

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
(CH₃)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 as 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

TMI SSG is stable when stored under a dry, inert atmosphere and away from heat. CAUTION: TMI 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®. TMI SSG is classified as Organometallic substance, solid, pyrophoric, water-reactive, class 4.2.

UN number	3393
Packaging group	I

Safety and handling

TMI 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 TMI SSG will undergo exothermic decomposition with evolution of extremely flammable gas. Products of complete combustion of TMI SSG are indium oxide, carbon dioxide and water. TMI SSG causes severe burns to the skin eyes. It is imperative that proper personal protective equipment be worn when handling TMI SSG. Please refer to the Material Safety Data Sheet (MSDS) for further information on the safe storage, use and handling of TMI SSG. This information should be thoroughly reviewed prior to acceptance of this product. The MSDS is available at <https://hpmo.nouryon.com>.

All information concerning this product and/or suggestions for handling and use contained herein are offered in good faith and are believed to be reliable. Nouryon, however, makes no warranty as to accuracy and/or sufficiency of such information and/or suggestions, as to the product's merchantability or fitness for any particular purpose, or that any suggested use will not infringe any patent. Nouryon does not accept any liability whatsoever arising out of the use of or reliance on this information, or out of the use or the performance of the product. Nothing contained herein shall be construed as granting or extending any license under any patent. Customer must determine for himself, by preliminary tests or otherwise, the suitability of this product for his purposes. The information contained herein supersedes all previously issued information on the subject matter covered. The customer may forward, distribute, and/or photocopy this document only if unaltered and complete, including all of its headers and footers, and should refrain from any unauthorized use. Don't copy this document to a website.

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