor/physician. Do not induce vomiting.
- P305+P351+P338+P315: If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses,if present and easy to do. Continue rinsing. Get immediate medical advice attention.
- P304+P340+P314: If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell
- P342+P340+P315: If experiencing respiratory symptoms: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get immediate medical advice/attention.
- P302+P352: If on skin (or in hair) : Wash with plenty of soap and water. If skin irritation occurs seek medical attention
- P306+P361: If on clothing: Remove/ take off immediately all contaminated clothing
- P402+P403+P404: Store in a dry place. Store in a well ventilated space. Store in a closed container.
- P233+P234+P235: Keep container tightly closed. Keep only in original container. Keep cool.

This sds is provided without any warranty expressed or implied regarding its correctness or suitability for specific situations. The conditions of handling,storage, use and disposal are beyond our control and may be beyond our knowledge.

SUPPLEMENTAL LABEL ELEMENTS:

Repeated exposure to high vapor concentrations may cause irritation of the respiratory system and permanent brain and nervous system damage. Inhalation of concentrations above recommended limits causes headaches, drowsiness and nausea and could lead to unconsciousness or possibly death.

Avoid any contact with skin or clothing and wash thoroughly after handling.

Emits toxic fumes when heated.

Sanding and grinding dust may be harmful if inhaled.

HAZARDS NOT OTHERWISE CLASSIFIED:

Prolonged or repeated exposure may dry skin and / or cause skin irritation.

Section -3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical family : Mixture of organic compounds

For the hazards of the composition, (SDS see Section 2).

2 BUTANONE

OSHA HAZARDS: FLAMMABLE LIQUID,TARGET ORGAN EFFECT,IRRITANT

TARGET ORGANS: CENTRAL NERVOUS SYSTEM

GHS CLASSIFICATION: 2-BUTANONE

FLAMMABLE LIQUIDS (CATEGORY 2)

ACUTE TOXICITY,ORAL (CATEGORY 5)

ACUTE TOXICITY,INHALATION (CATEGORY 5)

EYE IRRITATION (CATEGORY 2A)

SPECIFIC TARGET ORGAN TOXICITY-SINGLE EXPOSURE(CATEGORY3) CENTRAL NERVOUS SYSTEM.

4-METHYL-2-PENTANONE

OSHA HAZARDS: FLAMMABLE LIQUID,CARCINOGEN, TARGET ORGAN EFFECT,IRRITANT

TARGET ORGANS: NERVES

OTHER HAZARDS THAT DO NOT RESULT IN CLASSIFICATION: MAY FORM EXPLOSIVE PEROXIDES

GHS CLASSIFICATION: 4-METHYL-2-PENTANONE

FLAMMABLE LIQUIDS: (CATEGORY2)

ACUTE TOXICITY,ORAL (CATEGORY 5)

ACUTE TOXICITY,INHALATION (CATEGORY4)

SKIN IRRITATION (CATEGORY3)

EYE IRRITATION (CATEGORY2A)

SPECIFIC TARGET ORGAN TOXICITY-SINGLE EXPOSURE (CATEGORY 3) RESPIRATORY SYSTEM

PHENOLIC POLYMER (EPON RESIN)

FLAMMABLE LIQUID - CATEGORY 2

SKIN CORROSION/IRRITATION - Category 2

SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2A

SKIN SENSITIZATION - CATEGORY 1

SPECIFIC TARGET ORGAN TOXICITY-SINGLE EXPOSURE - (NARCOTIC EFFECTS) - CATEGORY 3

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SUBSTANCE % by weight in the product	H&P STATEMENTS	CAS	EINECS/ELINCS
2-BUTANONE (MEK) <=35%	H225,H303+H333,H319,H336,P210, P261,P305+P351+P338	78-93-3	201-159-0
4 Methyl-2-Pentanone <=30%	H225,H303,H316,H319,H332, H335,P210,P233,P240,P241, P242,P243,P261,P264,P271, P280,P303+P361+P353,P304+ P340,P305+P351+P338,P312 P337+P313,P370+P378,P403+ P233,P403+P235,P405,P501	108-10-1	203-550-1
PHENOLIC POLYMER	H225, H315, H319, H317, H335, H336	25036-25-3	N/A

Section -4. FIRST-AID MEASURES

General: When in doubt or symptoms persist, seek medical attention. Have Safety Data Sheet information available. Never give anything by mouth to an unconscious person.

Inhalation: Remove to fresh air, if breathing has stopped, administer artificial respiration. Give nothing by mouth, seek immediate medical attention.

Eye contact: Check for and remove any contact lenses. Irrigate with clean, fresh water for at least 15 minutes, holding the eyelids apart. Seek immediate medical attention.

Skin contact: Remove contaminated clothing. Wash skin thoroughly with soap and water or use recognized skin cleaners. Do NOT use aromatic solvents, thinners or petroleum products.

Ingestion: If accidentally swallowed obtain immediate medical attention. Keep at rest. Do NOT induce vomiting.

May be fatal if swallowed or vomited and enters lungs and/or airways. Never give anything by mouth to an unconscious person.

Section -5. FIRE-FIGHTING MEASURES

Extinguishing agents

Recommended: Universal resistant foam, CO2, water, powder.

Agents to avoid: None known

Attention

Promptly remove all persons in the event of a fire from the fire area. If safe to do so, remove all containers from fire area as well.

Fire will produce dense black smoke. Exposure to decomposition products may cause a Health Hazard. Fire fighters should wear self-contained breathing apparatus.

Water mist may be used to cool closed containers to prevent pressure build-up and possible auto-ignition and explosion when exposed to extreme heat.

Do not weld, flame cut or expose to extreme heat or ignition sources, empty containers which have contained flammable products.

Do not allow run-off from fire fighting to enter drains or water courses.

Never allow this material, any solutions, or any by-products, as well as any run-off, to come into contact with soil, waterways, wildlife habitats, drains, sewers, and / or the ocean. Avoid release into environment.

Emits toxic fumes when heated.

HAZARDOUS DECOMPOSITION PRODUCTS INCLUDE: CARBON DIOXIDE, CARBON MONOXIDE, HALOGENATED COMPOUNDS, AND METAL OXIDE / OXIDES, SMOKE, CARBON OXIDES, OTHER TOXIC FUMES

In case of inhalation of decomposition products released in a fire, symptoms may be delayed. Exposed persons may need to be kept under medical surveillance for at least 48 hours.

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Section -6. ACCIDENTAL RELEASE MEASURES

Eliminate sources of ignition, ventilate the area. Avoid breathing vapors by using appropriate respiratory protective equipment. Refer to protective measures listed in sections 7 & 8.

Collect spill with non-combustible absorbent materials, e.g. sand, earth, vermiculite, diatomaceous earth and place in a suitable container for disposal in accordance with local regulations (see section 13). Do not allow to enter drains or watercourses.

Clean-up with a detergent/ water mix ; avoid use of aromatic solvents. If the product enters drains or watercourses, inform authority with jurisdiction in accordance with state / local regulations.

Section -7. HANDLING AND STORAGE

7.1 Handling:

No smoking, eating and drinking during handling.

Avoid exposure during pregnancy.

Keep containers tightly closed. Prior to movement containers which are opened should be carefully resealed.

Avoid skin and eye contact. Avoid inhalation in case of exposure to vapor and spray mist.

Handle and open containers with care to avoid spilling of contents. Never use pressure to empty; container is not a pressure vessel. Clean or discard contaminated clothing and shoes.

Preparation may charge electrostatically; always use grounding/ bonding/ earthing leads when transferring contents of containers. Operators should wear antistatic footwear and clothing, and floors should be electrically conductive.

Vapors are heavier than air and may spread along floors. Vapors may form explosive mixtures with air. Prevent the creation of flammable or explosive concentrations of vapor in air, and avoid vapor concentration higher than the Occupational Exposure Limits.

Use in areas from which local sources of ignition have been excluded. Electrical equipment including lighting should be protected to the appropriate standard. Isolate from sources of heat, sparks and open flame. Non-sparking tools are recommended.

7.2 Storage:

Observe label precautions. Store between 32/F and 95/F (0/C and 35/C) in a dry, clean and well ventilated place, away from sources of heat, ignition, and direct sunlight. For flash points below 23 °C store in an area constructed to the appropriate standard

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Engineering measures:

Avoid the inhalation of vapors, spray mist and particulates. Achieve by local exhaust ventilation providing good general extraction as to keep air-borne concentration below the Occupational Exposure Limits (OEL).

If local / area ventilation is not sufficient to comply with OEL, suitable (NIOSH) respiratory protection to be provided. Always provide suitable (NIOSH) respiratory protection when sanding, grinding or otherwise abrading cured material.

8.2 Exposure limits

Work place exposure limits (8 hour)

Substance	OSHA	ACGIH TLV
2-BUTANONE (MEK) *	200 ppm	200 ppm
4-Methyl-2-Pentanone *	100 ppm	20 ppm
PHENOLIC RESIN *	5 mg/m ³ (Respirable)	10 mg/m ³ Inhalable Particulate
* can be absorbed through skin		

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8.3 Personal protection

All Personal Protective Equipment, including Respiratory Protection, used to control exposure to hazardous substances must be selected to meet the requirements of OSHA Regulations.

Respiratory protection :

Appropriate respiratory protection equipment should be selected according to the type of contaminants, following regulatory (OSHA / NIOSH) and manufacturers instructions including proper fitting of devices.

Hand protection :

For prolonged or repeated contact, recommend gloves type: polyvinyl alcohol, nitrile rubber, latex rubber (some people may exhibit sensitivity to Latex). Barrier creams may help to protect exposed areas of the skin. However, they should not be applied post exposure.

Eye protection :

Use safety glasses with side shields to protect against splashes. Face shields may also be worn.

Skin protection :

Protective clothing made of antistatic and fire resistant fibers. All parts of the body should be washed after contact. Use good hygiene and industrial practices, keep working clothes clean.

9. PHYSICAL AND CHEMICAL PROPERTIES

- | | |
|---|--|
| <ul style="list-style-type: none">• Physical state at: 68 ° F (20 ° C) Liquid• Flash point: -1.11 Deg. C--- 30 Deg. F Method: TCC• Specific gravity at: 68 ° F (20 ° C) 1.2 g/cm³• Vapor Density: 2.41• Lower Explosive Limit-2.3• Upper Explosive Limit- 11.0• Miscibility in water at 20 ° C: Moderate | <ul style="list-style-type: none">• Ph : 6.7• Volatile by weight: 13.0 % by volume: 15.0 %• Vapor pressure at: 68 ° F (20 ° C) 70 mm Hg• Color: Black• Appearance: Paste• Odor: Ketone odor• Boiling Point: > 37.78 Deg. C (>100 Deg F)• Material Supports Combustion : Yes |
|---|--|

10. STABILITY AND REACTIVITY

Stable under recommended storage and handling conditions (see SDS section 7). In case of combustion, may produce hazardous decomposition products including but not limited to the following:

- | | |
|--|--|
| <ul style="list-style-type: none">• Carbon Monoxide• Carbon Dioxide• Smoke | <ul style="list-style-type: none">• Halogenated Compounds• Oxides of Carbon and Nitrogen• Metal Oxide / Oxides |
|--|--|

In case of inhalation of decomposition products released in a fire, symptoms may be delayed. Exposed persons may need to be kept under medical surveillance for at least 48 hours.

11. TOXICOLOGICAL INFORMATION

There are no data available on the preparation itself. See (SDS Sections 3 and 15) for details.

Exposure to component solvents vapors at concentrations in excess of the stated Occupational Exposure Limits may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on kidney, liver and central nervous system.

Symptoms and signs of overexposure include headache, dizziness, fatigue, muscular weakness, drowsiness, reduced fetal weight, increase in fetal deaths, skeletal malformations, and in extreme cases loss of consciousness. Repeated or prolonged contact with the preparation may cause Defatting of the skin resulting in non-allergic dermatitis and absorption through the skin.

The liquid splashed in the eyes causes serious eye irritation and damage.

Irritating to mouth, throat and stomach. Ingestion causes reduced fetal weight, increased fetal deaths and skeletal malformations

ACUTE TOXICITY:

PRODUCT:	RESULT	SPECIES	DOSE	EXPOSURE
Butanone	LC50 Inhalation Vapor	Rat	11243 ppm	4 Hours
	LD50 Dermal	Rabbit	6480 mg/kg	-
Methyl Isobutyl Ketone	LD50 ORAL	Rat	2737 mg/kg	-
	LC50 Inhalation Vapor	Rat	32772 mg/m ³	4 Hours
PHENOLIC POLYMER	LD50 ORAL	Rat	2.08 g/kg	-
	LD50 Dermal	RAT	>2000 mg/kg	-
		Rat	>2000 mg/kg	-

Harmful if Inhaled

Suspected of Causing Cancer. Risk depends on level and duration of exposure.

Causes Serious Eye Irritation

May Cause Respiratory Irritation

May Cause an Allergic Skin Reaction

Suspected of Damaging the Unborn Child.

CARCINOGENICITY:

INGREDIENT	IARC	OSHA	NTP	CAS#
4-Methyl-2-Pentanone	2B	-	-	108-10-1
PROCESSED MINERAL FIBERS	3	-	-	65997-17-3

SPECIFIC TARGET ORGAN TOXICITY-STOT (SINGLE EXPOSURE)

BUTANONE - CATEGORY 3

4-Methyl-2-Pentanone - CATEGORY 3

TARGET ORGANS: BRAIN, BLOOD, KIDNEYS, LUNGS, REPRODUCTIVE SYSTEM, LIVER, HEART, PERIPHERAL NERVOUS SYSTEM, GASTROINTESTINAL TRACT, UPPER RESPIRATORY TRACT, SKIN, CENTRAL NERVOUS SYSTEM, EYE, LENS AND/OR CORNEA. CARDIOVASCULAR SYSTEM, NERVOUS SYSTEM.

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12. ECOLOGICAL INFORMATION

There is no data available on the preparation itself. Do not allow the product to enter drains or water ways. See (SDS Sections 3 and 15)

Empty containers and/or liners may contain material residue. Empty contaminated packagings thoroughly. Dispose in accordance with all Federal, State, and local health and environmental regulations.

Never allow this material, any solutions, or any by-products, as well as any run-off, to come into contact with soil, waterways, wildlife habitats, drains, sewers, and / or the ocean. Avoid release into environment.

Bioaccumulative Potential :

Product / Ingredient	LogP(ow)	BCF	Potential
Butanone	.29	-	low
4-Methyl-2-Pentanone	1.31	-	low

Mobility in Soil : Not Available

13. DISPOSAL CONSIDERATIONS

Recommended incineration or land fill as hazardous waste per Federal, State and local regulations.

React with curing agent and dispose of as hazardous waste per Federal, State and local regulations. Recommended incineration or land fill.

Empty containers and/or liners may contain material residue. Empty contaminated packagings thoroughly. Dispose in accordance with all Federal, State, and local health and environmental regulations.

Never allow this material, any solutions, or any by-products, as well as any run-off, to come into contact with soil, waterways, wildlife habitats, drains, sewers, and / or the ocean. Avoid release into environment.

14. TRANSPORT INFORMATION

DOT: § 172.101 HAZARDOUS MATERIALS TABLE

UN Number: 1133

Proper Shipping Name: Adhesives

Labels: Flammable Liquid



Hazard Class: 3 Subclass: NO

Packaging Group: II

Limited Quantity: Passenger aircraft: 60 Liter (16 gallon)

Cargo aircraft only: 220 Liter (58 gallon)

Vessel stowage: A

ERG: 128

NMFC: 4620 SUB.5 – CL.60

Schedule B # 3506.91.0000

IATA:

UN Number: 1133

Proper Shipping Name: Adhesives

Labels: Flammable Liquid

Hazard Class: 3 Subclass: NO

Packaging Group: II

Passenger Air Packing Instruction : 309

Passenger aircraft: 60 Liter (16 gallon)

Cargo Air Packing Instruction : 310

Cargo aircraft only: 220 Liter (58 gallon)

IMDG:

UN Number: 1133

Proper Shipping Name: Adhesives

Label: 3

Hazard Class: 3 Subclass: NO

Packaging Group: II

EMS No: F, E – S, D

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15. REGULATORY INFORMATION

US Regulations Federal

chemical (s) subject to the reporting requirements of section 313 of Title III and of 40 CFR 372 (SARA)	Chemical Name	CAS No	Weight %	Threshold limit (Reporting Value)
	2-BUTANONE	78-93-3	<=35%	Unknown
	4-Methyl-2-Pentanone	108-10-1	<=30%	Unknown
	Phenolic Polymer	25036-25-3	<=10%	Unknown

SARA notifications must remain attached to this SDS. Any copies and /or distribution of this SDS must include all SARA notifications.

All remaining Constituents are non-hazardous per FED-STD-313 All Constituents are listed in TSCA inventory; complete mixture is excluded Per TSCA Par. 710.4 (d) 95 (6) (7) Constituents are not listed in TSCA 12b CORR. LIST

US Regulations State

California Proposition 65 (Developmental – Female)	4-Methyl-2-Pentanone	108-10-1	<=30%	>=1.0%
Massachusetts	4-Methyl-2-Pentanone	108-10-1	<=30%	>=1.0%
New Jersey	4-Methyl-2-Pentanone	108-10-1	<=30%	>=1.0%
Pennsylvania	4-Methyl-2-Pentanone	108-10-1	<=30%	>=1.0%
Rhode Island	4-Methyl-2-Pentanone	108-10-1	<=30%	>=1.0%
California Proposition 65 (Developmental – Female)	2-BUTANONE	78-93-3	<15%	>=1.0%
Massachusetts	2-BUTANONE	78-93-3	<15%	>=1.0%
New Jersey	2-BUTANONE	78-93-3	<15%	>=1.0%
Pennsylvania	2-BUTANONE	78-93-3	<15%	>=1.0%
Rhode Island	2-BUTANONE	78-93-3	<15%	>=1.0%
California Proposition 65 (Developmental – Female)	Phenolic Polymer	25036-25-3	<=10%	>=1.0%
Massachusetts	PHENOLIC POLYMER	25036-25-3	<=10%	>=1.0%
New Jersey	PHENOLIC POLYMER	25036-25-3	<=10%	>=1.0%
Pennsylvania	PHENOLIC POLYMER	25036-25-3	<=10%	>=1.0%
Rhode Island	PHENOLIC POLYMER	25036-25-3	<=10%	>=1.0%

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US Regulations State (Continued)

United States: Sara 302/304 (Sara 304 RQ): Not Applicable

Information On Ingredients: None Were Found

Sara 311/312

Classification: Fire Hazard, Immediate (acute) Health Hazard, Delayed (chronic) Health Hazard

Information On Ingredients:

Butanone: Fire Hazard, Immediate (acute) Health Hazard

4 Methyl 2 Pentanone: Fire Hazard, Immediate (acute) Health Hazard, Delayed (chronic) Health Hazard

Phenolic Resin: Immediate (acute) Health Hazard

Sudden Release Of Pressure: No Products

Reactivity: No Products

Sara 313 Notification: *

4- Methyl 2-pentanone Cas# 108-10-1 <35% Concentration

* Do not detach SARA 313 notifications from SDS. All copies of SDS must include SARA 313 notifications.

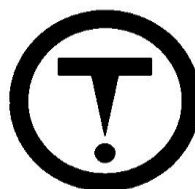
California Prop. 65 : Warning

This product contains a chemical known by the State of California to cause cancer, birth defects and other reproductive harm.

Canada



Class B – Flammable
4-Methyl 2-Pentanone
2-BUTANONE



Class D - Poisonous and Infectious
materials Division 2: Materials Causing
Other Toxic Effects D2A
4-Methyl 2-Pentanone Cas#108-10-1
Phenolic Polymer CAS# 25036-25-3
2-BUTANONE Cas#78-93-3

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by CPR.

Listed National Pollutant Release Inventory (NPRI):TOLUENE CAS:108-88-3

2-BUTANONE CAS#78-93-3

4-Methyl 2-Pentanone Cas#108-10-1

Phenolic Polymer CAS# 25036-25-3

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16. OTHER INFORMATION

HEALTH	2
FLAMMABILITY	3
REACTIVITY	0

HEALTH	2
FLAMMABILITY	3
REACTIVITY	0

* Customer and / or end user is responsible for determining Personal Protection Equipment

NFPA**HMIS**

Preparer:

Flamemaster / Compliance
Rev-A 5/20/2015
Supersedes (conversion)

Revision Notes: A

Conversion to ANSI format

Containers:

plastic jars, metal cans
cartridge kits

Limited Quantity

See SDS Section 14

Maximum container size 50 Gallons / 190 Liters

Notice to reader:

This SDS is provided without any warranty expressed or implied regarding its correctness or suitability for specific situations. The conditions of handling, storage, use and disposal are beyond our control and may be beyond our knowledge.

In all cases, the user must determine the applicability of all information and recommendations contained herein as well as the suitability of this product for their own particular needs or purposes.

This product may be hazardous and should always be used with care and discretion. Every effort has been made to describe all known hazards, but this in no way guarantees the above mentioned hazards are the only hazards present.

Flamemaster Corporation, its Affiliates and its Agents, shall in no way be held liable for any damages resulting from handling, using, storing, disposing of, or from contact with this product. User assumes all risk.

End of Safety Data Sheet

This sds is provided without any warranty expressed or implied regarding its correctness or suitability for specific situations. The conditions of handling, storage, use and disposal are beyond our control and may be beyond our knowledge.



FLAMEMASTER
Flamemaster Corp.
 13576 Desmond Street
 Pacoima, CA 91331 - USA

SAFETY DATA SHEET
 APRIL 3, 2017

File: CS1900 PTB GSA 07-10
 Firewall Catalyst

Section -1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

1.1. Product Identifier: CS-1900 Part B
 - Product Name: Firewall Catalyst
 - Product reference: CS-1900 Part B

1.2. Product Use:
 Firewall Catalyst

1.3. Manufacturer's Name:
CAGE Code: 14439
Flamemaster Corp.
Chem Seal Division
13576 Desmond Street
Pacoima, CA 91333 – USA

1.3.1 Suppliers Name (if not manufacturer)

Technical Contact:
Flamemaster Corp.
Tel: 818-890-1401
Fax: 818-890-6001
www.flamemaster.com

1.4. Emergency Telephone:
 Chemtrec – Chemtrec International
 800-424-9300 (North America)
 703-527-3887 (Outside North America))

Specification

MIL-S-38249

CATALYST PART B

NSN:	8030-00-783-8886 6OZ cartridge(3.5)	8030-00-783-8898 1/2 pint kit(6oz)	8030-00-723-5345 pint kit(12oz)	8030-01-033-3485 gallon kit(96oz)	8030-01-364-7359 2 1/2 oz cartridge
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Section -2. HAZARD (S) IDENTIFICATION

OSHA / HCS STATUS:

This Material is Considered Hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

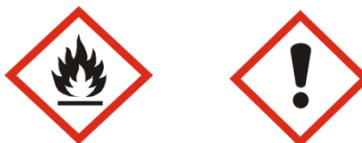
Classification of the Substance or Mixture:

FLAMMABLE LIQUIDS - (CATEGORY 2)

SKIN CORROSION / IRRITATION - (CATEGORY 2)

SERIOUS EYE DAMAGE / EYE IRRITATION - (CATEGORY 2A)

SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - STOT SE - (NARCOTIC EFFECTS) - (CATEGORY 3)

GHS LABEL ELEMENTS**HAZARD PICTOGRAMS :**

HIGHLY FLAMMABLE LIQUID AND VAPOR - H225

CAUSES SKIN IRRITATION - H315

CAUSES SERIOUS EYE IRRITATION - H319

MAY CAUSE DROWSINESS OR DIZZINESS - H336

SIGNAL WORD : DANGER

Section -3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical family : Mixture of organic compounds

For the hazards of the composition, (SDS see Section 2).

2-PROPANOL

OSHA HAZARDS: FLAMMABLE LIQUIDS,TARGET ORGAN EFFECT,IRRITANT

OTHER HAZARDS THAT DO NOT RESULT IN CLASSIFICATION: MAY FORM EXPLOSIVE PEROXIDES

GHS CLASSIFICATION: 2-PROPANOL

FLAMMABLE LIQUIDS (CATEGORY2)

SKIN IRRITATION (CATEGORY3)

EYE IRRITATION (CATEGORY 2A)

SPECIFIC TARGET ORGAN TOXICITY-SINGLE EXPOSURE (CATEGORY3)

N,N'-BIS[3-(TRIMETHOXYSILYL)PROPYL]ETHYLENEDIAMINE

GHS Classification in Accordance with 29 CFR 1910 (OSHA HCS)

SKIN IRRITATION (CATEGORY 2)

EYE IRRITATION (CATEGORY 2A)

STOT-SINGLE EPOSURE (CATEGORY 1)

N-(2-AMINOETHYL)-3-AMINOPROPYLTRIMETHOXYSILANE

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

FLAMMABLE LIQUIDS (CATEGORY 4) H227

SKIN IRRITATION (CATEGORY 2) H315

SERIOUS EYE DAMAGE (CATEGORY 1) H318

SKIN SENSITISATION (CATEGORY1) H317

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SUBSTANCE % by weight in the product		H&P Statements	CAS	EINECS/ELINCS
2-Propanal (Isopropyl Alcohol) <=70%		H225,H316,H319,H336,P210, P261,P305+P351+P338	67-63-0	200-661-7
<40%	N,N'-BIS[3-(TRIMETHOXYSYLYL)PROPYL]ETHYLENEDIAMINE			
		H315,H319,H335,P210,P233,P240 P241,P242,P243,P260,P264, P270,P271,P280,P301+P310, P303+P361+P353,P304+P340, P305+P351+P338,P307+P311 P322,P330,P332+P313,P337+ P313,P361,P370+P378,P403+ P233,P403+P235,P405,P501	68845-16-9	272-453-4
<40%	N-(2-AMINOETHYL)-3-AMINOPROPYLTRIMETHOXYLANE			
		H227,H315,H317,H318,P210, P261,P264,P272,P280,P302+ P352,P305+P351+P338,P310, P321,P333+P313,P362,P370+ P378,P403+P235,P501	1760-24-3	217-164-6

Section -4. FIRST-AID MEASURES

General: When in doubt or symptoms persist, seek medical attention. Have Material Safety Data Sheet information available. Never give anything by mouth to an unconscious person.

Inhalation: Remove to fresh air, if breathing has stopped, administer artificial respiration. Give nothing by mouth, seek immediate medical attention.

Eye contact: Check for and remove any contact lenses. Irrigate with clean, fresh water for at least 15 minutes, holding the eyelids apart. Seek immediate medical attention.

Skin contact: Remove contaminated clothing. Wash skin thoroughly with soap and water or use recognized skin cleaners. Do NOT use aromatic solvents, thinners or petroleum products.

Ingestion: If accidentally swallowed obtain immediate medical attention. Keep at rest. Do NOT induce vomiting. Never give anything by mouth to an unconscious person.

Section -5. FIRE-FIGHTING MEASURES

Extinguishing agents

Recommended: Universal resistant foam, CO₂, water, powder.

Agents to avoid: None known

Attention

Fire will produce dense black smoke. Exposure to decomposition products may cause a Health Hazard. Fire fighters should wear self-contained breathing apparatus.

Water mist may be used to cool closed containers to prevent pressure build-up and possible auto-ignition and explosion when exposed to extreme heat.

Do not weld, flame cut or expose to extreme heat or ignition sources, empty containers which have contained flammable products.

Do not allow run-off from fire fighting to enter drains or water courses.

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Section -6. ACCIDENTAL RELEASE MEASURES

Eliminate sources of ignition, ventilate the area. Avoid breathing vapors by using appropriate respiratory protective equipment. Refer to protective measures listed in sections 7 & 8.

Collect spill with non-combustible absorbent materials, e.g. sand, earth, vermiculite, diatomaceous earth and place in a suitable container for disposal in accordance with local regulations (see section 13). Do not allow to enter drains or watercourses.

Clean-up with a detergent/ water mix ; avoid use of aromatic solvents. If the product enters drains or watercourses, inform authority with jurisdiction in accordance with state / local regulations.

Section -7. HANDLING AND STORAGE

7.1 Handling:

No smoking, eating and drinking during handling.

Keep containers tightly closed. Prior to movement containers which are opened should be carefully resealed.

Avoid skin and eye contact. Avoid inhalation in case of exposure to vapor and spray mist.

Handle and open containers with care to avoid spilling of contents. Never use pressure to empty; container is not a pressure vessel. Clean or discard contaminated clothing and shoes.

Preparation may charge electrostatically; always use grounding/ bonding/ earthing leads when transferring contents of containers. Operators should wear antistatic footwear and clothing, and floors should be electrically conductive. Vapors are heavier than air and may spread along floors. Vapors may form explosive mixtures with air. Prevent the creation of flammable or explosive concentrations of vapor in air, and avoid vapor concentration higher than the Occupational Exposure Limits.

Use in areas from which local sources of ignition have been excluded. Electrical equipment including lighting should be protected to the appropriate standard. Isolate from sources of heat, sparks and open flame. Non-sparking tools are recommended.

7.2 Storage:

Observe label precautions. Store between 32/F and 95/F (0/C and 35/C) in a dry, clean and well ventilated place, away from sources of heat, ignition, and direct sunlight. For flash points below 23 °C store in an area constructed to the appropriate standard

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Engineering measures:

Avoid the inhalation of vapors, spray mist and particulates. Achieve by local exhaust ventilation providing good general extraction as to keep air-borne concentration below the Occupational Exposure Limits (OEL).

If local / area ventilation is not sufficient to comply with OEL, suitable (NIOSH) respiratory protection to be provided. Always provide suitable (NIOSH) respiratory protection when sanding, grinding or otherwise abrading cured material.

8.2 Exposure limits

Work place exposure limits (8 hour)

Substance	OSHA	ACGIH TLV
2-Propanal (Isopropyl Alcohol) *	400 ppm	400 ppm
N,N'-BIS[3-(TRIMETHOXSILYL)PROPYL]ETHYLENEDIAMINE *	Not Established	Not Established
N-(2-AMINOETHYL)-3-AMINOPROPYLTRIMETHOXSILANE *	Not Established	Not Established
* can be absorbed through skin		

8.3 Personal protection

All Personal Protective Equipment, including Respiratory Protection, used to control exposure to hazardous substances must be selected to meet the requirements of OSHA Regulations.

Respiratory protection :

Appropriate respiratory protection equipment should be selected according to the type of contaminants, following regulatory (OSHA / NIOSH) and manufacturers instructions including proper fitting of devices.

Hand protection :

For prolonged or repeated contact, recommend gloves type: polyvinyl alcohol, nitrile rubber, latex rubber (some people may exhibit sensitivity to Latex). Barrier creams may help to protect exposed areas of the skin. However, they should not be applied post exposure.

Eye protection :

Use safety glasses with side shields to protect against splashes. Face shields may also be worn.

Skin protection :

Protective clothing made of antistatic and fire resistant fibers. All parts of the body should be washed after contact. Use good hygiene and industrial practices, keep working clothes clean.

9. PHYSICAL AND CHEMICAL PROPERTIES

- Physical state at: 68 ° F (20 ° C) Liquid
- Flash point:> 54 ° F (12.2 ° C) Method: TCC
- Specific gravity at: 68 ° F (20 ° C) 1.01 g/cm³
- Vapor Density: 2.1
- Lower Explosive Limit (% vol.): 2.0
- Upper Explosive Limit (% vol.): 12.0
- Miscibility in water at 20 ° C: Moderate
- Ph : 8.5
- % Volatile by Volume:80
- Vapor pressure at: 68 ° F (20 ° C) 30 mm Hg
- Color: Clear or Amber
- Appearance: liquid
- Odor: Amine odor
- Boiling Point: 180 ° F

10. STABILITY AND REACTIVITY

Stable under recommended storage and handling conditions (see SDS section 7). In case of combustion, may produce hazardous decomposition products such as :

- Carbon monoxide Oxides of Nitrogen, Carbon, Sulfur
- Sulfur oxides

11. TOXICOLOGICAL INFORMATION

There are no data available on the preparation itself. See (SDS Sections 3 and 15) for details.

Exposure to component solvents vapors at concentrations in excess of the stated Occupational Exposure Limits may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on kidney, liver and central nervous system.

Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness, and in extreme cases loss of consciousness.

Repeated or prolonged contact with the preparation may cause Defatting of the skin resulting in non-allergic dermatitis and absorption through the skin.

The liquid splashed in the eyes may cause irritation and damage.

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12. ECOLOGICAL INFORMATION

There is no data available on the preparation itself. Do not allow the product to enter drains or water ways. See (SDS Sections 3 and 15)

13. DISPOSAL CONSIDERATIONS

Recommended incineration or land fill as hazardous waste per Federal, State and local regulations.
React with base and dispose of as hazardous waste per Federal, State and local regulations. Recommended incineration or land fill.

14. TRANSPORT INFORMATION

DOT: § 172.101 HAZARDOUS MATERIALS TABLE

UN Number: 1133

Proper Shipping Name: Adhesives

Labels: Flammable Liquid



Hazard Class: 3 Subclass: NO

Packaging Group: II

Limited Quantity: Passenger aircraft: 1 Liter (.26 Gallons)

Cargo aircraft only: 60 Liter (15.85 Gallons)

Vessel stowage: A

ERG: 128

NMFC: 4620 SUB.5 – CL.60

Schedule B # 3506.91.0000

IATA:

UN Number: 1133

Proper Shipping Name: Adhesives

Labels: Flammable Liquid

Hazard Class: 3 Subclass: NO

Packaging Group: II

Passenger Air Packing Instruction : 353

Passenger aircraft: 5 Liter (1.32 gallon)

Cargo Air Packing Instruction : 364

Cargo aircraft only: 60 Liter (15.85 gallon)

IMDG:

UN Number: 1133

Proper Shipping Name: Adhesives

Label: 3

Hazard Class: 3 Subclass: NO

Packaging Group: II

EMS No: F, E – S, D

15. REGULATORY INFORMATION

US Regulations Federal

chemical (s) subject to the reporting requirements of section 313 of Title III and of 40 CFR 372 (SARA) Chemical Name :	CAS No	Weight %	Threshold limit (Reporting Value)
2-Propanal	67-63-0	<70%	Unknown
N,N'-BIS[3-(TRIMETHOXSILYL)PROPYL]ETHYLENEDIAMINE	68845-16-9	<40%	Unknown
N-(2-AMINOETHYL)-3-AMINOPROPYLTRIMETHOXSILANE	1760-24-3	<40%	Unknown

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All remaining Constituents are non-hazardous per FED-STD-313 All Constituents are listed in TSCA inventory; complete mixture is excluded Per TSCA Par. 710.4 (d) 95 (6) (7) Constituents are not listed in TSCA 12b CORR. LIST

US Regulations State

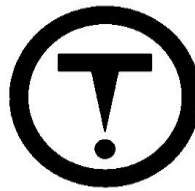
	2-Propanal	67-63-0	<70%	
California Proposition 65 (Developmental – Female)				>= 1.0%
Massachusetts				>= 1.0%
New Jersey				>= 1.0%
Pennsylvania				>= 1.0%
Rhode Island				>= 1.0%
N,N'-BIS[3-(TRIMETHOXYSILYL)PROPYL]ETHYLENEDIAMINE				
		68845-16-9	<40%	
California Proposition 65 (Developmental – Female)				>= 1.0%
Massachusetts				>= 1.0%
New Jersey				>= 1.0%
Pennsylvania				>= 1.0%
Rhode Island				>= 1.0%
N-(2-AMINOETHYL)-3-AMINOPROPYLTRIMETHOXYSILANE				
		1760-24-3	<40%	
California Proposition 65 (Developmental – Female)				>= 1.0%
Massachusetts				>= 1.0%
New Jersey				>= 1.0%
Pennsylvania				>= 1.0%
Rhode Island				>= 1.0%

Canada



**Class B – Flammable
2-propanal**

N,N'-BIS[3-(TRIMETHOXYSILYL)PROPYL]ETHYLENEDIAMINE
N-(2-AMINOETHYL)-3-AMINOPROPYLTRIMETHOXYSILANE



**Class D - Poisonous and Infectious
materials Division 2: Materials Causing
Other Toxic Effects D2A 2-propanal**

N,N'-BIS[3-(TRIMETHOXYSILYL)PROPYL]ETHYLENEDIAMINE
N-(2-AMINOETHYL)-3-AMINOPROPYLTRIMETHOXYSILANE

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by CPR.

Listed National Pollutant Release Inventory (NPRI):2-Propanal cas#67-63-0,
N,N'-BIS[3-(TRIMETHOXYSILYL)PROPYL]ETHYLENEDIAMINE- CAS# 68845-16-9

N-(2-AMINOETHYL)-3-AMINOPROPYLTRIMETHOXYSILANE- CAS# 1760-24-3

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16. OTHER INFORMATION



NFPA



HMIS

* Customer and / or end user is responsible for determining Personal Protection Equipment

Preparer:	Flamemaster / Compliance Rev-A June/09/2010 Supersedes (conversion)	Revision Notes: A	Conversion to ANSI format
Containers:	plastic jars, metal cans cartridge kits		
Limited Quantity	See SDS Section 14		
Maximum container size	50 Gallons / 190 Liters		

Notice to reader:

This SDS is provided without any warranty expressed or implied regarding its correctness or suitability for specific situations. The conditions of handling, storage, use and disposal are beyond our control and may be beyond our knowledge.

In all cases, the user must determine the applicability of all information and recommendations contained herein as well as the suitability of this product for their own particular needs or purposes.

This product may be hazardous and should always be used with care and discretion. Every effort has been made to describe all known hazards, but this in no way guarantees the above mentioned hazards are the only hazards present.

Flamemaster Corporation, its Affiliates and its Agents, shall in no way be held liable for any damages resulting from handling, using, storing, disposing of, or from contact with this product. User assumes all risk.

End of Safety Data Sheet