

# TMGa SSG

## Trimethylgallium

TMGa SSG is a gallium precursor (Select Semiconductor Grade) for the deposition of III/V semiconductors.

CAS number  
1445-79-0

EINECS/ELINCS No.  
215-897-6

TSCA status  
listed on inventory

Molecular weight  
114.8

### Characteristics

Appearance	Clear, colorless liquid
Boiling point, 760 torr	56 °C
Density, 20 °C	1.151 g/cm <sup>3</sup>
Melting point	-16 °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
Viscosity, 20 °C	0.7 mPa.s

### Vapor Pressure

at 10 °C / 283.15 K	113.6 torr
at 15 °C / 288.15 K	144.5 torr
A	1703
B	8.07
Gas constants	$\log P(\text{torr}) = B - A/T(K)$

## Applications

TMGa SSG is used as a gallium precursor for the deposition of compound semiconductors which are used in applications such as light emitting diodes (LED), laser diodes, sensors (VCSEL), HBT transistors, power devices (GaN on Si) and concentrated photovoltaic cells (CPV). The trimethylgallium is supplied in cylinders made from stainless steel with an electropolished internal finish. The cylinders are equipped with dip tube and diaphragm valves. The diaphragm valves are equipped with metal gasket VCR-connections.

## 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 [hpmo.nouryon.com](http://hpmo.nouryon.com). 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

## Additional information

Nouryon 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.

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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The logo for Nouryon, featuring a stylized blue 'N' followed by the word 'ouryon' in a blue sans-serif font.