

Product Data Sheet

TEGa SSG

Product description Triethylgallium, select semiconductor grade

Molecular formula	: (C ₂ H ₅) ₃ Ga
Molecular weight	: 156.9
CAS No.	: 1115-99-7
EINECS/ELINCS No.	: 214-232-7
TSCA status	: listed on inventory

TEGa SSG is used as a high quality Ga precursor for the deposition of compound semiconductors which are used in applications such as light emitting diodes, laser diodes, high performance transistors and highly efficient solar cells. TEGa SSG is mainly used in processes with lower deposition temperatures.

Specifications

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

Characteristics

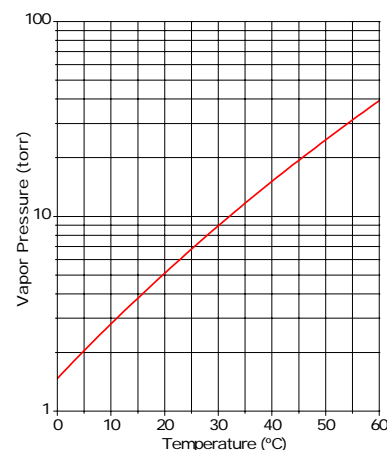
Appearance	: clear, colorless liquid
Density, 30°C	: 1.059 g/ml
Melting point	: -82°C
Boiling point	: 143°C
Stability to air	: ignites upon exposure
Stability to water	: reacts violently, may ignite upon contact
Solubility	: soluble in aromatic and saturated aliphatic and cycloaliphatic hydrocarbons

Vapor pressure

at 10°C (283.15 K)	: 2.80 torr
at 20°C (293.15 K)	: 5.10 torr

Gas constants: $\log P(\text{torr}) = B - A/T(\text{K})$

A	: 2162
B	: 8.083



Storage

TEGa SSG is stable when stored under a dry, inert atmosphere and away from heat. CAUTION: TEGa 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®.

For more information please refer to our Cylinder Offerings brochure, available at www.akzonobel.com/hpmo, or contact your AkzoNobel sales representative.

Both packaging and transport meet the international regulations.

TEGa SSG is classified as Organometallic substance, liquid, pyrophoric, water-reactive; Class 4.2; UN 3394; PG I.

Safety and handling

TEGa 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, TEGa SSG will undergo exothermic decomposition with evolution of extremely flammable gasses. Products of complete combustion of TEGa SSG are gallium oxide, carbon dioxide and water. TEGa SSG causes severe burns to the skin and eyes. It is imperative that proper personal protective equipment be worn when handling TEGa SSG.

Please refer to the Material Safety Data Sheet (MSDS) for further information on the safe storage, use and handling of TEGa SSG. This information should be thoroughly reviewed prior to acceptance of this product.

The MSDS is available at www.akzonobel.com/hpmo.

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