Definition of 'locked up' on MSDS

Posted by Anonymous on Thu, 2016-09-22 15:06

Definition of "locked up" on MSDS: I am in the process of rearranging our chemical storage area.

When the MSDS notes that a chemical (NaOH in this case) needs to be kept "locked up", can that mean with in a suitable container, inside a locked room? I have a corrosives cabinet, but it contains acids. Also, what material would be best to sit the container in? a specific plastic group?

Many thanks

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Submitted by sat on 05 October 2016

Answer reviewed 24 February 2023

"Locked up" means that it should be stored in a secure place. If your chemical store is a lockable store which cannot be accessed by unauthorised people, then that would satisfy the security requirement. The GHS precautionary statement "P405 Store locked up" is applicable to a range of chemical hazards, including the classification Skin Corrosion/Irritation Category 1A[1] which applies to sodium hydroxide.

Sodium hydroxide is also listed as a Category 3 chemical in illicit drug manufacture.[2] However, the Code of Practice[2] does not specify security measures for Category 3 chemicals (only Category 1 chemicals are required to be stored securely on this basis).

It is essential that your school enforces a policy regarding the security of chemicals, as well as general security in the science area. See our information sheet which considers this topic.[3]

Regarding the other questions that you have raised about the storage of sodium hydroxide, sodium hydroxide is:

- required to be stored in a corrosion resistant container.[4] It is best stored in the container in which it is supplied.
- incompatible with acids.[3] Therefore, it should be stored in your corrosives cabinet with other bases and compatible corrosive chemicals, and segregated from acids. Segregation should ensure that incompatible chemicals do not mix, even if two containers break simultaneously. Spill catchments of incompatible chemicals should be kept separate in all circumstances.
- hygroscopic,[4] which means that it absorbs moisture from the air. Therefore, ensure that the lid is kept tightly closed. It may be stored in a desiccator, ensuring that no incompatible chemicals are stored along with it in the desiccator.

Bunding (secondary containment) is required for corrosive liquids but not normally for corrosive solids. Containers with the plastics identification code 5 - PP (polypropylene) generally have good chemical resistance and are suitable for trays and storage containers that can be used for bunding. These can also assist with the **segregation** of incompatible chemicals by providing an impervious barrier in the event of a container breaking.

Further details regarding the handling and storage of sodium hydroxide can be found in section 7 of the SDS while information on incompatible chemicals can be found in section 10. For general guidance on storage and safe handling of school Science chemicals, see the Science ASSIST Chemical Management Handbook.[5] A previous question on Chemical Storage Timeframes[6] has some helpful information about using desiccators.

References

[1] United Nations, 2017, Globally Harmonized System of Classification and Labelling of Chemicals Revision 7 (GHS 7), https://unece.org/ghs-rev7-2017

[2] Chemistry Australia Website, *Code of Practice for Supply Diversion into Illicit Drug Manufacture*, 2008, https://chemistryaustralia.org.au/safety-environment/code_of_practice_fo...

[3] Science ASSIST website, 2015, Assist Information Sheet: School Science Area Security, AIS: School science area security | ASSIST (asta.edu.au)

[4] ChemSupply Australia website, 2023, *Safety Data Sheet: Sodium hydroxide.* Please search the product information page on the website for the current SDS for Sodium hydroxide https://shop.chemsupply.com.au/

5 Science ASSIST website, 2018, *Chemical Management Handbook for Australian Schools Edition 3,* https://assist.asta.edu.au/resource/4193/chemical-management-handbook-au...

6 Science ASSIST website, 2014, *Question: Chemical Storage Timeframes,* Chemical Storage Timeframes | ASSIST (asta.edu.au)
