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

SAFETY DATA SHEET
MARCH 2016

File: CS2415AB GSA 07-10
Sealant Base

Section -1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

1.1. Product Identifier: CS-2415 Part-A Class-B Base (all application times)
- Product Name: Fuel Tank /External Sealant Base compound Part-A
- Product reference: CS-2415-B

1.2. Product Use:
- Sealant

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: STM 40-006/ DMS 1819/ MIL-S-38228 Base PART A CLASS B

NSN:	8030-00-782-1420 CS2415B1/2 6OZ CART	8030-00-782-7782 CS2415B1/2 1/2 PT KIT	8030-00-159-5116 CS2415B1/2 QT KIT	8030-00-888-0534 CS2415B1/2 5GAI KIT	
	8030-00-693-2311 CS2415B-2 PINT KIT	8030-00-181-7925 CS2415B-2 QT KIT	8030-01-007-9153 CS2415B-2 GAL KIT	8030-01-386-8980 CS2415B-2 6OZ CART	

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.

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:

ASPIRATION HAZARD - CATEGORY 1
ACUTE TOXICITY (DERMAL) - CATEGORY 4
SKIN CORROSION/IRRITATION - Category 2
SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2A
CARCINOGENICITY - Category 2
TOXIC TO REPRODUCTION (UNBORN CHILD) - Category 2
SKIN SENSITIZATION, CATEGORY 1
AQUATIC TOXICITY - CATEGORY 4

GHS LABEL REQUIREMENTS
HAZARD PICTOGRAMS

SIGNAL WORD : DANGER

HAZARD STATEMENTS:

MAY BE FATAL IF SWALLOWED AND ENTERS AIRWAYS - H304
CAUSES SERIOUS EYE IRRITATION - (H319)
CAUSES SKIN IRRITATION - (H315)
SUSPECTED OF DAMAGING THE UNBORN CHILD - (H361d)
SUSPECTED OF CAUSING CANCER - (H351)
HARMFUL IN CONTACT WITH SKIN - H312
MAY CAUSE AN ALLERGIC SKIN REACTION - H317
MAY CAUSE LONG LASTING HARMFUL EFFECTS TO AQUATIC LIFE - H413

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.

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.
1-component mixtures: formaldehyde is released during the curing phase. Formaldehyde may cause irreversible effects, is irritating to the mucous membranes and may cause the skin to become sensitized.
Avoid any contact with skin or clothing and wash thoroughly after handling.
Emits toxic fumes when heated.

HAZARDS NOT OTHERWISE CLASSIFIED:
Prolonged or repeated exposure may dry skin and / or cause skin irritation.
Sanding and grinding dust may be harmful if inhaled. Sanding and grinding dust may form combustible concentrations in air.

Section -3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical family : Mixture of organic compounds
For the hazards of the composition, (SDS see Section 2).

PRODUCT	CAS#	% WEIGHT IN PRODUCT
GHS CLASSIFICATION:LIQUID POLYMER ACUTE TOXICITY (ORAL) - (CATEGORY 5)	N/A	<70%
GHS CLASSIFICATION:LIQUID POLYMER ACUTE TOXICITY (ORAL) - (CATEGORY 5)	N/A	<70%
GHS CLASSIFICATION:LIQUID POLYMER ACUTE TOXICITY (DERMAL) - (CATEGORY 4) SERIOUS EYE DAMAGE / EYE IRRITATION - (CATEGORY 2A)	N/A	<70%
GHS CLASSIFICATION:LIQUID POLYMER ACUTE TOXICITY (DERMAL) - (CATEGORY 4) SERIOUS EYE DAMAGE / EYE IRRITATION - (CATEGORY 2A)	N/A	<70%
GHS CLASSIFICATION: ALUMINUM POWDER (STABILIZED) FLAMMABLE SOLID - (CATEGORY 1)	7429-90-5	<10%
TITANIUM DIOXIDE OSHA HAZARDS: CARCINOGEN GHS CLASSIFICATION: TITANIUM DIOXIDE SKIN IRRITATION: (CATEGORY 3) CARCINOGENICITY (CATEGORY 2)	13463-67-7	<10%

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: Remove any contact lenses if present and easy to do. Irrigate with clean, fresh water for at least 15 minutes, holding the eye lids apart, and 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.

HAZARDOUS DECOMPOSITION PRODUCTS INCLUDE: CARBON DIOXIDE, CARBON MONOXIDE, HALOGENATED COMPOUNDS, SULFUR OXIDES, SULFUR COMPOUNDS, SMOKE, OXIDES OF NITROGEN, METAL OXIDE / OXIDES, OXIDES OF CARBON, SULFUR DIOXIDE, HYDROGEN SULFIDE, ACETALDEHYDE, FORMALDEHYDE, LOW MOLECULAR WEIGHT HYDROCARBONS, SOOT, AND ORGANIC PRODUCTS OF DECOMPOSITION.

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.

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.

Section -7. HANDLING AND STORAGE

7.1 Handling:

No smoking, eating and drinking during handling. Wash hands and face before eating, drinking, or smoking.

Avoid exposure during pregnancy/while nursing.

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 TWA
LIQUID POLYMER *	Not known	Not known
LIQUID POLYMER *	Not known	Not known
LIQUID POLYMER *	Not known	Not known
LIQUID POLYMER *	Not known	Not known
TERPHENYL, HYDROGENATED	5 mg/m³	0.5 ppm
TITANIUM DIOXIDE *	15mg/m³ (TOTAL DUST)	10 mg/m³ (TOTAL DUST)
ALUMINUM POWDER *	10mg/m³ (INHALABLE DUST)	4mg/m³ (RESPIRABLE DUST)
* 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 º F (20 º C) Liquid
- Flash point: 200 ° F (93 ° C) Method: TCC
- Specific gravity at: 68 ° F (20 ° C) N/A
- Vapor Density: NIL
- Lower Explosive Limit (% vol.): N/A
- Upper Explosive Limit '(% vol.): N/A
- Miscibility in water at 20 º C: NEGLIGIBLE
- VOC: N/A
- Ph : N/A
- Volatile by VOLUME: N/A
- Vapor pressure at: 68 º F (20 º C) NIL
- Color: ALUMINUM PASTE
- Appearance: PASTE
- Odor: Polysulfide Odor
- Boiling Point: Unknown
- 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 such as :

- Carbon Monoxide
- Sulfur Oxides
- Carbon Dioxide
- Formaldehyde
- Oxides of Nitrogen
- Acetaldehyde
- Low Molecular Weight Hydrocarbons
- Halogenated Compounds
- Oxides of Carbon, Sulfur Dioxide, Hydrogen Sulfide
- Metal Oxide / Oxides
- Smoke
- Sulfur Compounds
- Organic Products of Decomposition
- Soot

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
Formaldehyde is released during curing.

ACUTE TOXICITY:

PRODUCT:	RESULT	SPECIES	DOSE	EXPOSURE
Liquid polymer	LD50 Oral LD50 Dermal	Rat Rabbit	>3000mg/kg >2000mg/kg	-
Liquid polymer	LD50 Oral LD50 Dermal	Rat Rabbit	>3000mg/kg >2000mg/kg	-
Liquid polymer	LD50 Oral	Rat	>3000mg/kg	-
Liquid polymer	LD50 Oral	Rat	>3000mg/kg	-
Titanium Dioxide	LD50 ORAL	Rat	>10g/kg	-
Aluminum Powder (STABILIZED)	LD50 ORAL	Rat	>2000mg/kg	-
	LC50 INHALATIVE	Rat	888 mg/m³	-

HAZARD STATEMENTS:
MAY BE FATAL IF SWALLOWED AND ENTERS AIRWAYS - H304
CAUSES SERIOUS EYE IRRITATION - (H319)
CAUSES SKIN IRRITATION - (H315)
SUSPECTED OF DAMAGING THE UNBORN CHILD - (H361d)
SUSPECTED OF CAUSING CANCER - (H351)
HARMFUL IN CONTACT WITH SKIN - H312
MAY CAUSE AN ALLERGIC SKIN REACTION - H317
MAY CAUSE LONG LASTING HARMFUL EFFECTS TO AQUATIC LIFE - H413

CARCINOGENICITY:

INGREDIENT	IARC	OSHA	NTP	CAS#
TITANIUM DIOXIDE :	2B	-	-	13463-67-7

SPECIFIC TARGET ORGAN TOXICITY-STOT (SINGLE EXPOSURE)
LIQUID POLYMER - CATEGORY 3
LIQUID POLYMER - 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.

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

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)
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.

Toxicity :

Product / Ingredient	Result	Species	Exposure
Titanium Dioxide	Acute LC50>100mg/l Fresh Water	Daphnia	48 Hours

Persistance and Degradability :

Product / Ingredient	Aquatic Half Life	Photolysis	Biodegradability
No Data Available			

Bioaccumulative Potential :

Product / Ingredient	LogP(ow)	BCF	Potential
No Data Available			

Mobility in Soil : No Data 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: Not regulated
UN Number: Not regulated
IATA: Not regulated
IMDG/IMO: Not regulated
NMFC: 4620 SUB.5 – CL.60
Schedule B # 3506.91.0000

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)
	LIQUID POLYMER	N/A	<70%	Unknown
	LIQUID POLYMER	N/A	<70%	Unknown
	LIQUID POLYMER	N/A	<70%	Unknown
	with Phenol			
	Titanium Dioxide	*13463-67-7	< 10%	Unknown
	*(DELETED CAS# 98084-96-9)			

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)	LIQUID POLYMER	N/A	<70%	>= 1.0%
Massachusetts	LIQUID POLYMER	N/A	<70%	>= 1.0%
New Jersey	LIQUID POLYMER	N/A	<70%	>= 1.0%
Pennsylvania	LIQUID POLYMER	N/A	<70%	>= 1.0%
Rhode Island	LIQUID POLYMER	N/A	<70%	>= 1.0%
California Proposition 65 (Developmental – Female)	LIQUID POLYMER	N/A	<70%	>= 1.0%
Massachusetts	LIQUID POLYMER	N/A	<70%	>= 1.0%
New Jersey	LIQUID POLYMER	N/A	<70%	>= 1.0%
Pennsylvania	LIQUID POLYMER	N/A	<70%	>= 1.0%
Rhode Island	LIQUID POLYMER	N/A	<70%	>= 1.0%
California Proposition 65	Titanium Dioxide	13463-67-7	<10%	>= 1.0%
(Developmental – Female)			<10%	
Massachusetts	Titanium Dioxide	13463-67-7	<10%	>= 1.0%
New Jersey	Titanium Dioxide	13463-67-7	<10%	>= 1.0%
Pennsylvania	Titanium Dioxide	13463-67-7	<10%	>= 1.0%
Rhode Island	Titanium Dioxide	13463-67-7	<10%	>= 1.0%

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

Information On Ingredients: None Were Found

Sara 311/312

Information On Ingredients:

Liquid Polymer: Immediate (acute) Health Hazard

Liquid Polymer: Immediate (acute) Health Hazard

Liquid Polymer: No Data Available

Liquid Polymer: No Data Available

Liquid Plasticizer: Immediate (acute) Health Hazard

Titanium Dioxide: Delayed (chronic) Health Hazard

Sudden Release Of Pressure: No Products

Reactivity: No Products

California Prop. 65 : Warning

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

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):

Liquid Polymer cas# N/A	Liquid Polymer cas# N/A
Liquid Polymer cas# N/A	Liquid Polymer cas# N/A
Liquid polymer with Phenol Cas# N/A	Aluminum Powder Cas#7429-90-5
Titanium Dioxide CAS#13463-67-7	

16. OTHER INFORMATION

HEALTH	2
FLAMMABILITY	1
REACTIVITY	0

NFPA

HEALTH	2
FLAMMABILITY	1
REACTIVITY	0

HMIS

Customer and / or end user is responsible for determining PPE.

Preparer:	Flamemaster / Compliance Rev-A 4/02/2015 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

Section -1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

1.1. Product Identifier: CS-2415 Part B Class B (all application times)
- Product Name: Fuel Tank Sealant / Catalyst Part B
- Product reference: CS-2415-B

1.2. Product Use:
- Sealant

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: STM40-006/DMS1819/ MIL-S-38228 **Catalyst Part B** **CLASS B**

NSN:	8030-00-782-1420 CS2415B1/2 6 OZ CART	8030-00-782-7782 CS2415B1/2 1/2 PINT	8030-00-159-5116 CS2415B1/2 QUART KIT	8030-00-888-0534 CS2415B1/2 5 GALLON KIT	
	8030-01-386-8980 CS2415 B-2 6OZ CART	8030-00-693-2311 CS2415B-2 PINT KIT	8030-00-181-7925 CS2415B-2QUART KIT	8030-01-007-9153 CS2415 B-2 GALLON KIT	

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Section -2. HAZARD (S) IDENTIFICATION

ASPIRATION HAZARD 1, H304
ACUTE TOXICITY (ORAL) 4, H302
ACUTE TOXICITY (INHALATION) 4, H332
SKIN SENSITIZATION 1, H317
CARCINOGENICITY 2, H351
TOXIC TO REPRODUCTION (FERTILITY) 2, H361f
SPECIFIC TARGET ORGAN TOXICITY (STOT) REPEATED EXPOSURE 2, H373
AQUATIC CHRONIC 4, 413

For A Complete List of H-Statements and Classifications See Section 16

OSHA / HCS STATUS : THIS MATERIAL IS CONSIDERED HAZARDOUS BY THE OSHA HAZARD COMMUNICATION STANDARD (29 CFR 1910.1200)

Human and Environmental Hazards:

HAZARD STATEMENTS:

May Be Fatal If Swallowed and Enters Airways.
Harmful by Inhalation and / or Swallowing
Irritating to Eyes and Skin
May Cause An Allergic Skin Reaction
Suspected of Causing Cancer
Suspected of Damaging Fertility
May Cause Damage to Organs Through Prolonged or Repeated Exposure
May Cause Long Lasting Harmful Effects to Aquatic Life

HAZARD PICTOGRAMS:

SIGNAL WORD: **DANGER**

Full text of P statements associated to this compound:

- 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: Wash with plenty of soap and water
- 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.

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HAZARDS NOT OTHERWISE CLASSIFIED: OXIDISING POTENTIAL: Contact with combustible material may result in fire. Keep away from combustible materials. This material increases the risk of fire and may aid in combustion.

Other Hazards that do not result in classification:
Prolonged or repeated exposure may dry skin and / or cause irritation

Section -3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical family : Mixture of organic compounds
For the hazards of the composition, (SDS see Section 2).

CHEMICAL NAME: MANGANESE DIOXIDE CAS# 1313-13-9 EC# 215-202-6 <65% by weight
OSHA HAZARDS: TARGET ORGAN EFFECT,TOXIC BY INHALATION
TARGET ORGANS: NERVES, LUNGS
GHS CLASSIFICATION:
ACUTE TOXICITY,ORAL (CATEGORY 4) - H302
ACUTE TOXICITY,INHALATION (CATEGORY 4) - H332

CHEMICAL NAME: TERPHENYL, HYDROGENATED CAS# 61788-32-7 EC# 262-967-7 <50% by weight
AQUATIC CHRONIC (CATEGORY 4) - H413

CHEMICAL NAME: ZEOLITES CAS#1318-02-1 EC# 215-283-8 <15% by weight
NOT CLASSIFIED

CHEMICAL NAME: TALC CAS# 14807-96-6 EC# 238-877-9 <10% by weight
NOT CLASSIFIED

CHEMICAL NAME: CARBON BLACK CAS# 1333-86-4 EC# 215-609-9 <10% by weight
NOT CLASSIFIED

CHEMICAL NAME: TERPHENYL CAS# 26140-60-3 EC# 247-477-3 <10% by weight
AQUATIC ACUTE (CATEGORY 1) - H400
AQUATIC CHRONIC (CATEGORY 1) - H410

CHEMICAL NAME: 1,3 DIPHENYLGUANIDINE CAS# 102-06-7 EC# 203-002-1 <3% by weight
ACUTE TOXICITY (CATEGORY 4) - H302
SKIN IRRITATION (CATEGORY 2) - H315
EYE IRRITATION (CATEGORY 2) - H319
REPRODUCTIVE (CATEGORY 2) - H361f (FERTILITY)
STOT-SINGLE EXPOSURE (CATEGORY 3) - H335
AQUATIC CHRONIC (CATEGORY 2) - H411

CHEMICAL NAME: BIS(PIPERIDINOTHIOCARBONYL) TETRASULFIDE CAS# 120-54-7 EC# 204-406-0 <3% by weight
SKIN SENSITIVITY (CATEGORY 1) - H317

CHEMICAL NAME: POLYPHENYL, QUATER AND HIGHER CAS# 68956-74-1 <10% by weight

MAGNESIUM CARBONATE CAS# 546-93-0 <10% by weight

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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

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.
Hazardous decomposition products include: Carbon Dioxide, Carbon Monoxide, Nitrogen Oxides, Sulfur Oxides Metal Oxide / Oxides, Manganese Compounds, Smoke

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 / while nursing.
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

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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	ACGIH TLV
Manganese Dioxide	TWA: 0.1mg/m³ (as Mn) 8 hours (Inhalable Fraction)
	TWA: 0.02mg/m³ (as Mn) 8 hours (Respirable Fraction)
Terphenyl, Hydrogenated	TWA: 4.9 mg/m³ 8 hours
	TWA: 0.5 ppm 8 hours
Zeolites	TWA: 1mg/m³ 8 hours (Respirable Fraction)
Talc	TWA: 2mg/m³ 8 hours (Respirable Fraction)
Carbon Black	TWA: 3mg/m³ 8 hours (Inhalable Fraction)
Terphenyl	C: 5mg/m³
	C: 0.53 ppm
MAGNESIUM CARBONATE	TWA: 5mg/m³ (Respirable Fraction)
	TWA: 15 mg/m³ 8 hours (Total Dust)

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.

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9. PHYSICAL AND CHEMICAL PROPERTIES

- Physical state at: 68 º F (20 º C) Liquid
- Flash point: 200 ° F (93 ° C) Method: TCC
- Specific gravity at: 68 ° F (20 ° C) 2.0
- Vapor Density: N/A
- Lower Explosive Limit (% vol.): N/A
- Upper Explosive Limit '(% vol.): N/A
- Miscibility in water at 20 º C: NEGLIGIBLE
- Material Supports Combustion. : Yes
- Ph : 9.0
- % VOLATILE BY VOLUME - 2.0
- Vapor pressure at: 68 º F (20 º C) N/A
- Color: BLACK
- Appearance: PASTE
- Odor: NEGLIGIBLE OILY ODOR
- Boiling Point: 360º C (680º 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
- Sulfur oxides
- Carbon Dioxide
- Oxides of nitrogen
- Metal Oxide / Oxides
- Manganese Compounds
- Smoke

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

ACUTE TOXICITY:

PRODUCT:	RESULT	SPECIES	DOSE	EXPOSURE
Manganese Dioxide	LD50 ORAL	Rat	3478 mg/kg	-
Terphenyl,Hydrogenated	LD50 ORAL	Rat	17500 mg/kg	-
Zeolites	LD50 ORAL	Rat	>5 g/kg	-
Carbon Black	LD50 Dermal	Rabbit	>3 g/kg	-
	LD50 Oral	Rat	>15400mg/kg	-
Terphenyl	LD50 Oral	Rat	>1400 mg/kg	-
Magnesium Carbonate	LD50 Oral	Rat	8000mg/kg	-
1, 3-Diphenylguanidine	LD50 Oral	Rat	323mg/kg	-

CARCINOGENICITY:

INGREDIENT	IARC	OSHA	NTP
Zeolites	3	-	-
Carbon Black, Respirable Powder	2B	-	-

Acute Toxicity Estimates:
Oral: 1099.7 mg/kg
Inhalation (gases): 10532.1 ppm
Inhalation (vapors) : 25.75 mg/l
Inhalation (Dust and Mist): 3.511mg/l

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Specific Target Organ Toxicity (STOT)- Single Exposure
1,3-Diphenylguanidine - (Category 3)
Zeolites - (Category 3)
Talc - (Category 3)

This Product is Harmful if Swallowed or Inhaled.
This Product also Causes Serious Eye Irritation.
This Product Causes Skin Irritation, Defatting of the Skin, and May Cause an Allergic Reaction.

Specific Target Organ Toxicity (STOT) - Repeated Exposure:
Manganese Dioxide - (Category 2)

Potential chronic health effects include the following:
May cause damage to organs through prolonged or repeated exposure. May lead to defatting of the skin and / or irritation.
May lead to allergic reactions.
Suspected of causing cancer.
Suspected of damaging fertility

Target Organs: lungs, skin, central nervous system, blood, kidneys, nervous system, liver, spleen, lymphatic system, cardiovascular system, upper respiratory tract, bone marrow, eye, lens, cornea

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)

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	LogPow	BCF	Potential
1,3 Diphenylguanidine	1.69	19.95	Low
Bis(piperidinothiocarbonyl) tetrasulfide	2.8	16.98	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 base and dispose of as hazardous waste per Federal, State and local regulations. Recommended incineration or land fill.
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: Not regulated
UN Number: Not regulated
IATA: Not regulated
IMDG/IMO: Not regulated
NMFC: 4620 SUB.5 – CL.60
Schedule B # 3506.91.0000

15. REGULATORY INFORMATION

Other EU Regulations:
1,3-Diphenylguanidine - Reproductive (Category 2) H361f (Fertility)

SARA 311/312
Classification: Immediate (acute) health hazard
Delayed (chronic) health hazard

Composition of Ingredients :

Manganese Dioxide : Immediate (acute) health hazard
Delayed (chronic) health hazard

Zeolites : Immediate (acute) health hazard

Polyphenyls, quater and higher : Immediate (acute) health hazard

Talc : Immediate (acute) health hazard

Carbon Black : Fire Hazard
Delayed (chronic) health hazard

Terphenyl : Immediate (acute) health hazard

1,3-Diphenylguanidine : Fire Hazard
Immediate (acute) health hazard
Delayed (chronic) health hazard

Bis(piperidinothiocarbonyl) tetrasulfide : Fire Hazard
Immediate (acute) health hazard

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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** (Reprting Value)
	Manganese Dioxide	1313-13-9	<65%	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)	**MANGANESE DIOXIDE**	1313-13-9	< 65%	>= 1.0%
Massachusetts	**MANGANESE DIOXIDE**	1313-13-9	< 65%	>= 1.0%
New Jersey	**MANGANESE DIOXIDE**	1313-13-9	< 65%	>= 1.0%
Pennsylvania	**MANGANESE DIOXIDE**	1313-13-9	<65%	>= 1.0%
Rhode Island	**MANGANESE DIOXIDE**	1313-13-9	<65%	>= 1.0%

California Prop 65 Warning :

This Product contains one or more ingredients known by the state of California to cause cancer.

materials Division 2: Materials Causing Other Toxic Effects:
Manganese Dioxide CAS#1313-13-9

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):Manganese Dioxide cas#1313-13-9

HEALTH	3	HEALTH	3	Customer and / or end user is responsible for determining PPE.
FLAMMABILITY	1	FLAMMABILITY	1	
REACTIVITY	1	REACTIVITY	1	

NFPA **HMIS**

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Section 16 Other Information

Full Text of H Statements Associated with this Compound:

ASPIRATION HAZARD 1, H304
ACUTE TOXICITY (ORAL) 4, H302
ACUTE TOXICITY (INHALATION) 4, H332
SKIN SENSITIZATION 1, H317
CARCINOGENICITY 2, H351
TOXIC TO REPRODUCTION (FERTILITY) 2, H361f
SPECIFIC TARGET ORGAN TOXICITY (STOT) REPEATED EXPOSURE 2, H373
AQUATIC CHRONIC 4, H413

H304 - MAY BE FATAL IF SWALLOWED AND ENTERS AIRWAYS.
H302 - HARMFUL IF SWALLOWED.
H332 - HARMFUL IF INHALED.
H317 - MAY CAUSE AN ALLERGIC SKIN REACTION.
H351 - SUSPECTED OF CAUSING CANCER.
H361f - SUSPECTED OF DAMAGING FERTILITY.
H373 - MAY CAUSE DAMAGE TO ORGANS THROUGH PROLONGED OR REPEATED EXPOSURE.
H413 - MAY CAUSE LONG LASTING HARMFUL EFFECTS TO AQUATIC LIFE.

Preparer-Flamemaster/Compliance Revision Notes: A Conversion to ANSI format
Rev A April 2015
Supercedes(Conversion)

Containers: Plastic Jars, Metal Cans, Cartridge Kits

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