

# SAFETY DATA SHEET

## 1. Identification

<b>Product identifier</b>	<b>Spent Catalyst</b>
<b>Other means of identification</b>	
<b>SDS number</b>	901A - GHS
<b>Synonyms</b>	Spent metal catalyst. See section 16 for complete information.
<b>Recommended use</b>	This product is intended for use as a refinery feedstock, fuel or for use in engineered processes. Use in other applications may result in higher exposures and require additional controls, such as local exhaust ventilation and personal protective equipment.
<b>Recommended restrictions</b>	None known.
<b>Manufacturer / Importer / Supplier / Distributor information</b>	
<b>Manufacturer/Supplier</b>	Valero Marketing & Supply Company and Affiliates One Valero Way San Antonio, TX 78269-6000 210-345-4593 CorpnSE@Valero.com
<b>General Assistance</b>	210-345-4593
<b>E-Mail</b>	CorpnSE@Valero.com
<b>Contact Person</b>	Induufac9Hygienssin.
<b>Other means of identification</b>	

**Precautionary statement**  
**Prevention**

Chromium	7440-47-3	0.1 - 3
Hydrogen sulfide	7783-06-4	0.5 - 2
Sulfur	7704-34-9	0.5 - 2
Titanium dioxide	13463-67-7	0.5 - 2
Antimony	7440-36-0	0.1 - 2
Antimony sulfide	1345-04-6	0.1 - 2
Antimony trioxide	1309-64-4	0.1 - 2
Potassium	7440-09-7	0.1 - 2
Potassium Oxide	12136-45-7	0.1 - 2
Potassium sulfide	1312-73-8	0.1 - 2
Sodium oxide	12401-86-4	0.1 - 2

#### **4. First-aid measures**

##### **Inhalation**

**Methods and materials for containment and cleaning up**

ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Dike the spilled material, where this is possible. Prevent entry into waterways, sewers, basements or confined areas.

**US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)**

<b>Components</b>	<b>Type</b>	<b>Value</b>	<b>Form</b>
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**US. ACGIH Threshold Limit Values**

Components	Type	Value	Form
Tungsten trioxide (CAS 1314-35-8)	STEL	10 mg/m3	
	TWA	5 mg/m3	
Vanadium pentoxide (CAS 1314-62-1)	TWA	0.05 mg/m3	Inhalable fraction.

**US. NIOSH: Pocket Guide to Chemical Hazards**

Components	Type	Value	Form
Antimony trioxide (CAS 1309-64-4)	TWA	0.5 mg/m3	
Arsenic (CAS 7440-38-2)	Ceiling	0.002 mg/m3	
Arsenic pentoxide (CAS 1303-28-2)	Ceiling	0.002 mg/m3	
Arsenic trisulfide (CAS 1303-33-9)	Ceiling	0.002 mg/m3	
Calcium oxide (CAS 1305-78-8)	TWA	2 mg/m3	
Cobalt (CAS 7440-48-4)	TWA	0.05 mg/m3	Dust and fume.
Hydrogen sulfide (CAS 7783-06-4)	Ceiling	15 mg/m3	
		10 ppm	
Nickel (CAS 7440-02-0)	TWA	0.015 mg/m3	
Nickel oxide (CAS 1313-99-1)	TWA	0.015 mg/m3	
Nickel sulfide (CAS 12035-72-2)	TWA	0.015 mg/m3	
Phosphorus (CAS 7723-14-0)	TWA	0.1 mg/m3	
Phosphorus sulfide (CAS 1314-80-3)	STEL	3 mg/m3	
	TWA	1 mg/m3	
Silicon dioxide (CAS 7631-86-9)	TWA	6 mg/m3	
Vanadium (CAS 7440-62-2)	STEL	3 mg/m3	
	TWA	1 mg/m3	
	Ceiling	0.05 mg/m3	F [0 d1 i q 1 0 0 1 53.TJ0 -U.G0

## ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
	1 µg/l	Cobalt	Blood	*
* - For sampling details, please see the source document.				
<b>Exposure guidelines</b>	No exposure standards allocated.			
<b>Appropriate engineering controls</b>	Provide adequate general and local exhaust ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in handling of this product contain explosion relief vents or an explosion suppression system or an oxygen deficient environment. Ensure that dust-handling systems (such as exhaust ducts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is no leakage from the equipment). Use only appropriately classified electrical equipment and powered industrial trucks.			
<b>Individual protection measures, such as personal protective equipment</b>				
<b>Eye/face protection</b>	Safety glasses.			
<b>Skin protection</b>				
<b>Hand protection</b>	Wear protective gloves.			
<b>Other</b>	Full body suit and boots are recommended when handling large volumes or in emergency situations. Flame retardant protective clothing is recommended.			
<b>Respiratory protection</b>	Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. If workplace exposure limits for product or components are exceeded, NIOSH approved equipment should be worn. Proper respirator selection should be determined by adequately trained personnel, based on the contaminants, the degree of potential exposure and published respiratory protection factors. This equipment should be available for nonroutine and emergency use.			
<b>Thermal hazards</b>	Not applicable.			
<b>General hygiene considerations</b>	Not applicable.			

<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	Insoluble.
<b>Partition coefficient (n-octanol/water)</b>	No data available.
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not applicable.

## 10. Stability and reactivity

<b>Reactivity</b>	The product is stable and non-reactive under normal conditions of use, storage and transport.
<b>Chemical stability</b>	Stable under normal temperature conditions and recommended use.
<b>Possibility of hazardous reactions</b>	Hazardous polymerization does not occur.
<b>Conditions to avoid</b>	Minimize dust generation and accumulation.
<b>Incompatible materials</b>	Strong oxidizing agents.
<b>Hazardous decomposition products</b>	No hazardous decomposition products are known.

## 11. Toxicological information

### Information on likely routes of exposure

<b>Ingestion</b>	Toxic if swallowed. May cause burns to mouth, throat and stomach.
<b>Inhalation</b>	Toxic if inhaled. Causes respiratory tract irritation. May cause allergic respiratory reaction.
<b>Skin contact</b>	Causes skin burns. May cause an allergic skin reaction.
<b>Eye contact</b>	Causes serious eye damage.

<b>Symptoms related to the physical, chemical and toxicological characteristics</b>	May cause chemical burns. Corneal damage. Causes respiratory tract irritation. Sensitization. Rash. Symptoms may be delayed.
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### Information on toxicological effects

#### Acute toxicity



**Components****Species****Test Results**

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Hydrogen sulfide (CAS 7783-06-4)

*Inhalation*  
LC50

Mouse

Arsenic trisulfide (CAS 1303-33-9)

Cancer

**Reproductive toxicity**

Suspected of damaging fertility or the unborn child.

### 13. Disposal considerations

**Disposal instructions** Dispose in accordance with all applicable regulations. Incinerate the material under controlled conditions in an approved incinerator. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container.

**Hazardous waste code** K172: WASTE HYDROREFINING CATALYST  
D004: Waste Arsenic

**US RCRA Hazardous Waste P List: Reference**

Arsenic pentoxide (CAS 1303-28-2)	P011
Vanadium pentoxide (CAS 1314-62-1)	P120

**US RCRA Hazardous Waste U List: Reference**





Arsenic (CAS 7440-38-2)  
Arsenic pentoxide (CAS 1303-28-2)  
Arsenic trisulfide (CAS 1303-33-9)  
Calcium oxide (CAS 1305-78-8)  
Cobalt (CAS 7440-48-4)

**Country(s) or region**

**Inventory**