

MATERIAL SAFETY DATA SHEET

NFCA 1

FOR COATINGS, RESINS AND RELATED MATERIALS

(Approved by U.S. Department of Labor "Essentially Similar" to Form OSHA-20)

S140

DATE OF PREP. March 4, 1977

Section I

MANUFACTURER'S NAME
INDUSMIN LIMITED

STREET ADDRESS

365 Bloor St. East, Suite 200

EMERGENCY TELEPHONE NO.

(416) 967-1900

CITY, STATE, AND ZIP CODE

Toronto, Ontario M4W 1H7
Canada

PRODUCT CLASS

Nepheline Syenite

TRADE NAME

MANUFACTURERS CODE IDENTIFICATION

Chemical Nepheline Syenites A-270, A-400 and #330
Empirical Formula: $3\text{Na}_2\text{O} \cdot \text{K}_2\text{O} \cdot 4.5\text{Al}_2\text{O}_3 \cdot 20\text{SiO}_2$

Section II - HAZARDOUS INGREDIENTS

INGREDIENT	PERCENT	TLV		LEL	VAPOR PRESSURE
		PPM	mg/M ³		
THIS PRODUCT IS NOT A HAZARDOUS MATERIAL UNDER CURRENT DEPARTMENT OF LABOR DEFINITIONS. (With this statement, it is not necessary to complete other sections of this sheet, which are not applicable).					

Section III - PHYSICAL DATA

BOILING RANGE

VAPOR DENSITY

 HEAVIER LIGHTER THAN AIR

EVAPORATION RATE

 FASTER SLOWER THAN ETHER

PERCENT VOLATILE BY VOLUME

WEIGHT PER GALLON

Section IV - FIRE AND EXPLOSION HAZARD DATA

DOT CATEGORY

FLASH POINT

LEL

EXTINGUISHING MEDIA

UNUSUAL FIRE AND EXPLOSION HAZARDS

SPECIAL FIRE FIGHTING PROCEDURES

ADDITIONAL DATA TO SUPPLEMENT MSDS (NPCA 1-72)

PROCESSOR/SUPPLIER: Indusmin Limited
PRODUCT TRADE NAME: MINEX
CHEMICAL OR MINERALOGICAL NAME: Nepheline Syenite
CHEMICAL FAMILY: Inorganic feldspathic minerals - an anhydrous sodium potassium aluminum silicate.
EMPERICAL FORMULA: $3Na_2O \cdot K_2O \cdot 4.5Al_2O_3 \cdot 20SiO_2$
MAXIMUM CONCENTRATION OF:

Arsenic	< 10	ppm
Beryllium	0.03	ppm
Cadmium	< 1	ppm
Lead	< 60	ppm
Mercury	< 0.6	ppm

TYPICAL CONCENTRATION OF:

Antimony	< 0.8	ppm
Barium	< 10	ppm
Bismuth	< 5	ppm
Boron	4	ppm
Chromium	5	ppm
Cobalt	< 1	ppm
Copper	5	ppm
Manganese	38	ppm
Nickel	15	ppm
Selenium	< 5	ppm
Tellurium	< 1	ppm
Thallium	< 1	ppm
Zinc	< 5	ppm

PRESENCE OF HAZARDOUS MINERALS SUCH AS QUARTZ, CRISTOBALITE, PYROXINES (SUCH AS CHRYSOTILE), AMPHIBOLES (SUCH AS CROCIDOLITE), AMOSITE, TREMOLITE, ANTHOPHYLLITE, ETC.

None; no free silica or quartz

THRESHOLD LIMIT VALUES:

10 Mg/m³ (for nuisance dust having less than 1% free silica or quartz).

REACTIVITY DATA:

N/A -- Non-reactive.

STORAGE AND HANDLING PRECAUTIONS:

N/A -- No hazard.

WASTE DISPOSAL PROBLEMS:

N/A -- No problems.

ENVIRONMENTAL PROBLEMS:

N/A -- No problems, completely non-toxic.

MINERALOGICAL DATA:

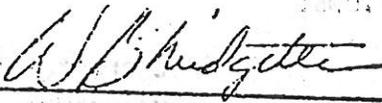
1. MINEX is a high pH extender pigment/filler which prefers a neutral to basic environment.
2. MINEX is a naturally occurring coarse-grained igneous feldspathic rock, an anhydrous sodium potassium aluminum silicate, which is mined and dry-processed. Its physical structure is determined by the nature of the predominate minerals present, as follows:
 - (a) Albite - triclinic crystalline form
 $\text{Na}_2\text{O} \cdot \text{Al}_2\text{O}_3 \cdot 6\text{SiO}_2$
 - (b) Microcline - triclinic crystalline form
 $\text{K}_2\text{O} \cdot \text{Al}_2\text{O}_3 \cdot 6\text{SiO}_2$
 - (c) Nephelite - hexagonal crystalline form
 $(\text{Na}, \text{K})_2\text{O} \cdot \text{Al}_2\text{O}_3 \cdot 2\text{SiO}_2$
or $(\text{Na}, \text{K})_8\text{Al}_8\text{Si}_9\text{O}_{34}$
or $(\text{Na}, \text{K})\text{AlSiO}_4$
3. Particle size of each MINEX product is determined and controlled in day to day production by a Bahco mechanical separator, standardized regularly by Andreasen, Fisher and Sedigraph measurements.

WATER SOLUBILITY DATA:

MINEX, although referred to as an anhydrous alkali aluminum silicate, is actually a complex of silicates wherein the sodium, potassium and other ions are tightly locked and held within the complex. The surface ions of sodium and potassium exert the pH of 9.9, but the majority of alkali ions remain locked within the crystal lattice and are unavailable for solubilization. It is thought that these ions are made available over the long term to stabilize aqueous coatings and offer long-term buffering action, especially helpful in acrylic systems.

The water solubility of MINEX is given as average 265 ppm (0.0265%), determined by slowly pumping distilled water at 295°C and 2500 psi over the bomb-contained sample for 135 days.

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By: 
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