TMIn SSG

Trimethylindium

TMIn SSG is a solid indium precursor (Select Semiconductor Grade) for the deposition of compound semiconductors.

CAS number
3385-78-2

EINECS/ELINCS No.
222-200-9

TSCA status
listed on inventory

Molecular weight
159.9

Molecular formula
$(CH_3)_3In$

Characteristics

Appearance	White crystalline solid
Boiling point	88 °C
Density, 30 °C	1.568 g/cm^3
Melting point	134 °C
Solubility	Soluble in aromatic and saturated aliphatic and cycloaliphatic hydrocarbons
Stability to air	Ignites upon exposure
Stability to water	Reacts violently, may ignite upon contact

Vapor Pressure

at 10 °C / 283.15 K	3.45 torr
at 30 °C / 303.15 K	19.35 torr
A	3204
B	10.98
Gas constants	log P(torr) = B-A/T(K)

Notes:
Nouryon uses leading edge processes, purification and transfilling techniques that ensure the repeatable and consistent delivery of our TMIn SSG in each cylinder that we supply. We apply state of the art techniques such as ICP-OES for trace metal analyses to meet your demands. Please contact us for detailed sales specifications.

Applications

TMI SSG is used as a high quality solid indium precursor for the deposition of compound semiconductors which are used in applications such laser diodes, sensors (VCSEL), light emitting diodes (LED) and concentrated photovoltaic cells (CPV). Trimethylindium is solid high purity metalorganic. To guarantee a consistent molar flow concentration and high utilization of the cylinder content, we have developed a unique and patented technology delivery technology called the Hiperquad. Check out our cylinders and equipment page to learn more about this technology.

Storage

TMIn SSG is stable when stored under a dry, inert atmosphere and away from heat. CAUTION: TMIn SSG may undergo exothermic decomposition with gas evolution at elevated temperatures (see section on safety and handling).

Packaging and transport

Containers are fabricated from stainless steel with an electropolished internal finish and are equipped with dip tube for top discharge and diaphragm valves. The diaphragm valves are equipped with metal gasket face seal connections such as Swagelok® VCR®. TMIn SSG is classified as Organometallic substance, solid, pyrophoric, water-reactive, class 4.2.

UN number	3393
Packaging group	I

Safety and handling

TMIn SSG ignites upon exposure to air and reacts violently with water. Water must be scrupulously removed from process equipment prior to putting it into metal alkyls service. Failure to do so may result in an explosion. At elevated temperatures TMIn will undergo exothermic decomposition with evolution of extremely flammable gas. Products of complete combustion of TMIn SSG are indium oxide, carbon dioxide and water. TMIn SSG causes severe burns to the skin eyes. It is imperative that proper personal protective equipment be worn when handling TMIn SSG. Please refer to the Material Safety Data Sheet (MSDS) for further information on the safe storage, use and handling of TMIn SSG. This information should be thoroughly reviewed prior to acceptance of this product. The MSDS is available at https://hpmo.nouryon.com.

Contact Us

Europe, Middle East, India and Africa
polymerchemistry.nl@nouryon.com

Asia Pacific
polymerchemistry.ap@nouryon.com

Americas
polymerchemistry.na@nouryon.com

Nouryon