

# VOC Decomposition Catalysts Using Co and Ce Oxides

A good substitute  
for expensive platinum catalysts

Excellent for Cleaning  
Exhaust Gases!  
Low Cost!



Ball type



Honeycomb type

## Applications

- VOC decomposition of exhaust gases in paint and printing factories
- Odor removal in chemical and food processing factories

## Features

- Useful for most VOCs
- Excellent for tar combustion
- Low cost, precious metals like platinum not in use

Commercializing Firm:

 Sankyo Kousan Co., Ltd

# Principle of Measurement

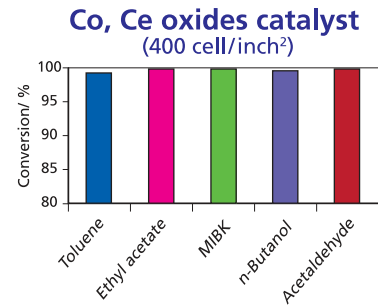
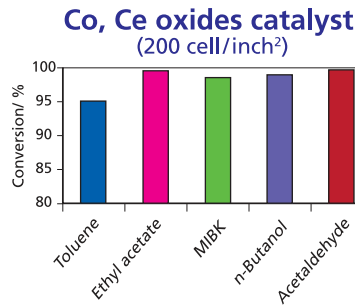
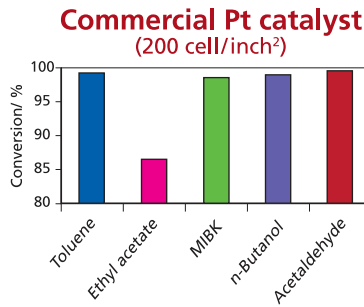
Oxygen adsorbed on the active site of the catalyst promotes the oxidation of VOCs.

## Performance

### VOC combustion

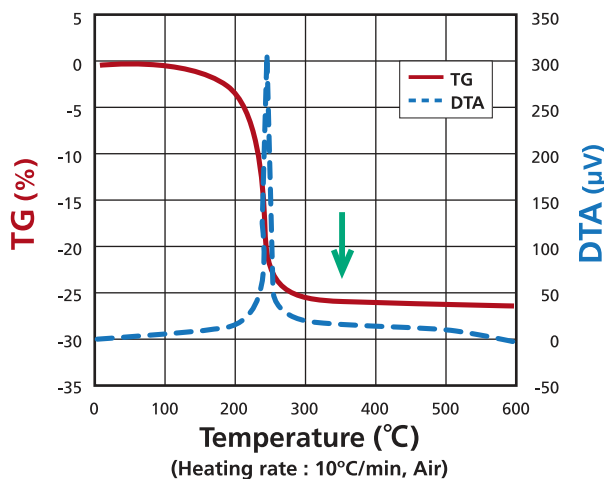
#### Experimental Conditions

•SV: 30,000h<sup>-1</sup>(N) •LV: 0.42 m/s (N)  
 •Inlet Temp: 275°C •Carrier gas: dried air 86 L/min  
 •VOC concentration: 100 ppm



### Tar combustion

Co, Ce oxides catalyst (powder) + tar



The Co, Ce oxides catalyst can decompose tar at 350°C, which is lower than that of a Pt catalyst by 100 degrees.

TG: Thermogravimetric Analysis  
 The weight decrease means tar burned to produce CO<sub>2</sub> and H<sub>2</sub>O.

DTA: Differential Thermal Analysis  
 The peak shows tar burned exothermally.

## Specifications

Type	Item	Application
Honeycomb	Size : 150(W)×150(D)×50(H) mm	VOC decomposition Odor reduction
	Cell : 200cell/inch <sup>2</sup> 400cell/inch <sup>2</sup>	
Ball	Carrier : Ceramics	
	Main components of catalyst: Ce, Co oxides	
Ball	Size : Diameter 2~3mm 4~6mm	
	Carrier : Ceramics Main component of catalyst: Ce, Co oxides	