

Product Data Sheet

Sodium Hydrosulfide (NaHS) Solution, 45%

Nomenclature	Sodium Hydrosulfide Sodium Hydrogen Sulfide		
Formula	NaSH		
Product Identification Number	UN 2922		
CAS Number	16721-80-5		
Molecular Weight	56.06		
Description	Sodium Hydrosulfide (NaHS) is an economical form of reactive sulfur that is typically a light-yellow colored solution with the accompanying odor of rotten eggs. Hydrogen Sulfide (H ₂ S), a toxic gas, is evolved upon contact of NaHS with acids. NaHS is mildly corrosive to carbon steel and cast iron. Stainless steels are very resistant to corrosion. Copper and its alloys, aluminum and zinc are rapidly attacked. Polyvinyl chloride (PVC) storage systems are to be avoided.		
Available Grades	Technical Grade		
Typical Composition	Parameter	Specification	Test Method
	NaHS (%)	42.5 – 46.5	QCL455
	Na ₂ S (%)	1.5 max.	QCL455
	Na ₂ CO ₃ (%)	0.6 max.	QCL453
Typical Properties	Na ₂ SO ₃ and Na ₂ S ₂ O ₃ (%)	0.6 max.	QCL456
	Specific Gravity (50°C/15.6°C)	1.259 – 1.283	-----
	Density (lb./gal) at 50°C (122°F)	10.5 – 10.7	-----
	Freezing Point	11°C (52°F) - 22°C (72°F)	-----
Shipping Containers	Fe	6 ppm max.	QCL452
	Tank Trailers (22 short tons net weight) ISO Tank Containers (22 to 25 short tons net weight) Rail Tank Cars (92 short tons net weight)		
Uses	Chemical	In manufacture of thio compounds such as thioamides, thiourea, thioglycolic acid, thio and dithiobenzoic acids, and sodium thiosulfate. As an agent to separate or remove heavy metals.	
	Dyes	To apply sulfur dyes to cotton, leather and skins; as a process material in the manufacture of some dyes	
	Leather Processing	As a dehairing agent to produce fine leathers	
	Glass Making	As a fining agent in flint glass	
	Metal Refining	As a floatation aid; to precipitate metals for recovery	

Uses (continued)	Mining	For sulfidizing the ore and as a depressant in flotation circuits
	Plastics Manufacturing	As a process additive in the manufacture of heat resistant thermoplastics for the auto and electric and electronic industries
	Paper Industry	In synthetic cooking liquor for kraft pulp mill start-ups or as a make up chemical for this process
	Textiles	To desulfurize viscose rayon and regenerated viscose