Schieffelinite $\mathbf{Pb(Te^{6+}O_4, SO_4)\cdot H_2O}$

©2001-2005 Mineral Data Publishing, version 1

Crystal Data: Orthorhombic. *Point Group:* $2/m\ 2/m\ 2/m$. Crystals are very rare, flattened on {010}, modified by {001}, {320}, {133}; typically platy or scaly, to 1 mm, in random aggregates.

Physical Properties: *Cleavage:* On {010}, easy. Hardness = 2 D(meas.) = 4.98(12) D(calc.) = 5.15

Optical Properties: Transparent to translucent. *Color:* Colorless, milky white. *Luster:* Adamantine.
Optical Class: Biaxial (–). *Orientation:* $X = b$; $Y = c$; $Z = a$. *Dispersion:* $r < v$, weak.
$\alpha = 1.897$ $\beta = 1.940$ $\gamma = 1.942$ 2V(meas.) = 24°

Cell Data: *Space Group: Cmcm.* $a = 9.67$ $b = 19.56$ $c = 10.47$ Z = 16

X-ray Powder Pattern: Joe shaft, Tombstone, Arizona, USA.
9.778 (10), 3.426 (6), 3.250 (6b), 3.560 (5b), 3.338 (5), 3.033 (5), 2.934 (5)

Chemistry:

	(1)
SO_3	6.8
TeO_3	28.6
PbO	58.2
H_2O	4.7
Total	98.3

(1) Joe shaft, Tombstone, Arizona, USA; average of two analyses, H_2O by the Penfield method; corresponds to $Pb_{1.05}(Te_{0.66}S_{0.34})_{\Sigma=1.00}O_4 \cdot 1.06H_2O$.

Occurrence: In the oxidized zone of tellurium-bearing hydrothermal precious metal deposits.

Association: Rodalquilarite, girdite, bromargyrite, gold, pyrite, empressite, goethite, quartz.

Distribution: On the dumps of the Joe shaft and at the Grand Central mine, Tombstone, Cochise Co., Arizona, USA.

Name: To honor Edward Schieffelin (1847–1897), a discoverer of the mines at Tombstone, Arizona, USA.

Type Material: Natural History Museum, Paris, France; The Natural History Museum, London, England, 1980,539; University of Arizona Mineral Museum, Tucson, Arizona; National Museum of Natural History, Washington, D.C., USA, R18474.

References: (1) Williams, S.A. (1980) Schieffelinite, a new lead tellurate-sulphate from Tombstone, Arizona. Mineral. Mag., 43, 771–773. (2) (1981) Amer. Mineral., 66, 219 (abs. ref. 1).

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise without the prior written permission of Mineral Data Publishing.