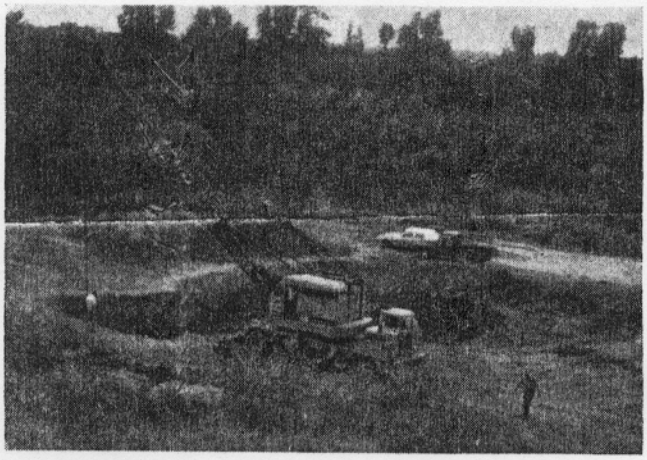
INDUSTRIAL MINERAL PRODUCTS, INC.

PRODUCERS OF
"TRUE ALBANY" SLIP CLAY
AT ALBANY, N.Y.

UNIFORM PROPERTIES **ASSURED SUPPLIES**



Mining "TRUE ALBANY" Slip Clay

Our "TRUE ALBANY" SLIP CLAY pit was opened 70 years ago in the heart of the Albany deposits. These unique glacial-lake clays are wide-spread in the Hudson Valley but clay of uniform properties is limited to a small area in the City of Albany. Reserves for another 50 years are in sight in just one section of our holdings. Mechanical drying equipment insures year around availability of crude clay and large warehouse stocks of airfloated clay are maintained by our sales agents, HAMMILL & GILLESPIE, INC., who will be glad to supply samples and technical assistance.

Typical chemical properties:

SiO_2	57.64%
Al_2O_3	14.66
TiO_2	.80
Fe_2O_3	5.20
CaO	5.78
MgO	2.68
K_2O	3.25
Na_2O	.80
Loss on Ignition @ 1000°C.	9.46
Ba, Sr, Li, Mn, Pb	.13
	100.40

Albany slip clays are low fusion point clays which melt easily to a reddish-brown glass. Their use began early in the 19th Century, slip glazing interior and exterior surfaces of jugs, bean pots, crocks and other familiar household items. In 1873, experimentation began on the use of slip clay as a ceramic bond for emery grinding wheels. As the economy and technology broadened, Albany slip glazing of electrical porcelain, sewerpipe and artware began. The clay continues to be used in the same fields, as well as in the efficient and economical glazing or bonding of carbon products, silicon carbide, thermosetting refractories, refractory castables and mortars.

APPLICATIONS

General application notes:

Smooth, glossy, reddish-brown to black glazes are developed in the Cone 6-12 range. Lead bisilicate will lower the maturing temperature without adversely affecting color. Between 3-5% is generally required for each cone fired below 6. Colemanite and similar additions will also reduce maturing temperatures but color will go to yellow-green. Thick slip glaze applications result in semi-matt effect.

Electrical Porcelain—While slip clay is generally 50-75% of glaze, even 10% as feldspar replacement will improve glaze compressive strength, stabilize color, suspend non-plastics and improve fusibility.

Vitrified Grinding Wheels—A typical aluminum oxide bond includes 50% slip clay. It is especially valuable where high forming pressures are employed.

Silicon Carbide—Low maturing temperature permits bonding without oxidation of the SiC. Good wetting of grain.

Graphite and Carbon Products—Effective protective glaze component.

Refractory Castables and Mortars—Helps preserve bond strength while approaching 2000°F.

Structural Clay Products—Bond, engobe and glaze.

Stoneware and Artware—See general application notes. Coloring oxides create interesting effects, as does varying kiln atmosphere.

Typical physical properties:

Specific Gravity		2.7
pH		6
P.C.E.		3
Temperature at which fusion is complete		1170°C.
Dry screen analysis, ground clay		
% retained	60 mesh	0.00
	120 mesh	1.0 max.
	200 mesh	5.0 max.
Shipping moisture:		
dried lump clay		12% average
ground		3% max.

Mineralogical composition:
Illite, quartz, limonite, chlorite, calcite, dolomite

SALES AGENTS

HAMMILL & GILLESPIE, INC.

P.O. BOX 104
LIVINGSTON, NJ 07039

(201) 994-3650

HAMMILL & GILLESPIE, INC.
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NON METALLIC MINERAL PRODUCTS AND CHEMICALS

NATURAL, PROCESSED AND SYNTHETIC

MATERIAL SAFETY DATA SHEET

To comply with OSHA's Hazard Communication Standard, 29 CFR 1910.1200

SECTION I. IDENTITY OF PRODUCT AND IMPORTER OR PRODUCER

Trade Name: TRUE ALBANY SLIP CLAY
Chemical Name: Hydrous Aluminum Silicate
CAS Number: 1332-58-7

As Marked on Bag: True Albany Slip Clay

Telephone Number:

For Emergency and Information
201/994/3650

Date Prepared: 11/22/85
Prepared By: R. P. Isaacs

SECTION II. HAZARDOUS INGREDIENTS

Total free silica (Quartz) by dry weight: 30%
Much of this is not fine enough to be normally respirable.

See Section VI.

SECTION III. PHYSICAL DATA

Fusion Range: 1160-1175°C
Solubility in Water: Slightly Soluble
Vapor Pressure: Not Applicable
Odor and Appearance: Brown powder, earthy odor

Specific Gravity: 2.6
% Volatile: Below 100°C. None

SECTION IV. FIRE AND EXPLOSION HAZARD DATA: Non-flammable and Non-Hazardous

SECTION V. REACTIVITY DATA

Stability: Stable

Incompatibility (Materials to Avoid): None
Hazardous Polymerization: Will NOT occur

Data, information, and recommendations recorded herein are believed to be accurate. Hammill & Gillespie, Inc. makes no warranty, either expressed or implied, with respect thereto and disclaims all liability from reliance thereon.

(Continued on reverse side)

SECTION VI. HEALTH HAZARD DATA

OSHA Permissable Exposure Limit (PEL): Total Dust mg/m³: 0.90
Respirable Dust* mg/m³: 0.58

*Based upon free silica content

Route of Entry: Inhalation

Effects of Overexposure:
Short Term - Probably no effect other than as a nuisance dust
Long Term - Long term exposure to dust and free silica in concentrations higher than recommended PEL may cause silicosis.

First Aid: Eyes - Flush thoroughly with water. See a physician if irritation persists.

SECTION VII. SPILL, LEAK AND DISPOSAL INFORMATION

Action to be taken in case material is released or spilled:
Clean up and collect, minimizing excessive dust*

Waste disposal method:
Any approved solid waste disposal including burial.*

*Do not exceed recommended PEL - See Section VI.

SECTION VIII. SPECIAL PROTECTION INFORMATION

Respiratory Protection: If dust concentrations exceed recommended Permissable Exposure Limits, use NIOSH approved dust respirators. If spraying coatings use NIOSH approved dust/mist respirators.

Ventilation: Local exhaust or other ventilation that will reduce dust concentrations to less than Permissable Exposure Limits is recommended. Use adequate ventilation if spraying coatings.

Eye Protection: Wear right fitting goggles if high dust concentrations exist.

Other Protective Equipment: Not required.

SECTION IX. SPECIAL PRECAUTIONS

Minimize dust generation and exposure. Do not breathe dust.