Product Data Sheet

TMGa SSG

Product description

Trimethylgallium, Select Semiconductor Grade

Molecular formula	: $(CH_3)_3Ga$
Molecular weight	: 114.8
CAS No.	: 1445-79-0
EINECS/ELINCS No.	: 215-897-6
TSCA status	: listed on inventory

TMGa SSG is used as a Ga precursor for the deposition of III/V semiconductors which are used in applications such as light emitting diodes, laser diodes, high performance transistor and high efficiency solar cell.

Specifications

AkzoNobel uses leading edge processes, purification and transfilling techniques that ensure the repeatable and consistent delivery of our TMGa 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

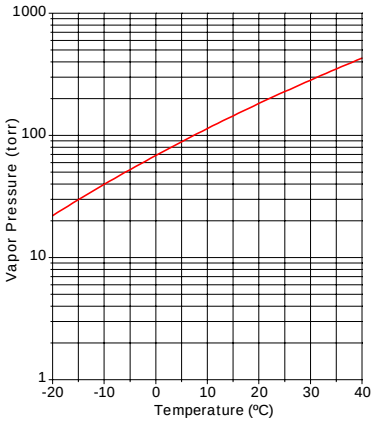
Appearance	: clear, colorless liquid
Density, 20°C	: 1.151 g/ml
Melting point	: -16°C
Viscosity, 20°C	: 0.7 mPa.s
Boiling point, 760 torr	: 56°C
Stability to air	: ignites upon exposure
Stability to water	: reacts violently, may ignite upon contact
Solubility	: soluble in aromatic and saturated aliphatic and cycloaliphatic hydrocarbons

Vapor pressure

at 10°C (283.15 K)	: 113.6 torr
at 15°C (288.15 K)	: 144.5 torr

Gas constants: log P(torr)=B-A/T(K)

A	: 1703
B	: 8.07



Storage

TMGa SSG is stable when stored under a dry, inert atmosphere and away from heat. CAUTION: TMGa SSG may undergo exothermic decomposition with gas evolution at elevated temperatures (see section on Safety and handling). Thermal decomposition products include methane and an amorphous solid containing > 50% Gallium.

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 standard VCR connections.

For more information please refer to our Cylinder Offerings leaflet, available at www.akzonobel.com/hpmo.
Both packaging and transport meet the international regulations.

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

Safety and handling

TMGa 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. If heated above 120°C (248°F), TMGa SSG will undergo exothermic decomposition with evolution of flammable gas. Products of complete combustion of TMGa SSG are gallium oxide, carbon dioxide and water. TMGa SSG causes severe burns to the skin and eyes. It is imperative that proper personal protective equipment be worn when handling TMGa SSG.

Please refer to the Material Safety Data Sheet (MSDS) for further information on the safe storage, use and handling of TMGa 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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