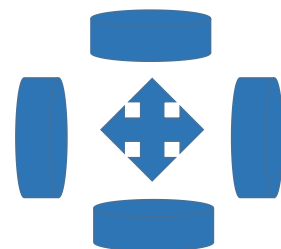


CHALCOGENIDE & PHOSPHOROUS MATERIALS

- [Chalcogenide Compound Materials..... VI 03](#)
- [Phosphorous Compound Materials..... VI 07](#)



VI HALBLEITERMATERIAL manufactures an entire series of Sulfides, Selenides, Tellurides, Phosphides, Arsenides, Antimonides and other intermetallics for semiconductor applications, integrated circuit, and flat panel display technologies.

PURITY & PHYSICAL SPECIFICATIONS

We supply high purity Chalcogenide materials, the purity between 99.99%-99.99999% (Purity is based on spectrographic values of trace metals found, Carbon and Sulfur are not included in the analysis but can possibly be determined if needed), Various shapes for customer's choice.



CERTIFICATION

All items are shipped with an analysis certificate. The analysis is specific to the actual lot of material being sent and not a "typical analysis", unless specifically stated.

All dangerous materials are shipped attached by a Material Safety Data Sheet (MSDS).



CUSTOM MANUFACTURING

The purity and physical specification listed are most commonly used, However Funcmater can offer a variety of grades and purities of compounds to optimally fit your needs.

Whether your research focuses on sensors, optoelectronics, photovoltaics or biomedical applications, VI HALBLEITERMATERIAL is your source.

Chalcogenide Compound Materials



Sulfide Materials

CHEMICAL NAME	FORMULA	CAS No.	PURITY	PHYSICAL SPECIFICATIONS
Sulfur	S	7704-34-9	99.99%-99.9999%	Granules, Lumps, Powder
Antimony(III) Sulfide	Sb ₂ S ₃	1345-04-6	99.99%-99.9999%	lumps, powder
Arsenic(III) Sulfide	As ₂ S ₃	1303-33-9	99.99%-99.999%	lumps, powder
Barium Sulfide	BaS	21109-95-5	99.9%	powder
Bismuth(III) Sulfide	Bi ₂ S ₃	1345-07-9	99.99%-99.9999%	powder
Boron Sulfide	B ₂ S ₃	12007-33-9	99.9%	powder
Cadmium Sulfide	CdS	1306-23-6	99.99%-99.9999%	lumps, powder
Calcium Sulfide	CaS	20548-54-3	99.9%	powder
Cerium Sulfide	Ce ₂ S ₃	12014-93-6	99.9%	powder
Cobalt(II) Sulfide	CoS	1317-42-6	99.9%-99.99%	powder
Cobalt(IV) Sulfide	CoS ₂	12013-10-4	99.9%-99.99%	powder
Copper(I) Sulfide	Cu ₂ S	22205-45-4	99.99%-99.999%	lumps, powder
Copper(II) Sulfide	CuS	1317-40-4	99.99%-99.999%	lumps, powder
Europium Sulfide	EuS	12020-65-4	99.9%	powder
Gadolinium Sulfide	Gd ₂ S ₃	12134-77-9	99.9%	powder
Gallium(II)Sulfide	GaS	12024-10-1	99.99%-99.9999%	powder
Gallium(III) Sulfide	Ga ₂ S ₃	12024-22-5	99.99%-99.9999%	powder
Germanium(II) Sulfide	GeS	12025-32-0	99.99%-99.999%	powder
Germanium Disulfide	GeS ₂	12025-34-2	99.99%-99.999%	powder
Hafnium Disulfide	HfS ₂	18855-94-2	99.9%	powder
Holmium Sulfide	Ho ₂ S ₃	12162-59-3	99.9%	powder

Indium(III) Sulfide	In ₂ S ₃	12030-24-9	99.99%-99.9999%	lumps, powder
Indium(II) Sulfide	InS	12030-14-7	99.99%-99.9999%	lumps, powder
Ferrous sulfide	FeS	1317-37-9	99.99%-99.999%	powder
Iron Sulfide / PYRITE	FeS ₂	1309-36-0	99.99%-99.999%	powder
Lanthanum Sulfide	La ₂ S ₃	12031-49-1	99.9%	powder
Lead(II) Sulfide	PbS	1314-87-0	99.99%-99.9999%	lumps, powder
Lithium Sulfide	Li ₂ S	12136-58-2	99.9%	powder
Lutetium Sulfide	Lu ₂ S ₃	12031-49-1	99.9%	powder
Magnesium Sulfide	MgS	12032-36-9	99.9%	powder
Mercury(II) Sulfide	HgS	1344-48-5	99.99%-99.999%	powder
Neodymium Sulfide	Nd ₂ S ₃	12035-32-4	99.9%	powder
Nickel(II) Sulfide	NiS	16812-54-7	99.9%-99.99%	powder
Nickel(IV) Disulfide	NiS ₂	12035-51-7	99.9%-99.99%	lumps, powder
Niobium Disulfide	NbS ₂	12136-97-9	99.9%	powder
Praseodymium Sulfide	Pr ₂ S ₃	12038-13-0	99.9%	powder
Samarium Sulfide	Sm ₂ S ₃	12067-22-0	99.9%	powder
Scandium Sulfide	Sc ₂ S ₃	12166-29-9	99.9%	powder
Silicon(IV)Sulfide	SiS ₂	13759-10-9	99.99%-99.999%	powder
Silver Sulfide	Ag ₂ S	21548-73-2	99.99%-99.999%	lumps, powder
Strontium Sulfide	SrS	1314-96-1	99.9%	powder
Tantanium Disulfide	TaS ₂	12143-72-5	99.9%-99.99%	powder
Terbium Sulfide	Tb ₂ S ₃	12138-11-3	99.9%	powder
Thulium Sulfide	Tm ₂ S ₃	12166-30-2	99.9%	powder
Tin Disulfide	SnS ₂	1315-01-1	99.99%-99.999%	powder
Tin(II) Sulfide	SnS	1314-95-0	99.99%-99.999%	powder
Titanium(IV) Sulfide	TiS ₂	12039-13-3	99.95%	powder
Ytterium Sulfide	Y ₂ S ₃	12039-19-9	99.9%	powder
Zirconium Sulfide	ZrS ₂	12039-15-5	99.9%	powder



Selenide Materials

CHEMICAL NAME	FORMULA	CAS No.	PURITY	PHYSICAL SPECIFICATIONS
Selenium	Se	7782-49-2	99.999%-99.9999%	Powder, Shots
Arsenic(III) Selenide	As ₂ Se ₃	1303-36-2	99.99%-99.9999%	lumps, powder
Barium Selenide	BaSe	1304-39-8	99.9%	powder
Bismuth(III) Selenide	Bi ₂ Se ₃	12068-69-8	99.99%-99.9999%	lumps, powder

Cadmium Selenide	CdSe	1306-24-7	99.99%-99.9999%	lumps, powder
Calcium Selenide	CaSe	1305-84-6	99.9%	powder
Cobalt Selenide	CoSe	1307-99-9	99.95%	powder
Copper(I) Selenide	Cu ₂ Se	20405-64-5	99.99%-99.9999%	lumps, powder
Copper(II) Selenide	CuSe	1317-41-5	99.99%-99.9999%	lumps, powder
Gallium(III) Selenide	Ga ₂ Se ₃	12024-24-7	99.99%-99.9999%	lumps, powder
Gallium(II) Selenide	GaSe	12024-11-2	99.99%-99.9999%	lumps, powder
Germanium(II) Selenide	GeSe	12065-10-0	99.99%-99.9999%	lumps, powder
Germanium(IV) Selenide	GeSe ₂	12065-11-1	99.99%-99.9999%	lumps, powder
Indium(III) Selenide	In ₂ Se ₃	12056-07-4	99.99%-99.9999%	lumps, powder
Iron Selenide	FeSe	1310-32-3	99.99%-99.999%	powder
Lead(II) Selenide	PbSe	12069-00-0	99.99%-99.9999%	lumps, powder
Magnesium Selenide	MgSe	1313-04-8	99.9%	powder
Manganese(II) Selenide	MnSe	1313-22-0	99.9%	lumps, powder
Mercury Selenide	HgSe	20601-83-6	99.99%-99.999%	powder
Molybdenum(IV) Selenide	MoSe ₂	12058-18-3	99.9%-99.99%	lumps, powder
Nickel(II) Selenide	NiSe	1314-05-2	99.9%-99.99%	lumps, powder
Niobium(IV) Selenide	NbSe ₂	12034-77-4	99.9%-99.99%	lumps, powder
Silver(I) Selenide	Ag ₂ Se	1302-09-6	99.99%-99.999%	powder
Sodium Selenide	Na ₂ Se	1313-85-5	99.9%	powder
Tantalum Selenide	TaSe ₂	12039-55-3	99.9%	powder
Tin Selenide	SnSe	1315-06-6	99.99%-99.9999%	lumps, powder
Tin(IV)Selenide	SnSe ₂	20770-09-6	99.99%-99.9999%	lumps, powder
Tungsten(IV) Selenide	WSe ₂	12067-46-8	99.99%	lumps, powder
Zirconium Selenide	ZrSe ₂	12166-47-1	99.95%	powder



Telluride Materials

CHEMICAL NAME	FORMULA	CAS No.	PURITY	PHYSICAL SPECIFICATIONS
Antimony(III) Telluride	Sb ₂ Te ₃	1327-50-0	99.99%-99.9999%	lumps, powder
Arsenic(III) Telluride	As ₂ Te ₃	12044-54-1	99.99%-99.9999%	lumps, powder
Bismuth(III) Telluride	Bi ₂ Te ₃	1304-82-1	99.99%-99.9999%	lumps, powder
Cadmium Telluride	CdTe	1306-25-8	99.99%-99.9999%	lumps, powder
Calcium Telluride	CaTe	12013-57-9	99.9%	powder
Chromium Telluride	Cr ₂ Te ₃	12053-39-3	99.9%-99.99%	powder

Cobalt Telluride	CoTe	12017-13-9	99.95%	powder
Copper(I) Telluride	Cu ₂ Te	12019-52-2	99.99%-99.9999%	lumps, powder
Copper(II) Telluride	CuTe	12019-23-7	99.99%-99.9999%	lumps, powder
Gallium(II) Telluride	GaTe	12024-14-5	99.99%-99.9999%	lumps, powder
Germanium(II) Telluride	GeTe	12025-39-7	99.99%-99.9999%	lumps, powder
Germanium Telluride	GeTe ₂	12260-55-8	99.99%-99.9999%	lumps, powder
Hafnium Telluride	HfTe ₂	39082-23-0	99.95%	powder
Indium(III) Telluride	In ₂ Te ₃	1312-45-4	99.99%-99.9999%	lumps, powder
Indium Telluride	InTe		99.99%-99.9999%	lumps, powder
Lead(II) Telluride	PbTe	1314-91-6	99.99%-99.9999%	lumps, powder
Manganese Telluride	MnTe	12032-88-1	99.99%	lumps, powder
Mercury(II) Telluride	HgTe	12068-90-5	99.99%-99.9999%	lumps, powder
Molybdenum(IV)Telluride	MoTe ₂	12058-20-7	99.95%	powder
Nickel Telluride	NiTe	12142-88-0	99.99%	lumps, powder
Niobium Telluride	NbTe ₂	12034-83-2	99.99%	lumps, powder
Silver Telluride	Ag ₂ Te	12002-99-2	99.99%-99.9999%	lumps, powder
Sodium Telluride	Na ₂ Te	12034-41-2	99.9%	powder
Tin(II) Telluride	SnTe	12040-02-7	99.99%-99.9999%	lumps, powder
Tin Telluride	SnTe ₂		99.99%-99.9999%	lumps, powder
Tungsten(IV) Telluride	WTe ₂	12067-76-4	99.99%	lumps, powder
Zinc Telluride	ZnTe	1315-11-3	99.99%-99.9999%	lumps, powder



Phosphorous Compound Materials



P

Phosphide Materials

CHEMICAL NAME	FORMULA	CAS No.	PURITY	PHYSICAL SPECIFICATIONS
Cadmium Phosphide	Cd_3P_2	12014-28-7	99.99%-99.9999%	lumps, powder
Zinc Phosphide	Zn_3P_3	1314-84-7	99.99%-99.9999%	lumps, powder
Cobalt Phosphide	Co_2P	12134-02-0	99.9%	lumps, powder
Molybdenum Phosphide	MoP	12163-69-8	99.9%	lumps, powder
Iron Phosphide	Fe_3P	12023-53-9	99.9%	lumps, powder
Iron Phosphide	Fe_2P	1310-43-6	99.9%	lumps, powder
Nickel Phosphide	Ni_2P	12035-64-2	99.9%	lumps, powder



As

Arsenic Materials

CHEMICAL NAME	FORMULA	CAS No.	PURITY	PHYSICAL SPECIFICATIONS
Gallium Arsenic	GaAs	1303-00-0	99.99%-99.9999%	lumps, powder
Indium Arsenic	InAs	1303-11-3	99.99%-99.9999%	lumps, powder

Sb

Antimonide Materials

CHEMICAL NAME	FORMULA	CAS No.	PURITY	PHYSICAL SPECIFICATIONS
Cadmium Antimonide	CdSb	12050-27-0	99.99%-99.9999%	lumps, powder
Gallium Antimonide	GaSb	12064-03-8	99.99%-99.9999%	lumps, powder
Indium Antimonide	InSb	1312-41-0	99.99%-99.9999%	lumps, powder
Germanium Antimonide	GeSb		99.99%-99.9999%	lumps, powder
Cobalt Antimonide	CoSb	12052-42-5	99.95%	lumps, powder

O

Other Materials

CHEMICAL NAME	FORMULA	CAS No.	PURITY	PHYSICAL SPECIFICATIONS
Cadmium Stannate	Cd ₂ SnO ₄	12185-56-7	99.99%-99.9999%	powder
Sodium Tellurite	Na ₂ O ₃ Te	10102-20-2	99.9%-99.99%	powder
Potassium Tellurite	K ₂ O ₃ Te	123333-66-4	99.9%-99.99%	powder
Indium Acetate	In(C ₂ H ₃ O ₂) ₃	25114-58-3	99.99%-99.9999%	powder
Lead Acetate	(CH ₃ COO) ₂ Pb	301-04-2	99.99%	powder
Cadmium Acetate	Cd(CH ₃ CO ₂) ₂	543-90-8	99.99%	powder
Zinc Acetate	C ₄ H ₁₀ O ₆ Zn	557-34-6	99.99%	powder
Gallium Acetate	C ₆ H ₉ GaO ₆	2571-06-4	99.99%	powder
Bismuth Acetate	C ₆ H ₉ BiO ₆	22306-37-2	99.99%	powder



Bi

Bismuth Compound Materials

CHEMICAL NAME	FORMULA	CAS No.	PURITY	PHYSICAL SPECIFICATIONS
Bismuth metal	Bi	7440-69-9	99.9%-99.99%	Pellets, powder, Beads, Needles, Sputtering Target
Bismuth oxide	Bi ₂ O ₃	1304-76-3	99.9%-99.999%	Powder
Bismuth nitrate pentahydrate	Bi(NO ₃) ₃ ·5H ₂ O	10035-06-0	≥99.9%	Crystalline Powder
Bismuth nitrate oxide	BiNO ₄	10361-46-3	71.5%-74.5%	Powder
Bismuth subcarbonate	CBi ₂ O ₅	5892-10-4	80.0%-82.5%	Powder
Bismuth hydroxide	Bi(OH) ₃	10361-43-0	79.5%-82.5%	Powder
Bismuth oxychloride	BiClO	7787-59-9	≥79.0%	Crystalline powder
Bismuth trichloride	BiCl ₃	7787-60-2	≥99.9%	Crystal
Bismuth sulfate	Bi ₂ (SO ₄) ₃	7787-68-0	≥98.0%	Crystal or powder
Bismuth(III) fluoride	BiF ₃	7787-61-3	≥99.0%	Crystal
Bismuth(III) citrate	C ₆ H ₅ BiO ₇	813-93-4	50.0%-53.0%(Bi)	Powder
Bismuth octoate	Bi[OOCCH(C ₂ H ₅)C ₄ H ₉] ₃	67874-71-9	≥20.0%(Bi)	Liquid
Bismuth,2-hydroxypropanoate	C ₉ H ₁₅ BiO ₉	6591-53-3	8%(Bi)	Powder/Liquid
Bismuth neodecanoate	C ₃₀ H ₅₇ BiO ₆	34364-26-6	16.0%-20.0%(Bi)	Liquid
Naphthenicacids, bismuthsalts		85736-59-0	≥99.0%	Liquid

