

CROSSFIELD PRODUCTS CORPORATION

www.crossfieldproducts.com

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 (310)-886-9100 (8:00 AM – 5:00 PM Pacific Time)

140 Valley Rd.
 Roselle Park, NJ 07204
 (908)-245-2800 (8:00 AM – 5:00 PM Eastern Time)

SAFETY DATA SHEET

1. PRODUCT IDENTIFICATION

<u>TRADE NAME (AS LABELED):</u>	Aerosil Thickner Powder
<u>CHEMICAL NAME/CLASS:</u>	Synthetic Silicon dioxide
<u>PRODUCT USE:</u>	Viscosity Modifier
<u>SUPPLIER/MANUFACTURER'S NAME:</u>	Crossfield Products Corp.
<u>ADDRESS: (West Coast):</u>	3000 E. Harcourt St. Rancho Dominguez, CA 90221 (Headquarters)
<u>ADDRESS: (East Coast):</u>	140 Valley Rd. Roselle Park, NJ 07204
<u>EMERGENCY PHONE:</u>	CHEMTREC: 800-424-9300
<u>DATE OF PREPARATION:</u>	June 22, 2010
<u>REVISION DATE:</u>	May 12, 2017

2. HAZARD(S) IDENTIFICATION

GHS Classification:
 Not a hazardous substance or mixture

GHS Labelling:
 No labeling according to GHS required

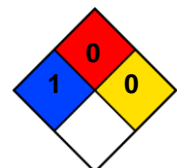
Signal Word: (none)

HMIS-RATINGS (SCALE 0 – 4)

HEALTH	1
FLAMMABILITY	0
REACTIVITY	0

Health = 1
 Fire = 0
 Reactivity = 0

NFPA RATING



3. COMPOSITION / INFORMATION ON INGREDIENTS

CHEMICAL NAME	CAS #	%	EXPOSURE LIMITS IN AIR					
			ACGIH		OSHA		IDLH	OTHER
			TLV mg/m ³	STEL mg/m ³	PEL mg/m ³	STEL mg/m ³		
Silane, dichlorodimethyl-, reaction products with silica	68611-44-9	60 - 100	TWA 10 (Inhalable) 3 (respirable)	NE	6 mg/m ³	NE	NE	
Water and other ingredients. The other ingredients are each present in less than 1 percent concentration in this product.	Balance	The components present in the balance of this product do not contribute any significant, additional hazards. All hazard information pertinent to this product has been presented in the remaining sections of this Material Safety Data Sheet, per the requirements of Federal Occupational Safety and Health Hazard Communication Standard (29 CFR 1910.1200).						
VOC Component = 0 g/L								

NE = Not Established. C = Ceiling Limit. See Section 16 for Definitions of Terms Used.

NOTE: All WHMIS required information is included. It is located in appropriate sections based on the ANSI Z400.1-1993 format.

4. FIRST-AID MEASURES

SKIN EXPOSURE: Wash off with soap and plenty of water.

EYE EXPOSURE: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes or until all material has been removed Obtain medical attention.

INHALATION: In case product dust is released: Possible discomfort, cough, sneezing. Move victims into fresh air,.

INGESTION: If accidentally swallowed, rinse mouth thoroughly with water and afterwards, drink plenty of water. In case of discomfort, obtain medical attention.

Most important symptoms and effects, both acute and delayed

Symptoms:

None known

Indication of any immediate medical attention and special treatment needed

No hazards which require special first aid measures.

5. FIRE-FIGHTING MEASURES

FLASH POINT, °C (method): Not applicable

AUTOIGNITION TEMPERATURE, °C: NE

FLAMMABLE LIMITS (in air by volume, %):

Lower (LEL): NE

Upper (UEL): NE

FIRE EXTINGUISHING MATERIALS:

Water Spray: YES

Foam: YES

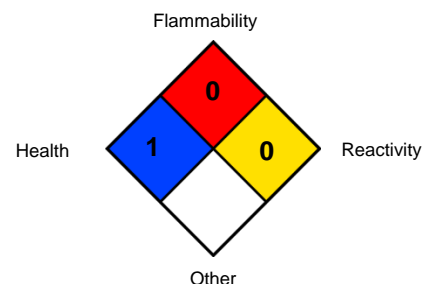
Halon: YES

Carbon Dioxide: YES

Dry Chemical: YES

Other: Any "ABC" Class.

NFPA RATING



UNUSUAL FIRE AND EXPLOSION HAZARDS: Run-off from fire control may cause pollution. Keep fire-exposed containers cool with water spray to prevent rupture due to excessive heat. High pressure water hose may spread product from broken containers increasing contamination. If involved in a fire, this product may decompose to produce a variety of compounds (i.e. carbon monoxide, carbon dioxide, and other compounds). Emergency responders must wear the proper personal protective equipment suitable for the situation to which they are responding. Products of combustion are irritating to the respiratory tract and may cause breathing difficulty. Symptoms may be delayed several hours or longer depending upon the extent of exposure.

Explosion Sensitivity to Mechanical Impact: Not sensitive.

Explosion Sensitivity to Static Discharge: Not sensitive.

SPECIAL FIRE-FIGHTING PROCEDURES: Incipient fire responders should wear eye protection. Structural fire fighters must wear Self-Contained Breathing Apparatus and full protective equipment. Move fire-exposed containers, if it can be done without risk to firefighters. If possible, prevent run-off water from entering storm drains, bodies of water, or other environmentally sensitive areas. If necessary, discard or decontaminate fire response equipment before returning such equipment to service.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Wear personal protective equipment.

Environmental precautions

Obey relevant local, state, provincial and federal laws and regulations. Do not contaminate any lakes, stream, ponds, groundwater or soil.

Methods and material for containment and cleaning up

Sweep up or vacuum up spillage and collect in suitable container for disposal.

Additional advice

Avoid dust formation.

7. HANDLING and STORAGE

Precautions for safe handling

Use with adequate ventilation.

Conditions for safe storage, including any incompatibilities

Take precautionary measures against static discharges.

Storage

Keep containers tightly closed in a dry, cool place.

Dust explosion class

1 m³ vessel = not dust explosive

VDI Guideline 2263 sheet 1

8. EXPOSURE CONTROL/PERSONAL PROTECTION

Personal protective equipment

Respiratory protection

A respiratory protection program that meets OSHA 1810.134 and ANSI Z88.2 or applicable federal/provincial requirements must be followed whenever workplace conditions warrant respirator use. NIOSH's "Respirator Decision Logic" may be useful in determining the suitability of various types of respirators.

Hand protection

Use impermeable gloves.

Eye protection

Wear safety glasses with side shields. In case dusts are formed, wear close fitting protective goggles.

Skin and body protection

A safety shower and eye wash fountain should be readily available.

To identify additional Personal Protective Equipment (PPE) requirements, it is recommended that a hazard assessment in accordance with the OSHA PPE Standard (29CFR1910.132) be conducted before using this product.

Hygiene measures

When using, do not eat, drink or smoke. Wash face and/or hands before break and end of work. To ensure ideal skin protection: use super fatted soaps and skin cream for skin care. Wash contaminated clothing before re-use.

Protective measures

Handle in accordance with good industrial hygiene and safety practice. If there is the possibility of skin/eye contact, the indicated hand/eye/body protection should be used. If the workplace threshold limit value is exceeded and/or the substance is released, use appropriate respiratory protection.

For Routine Industrial Applications

Dust Mask



Safety Glasses



Safety Gloves

9. PHYSICAL and CHEMICAL PROPERTIES

RELATIVE VAPOR DENSITY (air = 1): > ND

SPECIFIC GRAVITY (water = 1): 2.2

SOLUBILITY IN WATER: Not Soluble

VAPOR PRESSURE, mm Hg @ 20 °C: ND

ODOR: Odorless

LOG WATER/OIL DISTRIBUTION COEFFICIENT: Not available.

EVAPORATION RATE (n-BuAc=1): NA

MELTING/FREEZING POINT: Not established.

BOILING POINT: > ND

pH: 3.6 – 5.5

APPEARANCE AND COLOR: This product is a solid white fluffy powder.

HOW TO DETECT THIS SUBSTANCE (warning properties): ND

10. STABILITY and REACTIVITY

STABILITY: Stable.

DECOMPOSITION PRODUCTS: Decomposition products with heating above decomposition temperature: Carbon monoxide, Carbon dioxide (CO₂), organic products of decomposition

MATERIALS WITH WHICH SUBSTANCE IS INCOMPATIBLE: None known.

HAZARDOUS POLYMERIZATION: Will not occur by itself.

CONDITIONS TO AVOID: Avoid exposure or contact to extreme temperatures and incompatible chemicals.

11. TOXICOLOGICAL INFORMATION

TOXICITY DATA: Additional toxicology information for components greater than 1 percent in concentration is provided below.

Acute toxicity:

Oral LD50	(Rat) >5,000 mg/kg	(Method – analogous OECD method)
Inhalation LC0	(Rat) 0.477 mg/l / 4 h	(Method – analogy OECD) maximum concentration attainable in experiments – comparable product
Skin corrosion/irritation	(Rabbit) - not irritating	(Method – analogous OECD method)
Eye irritation	(Rabbit) - not irritating	(Method – analogous OECD method)
Sensitization	Not Known	
Repeated dose toxicity Oral	No negative effects	
Repeated dose toxicity Inhalation	No irreversible changes and no indication of silicosis	
Assessment of STOT single exposure	no evidence for hazardous properties	
Assessment of STOT repeat exposure	no evidence for hazardous properties	
Risk of aspiration toxicity	no aspiration toxicity classification	

SUSPECTED CANCER AGENT:

The major components of this product are not found on the following lists: FEDERAL OSHA Z LIST, NTP, IARC and are therefore not considered to be, nor suspected to be, cancer-causing agents by these agencies.

REPRODUCTIVE TOXICITY INFORMATION: Listed below is information concerning the effects of this product and its components on the human reproductive system.

Mutagenicity: This product is not reported to produce mutagenic effects in humans.

Embryotoxicity: This product is not reported to produce embryotoxic effects in humans.

Teratogenicity: This product is not reported to cause teratogenic effects in humans.

Reproductive Toxicity: This product is not reported to cause reproductive effects in humans

A mutagen is a chemical which causes permanent changes to genetic material (DNA) such that the changes will propagate through generational lines. An embryotoxin is a chemical which causes damage to a developing embryo (i.e. within the first eight weeks of pregnancy in humans), but the damage does not propagate across generational lines. A teratogen is a chemical which causes damage to a developing fetus, but the damage does not propagate across generational lines. A reproductive toxin is any substance which interferes in any way with the reproductive process.

12. ECOLOGICAL INFORMATION

ALL WORK PRACTICES MUST BE AIMED AT ELIMINATING ENVIRONMENTAL CONTAMINATION.

Toxicity

Toxicity to fish	LC50 (Brachydanio rerio): >10,000 mg/l / 96 h Method: OECD 203
Toxicity to aquatic	EC50 (Daphnia magna): > 10,000 mg/l / 24 h Method: OECD 202 The reported toxic effects relate to the nominal concentration.
Toxicity to algae invertebrates	IC50 (Desmodesmus subspicatus – Green algae); > 10,000 mg/l / 72 h Method: OECD 201

Persistence and degradability

Biodegradability The methods designed to assess persistence and biodegradability are not applicable to this product, in analogy to inorganic substances.

Bioaccumulative potential

Bioaccumulation Not to be expected.

Mobility in soil

Mobility No remarkable mobility in soil is to be expected

Other adverse effects

Further Information The data we have at our disposal do not necessitate identification concerning environmental hazard..

13. DISPOSAL CONSIDERATIONS

PREPARING WASTES FOR DISPOSAL: Waste disposal must be in accordance with appropriate Federal, State, and local regulations.

EPA WASTE NUMBER: NA (Not a hazardous material)

14. TRANSPORTATION INFORMATION

Department of Transportation: Not regulated

IATA: Not regulated

IMDG: Not regulated

TDG: Not regulated

15. REGULATORY INFORMATION

OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA): This Safety Data Sheet (SDS) has been prepared in compliance with the federal OSHA Hazard Communication Standard 29 CFR 1910.1200.

SARA REPORTING REQUIREMENTS:

EPA SARA Title III Section 311/312 (40 CFR 370) Hazard Classification: Not listed

EPA SARA Title III Section 313 (40 CFR 372) Components above 'de minimus' level:

SARA Threshold Planning Quantity: Not applicable.

TSCA INVENTORY STATUS: The components of this product are listed on the TSCA Inventory.

CERCLA REPORTABLE QUANTITY (RQ): None

OTHER FEDERAL REGULATIONS: Not applicable.

STATE REGULATORY INFORMATION: Components of this product are covered under specific State regulations, as denoted below:

New Jersey Right-to-know: The following is required composition information:

No Listings

Pennsylvania Right-to-know: The following is required composition information:

No Listings

CALIFORNIA PROPOSITION 65: The below list of compounds is known to the State of California to cause cancer, birth defects or other reproductive harm:

Not listed

WHMIS

No Listings

16. OTHER INFORMATION

PREPARED BY: BILL BEACH
CROSSFIELD PRODUCTS CORP.

THIS INFORMATION IS DRAWN FROM RECOGNIZED SOURCES BELIEVED TO BE RELIABLE. CROSSFIELD PRODUCTS CORP. MAKES NO GUARANTEES NOR ASSUMES ANY LIABILITY IN CONNECTION WITH THIS INFORMATION. THE USER SHOULD BE AWARE OF CHANGING TECHNOLOGY, RESEARCH, REGULATIONS AND ANALYTICAL PROCEDURES THAT MAY REQUIRE CHANGES HEREIN. THE ABOVE DATA IS SUPPLIED UPON THE CONDITION THAT PERSONS WILL EVALUATE THIS INFORMATION AND THEN DETERMINE ITS SUITABILITY FOR THEIR USE.

DEFINITIONS OF TERMS

A large number of abbreviations and acronyms appear on a MSDS. Some of these which are commonly used include the following:

CAS #: This is the Chemical Abstract Service Number which uniquely identifies each constituent. It is used for computer-related searching.

EXPOSURE LIMITS IN AIR:

ACGIH - American Conference of Governmental Industrial Hygienists, a professional association which establishes exposure limits.

TLV - Threshold Limit Value - an airborne concentration of a substance which represents conditions under which it is generally believed that nearly all workers may be repeatedly exposed without adverse effect. The duration must be considered, including the 8-hour **Time Weighted Average (TWA)**, the 15-minute **Short Term Exposure Limit**, and the instantaneous **Ceiling Level**. Skin adsorption effects must also be considered.

OSHA - U.S. Occupational Safety and Health Administration.

PEL - Permissible Exposure Limit - This exposure value means exactly the same as a TLV, except that it is enforceable by OSHA. The OSHA Permissible Exposure Limits are based in the 1989 PELs and the June, 1993 Air Contaminants Rule (Federal Register: 58: 35338-35351 and 58: 40191). Both the current PELs and the vacated PELs are indicated. The phrase, "Vacated 1989 PEL," is placed next to the PEL which was vacated by Court Order.

IDLH - Immediately Dangerous to Life and Health - This level represents a concentration from which one can escape within 30-minutes without suffering escape-preventing or permanent injury. **The DFG - MAK** is the Republic of Germany's Maximum Exposure Level, similar to the U.S. PEL. **NIOSH** is the National Institute of Occupational Safety and Health, which is the research arm of the U.S. Occupational Safety and Health Administration (**OSHA**). NIOSH issues exposure guidelines called Recommended Exposure Levels (**RELs**). When no exposure guidelines are established, an entry of **NE** is made for reference.

HMIS HAZARD RATINGS:

HAZARDOUS MATERIALS IDENTIFICATION SYSTEM: Health Hazard:

0 (minimal acute or chronic exposure hazard); **1** (slight acute or chronic exposure hazard); **2** (moderate acute or significant chronic exposure hazard); **3** (severe acute exposure hazard; onetime over-exposure can result in permanent injury and may be fatal); **4** (extreme acute exposure hazard; onetime over-exposure can be fatal). Flammability Hazard: **0** (minimal hazard); **1** (materials that require substantial pre-heating before burning); **2** (combustible liquid or solids; liquids with a flash point of 38-93°C [100-200°F]); **3** (Class IB and IC flammable liquids with flash points below 38°C [100°F]); **4** (Class IA flammable liquids with flash points below 23°C [73°F] and boiling points below 38°C [100°F]). Reactivity Hazard: **0** (normally stable); **1** (material that can become unstable at elevated temperatures or which can react slightly with water); **2** (materials that are unstable but do not detonate or which can react violently with water); **3** (materials that can detonate when initiated or which can react explosively with water); **4** (materials that can detonate at normal temperatures or pressures).

NATIONAL FIRE PROTECTION ASSOCIATION: Health Hazard: **0**

(material that on exposure under fire conditions would offer no hazard beyond that of ordinary combustible materials); **1** (materials that on exposure under fire conditions could cause irritation or minor residual injury); **2** (materials that on intense or continued exposure under fire conditions could cause temporary incapacitation or possible residual injury); **3** (materials that can on short exposure could cause serious temporary or residual injury); **4** (materials that under very short exposure could cause death or major residual injury). Flammability Hazard and Reactivity Hazard: Refer to definitions for "Hazardous Materials Identification System".

FLAMMABILITY LIMITS IN AIR:

Much of the information related to fire and explosion is derived from the **National Fire Protection Association (NFPA)**. Flash Point - Minimum temperature at which a liquid gives off sufficient vapors to form an ignitable mixture with air. Autoignition Temperature: The minimum temperature required to initiate combustion in air with no other source of ignition. LEL - the lowest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source. UEL - the highest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source.

TOXICOLOGICAL INFORMATION:

Possible health hazards as derived from human data, animal studies, or from the results of studies with similar compounds are presented. Definitions of some terms used in this section are: **LD₅₀** - Lethal Dose (solids & liquids) which kills 50% of the exposed animals; **LC₅₀** - Lethal Concentration (gases) which kills 50% of the exposed animals; **ppm** concentration expressed in parts of material per million parts of air or water; **mg/m³** concentration expressed in weight of substance per volume of air; **mg/kg** quantity of material, by weight, administered to a test subject, based on their body weight in kg. Data from several sources are used to evaluate the cancer-causing potential of the material. The sources are: **IARC** - the International Agency for Research on Cancer; **NTP** - the National Toxicology Program, **RTECS** - the Registry of Toxic Effects of Chemical Substances, **OSHA** and **CAL/OSHA**. IARC and NTP rate chemicals on a scale of decreasing potential to cause human cancer with rankings from 1 to 4. Subrankings (2A, 2B, etc.) are also used. Other measures of toxicity include **TDLo**, the lowest dose to cause a symptom and **TCLo** the lowest concentration to cause a symptom; **TDo**, **LDLo**, and **LDo**, or **TC**, **TCo**, **LCLo**, and **LCo**, the lowest dose (or concentration) to cause death. **BEI** - Biological Exposure Indices, represent the levels of determinants which are most likely to be observed in specimens collected from a healthy worker who has been exposed to chemicals to the same extent as a worker with inhalation exposure to the TLV.

REGULATORY INFORMATION:

This section explains the impact of various laws and regulations on the material. **EPA** is the U.S. Environmental Protection Agency. **WHMIS** is the Canadian Workplace Hazardous Materials Information System. **DOT** and **TC** are the U.S. Department of Transportation and the Transport Canada, respectively. Other acronyms used are: **Superfund Amendments and Reauthorization Act (SARA)**; the **Toxic Substance Control Act (TSCA)**; Marine Pollutant status according to the **DOT**; California's Safe Drinking Water Act (**Proposition 65**); the **Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or Superfund)**; and various state regulations. This section also includes information on the precautionary warnings which appear on the materials package label.