

GENERAL NOTES

**ASPHALT CONCRETE, AC-20, WITH VERGLIMIT ADDITIVE:**

The following requirements are added to C.M.S.:

Composition of Mix

1. The basic mix for the pavement shall be as specified for Item 404 - Asphalt Concrete, in the State of Ohio Construction and Material Specifications, except the Contractor shall develop the JMF to comply with the specified composition limits and mix design criteria and submit to the Laboratory for approval prior to the start of production.
2. Aggregate passing the No. 4 Sieve shall be reduced by 5 1/2% of total weight of the mix to compensate for VERGLIMIT addition.
3. To prevent hardening of the mortar, the rate between mineral filler and asphalt cement shall not exceed 1.7:1 by weight in the mix containing VERGLIMIT.

(The asphalt cement content of the basic mix shall remain unchanged if the filler: asphalt cement rate is less than 1.7. If the asphalt cement content is low, it may be raised 0.1 to 0.3% by weight.)

4. The Marshall method\* of mix design shall be used, with the following exceptions:
  - (a) VERGLIMIT shall be added as 5 1/2% by total weight of the mix (Aggregate + Asphalt Cement + Verglimit = 100%).
  - (b) VERGLIMIT, at room temperature, shall be added last in the Laboratory Mix.
  - (c) For the Stability and Flow Test, do not immerse the test specimen in water bath for 1/2 hour before test. Instead, shake the specimen several times under water.
  - (d) Air Voids of the test specimens shall be 2.0-3.0% by Weight.

\*Mix Design Methods for Asphalt Concrete and Other Hot-Mix Types, Manual Series No. 2, Chapter III, published by the Asphalt Institute.

Mix Preparation at Plant

1. VERGLIMIT granules are to be handled with care to keep crushing to a minimum.
2. The sacks of VERGLIMIT shall be stored in a dry place, and shall not be opened until immediately before addition to mix.
3. Goggles, gloves, and breath protective masks shall be used by all workers in direct contact with VERGLIMIT granules.
4. VERGLIMIT shall not be added before a minimum of one-third of the asphalt cement has been added to the mix.
5. The sacks of VERGLIMIT shall be emptied over a sieve with openings of 3/4 inch.
6. VERGLIMIT addition to the mix shall take a minimum of 5 and a maximum of 10 seconds.
7. The following mixing systems may be used: (a) funnel or conveyor belt directly into the pugmill over 3/4" x 3/4" screen; or (b) addition directly over the filler scale. Auger systems shall be avoided.
8. Mixing time after all components have been added shall remain unchanged from normal mixing procedures provided that VERGLIMIT is adequately coated with bitumen; i.e., white granules should not be visible.
9. Temperature of mix shall not exceed 338°F (170°C).

Placing and Compaction

1. VERGLIMIT surfaces shall not be placed at air temperatures less than 50° F or when raining.
2. Compaction of the mix is very important. Densities of drilled cores from the completed pavement shall not be less than:
  - (a) An average of 10 cores at least 97% of maximum theoretical density
  - (b) An individual value of 95%

Fill any porous areas prior to first roller.

3. The rolling procedure shall be (all rollers operated hot and dry):
  - (a) First, use steel wheel roller meeting requirement of 401.11.
  - (b) Second, use rubber tired roller meeting requirement of 409.05.
  - (c) Finish rolling, use tandem roller - 12 tons minimum.
4. No water shall be used at the rollers.
  - (a) Rollers can be wiped with raw linseed oil.
5. The placing temperature of the mix behind the paver shall be between 266°F (136°C). and 302°F (150°C).
6. Immediately after the breakdown roll, the surface shall be seeded with crushed screenings, 703.10, at the approximate rate of 2 lb./sq.yd. Care shall be exercised to prevent marking the new mix with wheel tracks.
7. The asphalt shall be flushed prior to placing traffic in completed lane.

Source of Materials

Verglimit is distributed by:

Verglimit of Ohio  
12304 Fowlers Mill Rd., P.O. Box 134  
Chardon, Ohio 44024-0134

Phone Number: (216) 286-3494

Payment

Payment for accepted quantities of VERGLIMIT pavement, complete in place, will be made at the contract price for:

Item	Unit	Description
404	C.Y.	Asphalt Concrete, AC-20 with Verglimit Additive

which price shall constitute full compensation for all materials, labor, equipment, and tools necessary to complete this item including joint, edge, and porous sealing of pavement and seeding the surface with screenings.



**GENERAL NOTES**

SUPERSTRUCTURE  
BRIDGE NO. LAK-90-2342 (L & R)  
OVER THE GRAND RIVER

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DHT	JPS	JPS	DT	DAP	9/13/89	