MATERIAL SAFETY DATA SHEET

SECTION 01 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION:

Chemical Name: **Klein Cat. No. 50994**

INTUMESCENT FIRESTOP CAULK GG-266

Manufacturer: **NUCO INC.**

150 Curtis Drive
Guelph, Ontario N1K 1N5
Tel: (519)-823-4994
Fax: (519)-823-1099
Infotrac 24 Hour Emergency Tel: (800)-535-5053

Date: **August 1, 2005**
Prepared by: **Technical Services Department**
WHMIS Classification: **D2B**
Product Use: **Intumescent Silicone Caulk for Firestopping**

SECTION 02 – COMPOSITION / INFORMATION ON INGREDIENTS:

Ingredients	CAS No.	%	LD50(Oral-rat)	LC50(Inhalation-rat)
Methyl Tri(methylethylketoxime)silane	22984-54-9	3.0 - 7.0	2 – 3 ml/kg	> 50 mg/L (4 hr)
Amorphous Silica	7631-86-9	1.0 – 5.0	3,160 mg/kg	> 0.139 mg/L (4 hr)
1,3,5-Triazine - 2,4,6,-Triamine	108-78-1	15.0 – 40.0	3,100 mg/kg	Not available
Natural Graphite	7782-42-5	10.0 – 30.0	Not available	Not available

The ingredients listed above are controlled products as defined in CPR, am. SOR/88-555 or 29 CFR 1910.1200

SECTION 03 – HAZARDS INDENTIFICATION:

ROUTES OF ENTRY INTO THE BODY (ACUTE EFFECTS):

Eyes: Direct contact will cause irritation.

Skin: May cause moderate irritation. Repeated skin contact may cause allergic skin reaction.

Inhalation: Irritates respiratory passages very slightly. Vapor overexposure may cause drowsiness and prolonged overexposure may injure blood and liver.

Ingestion: Low ingestion hazard in normal use. Repeated ingestion may injure internally.

WHMIS HAZARD SYMBOL(S):

SECTION 04 - FIRST AID MEASURES:

Eyes: Flush with copious quantities of lukewarm water. Do not attempt to physically remove the solids or gums from the eye. Seek medical attention immediately.

Skin: Remove contaminated clothing. Wash thoroughly with warm water and non-abrasive soap. Seek medical attention if you feel ill or a reaction develops.

Inhalation: Remove to fresh air and provide water. Seek medical attention if you feel ill or a reaction develops.

Ingestion: Get medical attention.

SECTION 05 - FIRE FIGHTING MEASURES:

Flammable Conditions: Avoid direct sources of heat or ignition in uncured state.

Extinguishing Media: Carbon dioxide, dry chemical, water fog or foam. Water can be used to cool fire exposed containers.

Fire Fighting Measures: Self-contained breathing apparatus and protective clothing should be worn in fighting large fires involving chemicals. Determine the need to evacuate or isolate the area according to your local emergency plan.

Flash Point:		**Not applicable**
Flammability Limits:		**Lower Explosion Limit – not available**
		Upper Explosion Limit – not available
Autoignition Temperature:		**Not available**
Hazardous Decomposition Products:		**Carbon dioxide, carbon monoxide, silicone dioxide, sulfur oxides, nitrogen oxides, formaldehyde, and other potentially toxic fumes.**
Sensitivity -	**Impact:**	**None**
	Static:	**None**

SECTION 06 – ACCIDENTAL RELEASE MEASURES:

Containment / Clean Up: **Restrict access to the area of the spill. Provide ventilation and protective clothing. Scrape up caulk and place in container for disposal. Clean area as appropriate since silicone materials can represent a slip hazard. Cleaning may require steam or detergents. Dispose of saturated absorbent or cleaning materials appropriately, since spontaneous heating may occur. Local, state, provincial, federal laws and regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup.**

SECTION 07 – HANDLING AND STORAGE:

Handling and Storage: **Store in an adequately ventilated area under dry conditions between 50°F (10°C) to 77°F (25°C) and keep container tightly sealed when not in use.**

SECTION 08 – EXPOSURE CONTROL / PERSONAL PROTECTION:

Component Exposure Limits: **Methyl Tri(methylethylketoxime)silane (CAS# 22984-54-9) forms Methyl Ethyl Ketoxime (CAS# 96-29-7) upon contact with atmospheric moisture. Provide adequate ventilation to control exposures within the following exposure guidelines: Vendor Guide TWA: 3 ppm, STEL: 10 ppm; AIHA WEEL TWA: 10 ppm.**

Amorphous Silica (CAS# 7631-86-9): Although the silica is coated with the silicone caulk observe the particulate limits. OSHA PEL: TWA 15 mg/m^3 total dust, 5 mg/m^3 respirable fraction. ACGIH TLV: TWA 10 mg/m^3 inhalable particulate, 3 mg/m^3 respirable particulate.

1,3,5-Triazine – 2,4,6,-Triamine (CAS# 108-78-1): Although the amine is coated with the silicone caulk observe the particulate limits. AIHA WEEL: 10 mg/m^3 inhalable fraction, 5 mg/m^3 respirable fraction.

Natural Graphite (CAS# 7782-42-5): Although the graphite is coated with the silicone caulk observe the particulate limits. OSHA PEL: 2.5 mg/m^3 respirable fraction. ACGIH TLV: 2 mg/m^3 respirable particulate.

Respiratory: **Wear an organic vapor NIOSH / MSHA approved respirator.**

Ventilation: **In indoor applications, passive ventilation (opening of doors and windows) is recommended. Local exhaust as necessary to keep exposure levels within guidelines.**

Personal Protective Equipment: **Safety glasses with side-protection, impermeable gloves (e.g., neoprene, nitrile, silver shield®), coveralls or apron are important in preventing contamination of eyes, skin and clothing. Wash thoroughly after handling.**

SECTION 09 – PHYSICAL AND CHEMICAL PROPERTIES:

Physical State:	**Red paste with black particles**
Odor and Appearance:	**Thixotropic caulk**
Odor Threshold:	**Not available**
Specific Gravity:	**1.25**
Vapor Pressure:	**Less than 5 mm Hg**
Vapor Density:	**Greater than 1**
Evaporation Rate:	**Not available**
Boiling Point:	**Not applicable**
Freezing Point:	**Not applicable**
Ph:	**Not available**
Coeff. Oil/Water Distribution:	**Not available**

SECTION 10 – STABILITY AND REACTIVITY:

Chemical Stability:	**Stable but will begin to intumesce above 300°F (150°C)**
Incompatible Materials:	**Strong oxidizing agents or electrophiles (e.g. ferric chloride). Concentrated acids or bases can degrade the silicone polymer.**
Reactive Conditions:	**High temperature, moisture and incompatible materials.**
Hazardous Polymerization:	**Will not occur.**

SECTION 11 - TOXICOLOGICAL INFORMATION:

Effects of overexposure:	**The curing vapor, Methyl Ethyl Ketoxime (CAS# 96-29-7), may cause drowsiness, injure blood, liver and may irritate or harm nose, throat, lungs and eyes. Direct contact with eyes will irritate. Direct contact with skin may irritate.**
Sensitization:	**Allergic skin sensitization possible through repeated direct contact with the ketoxime in the uncured caulk.**
Carcinogenicity:	**No ingredients considered by IARC, NTP or OSHA to be carcinogens. Male rodents exposed to Methyl Ethyl Ketoxime (CAS# 96-29-7) vapor throughout their lifetime developed liver carcinomas. These carcinomas were statistically increased at a concentration of 375 ppm.**
Reproductive Toxicity:	**Methyl Ethyl Ketoxime (CAS# 96-29-7) is not considered a reproductive or developmental toxin based on studies on rats.**
Teratogenicity:	**Not known**
Mutagenicity:	**Methyl Ethyl Ketoxime (CAS# 96-29-7) is not considered mutagenic or genotoxic based on in vivo and in vitro studies.**
Synergistic Products:	**Not known**

SECTION 12 – ECOLOGICAL INFORMATION:

Air:	**The product is a solid consisting of crosslinked high molecular weight silicone polymer and solid fillers and unless abraded to produce dust or particles it is unlikely to cause atmospheric contamination.**
Water:	**The product is a solid which will sink to the bottom of a water course. The silicone polymer is insoluble in water. The 1,3,5-Triazine - 2,4,6,-Triamine (CAS# 108-78-1) is slightly soluble in water, inherently biodegradable with low toxicity to aquatic life (e.g., 96 h LC50 (for fish): > 3,000 mg/L, 48 h EC50 (for Daphnia): > 2,000 mg/L). Natural Graphite (CAS# 7782-42-5) is insoluble in water.**
Soil:	**The product is a solid and does not contain significant concentrations of water soluble components that may be leached from the product.**

SECTION 13 – DISPOSAL CONSIDERATIONS:

Waste Disposal:	**Dispose in accordance with Federal, State / Provincial and local regulations.**

SECTION 14 - TRANSPORT INFORMATION:

Shipping Information:	**Not subject to DOT, TDG, IMDG Code or IATA Regulations.**

SECTION 15 - REGULATORY INFORMATION:

TSCA Inventory Status:	**Chemical components listed on TSCA inventory except as exempted.**
NFPA Profile:	**Health 2, Flammability 1, Reactivity 0**
SARA TITLE III Chemical Listings:	**Section 302 Extremely Hazardous Substances: None** **Section 304 CERCLA Hazardous Substances: None** **Section 312 Hazard Class: Acute: Yes; Chronic: Yes; Fire: No; Pressure: No; Reactive: No** **Section 313 Toxic Chemicals: The nitric and sulfuric acids encapsulated within the graphite matrix do not pose a hazard during normal use but are subject to the reporting requirements of Section 313 of Title III (40 CFR Part 372): 2.9% nitric acid (CAS# 7697-37-2) and 4.75% sulfuric acid (CAS# 7664-93-9).**
State Substance List:	**This product contains a listed substance(s) that appears on one or more of the Substance Lists for Pennsylvania, Massachusetts and New Jersey: amorphous silica (CAS# 7631-86-9); 1,3,5-triazine-2,4,6-triamine (CAS#108-78-1); graphite (CAS# 7782-42-5); methyl tri(methylethylketoxime)silane**

	(CAS# 22984-54-9); dimethylsiloxane, hydroxy terminated (CAS# 70131-67-8); and dimethylsiloxane, trimethylsiloxy terminated (CAS# 63148-62-9).
California Proposition 65 List:	**Strong inorganic acid mists containing sulfuric acid (not released under normal conditions of use).**
Volatile Organic Content:	**25 grams per liter (0.21 lb/gallon), 2.0% by weight (meets California Air Resources Board VOC standard for sealants and caulking compounds 12/31/2002).**
WHMIS Classification:	**D2B**
Domestic Substance List:	**Chemical components listed on DSL except as exempted.**

SECTION 16 – OTHER INFORMATION:

The information herein is given in good faith, but no warranty, express or implied, is made. Product users should make independent judgements of the suitability of this information to ensure proper use and to protect the health and safety of employees.

Form: MSGG266 Rev.: 5 Date: 08/05