

SAFETY DATA SHEET

Section 1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Regular Dry Chemical Extinguishant
 Other Identifiers: Sodium Bicarbonate, SDC
 Product Code(s): CH 511, CH512, CH 541
 Model Codes for Fire Extinguishers: MX100B, MX100C, MX100R
 Recommended Use: Fire suppression of Class B and C fires
 Not for human or animal drug use.
 Manufacturer: H3R Performance, Inc.
 Internet Address: www.h3rperformance.com
 Address: 103 H Street
 Petaluma, CA 94952
 Company Telephone: (800) 249-4289
 E-mail Address: h3rinfo@h3rperformance.com
 Emergency Contacts: Chemtrec 1(800) 424-9300 or
 (703) 527-3887
 Revised: March 14, 2018

Section 2. HAZARDS IDENTIFICATION

GHS – Classification

Health	Environmental	Physical
Acute Toxicity: Category 5	None	None
Skin Corrosion/Irritation: Category 3	None	None
Skin Sensitization: NO	None	None
Eye: Category 2A	None	Warning
STOT – Category 3	None	Warning
Carcinogen: Category None	None	None

GHS – Label Symbol(s):



If Pressurized: Gas Under Pressure



GHS – Word(s):

Warning

Other Hazards Not Resulting in Classification: Mica may contain small quantities of quartz (crystalline silica). Prolonged exposure to respirable crystalline silica dust at concentrations exceeding the occupational exposure limits may increase the risk of developing a disabling lung disease known as silicosis. IARC found limited evidence for pulmonary carcinogenicity of

crystalline silica in humans. In the case of normal use of this product, exposure to silica should be nil.

The attapulgite clay used in this product has a fiber length of less than 5um; therefore, the clay is not considered to be carcinogenic to animals or humans.

GHS – Hazard Phrases

GHS Hazard	GHS Codes(s)	Code Phrase(s)
Physical	H229	*-Contents under pressure; may explode if heated.
Health	H303 315 319 335 373	May be harmful if swallowed Causes skin irritation Causes serious eye irritation May cause respiratory irritation May cause damage to organs through prolonged or repeated exposure.
Environmental	None	
Precautionary:		
General	P101	If medical advice is needed, have product container or label at hand
Prevention	P251 261 264 280	Do not pierce or burn, even after use. Avoid breathing dust Wash exposed skin thoroughly after handling Wear protective gloves/protective clothing/eye protection/face protection.
Response	P312 321 362 302+352 304+340 305+351+338 342+311 332+313 337+313	Call a doctor if you feel unwell. Specific treatment (see Section 4. First Aid Measures) Take off contaminated clothing. IF ON SKIN: Wash with plenty of water IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing. If experiencing respiratory symptoms: Call a doctor. If skin irritation occurs: Get medical advice/attention. If eye irritation persists get medical advice/attention
Storage	410+403	*- Protect from sunlight. Store in well-ventilated place.
Disposal	P501	Dispose of contents through a licensed disposal company. Contaminated container should be disposed of as unused product.

*- If under pressure

Section 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	EC No.	REACH Reg. No.	CAS-No.	Weight %
Sodium bicarbonate	205-633-8	Not Available	144-55-8	>89
Attapulgite clay	601-805-5	Not Available	12174-11-7	<9
Sericite Potassium aluminum silicate	310-127-6	Not Available	12001-26-2	<4
Silicone oil methyl hydrogen polysiloxane	NA	Not Available	63148-57-2	<0.5

Emergency overview:

Adverse health effects and symptoms:

White fine powder, odorless.

Possibly a mild irritant to the respiratory system and eyes; mild irritant to the skin. Symptoms may include coughing, shortness of breath, and irritation of the lungs, eyes, and skin. Ingestion, although unlikely,

may cause gastrointestinal irritation and edema (fluid retention).

Section 4. FIRST AID MEASURES

Eye Exposure:	Causes serious irritation. Irrigate eyes with water and repeat until pain free. Seek medical attention if irritation develops, or if vision changes occur.
Skin Exposure:	Causes skin irritation. In case of contact, wash with plenty of soap and water. Seek medical attention if irritation persists.
Inhalation:	May cause irritation, along with coughing. If respiratory irritation or distress occurs remove victim to fresh air. Seek medical attention if irritation persists.
Ingestion:	Overdose symptoms may include thirst, nausea, and severe diarrhea and vomiting. If victim is conscious and alert, give 2-3 glasses of water to drink. If conscious, do not induce vomiting. Seek immediate medical attention. Do not leave victim unattended. To prevent aspiration of swallowed product, lay victim on side with head lower than waist.
Medical conditions possibly aggravated by exposure:	Inhalation of product may aggravate existing chronic respiratory problems such as asthma, emphysema, or bronchitis. Skin contact may aggravate existing skin disease. Chronic overexposure may cause pneumoconiosis ("dusty lung" disease).

Section 5. FIRE-FIGHTING MEASURES

Flammable Properties:	Not flammable
Flash Point:	Not determined
Suitable Extinguishing Media:	Non-combustible. CO ₂ , extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.
Hazardous Combustion Products:	Carbon oxides (including CO ₂ and CO)
<u>Explosion Data:</u>	
Sensitivity to Mechanical Impact:	Not sensitive
Sensitivity to Static Discharge:	Not sensitive
Unusual fire/explosion hazards:	In a fire this material may decompose, releasing oxides of carbon, potassium and nitrogen (see Section 10).
Protective Equipment and	

Precautions for Firefighters:

As in any fire, wear self-contained breathing apparatus pressure-demand. NIOSH (approved or equivalent) and full protective gear.

Section 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions:

Avoid contact with skin, eyes, and clothing. Ensure adequate ventilation.

Personal Protective Equipment:

Minimum - safety glasses, gloves, and a dust respirator.

Emergency Procedures:

NA

Methods for Containment:

Prevent further leakage or spillage if safe to do so.

Methods for Clean Up:

Avoid dust formation. Clean up released material using vacuum or wet sweep and shovel to minimize generation of dust. Bag and transfer to properly labeled containers. Ventilate area and wash spill site after material pickup is complete.

Other:

If product is contaminated, use PPE and containment appropriate to the nature of the most toxic chemical/material in the mixture.

Section 7. HANDLING AND STORAGE

Personal Precautions:

Use appropriate PPE when handling or maintaining equipment, and wash thoroughly after handling (see Section 8).

Conditions for Safe Storage/Handling:

Keep product in original container or extinguisher. Prevent falling. Do not allow near heat sources. Contents may be under pressure – inspect extinguisher consistent with product labeling to ensure container integrity.

Incompatible Products:

Do not mix with other extinguishing agents, Incompatible with strong oxidizing agents and strong acids. Do not store in high humidity.

Hazardous Decomposition Products:

Carbon and sodium oxides.

Hazardous Polymerization:

Will not occur.

Section 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Chemical Name	OSHA PEL	ACGIH TLV	DFG MAK *	EU BLV
Sodium bicarbonate	PNOC** Total dust, 15 mg/m ³ Respirable fraction, 5 mg/m ³	PNOC Total dust, 10 mg/m ³ Respirable fraction, 3 mg/m ³	PNOC Total dust, 4 mg/m ³ Respirable fraction, 1.5 mg/m ³	NA
Attapulgite clay	PNOC** Total dust, 15 mg/m ³ Respirable fraction, 5 mg/m ³	PNOC Total dust, 10 mg/m ³ Respirable fraction, 3 mg/m ³	PNOC Total dust, 4 mg/m ³ Respirable fraction, 1.5 mg/m ³	NA
Sericite Potassium aluminum silicate	PNOC**** 20 mppcf	PNOC Total dust, 10 mg/m ³ Respirable fraction, 3 mg/m ³	PNOC Total dust, 4 mg/m ³ Respirable fraction, 1.5 mg/m ³	NA
Silicone oil methyl hydrogen polysiloxane	NR***	NR	NR	NA

*German regulatory limits **PNOC = Particulates not otherwise classified (ACGIH) also known as Particulates not otherwise regulated (OSHA) *** NR = Not Regulated. All values are 8 hour time weighted average concentrations. **** mppcf – millions of particles per cubic foot

Engineering Controls:

Showers
Eyewash stations
Ventilation systems

Personal Protective Equipment – PPE Code E:

The need for respiratory protection is not probable during short-term exposure. PPE use during production process must be independently evaluated.



Eye/Face Protection:
Skin and Body Protection:
Respiratory Protection:

Tightly fitting chemical goggles
Wear protective gloves/coveralls
If exposure limits are exceeded or irritation is experienced, NIOSH approved respiratory protection should be worn. Use P100 respirators for limited exposure, use air-purifying respirator (APR) with high efficiency particulate air (HEPA) filters for prolonged exposure. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be

Hygiene Measures:

provided in accordance with current safety and health requirements. The need for respiratory protection is not likely for short-term use in well ventilated areas. Good personal hygiene practice is essential, such as avoiding food, tobacco products, or other hand-to-mouth contact when handling. Wash thoroughly after handling.

Section 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	White powder, finely divided odorless solid
Molecular Weight:	NaHCO ₃ : 84.01
Odor:	No information available
Odor Threshold:	No information available
Decomposition Temperature °C:	NaHCO ₃ : 50
Freezing Point °C:	Approximately 50 (decomposes to sodium carbonate)
Initial Boiling Point °C:	851
Physical State:	Crystalline Powder
pH:	Approximately 8.3
Flash Point °C:	None
Autoignition Temperature °C:	None
Boiling Point/Range °C:	Not Applicable. Will decompose
Melting Point/Range °C:	Not Applicable
Flammability:	Not Flammable
Flammability Limits in Air °C:	Upper – Not Flammable; Lower-Not Flammable
Explosive Properties:	None
Oxidizing Properties:	None
Volatile Component (%vol)	Not Applicable
Evaporation Rate:	Not Applicable
Vapor Density:	Not Applicable
Vapor Pressure:	Low; Est 3.73e-09 mmhg
Specific gravity:	NaHCO ₃ : Approximately 1.2 as powder
Solubility:	Product is coated – not immediately soluble in water.
Partition Coefficient:	No Information Available
Viscosity:	Not Applicable

NOTE: NaHCO₃ – Sodium bicarbonate

Section 10. STABILITY AND REACTIVITY

Stability:	Stable under recommended storage and handling conditions.
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Reactivity: Reacts exothermically with acids to generate carbon monoxide and carbon dioxide gas. Dangerous reaction with mono-ammonium phosphate and sodium potassium alloys.

Incompatibles: Avoid contact with oxidizing agents and strong acids. Contact with mono-ammonium phosphate, especially in the presence of water, may cause pressure to build due to the generation of ammonia and carbon dioxide gas; moisture will accelerate this reaction. Sodium potassium alloy can result in a violent reaction with certain extinguishing agents, such as Sodium Bicarbonate. Mixtures of Sodium Bicarbonate with 2-furaldehyde can spontaneously ignite when exposed to air. Sodium Bicarbonate is incompatible with dopamine hydrochloride, pentazocine lactate, aspirin and bismuth salicylate, and many alkali salts.

Conditions to Avoid: Storage or handling near incompatibles.

Hazardous Decomposition Products: Carbon, nitrogen, and potassium oxides. Heat of fire may release carbon monoxide.

Possibility of Hazardous Reactions: None

Hazardous Polymerization: Does not occur

Section 11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure: Inhalation, skin and eye contact.

Symptoms:

 Immediate:

 Inhalation: Irritation, coughing.

 Eyes: Irritation.

 Skin: Irritation.

 Delayed: Symptoms appear to be relatively immediate

Acute Toxicity: Relatively non-toxic.

Chronic Toxicity:

 Short-term Exposure: None known.

 Long-term Exposure: As with all dusts, pneumoconiosis, or “dusty lung” disease, may result from chronic exposure.

Acute Toxicity Values - Health

Chemical Name	LD50		LC50 (Inhalation)
	Oral	Dermal	
Sodium bicarbonate	4220 mg/kg (rat)	>2000 mg/kg (rabbit)	900 mg/m3 (rat)
Attapulgite clay	None	None	None
Sericite Potassium aluminum silicate	None	None	None
Silicone oil methyl hydrogen polysiloxane	None	None	None

Reproductive Toxicity:

This product's ingredients are not known to have reproductive or teratogenic effects.

Target Organs and Effects (TOST):

Respiratory system (mild irritant).

This product is a mild irritant to epithelial tissue, (eyes, mucous membranes, skin) and may aggravate dermatitis. No information was found indicating the product causes sensitization.

Other Toxicity Categories

Chemical Name	Germ Cell Mutagenicity	Carcinogenicity	Reproductive	TOST Single Exp	TOST Repeated Exp	Aspiration
Sodium bicarbonate	None	None	None	3	None	None
Attapulgite clay	None	None	None	None	Kidney	None
Sericite Potassium aluminum silicate	None	None	None	None	None	None
Silicone oil methyl hydrogen polysiloxane	None	None	None	None	None	None

Section 12. ECOLOGICAL INFORMATION

Ecotoxicity:

Low.

Persistence/Degradability:

Soluble in water; NaHCO₃: 96 g/l at 20 °C.

Probability of rapid biodegradation:

NaHCO₃ Est: 0.718 (Rapid)

Anaerobic biodegradation probability:

NaHCO₃ Est: 0.836 (Rapid)

Bioaccumulation potential:

Low.

Bioconcentration factor:

NaHCO₃ Est: 3.16 L/kg

Mobility in soil:

Slow evaporation rate; water soluble, may leach to groundwater

Log Koc:

NaHCO₃ Est: -2.06

NOTE: NaHCO₃ – Sodium bicarbonate

Other Adverse Ecological Effects:

No other known effects at this time

Aquatic Toxicity Values - Environment

Chemical Name	Acute (LC50)	Chronic (LC50)
Sodium bicarbonate	7700 mg/l (rainbow trout)	4100 mg/l (water flea)
Attapulgite clay	N/A	N/A
Sericite Potassium aluminum silicate	N/A	N/A
Silicone oil methyl hydrogen polysiloxane	N/A	N/A

Aquatic Toxicity Values – Calculated Estimates

Chemical Name	Acute (LC50)	EC50
Sodium bicarbonate	8259 mg/L Fish 96 hr; 3737 mg/l Daphnid 48 hr;	1088 mg/L Gr. Algae 96 hr
Attapulgate clay	N/A	N/A
Sericite Potassium aluminum silicate	N/A	N/A
Silicone oil methyl hydrogen polysiloxane	N/A	N/A

Section 13. DISPOSAL CONSIDERATIONS

Safe Handling

Use appropriate PPE when handling, and wash thoroughly after handling (see Section 8).

Waste Disposal Considerations

Dispose in accordance with federal, state, and local regulations.

Contaminated Packaging

Dispose in accordance with federal, state, and local regulations.

NOTES:

This product is not a RCRA characteristically hazardous or listed hazardous waste. Dispose of according to state or local laws, which may be more restrictive than federal laws or regulations. Used product may be altered or contaminated, creating different disposal considerations.

Section 14. TRANSPORT INFORMATION

UN Number: NA
 UN Proper Shipping Name: NA
 Transport Hazard Class: NA
 Packing Group: NA
 Marine Pollutant?: NO

IATA Not regulated
 DOT Not regulated

NOTES:

This product is not defined as a hazardous material under U.S. Department of Transportation (DOT) 49 CFR 172, or by Transport Canada "Transportation of Dangerous Goods" regulations.

Special Precautions for Shipping:

The transportation information above covers the Regular Dry Chemical extinguisher as shipped in bulk containers and not when contained in fire extinguishers or fire extinguisher systems. If shipped in a stored pressure-type fire extinguisher, and pressurized with a non-flammable, non-toxic inert expellant gas, the fire extinguisher is considered a hazardous material by the US Department of Transportation and Transport Canada. The proper shipping name shall be FIRE EXTINGUISHER and

the UN designation is UN 1044. The DOT hazard class/division is LIMITED QUANTITY when pressurized to less than 241 psig and when shipped via highway or rail. UN Class 2.2. Non-Flammable Gas, when shipping via air. Packing Group – N/A

Section 15. REGULATORY INFORMATION

International Inventory Status: All ingredients are on the following inventories

Country(ies)	Agency	Status
United States of America	TSCA	Yes
Canada	DSL	Yes
Europe	EINECS/ELINCS	Yes
Australia	AICS	Yes
Japan	MITI	Yes
South Korea	KECL	Yes

REACH Title VII Restrictions: No information available

Chemical Name	Dangerous Substances	Organic Solvents	Harmful Substances Whose Names Are to be Indicated on Label	Pollution Release and Transfer Registry (Class II)	Pollution Release and Transfer Registry (Class I)	Poison and Deleterious Substances Control Law
Sodium bicarbonate	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Attapulgitte clay	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Sericite Potassium aluminum silicate	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Silicone oil methyl hydrogen polysiloxane	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable

Component	ISHA – Harmful Substances Prohibited for Manufacturing, Importing, Transferring, or Supplying	ISHA – Harmful Substances Requiring Permission	Toxic Chemical Classification Listing (TCCL) – Toxic Chemicals	Toxic Release Inventory (TRI) – Group I	Toxic Release Inventory (TRI) – Group II
Sodium bicarbonate	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Attapulgitte clay	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Sericite Potassium aluminum silicate	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Silicone oil methyl hydrogen polysiloxane	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable

European Risk and Safety phrases:

EU Classification:	XN	Irritant
R Phrases:	20	Harmful by inhalation.
	36/37	Irritating to eyes, respiratory system.
S Phrases:	22	Do not breath dust.
	24/25	Avoid contact with skin and eyes
	26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
	36	Wear suitable protective clothing.

U.S. Federal Regulatory Information:

SARA 313:

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) - This product does not contain and chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

None of the chemicals in this product are under SARA reporting requirements or have SARA threshold planning quantities (TPQs) or CERCLA reportable quantities (RQs), or are regulated under TSCA 8(d).

SARA 311/312 Hazard Categories:

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard-*	Yes
Reactive Hazard	No

* - Only applicable if material is in a pressurized extinguisher.

Clean Water/Clean Air Acts:

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42) or Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61) and Section 112 of the Clean Air Act Amendments of 1990.

U.S. State Regulatory Information:

Chemicals in this product are covered under specific State regulations, as denoted below:

Alaska - Designated Toxic and Hazardous Substances: None

California – Permissible Exposure Limits for Chemical Contaminants: None

Florida – Substance List: Mica Dust

Illinois – Toxic Substance List: None

Kansas – Section 302/303 List: None

Massachusetts – Substance List: Mica Dust

Minnesota – List of Hazardous Substances: None
Missouri – Employer Information/Toxic Substance List: None
New Jersey – Right to Know Hazardous Substance List: None
North Dakota – List of Hazardous Chemicals, Reportable Quantities: None
Pennsylvania – Hazardous Substance List: None
Rhode Island – Hazardous Substance List: Mica Dust
Texas – Hazardous Substance List: No
West Virginia – Hazardous Substance List: None
Wisconsin – Toxic and Hazardous Substances: None

California Proposition 65: No component is listed on the California Proposition 65 list.

Other:

Mexico – Grade	No component listed
Canada – WHMIS Hazard Class	No component listed

Section 16. OTHER INFORMATION

This SDS conforms to requirements under U.S., U.K., Canadian, Australian, and EU regulations or standards, and conforms to the proposed 2003 ANSI Z400.1 format.

Issuing Date	17-June-2012
Revision Date	14-March-2018
Revision Notes	None

The information herein is given in good faith but no warranty, expressed or implied, is made.
Updated by William F. Garvin, CIH.