

## Product Data Sheet

# Cp<sub>2</sub>Mg SSG

**Product description** Bis(cyclopentadienyl)magnesium, select semiconductor grade

Molecular formula	: (C <sub>5</sub> H <sub>5</sub> ) <sub>2</sub> Mg
Molecular weight	: 154.4
CAS No.	: 1284-72-6
EINECS/ELINCS No.	: not registered
TSCA status	: listed on inventory

Cp<sub>2</sub>Mg SSG is used as a high quality Mg precursor for the deposition of compound semiconductors and commonly applied as dopant in GaN based material systems.

**Specifications** AkzoNobel uses leading edge processes, purification and transfilling techniques that ensure the repeatable and consistent delivery of our Cp<sub>2</sub>Mg 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.

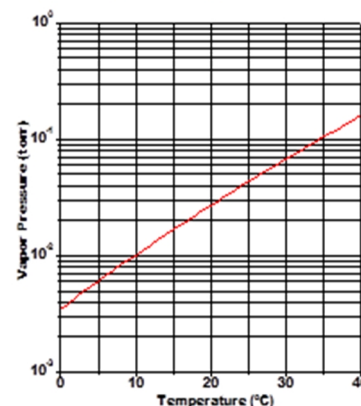
**Characteristics**

Appearance	: yellow crystalline solid
Density, 20°C	: 1.1 g/ml
Melting point	: 176°C
Boiling point, 760 torr	: >300°C (decomposes)
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)	: 0.010 torr
at 20°C (293.15 K)	: 0.027 torr

Gas constants:  
 $\log P(\text{torr}) = B - A/T(K) - 2.18 \ln T(K)$   
 A : 4198  
 B : 25.14



## Storage

Cp<sub>2</sub>Mg SSG is stable when stored under a dry, inert atmosphere and away from heat. CAUTION: Cp<sub>2</sub>Mg 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 leaflet, available at [www.akzonobel.com/hpmo](http://www.akzonobel.com/hpmo). Both packaging and transport meet the international regulations.

Cp<sub>2</sub>Mg SSG is classified as Organometallic substance, solid, pyrophoric, water-reactive; Class 4.2; UN 3393; PG I.

## Safety and handling

Cp<sub>2</sub>Mg 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 elevated temperature, Cp<sub>2</sub>Mg SSG will undergo exothermic decomposition with evolution of flammable gas. Products of complete combustion of Cp<sub>2</sub>Mg SSG are magnesium oxide, carbon dioxide and water. Cp<sub>2</sub>Mg SSG causes severe burns to the skin and eyes. It is imperative that proper personal protective equipment be worn when handling Cp<sub>2</sub>Mg SSG.

Please refer to the Material Safety Data Sheet (MSDS) for further information on the safe storage, use and handling of Cp<sub>2</sub>Mg SSG. This information should be thoroughly reviewed prior to acceptance of this product.

The MSDS is available at [www.akzonobel.com/hpmo](http://www.akzonobel.com/hpmo).

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