

# DEZn TCO

## Diethylzinc

DEZn TCO is a zinc precursor, specifically developed to serve the needs of the solar cell and display industry.

CAS number  
557-20-0

EINECS/ELINCS No.  
209-161-3

TSCA status  
listed on inventory

Molecular weight  
123.5

### Characteristics

Appearance	Liquid
Boiling point, 760 torr	118 °C
Density, 30 °C	1.198 g/cm <sup>3</sup>
Melting point	-30 °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	6.79 torr
at 20 °C / 293.15 K	12.2 torr
A	2109
B	8.28
Gas constants	$\log P(\text{torr}) = B - A/T(K)$

### Thermochemical properties

Heat of vaporization $\Delta H_v$ , 118 °C	326 J/g (78 cal/g)
Heat of hydrolysis, 25 °C	2117 J/g (506 cal/g)
Specific heat, 57 °C	1.502 J/g.°C (0.359 cal/g.°C)
Heat of formation $\Delta H_f^\circ$ , 25 °C / 1 bar	17 kJ/mole (4 kcal/mole)
Heat of combustion $\Delta H_c^\circ$ , 25 °C	-3364 kJ/mole (-804 kcal/mole)

## Applications

Our DEZn TCO product grade is specifically developed to serve the needs of the solar cell and display industry. DEZn TCO is used to create the TCO (transparent conductive oxide) layer in thin film solar cells and other thin film processes.

## Storage

DEZn TCO is stable when stored under a dry, inert atmosphere and away from heat. CAUTION: DEZn TCO may undergo violent exothermic decomposition with flammable gas evolution if stored at temperatures above 70°C (158°F) (see section on Safety and handling).

## Packaging and transport

Containers are fabricated from carbon steel and are equipped with dip tubes for top discharge. Valves are equipped with standard VCR connections. For more information please refer to our Cylinder Offerings leaflet, available at [www.Nouryon.com/hpmpo](http://www.Nouryon.com/hpmpo). Both packaging and transport meet the international regulations. DEZn TCO 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 DEZn TCO 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 Nouryon logo consists of a stylized orange 'N' followed by the word 'ouryon' in a lowercase, sans-serif font, all in orange.