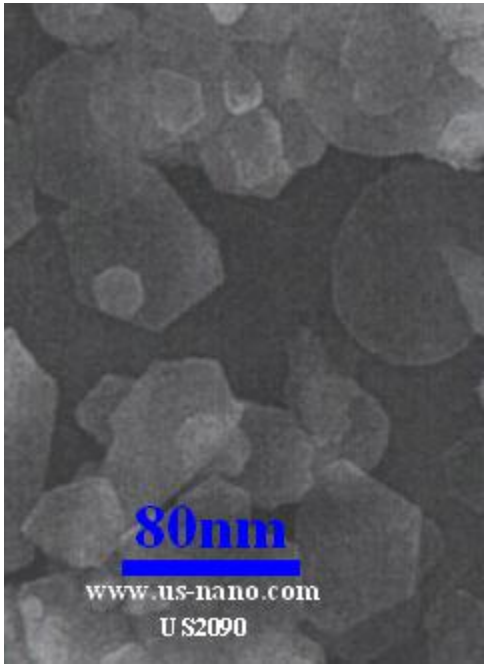
Tungsten Disulfide Nanoparticles (Tungsten (IV) sulfide, WS2, 40-80nm, 99.9+%, Amorphous)

Stock#: US2090

Please click here for price information.



MSDS
X-Ray
Particle Distribution

Details:

Tungsten (IV) sulfide (WS2)
Purity: 99.9+%
APS: 40-80nm
SSA: 80m^2/g
Color: Gray
Crystal Structure: Amorphous
Friction coefficient: 0.03
CAS number: 12138-09-9
True density: 7.5 g/cm^3
Bulk density: 0.25 g/cm^3

W	S	Al	As	Cl	Cu	Fe	Ni	P	Si	O
74.12%	25.82%	10ppm	20ppm	300ppm	20ppm	50ppm	20ppm	20ppm	30ppm	20ppm

Properties and Applications:

Tungsten(IV) sulfide is the chemical compound with the formula WS_2. It occurs naturally as the rare mineral called tungstenite. This material is a component of certain catalysts used for hydrodesulfurization and hydrodenitrification. WS_2 adopts a layered structure related to MoS_2, with W atoms situated in trigonal prismatic coordination sphere.

WS2 nanoparticles is a very good performance of new solid lubricant materials, not only for general lubrication, also it can be used in the work environment of high temperature, high pressure, high vacuum, high load and with radiation and corrosive media; WS2 cluster within the cluster produce magnetic alignment, lubrication process can be better adsorbed on the metal surface to form a layer of nano

US Research Nanomaterials, Inc.
3302 Twig Leaf Lane, Houston, TX 77084, USA
Phone: (Sales) 832-460-3661; (Shipping) 832-359-7887 **Fax**: 281-492-8628
E-mail: Service@us-nano.com; Tech@us-nano.com

protective lubricating film; WS2 has a very small friction coefficient (about 0.03), therefore it can be used as additives in the metal powder to obtain a stable friction coefficient; nanoscale WS2 has good resistance to oxidation, it can be used as additives to lubricating oil (grease) effectively to improve lubricants (grease) and extreme pressure properties and antiwear properties; Adding nanoscale WS2 In the casting process can make cast metal have a certain self-lubricating properties and have an excellent adsorption capacity on the metal surface.

WS2 nanoparticles are mainly used for oil catalysts, they are a new highly efficient catalyst, and it can be used as solid lubricants, dry film lubricants, self-lubricating composite materials; WS2 nanoparticles is to create high-performance lubricant additives; WS2 nanoparticle can be used as fuel cells of the anode, organic electrolyte battery anode, the oxidation of sulfur dioxide in strong acid in the anode and the anode sensor; WS2 nanoparticle is used to make nano-ceramic composites; WS2 nanoparticle is a good semiconductor material.

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