

Crystal Data: Orthorhombic. *Point Group:* $2/m\ 2/m\ 2/m$. As irregular aggregates (<1 mm) of mica-like platelets to 40 μm , tabular on {010}.

Physical Properties: *Cleavage:* Perfect {010}. *Fracture:* n.d. *Tenacity:* n.d. *Hardness:* = Soft. *D(meas.)* = n.d. *D(calc.)* = 5.08 Nonfluorescent.

Optical Properties: Translucent. *Color:* Pale greenish yellow to beige. *Streak:* White. *Luster:* Pearly. *Optical Class:* Biaxial. *n(calc.)* = 1.96-1.97

Cell Data: *Space Group:* $Pbnm$. $a = 4.512(5)$ $b = 9.772(8)$ $c = 2.967$ $Z = 4$

X-ray Powder Pattern: Tsumeb, Namibia.

4.089 (100), 2.404 (100), 2.632 (33), 1.690 (26), 2.530 (22), 1.538 (21), 1.478 (16)

| Chemistry: | (1) | (2) |
|--------------------------------|--------|--------|
| Ga ₂ O ₃ | 78.13 | 91.23 |
| Fe ₂ O ₃ | 3.99 | |
| GeO ₂ | 4.01 | |
| ZnO | 0.78 | |
| SiO ₂ | 1.07 | |
| H ₂ O | [8.77] | 8.77 |
| Total | 96.75 | 100.00 |

(1) Tsumeb, Namibia; average of 15 electron microprobe analyses, H₂O calculated; corresponds to (Ga_{0.86}Fe_{0.05}Ge_{0.04}Si_{0.02}Zn_{0.01}) $\Sigma=0.98$ O(OH)_{1.00}. (2) GaO(OH).

Mineral Group: Diaspore group.

Occurrence: In vugs within tennantite-germanite ore from the oxidation zone.

Association: Söhngeite, zincian siderite, chalcocite, tennantite, germanite, quartz.

Distribution: From second oxidation zone of the Tsumeb deposit, Namibia.

Name: Refers to the locality, *Tsumeb*, and *gallium* in the essential chemical composition.

Type Material: Mineralogical Museum, University of Hamburg, Germany.

References: (1) Schlüter, J., K.-H. Klaska, G. Adiwidjaja, and G. Gebbard (2003) Tsumgallite, GaO(OH), a new mineral from the Tsumeb mine, Tsumeb, Namibia. *Neues Jahrb. Mineral. Mon.*, 521-527. (2) (2004) *Amer. Mineral.*, 89, 896 (abs. ref. 1).