



Key ESM Reference Articles, 2022

Tox and Hound Medical Treatment

1. Curry, S., Warpinski, G., Ngai, E.Y., “**Tox and Hound – Fellow Friday – Metal Hydrides I**”, May 29, 2021, <https://toxandhound.com/toxhound/ff-metal-hydrides/>
2. Curry, S., Makar, G., Ngai, E.Y., “**Tox and Hound – Fellow Friday – Metal Hydrides II – Phosphine (PH₃)**”, Nov. 19, 2021 <https://toxandhound.com/toxhound/ff-phosphine/>
3. Curry, S., Ngai, E.Y., Gold, J., “**Tox and Hound – Fellow Friday – Metal Hydrides III – Boron Hydrides**”, May 26, 2022 <https://toxandhound.com/?s=Boranes>

Hexachlorodisilane

1. Nguyen, T. T., Huang, Y. W., Yana, O. X., Hua, Y. C., Chen, J.R., Tsai, H.Y., Ngai, E., “**Safe and Efficient Disposal of Hexachlorodisilane Liquid**”, CHEMICAL ENGINEERING TRANSACTIONS, VOL. 90, 2022
2. Lin, Y. J., Liu, C.H., Chin, M.G., Wang, C. C., Wang, S.H., Tsai, H.Y., Chen, J.R., Ngai, E.Y. & Ramachandran R., “**Characterization of Shock Sensitive Deposits from the Hydrolysis of Hexachlorodisilane**”, ACS Omega 2019, 4, 1, 1416–1424, :January 16, 2019, <https://doi.org/10.1021/acsomega.8b03103>
3. Nguyen, T. T., Chin, Y. J., Wang, C. C. Ngai, E., Chen, J.R., Tsai, H.Y. et al, “**Characterization and Control of Energetic Deposits from Hexachlorodisilane in Process Tool Exhaust Lines**”, Journal of Loss Prevention in the Process Industries, Volume 65, May 2020, 10412
4. Ngai, E., Chen, J.R., Tsai, H.Y. et al, “**Disposal of Hexachlorodisilane and Its Hydrolyzed Deposits**”, Journal of Loss Prevention in the Process Industries, Vol. 65, May 2020, 104136
5. Nguyen, T. T., Lin, Y. J., Lin, Z. X., Ngai, E., Chen, J.R., Tsai, H.Y. et al. “**Enhanced Friction and Shock Sensitivities of Hexachlorodisilane Hydrolyzed Deposit Mixed with KOH**”. 13th International Symposium on Hazards, Prevention, and Mitigation of Industrial Explosions Braunschweig, GERMANY – July 27-31, 2020

Disilane

1. Nguyen, T. T., Cao, K. Q., Yang, M. H., Chen, J.R., Tsai, H.Y., Gordon, M., Ngai, E., “**Experimental Studies on Ignition Behavior of Pure Disilane and Its Lower Flammability Limit**”, Chemical Engineering Transactions, Vol. 90, 2022

Silane

1. Ngai, E.Y., Chen, J. R., Huang, P. P., et al, “**Field Tests of Release, Ignition and Explosion from Silane Cylinder Valve and Gas Cabinet**”, Process Safety Progress, Vol 26, No 14, Dec 2007
2. Ngai, E.Y., Chen, J. R., Huang, P. P., et al, “**Experimental Studies on the Ignition Behavior of Pure Silane Released into Air**”, Journal of Loss Prevention in the Process Industries, July 2009
3. Ngai, E.Y., Chen, J. R., Huang, P. P., et al, “**Ignition Characteristics of Steady and Dynamic Release of Pure Silane into Air**”, Combustion, Explosion and Shock Waves Vol. 46, No. 4. July 2010, pp. 391-399
4. Ngai, E. Y. “**Silane Safety**”, Specialty Gas Report, 2nd Qtr 2010
5. Ngai, E., Chen, J.R., et al, “**CGA G-13 Large-Scale Silane Release Tests – Part I. Silane Jet Flame Impingement Tests and Thermal Radiation Measurement**”, Tenth International Symposium on Hazards, Prevention, and Mitigation of Industrial Explosions, Bergen, Norway, 10-14 June 2014
6. Ngai, E., Chen, J.R., et al, “**CGA G-13 Large-Scale Silane Release Test –Part II. Unconfined Silane-Air Explosions**”, Tenth International Symposium on Hazards, Prevention, and Mitigation of Industrial Explosions, Bergen, Norway, 10-14 June 2014
7. Ngai, E. Y., Fuhrhop, R., Chen, J. R.*, Chao, J., Bauwens, C. R., Mjelde, C., Miller, G., Sameth, J., Borzio, J., Telgenhoff, M., Wilson, B., **CGA G-13 Large-Scale Silane Release Tests – Part I. Silane Jet Flame Impingement Tests and Thermal Radiation Measurement**, Journal of Loss Prevention in the Process Industries, Vol 36, July 2015, pp 478-487



8. Ngai, E.Y., Fuhrhop, R., Chen, J. R.*, Chao, J., Bauwens, C. R., Mjelde, C., Miller, G., Sameth, J., Borzio, J., Telgenhoff, M. Wilson, B., **CGA G-13 Large-Scale Silane Release Tests – Part II. Unconfined Silane-Air Explosion**, Journal of Loss Prevention in the Process Industries, Vol 36, July 2015, pp 488-496
9. Ngai, E., Chen, J.R , Tsai, H.Y. et al, **Unconfined Silane-Air Explosions**, 11th International Symposium on Hazards, Prevention and Mitigation of Industrial Explosions, Dalian, China, July 24-29, 2016
2. 28. Ngai, E., Ngai, C. **“Compressed Gas Safety at the University”**, The Journal of Chemical Education Manuscript ID: ed-2020-00138f.R2, American Chemical Society, 2020
<http://dx.doi.org/10.1021/acs.jchemed.0c00138>
3. Nguyen, T. T., Lin, Y. J., Lin, Z. X., Ngai, E., Chen, J.R , Tsai, H.Y. et al , **Enhanced Friction and Shock Sensitivities of Hexachlorodisilane Hydrolyzed Deposit Mixed with KOH**, The Journal of Loss Prevention in the Process Industries, Volume 71, July 2021, 104455

Emergency Response

1. Seaton, M. G., Maier, A., Sachdeva, S., Barton, C., Ngai, E.Y., Lentz, T.J., Rane, P. D., McKernan, L. T., **J_A framework for integrating information resources for chemical emergency management and response**, Journal of Emergency Management, Vol. 17, No. 4, July/August 2019