

## SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Version 6.12  
Revision Date 29.04.2023  
Print Date 01.05.2023

GENERIC EU MSDS - NO COUNTRY SPECIFIC DATA - NO OEL DATA

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1 Product identifiers

Product name

: Arsenic standard solution traceable to SRM from NIST H<sub>3</sub>AsO<sub>4</sub> in HNO<sub>3</sub> 0.5 mol/l 1000 mg/l As Certipur®

Product Number

: 1.19773

Catalogue No.

: 119773

Brand

: Millipore

REACH No.

: This product is a mixture. REACH Registration Number see section 3.

#### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Reagent for analysis

#### 1.3 Details of the supplier of the safety data sheet

Company

: Merck KGaA  
Frankfurter Str. 250  
D-64271 DARMSTADT

Telephone

: +49 (0)6151 72-0

Fax

: +49 6151 727780

E-mail address

: TechnicalService@merckgroup.com

#### 1.4 Emergency telephone

Emergency Phone # : +(44)-870-8200418 (CHEMTREC (GB))  
+(353)-19014670 (CHEMTREC Ireland)  
001-803-017-9114 (CHEMTREC India)

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

##### Classification according to Regulation (EC) No 1272/2008

Corrosive to Metals (Category 1), H290

Skin irritation (Category 2), H315

Eye irritation (Category 2), H319

Carcinogenicity (Category 1B), H350

For the full text of the H-Statements mentioned in this Section, see Section 16.

Millipore- 1.19773

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The life science business of Merck operates as MilliporeSigma in the US and Canada



g)	Upper/lower flammability or explosive limits	No data available
h)	Flash point	Not applicable
i)	Autoignition temperature	Not applicable
j)	Decomposition temperature	No data available
k)	pH	ca.0,5 at 20 °C
l)	Viscosity	Viscosity, kinematic: No data available Viscosity, dynamic: No data available
m)	Water solubility	at 20 °C soluble
n)	Partition coefficient: n-octanol/water	Not applicable
o)	Vapor pressure	No data available
p)	Density	ca.1,013 g/cm <sup>3</sup> at 20 °C
	Relative density	No data available
q)	Relative vapor density	No data available
r)	Particle characteristics	No data available
s)	Explosive properties	Not classified as explosive.
t)	Oxidizing properties	none

## 9.2 Other safety information

No data available

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

No data available

### 10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

### 10.3 Possibility of hazardous reactions

Generates dangerous gases or fumes in contact with:

Metals

metal alloys

Release of:

Hydrogen

nitrous gases

Violent reactions possible with:

The generally known reaction partners of water.



## Certified Reference Material

### Reference material certificate

#### Lead Standard for AAS

**TraceCERT®**  
Traceable Certified Reference Materials

<b>Product no.:</b>	16595
<b>Lot no.:</b>	BCCK1030
<b>Description of CRM:</b>	Lead nitrate (pure material) in 2% HNO <sub>3</sub> (prepared with HNO <sub>3</sub> suitable for trace analysis and high-purity water, 18.2 MΩ·cm, 0.22 µm filtered).
<b>Expiry date:</b>	FEB 2026
<b>Storage:</b>	Store at 5°C-25°C
<b>Density (certified) at 20°C:</b>	1010.5 kg m <sup>-3</sup> ± 0.5 kg m <sup>-3</sup>

Constituent	Certified values at 20°C and expanded uncertainties, $U = k \cdot u$ ( $k = 2$ ) [1][2]
Lead	990 mg kg <sup>-1</sup> ± 4 mg kg <sup>-1</sup> 1000 mg L <sup>-1</sup> ± 4 mg L <sup>-1</sup>

<b>Metrological traceability:</b>	Certified values are traceable to the International System of units (SI) through a metrologically valid weighing process. Details see "Details on metrological traceability". <sup>[3]</sup>
<b>Measurement method:</b>	The certified value is determined by high-precision weighing of thoroughly characterized starting materials and verified by measurement against NIST SRMs or similar CRMs in accordance with ISO/IEC 17025. <sup>[4]</sup>
<b>Intended use:</b>	Calibration of AAS, ICP, spectrophotometry or any other analytical technique.
<b>Instructions for handling and correct use:</b>	The bottle's temperature must be 20°C. Shake well before every use. If storage of a partially used bottle is necessary (at the user's risk), the cap should be tightly sealed and the bottle should be stored at reduced temperature (e.g. refrigerator) to minimize transpiration rate.
<b>Health and safety information:</b>	Please refer to the Safety Data Sheet for detailed information about the nature of any hazard and appropriate precautions to be taken.
<b>Packaging:</b>	250 mL HDPE bottle
<b>Accreditation:</b>	Sigma-Aldrich Production GmbH is accredited by the Swiss Accreditation Service SAS as reference material producer under no. SRMS 0001 in accordance with international standard ISO 17034 <sup>[5]</sup>
<b>Certificate issue date:</b>	05 APR 2023



ISO 17034  
SRMS 0001

S. Matt

S. Matt – CRM Operations

Dr. P. Zell – Approving Officer



## Phần 9: Các tính chất vật lý và hóa học

### 9.1 Thông tin cơ bản về các đặc tính vật lý và hóa học

- |    |  |  |
|----|--|--|
| a) | Trạng thái vật lý                              | trong suốt, thể lỏng   |
| b) | Màu sắc  | không màu  |
| c) | Mùi đặc trưng                                  | chưa có dữ liệu  |
| d) | Điểm/khoảng nóng chảy/đóng đặc                 | chưa có dữ liệu  |
| e) | Điểm sôi/khoảng sôi ban đầu                    | chưa có dữ liệu  |
| f) | Khả năng bắt cháy (chất rắn, khí)              | chưa có dữ liệu  |
| g) | Giới hạn trên/dưới của tính dễ cháy hoặc dễ nổ | chưa có dữ liệu  |
| h) | Điểm cháy                                      | chưa có dữ liệu  |
| i) | Nhiệt độ tự bốc cháy                           | Không áp dụng được   |
| j) | Nhiệt độ phân hủy                              | chưa có dữ liệu  |
| k) | Độ pH  | < 1.0  |
| l) | Độ nhớt  | Độ nhớt, động học: chưa có dữ liệu<br>Độ nhớt, động lực: chưa có dữ liệu |
| m) | Độ hòa tan trong nước                          | ở 20 °C hòa tan được   |
| n) | Hệ số phân tán: n-octanol/nước                 | chưa có dữ liệu  |
| o) | Áp suất hóa hơi                                | chưa có dữ liệu  |
| p) | Mật độ   | 1.020 g/cm <sup>3</sup>  |
|    | Tỷ trọng tương đối                             | chưa có dữ liệu  |
| q) | Tỷ trọng hơi tương đối                         | chưa có dữ liệu  |
| r) | Đặc điểm hạt                                   | chưa có dữ liệu  |
| s) | Đặc tính cháy nổ                               | Không được phân loại là dễ nổ.   |
| t) | Đặc tính ôxy hóa                               | không  |



## Certified Reference Material Reference material certificate

### Nickel Standard for AAS

**TraceCERT®**  
Traceable Certified Reference Materials

<b>Product no.:</b>	42242
<b>Lot no.:</b>	BCCJ4376
<b>Description of CRM:</b>	Nickel metal (pure material) in 2% HNO <sub>3</sub> (prepared with HNO <sub>3</sub> suitable for trace analysis and high-purity water, 18.2 MΩ·cm, 0.22 µm filtered).
<b>Expiry date:</b>	OCT 2025
<b>Storage:</b>	Store at 5°C-25°C
<b>Density (certified) at 20°C:</b>	1011.4 kg m <sup>-3</sup> ± 0.5 kg m <sup>-3</sup>

Constituent	Certified values at 20°C and expanded uncertainties, $U = k \cdot u$ ( $k = 2$ ) [1][2]		
Nickel	<b>989 mg kg<sup>-1</sup> ± 4 mg kg<sup>-1</sup></b>	<b>1000 mg L<sup>-1</sup> ± 4 mg L<sup>-1</sup></b>	

<b>Metrological traceability:</b>	Certified values are traceable to the International System of units (SI) through a metrologically valid weighing process. Details see "Details on metrological traceability". <sup>[3]</sup>
<b>Measurement method:</b>	The certified value is determined by high-precision weighing of thoroughly characterized starting materials and verified by measurement against NIST SRMs or similar CRMs in accordance with ISO/IEC 17025. <sup>[4]</sup>
<b>Intended use:</b>	Calibration of AAS, ICP, spectrophotometry or any other analytical technique.
<b>Instructions for handling and correct use:</b>	The bottle's temperature must be 20°C. Shake well before every use. If storage of a partially used bottle is necessary (at the user's risk), the cap should be tightly sealed and the bottle should be stored at reduced temperature (e.g. refrigerator) to minimize transpiration rate.
<b>Health and safety information:</b>	Please refer to the Safety Data Sheet for detailed information about the nature of any hazard and appropriate precautions to be taken.
<b>Packaging:</b>	250 mL HDPE bottle
<b>Accreditation:</b>	Sigma-Aldrich Production GmbH is accredited by the Swiss Accreditation Service SAS as reference material producer under no. SRMS 0001 in accordance with international standard ISO 17034 <sup>[5]</sup>
<b>Certificate issue date:</b>	02 JAN 2023



ISO 17034  
SRMS 0001

S. Matt

S. Matt – CRM Operations

Dr. P. Zell – Approving Officer



## Certified Reference Material Reference material certificate

### Chromium Standard for AAS

**TraceCERT®**  
Traceable Certified Reference Materials

<b>Product no.:</b>	02733
<b>Lot no.:</b>	BCCK2665
<b>Description of CRM:</b>	Ammonium dichromate (pure material) in 2% HNO <sub>3</sub> (prepared with HNO <sub>3</sub> suitable for trace analysis and high-purity water, 18.2 MΩ·cm, 0.22 µm filtered).
<b>Expiry date:</b>	MAR 2026
<b>Storage:</b>	Store at 5°C-25°C
<b>Density (certified) at 20°C:</b>	1010.8 kg m <sup>-3</sup> ± 0.5 kg m <sup>-3</sup>

**Constituent**      Certified values at 20°C and expanded uncertainties,  $U = k \cdot u$  ( $k = 2$ ) [1][2]

<b>Chromium</b>	<b>989 mg kg<sup>-1</sup> ± 4 mg kg<sup>-1</sup></b>	<b>1000 mg L<sup>-1</sup> ± 4 mg L<sup>-1</sup></b>
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<b>Metrological traceability:</b>	Certified values are traceable to the International System of units (SI) through a metrologically valid weighing process. Details see "Details on metrological traceability". <sup>[3]</sup>
<b>Measurement method:</b>	The certified value is determined by high-precision weighing of thoroughly characterized starting materials and verified by measurement against NIST SRMs or similar CRMs in accordance with ISO/IEC 17025. <sup>[4]</sup>
<b>Intended use:</b>	Calibration of AAS, ICP, spectrophotometry or any other analytical technique.
<b>Instructions for handling and correct use:</b>	The bottle's temperature must be 20°C. Shake well before every use. If storage of a partially used bottle is necessary (at the user's risk), the cap should be tightly sealed and the bottle should be stored at reduced temperature (e.g. refrigerator) to minimize transpiration rate.
<b>Health and safety information:</b>	Please refer to the Safety Data Sheet for detailed information about the nature of any hazard and appropriate precautions to be taken.
<b>Packaging:</b>	250 mL HDPE bottle
<b>Accreditation:</b>	Sigma-Aldrich Production GmbH is accredited by the Swiss Accreditation Service SAS as reference material producer under no. SRMS 0001 in accordance with international standard ISO 17034 <sup>[5]</sup>
<b>Certificate issue date:</b>	25 APR 2023



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SRMS 0001

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## Phần 9: Các tính chất vật lý và hóa học

### 9.1 Thông tin cơ bản về các đặc tính vật lý và hóa học

- |    |  |  |
|----|--|--|
| a) | Trạng thái                                     | Hình thể: thể lỏng<br>Màu sắc: không màu                                 |
| b) | Mùi đặc trưng                                  | chưa có dữ liệu  |
| c) | Ngưỡng mùi                                     | chưa có dữ liệu  |
| d) | Độ pH  | 6.0 - 8.0 ở 25 °C  |
| e) | Điểm/khoảng nóng chảy/đông đặc                 | 0.0 °C   |
| f) | Điểm sôi/khoảng sôi ban đầu                    | 100.0 °C   |
| g) | Điểm cháy                                      | chưa có dữ liệu  |
| h) | Tỷ lệ hóa hơi                                  | chưa có dữ liệu  |
| i) | Khả năng bắt cháy (chất rắn, khí)              | chưa có dữ liệu  |
| j) | Giới hạn trên/dưới của tính dễ cháy hoặc dễ nổ | chưa có dữ liệu  |
| k) | Áp suất hóa hơi                                | chưa có dữ liệu  |
| l) | Mật độ hơi                                     | chưa có dữ liệu  |
| m) | Mật độ   | 1.00 g/cm <sup>3</sup>   |
|    | Tỷ trọng tương đối                             | chưa có dữ liệu  |
| n) | Độ hòa tan trong nước                          | có thể pha trộn hoàn toàn ở 20 °C hòa tan được                           |
| o) | Hệ số phân tán: n-octanol/nước                 | chưa có dữ liệu  |
| p) | Nhiệt độ tự bốc cháy                           | Không áp dụng được   |
| q) | Nhiệt độ phân hủy                              | chưa có dữ liệu  |
| r) | Độ nhớt  | Độ nhớt, động học: chưa có dữ liệu<br>Độ nhớt, động lực: chưa có dữ liệu |
| s) | Đặc tính cháy nổ                               | Không được phân loại là dễ nổ.   |
| t) | Đặc tính ôxy hóa                               | không  |



## Certified Reference Material

### Reference material certificate

#### Zinc Standard for AAS

**TraceCERT®**  
Traceable Certified Reference Materials

<b>Product no.:</b>	18827
<b>Lot no.:</b>	BCCH9888
<b>Description of CRM:</b>	Zinc metal (pure material) in 2% HNO <sub>3</sub> (prepared with HNO <sub>3</sub> suitable for trace analysis and high-purity water, 18.2 MΩ·cm, 0.22 µm filtered).
<b>Expiry date:</b>	JUL 2025
<b>Storage:</b>	Store at 5°C-25°C
<b>Density (certified) at 20°C:</b>	1011.2 kg m <sup>-3</sup> ± 0.5 kg m <sup>-3</sup>

**Constituent**      Certified values at 20°C and expanded uncertainties,  $U = k \cdot u$  ( $k = 2$ ) [1][2]

<b>Zinc</b>	<b>989 mg kg<sup>-1</sup> ± 4 mg kg<sup>-1</sup></b>	<b>1000 mg L<sup>-1</sup> ± 4 mg L<sup>-1</sup></b>
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<b>Metrological traceability:</b>	Certified values are traceable to the International System of units (SI) through a metrologically valid weighing process. Details see "Details on metrological traceability". <sup>[3]</sup>
<b>Measurement method:</b>	The certified value is determined by high-precision weighing of thoroughly characterized starting materials and verified by measurement against NIST SRMs or similar CRMs in accordance with ISO/IEC 17025. <sup>[4]</sup>
<b>Intended use:</b>	Calibration of AAS, ICP, spectrophotometry or any other analytical technique.
<b>Instructions for handling and correct use:</b>	The bottle's temperature must be 20°C. Shake well before every use. If storage of a partially used bottle is necessary (at the user's risk), the cap should be tightly sealed and the bottle should be stored at reduced temperature (e.g. refrigerator) to minimize transpiration rate.
<b>Health and safety information:</b>	Please refer to the Safety Data Sheet for detailed information about the nature of any hazard and appropriate precautions to be taken.
<b>Packaging:</b>	250 mL HDPE bottle
<b>Accreditation:</b>	Sigma-Aldrich Production GmbH is accredited by the Swiss Accreditation Service SAS as reference material producer under no. SRMS 0001 in accordance with international standard ISO 17034 <sup>[5]</sup>
<b>Certificate issue date:</b>	27 SEP 2022



**ISO 17034  
SRMS 0001**

*S. Matt*

S. Matt – CRM Operations

*D. Zell*

Dr. P. Zell – Approving Officer



## Certified Reference Material Reference material certificate

### Manganese Standard for AAS

**TraceCERT®**  
Traceable Certified Reference Materials

<b>Product no.:</b>	77036
<b>Lot no.:</b>	BCCH8053
<b>Description of CRM:</b>	Manganese nitrate hydrate (pure material) in 2% HNO <sub>3</sub> (prepared with HNO <sub>3</sub> suitable for trace analysis and high-purity water, 18.2 MΩ·cm, 0.22 µm filtered).
<b>Expiry date:</b>	MAY 2025 (unopened bottle in aluminized bag)
<b>Storage:</b>	Store at 5°C-25°C
<b>Density (certified) at 20°C:</b>	1011.6 kg m <sup>-3</sup> ± 0.5 kg m <sup>-3</sup>

Constituent	Certified values at 20°C and expanded uncertainties, $U = k \cdot u$ ( $k = 2$ ) [1][2]		
<b>Manganese</b>	<b>992 mg kg<sup>-1</sup> ± 8 mg kg<sup>-1</sup></b>	<b>1004 mg L<sup>-1</sup> ± 8 mg L<sup>-1</sup></b>	

<b>Metrological traceability:</b>	Directly traceable to NIST SRM 3132. [3]
<b>Measurement method:</b>	The certified value is established by inductively coupled plasma optical emission spectrometry ICP-OES in accordance with ISO/IEC 17025. [4]
<b>Intended use:</b>	Calibration of AAS, ICP, spectrophotometry or any other analytical technique.
<b>Instructions for handling and correct use:</b>	The bottle's temperature must be 20°C. Shake well before every use. If storage of a partially used bottle is necessary (at the user's risk), the cap should be tightly sealed and the bottle should be stored at reduced temperature (e.g. refrigerator) to minimize transpiration rate.
<b>Health and safety information:</b>	Please refer to the Safety Data Sheet for detailed information about the nature of any hazard and appropriate precautions to be taken.
<b>Packaging:</b>	250 mL HDPE bottle
<b>Accreditation:</b>	Sigma-Aldrich Production GmbH is accredited by the Swiss Accreditation Service SAS as reference material producer under no. SRMS 0001 in accordance with international standard ISO 17034 [5]
<b>Certificate issue date:</b>	18 JUL 2022



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Dr. P. Zell – Approving Officer



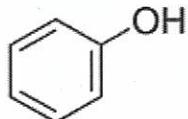
3050 Spruce Street, Saint Louis, MO 63103, USA  
Website: [www.sigmaaldrich.com](http://www.sigmaaldrich.com)  
Email USA: [techserv@sial.com](mailto:techserv@sial.com)  
Outside USA: [eurtechserv@sial.com](mailto:eurtechserv@sial.com)

## Product Specification

Product Name:  
Phenol - ≥99%

Product Number: W322318  
CAS Number: 108-95-2

Formula: C<sub>6</sub>H<sub>6</sub>O  
Formula Weight: 94.11 g/mol



### TEST

### Specification

Appearance (Color)	White
Appearance (Form)	Crystalline Powder
Initial Melting Point	≥ 38 °C
Final Melting Point	≤ 43 °C
Infrared spectrum	Conforms to Structure
Purity (GC)	≥ 99.0 %
Trace Acid by ICP (as Hypophosphorous acid)	≤ 0.15
Solubility (Turbidity) 5% in 95% Ethanol	Clear
Solubility (Color)	Colorless
Arsenic (As)	≤ 3.0 ppm
Cadmium (Cd)	≤ 1.0 ppm
Mercury (Hg)	≤ 1.0 ppm
Lead (Pb)	≤ 10.0 ppm
Expiration Date Period	Confirmed
5 Years	

Specification: PRD.1.ZQ5.10000037804

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.

Break through time: 480 min  
Material tested: Vitoject® (KCL 890 / Aldrich Z677698, Size M)

**Body Protection**

Flame retardant antistatic protective clothing.

**Respiratory protection**

Recommended Filter type: Filter A-(P3)

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

**Control of environmental exposure**

Do not let product enter drains.

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**SECTION 9: Physical and chemical properties**

**9.1 Information on basic physical and chemical properties**

a) Physical state	solid
b) Color	No data available
c) Odor	stinging
d) Melting point/freezing point	Melting point/range: 40 - 43 °C - lit.
e) Initial boiling point and boiling range	182 °C - lit.
f) Flammability (solid, gas)	No data available
g) Upper/lower flammability or explosive limits	No data available
h) Flash point	81 °C at ca.1,013 hPa - closed cup - DIN 51758
i) Autoignition temperature	715 °C at 1,013 hPa
j) Decomposition temperature	No data available
k) pH	ca.5 at 50 g/l at 20 °C
l) Viscosity	Viscosity, kinematic: No data available Viscosity, dynamic: 3.437 Pas at 50.00 °C
m) Water solubility	87 g/l at 25 °C
n) Partition coefficient: n-octanol/water	log Pow: 1.47 at 30 °C - (ECHA), Bioaccumulation is not expected.
o) Vapor pressure	0.53 hPa at 20.0 °C
p) Density	1.071 g/mL at 25 °C - lit.



3050 Spruce Street, Saint Louis, MO 63103, USA

Website: [www.sigmaaldrich.com](http://www.sigmaaldrich.com)Email USA: [techserv@sial.com](mailto:techserv@sial.com)Outside USA: [eurtechserv@sial.com](mailto:eurtechserv@sial.com)

## Product Specification

Product Name:

Potassium carbonate - ACS reagent, ≥99.0%

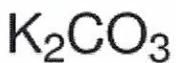
Product Number: 209619

CAS Number: 584-08-7

MDL: MFCD00011382

Formula: CK2O3

Formula Weight: 138.21 g/mol

**TEST****Specification**

Assay	> 99.0 %
Titration by HCL	
Insoluble Matter	≤ 0.01 %
Chloride Content	≤ 0.003 %
Phosphate (PO <sub>4</sub> )	≤ 0.001 %
Silica	≤ 0.005 %
Sulfur Compounds	≤ 0.004 %
Calcium (Ca)	≤ 0.005 %
Magnesium (Mg)	≤ 0.002 %
Sodium (Na)	≤ 0.02 %
Iron (Fe)	≤ 5 ppm
Heavy Metals ((by ICP-OES)	≤ = 5 ppm
Recommended Retest Period	-----
3 years	
Meets ACS Requirements	Current ACS Specification

Specification: PRD.5.ZQ5.10000029314

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.

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## **SECTION 9: Physical and chemical properties**

### **9.1 Information on basic physical and chemical properties**

a)	Physical state	crystalline
b)	Color	white
c)	Odor	odorless
d)	Melting point/freezing point	Melting point/range: 891 °C
e)	Initial boiling point and boiling range	(decomposition)
f)	Flammability (solid, gas)	The product is not flammable.
g)	Upper/lower flammability or explosive limits	No data available
h)	Flash point	Not applicable
i)	Autoignition temperature	No data available
j)	Decomposition temperature	No data available
k)	pH	11.0 - 13 at 138 g/l at 25 °C
l)	Viscosity	Viscosity, kinematic: No data available Viscosity, dynamic: Not applicable
m)	Water solubility	138 g/l at 20 °C - completely soluble
n)	Partition coefficient: n-octanol/water	Not applicable for inorganic substances
o)	Vapor pressure	Not applicable
p)	Density	2.428 g/cm <sup>3</sup>
	Relative density	No data available
q)	Relative vapor density	No data available
r)	Particle characteristics	No data available
s)	Explosive properties	No data available
t)	Oxidizing properties	none

### **9.2 Other safety information**

No data available



3050 Spruce Street, Saint Louis, MO 63103, USA

Website: [www.sigmaaldrich.com](http://www.sigmaaldrich.com)Email USA: [techserv@sial.com](mailto:techserv@sial.com)Outside USA: [eurtechserv@sial.com](mailto:eurtechserv@sial.com)

## Product Specification

Product Name:

Glycine - ACS reagent, ≥98.5%

Product Number:

410225

CAS Number:

56-40-6

MDL:

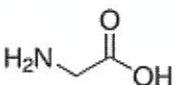
MFCD00008131

Formula:

C<sub>2</sub>H<sub>5</sub>NO<sub>2</sub>

Formula Weight:

75.07 g/mol

**TEST****Specification**

Appearance (Color)

White

Appearance (Form)

Powder or Crystals or Granules

Infrared spectrum

Conforms to Structure

Purity (Titration by HClO<sub>4</sub>)

&gt; 98.5 %

Residue on ignition (Ash)

≤ 0.1 %

Additional Test

Pass

Hydrolyzable Substances Test

Chloride Content

≤ 0.005 %

Substances Darkened (by H<sub>2</sub>SO<sub>4</sub>)

Pass

Heavy Metals

≤ 0.002 %

(by ICP)

Ammonia (NH<sub>4</sub>)

≤ 0.005 %

Sulfate (SO<sub>4</sub>)

≤ 0.005 %

Meets ACS Requirements

Current ACS Specification

Specification: PRD.5.ZQ5.10000003684

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Material: Nitrile rubber  
Minimum layer thickness: 0,11 mm  
Break through time: 480 min  
Material tested:KCL 741 Dermatril® L

Splash contact  
Material: Nitrile rubber  
Minimum layer thickness: 0,11 mm  
Break through time: 480 min  
Material tested:KCL 741 Dermatril® L

### **Respiratory protection**

required when dusts are generated.

Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

Recommended Filter type: Filter type P1

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

### **Control of environmental exposure**

Do not let product enter drains.

---

## **SECTION 9: Physical and chemical properties**

### **9.1 Information on basic physical and chemical properties**

a) Appearance	Form: Crystalline powder Color: white
b) Odor	odorless
c) Odor Threshold	Not applicable
d) pH	No data available
e) Melting point/freezing point	Melting point/range: 240 °C
f) Initial boiling point and boiling range	Not applicable
g) Flash point	Not applicable
h) Evaporation rate	No data available
i) Flammability (solid, gas)	No data available
j) Upper/lower flammability or explosive limits	No data available
k) Vapor pressure	No data available
l) Vapor density	No data available
m) Relative density	No data available
n) Water solubility	250 g/l at 25 °C - soluble



Type in Product Names, Product Numbers, or CAS Numbers to see suggestions.



30

# Specification Sheet

**Product Name** Phloroglucinol ≥99.0% (HPLC)**Product Number** 79330**Product Brand** ALDRICH**CAS Number** 108-73-6**Molecular Weight** 126.11**TEST****SPECIFICATION****APPEARANCE (COLOR)** White to Faint Beige**APPEARANCE (FORM)** Powder or Crystals**PURITY (HPLC AREA %)** ≥ 99.0 %**MELTING POINT** 215 - 220 C**SOLUBILITY (COLOR)** Colorless to Light Brown-Yellow**SOLUBILITY (TURBIDITY)** Clear to Hazy**SOLUBILITY (METHOD)** 0.5G IN 10ML ETHANOL**LOSS ON DRYING** ≤ 2.0 %**CARBON CONTENT** 57.15 % (THEORY)

Type in Product Names, Product Numbers, or CAS Numbers to see suggestions.



# Specification Sheet

**Product Name** 4-Aminoantipyrine puriss. p.a., reag.  
Ph. Eur., ≥99%

**Product Number** 33528

**Product Brand** SIAL

**CAS Number** 83-07-8

**Molecular Weight** 203.24

## TEST

## SPECIFICATION

**APPEARANCE (COLOR)** White to Yellow and Faint Orange to  
Orange and Faint Beige to Beige and  
Faint Brown to Brown

**APPEARANCE (FORM)** Powder or Crystals or Fibers

**TITRATION (NT) HCLO4 0.1M** ≥ 99 %

**MELTING POINT** 107 - 109 C

**SOLUBILITY (COLOR)** Colorless to Dark Yellow and Colorless to  
Dark Green-Yellow

**SOLUBILITY (TURBIDITY)** Clear to Slightly Hazy

**SOLUBILITY (METHOD)** 1G IN 10ML WATER

## **PROPERTIES**

**Agency**

USP/NF

reag. Ph. Eur.

**Quality Level**

200

**grade**

puriss. p.a.

**Assay**

≥99%

**ign. residue**

≤0.1%

**loss**

≤0.5% loss on drying

**mp**

105-110 °C (lit.)

107-109 °C

**SMILES string**

CN1N(c2ccccc2)C(=O)C(N)=C1C

**InChI**

1S/C11H13N3O/c1-8-10(12)11(15)14(13(8)2)9-6-4-3-5-7-9/h3-7H,12H2,1-2H3

**InChI key**

RLFWWDJHLFCNIJ-UHFFFAOYSA-N

Type in Product Names, Product Numbers, or CAS Numbers to see suggestions.



32

# Specification Sheet

**Product Name** Sodium nitrite puriss. p.a., ACS  
reagent, reag. Ph. Eur., ≥99%

**Product Number** 31443

**Product Brand** SIGALD

**CAS Number** 7632-00-0

**Molecular Weight** 69.00

## TEST

## SPECIFICATION

**APPEARANCE (COLOR)** White to Faint Yellow

**APPEARANCE (FORM)** Powder or Crystals

**REDOX TITRATION** ≥ 99 %

**ACS SPECIFICATIONS** CORRESPONDS TO REQUIREMENTS

**REMARKS ON ACS**  
INSOLUBLE MATTER ≤ 0.01%  
(C=10%, H<sub>2</sub>O)  
HEAVY METALS ≤ 0.001% (AS PB)

**CALCIUM (ICP)** ≤ 20 mg/kg

**IRON (ICP)** ≤ 10 mg/kg

**POTASSIUM (ICP)** < 50 mσ/kσ

## **PROPERTIES**

**grade**

ACS reagent  
puriss. p.a.

---

**Quality Level**

200

---

**Agency**

reag. Ph. Eur.

---

**vapor pressure**

<0.0001 hPa ( 25 °C)

---

**Assay**

≥99%

---

**form**

powder or crystals

---

**autoignition temp.**

914 °F

---

**impurities**

≤0.001% heavy metals (as Pb)

---

**pH**

9

---

**mp**

271 °C (lit.)

---

33  
3050 Spruce Street, Saint Louis, MO 63103, USAWebsite: [www.sigmaaldrich.com](http://www.sigmaaldrich.com)Email USA: [techserv@sial.com](mailto:techserv@sial.com)Outside USA: [eurtechserv@sial.com](mailto:eurtechserv@sial.com)

## Product Specification

**Product Name:**

Hydrochloric acid solution - volumetric, 0.1 M HCl (0.1N), endotoxin free

**Product Number:** 2104

CAS Number: 7647-01-0

MDL: MFCD00011324

Formula Weight: 36.46 g/mol

**HCl****TEST****Specification**

Appearance (Color) Colorless

Appearance (Form) Liquid

Appearance (Turbidity) Clear

Titration with NaOH 0.098 - 0.120 Normal

Endotoxin Level ≤ 0.1 EU/ml

Specification: PRD.2.ZQ5.10000036001

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# PROPERTIES

vapor pressure

190 mmHg ( 25 °C)

---

Quality Level

100

---

form

liquid

---

quality

endotoxin free

volumetric

---

concentration

0.1 M HCl (0.1N)

---

pH

<1

---

bp

100 °C (lit.)

---

density

1.2 g/cm<sup>3</sup> at 25 °C

---

SMILES string

Cl

---

InChI

1S/ClH/h1H

---

Show



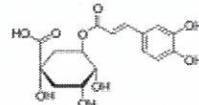
More

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Email USA: [techserv@sial.com](mailto:techserv@sial.com)  
Outside USA: [eurtechserv@sial.com](mailto:eurtechserv@sial.com)

## Product Specification

Product Name:  
Chlorogenic acid - **≥95% (titration)**

Product Number: **C3878**  
CAS Number: 327-97-9  
MDL: MFCD00003862  
Formula: C<sub>16</sub>H<sub>18</sub>O<sub>9</sub>  
Formula Weight: **354.31 g/mol**

**TEST****Specification**

Appearance (Color)	White to Off-White
Appearance (Form)	Powder
Solubility (Color)	Very Faint Yellow to Dark Yellow
Solubility (Turbidity)	Clear to Hazy
25 mg/mL, EtOH	
Loss on Drying	≤ 6 %
Titration with NaOH	≥ 95 %
Dry Basis	
1H NMR Spectrum	Conforms to Structure

Specification: PRD.3.ZQ5.10000041530

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## PROPERTIES

### Quality Level

200

---

### Assay

≥95% (titration)

---

### form

powder

---

### mp

210 °C (dec.) (lit.)

---

### SMILES string

O[C@@@H]1C[C@](O)(C[C@@H](OC(=O)\C=C\c2ccc(O)c(O)c2)[C@@@H]1O)C(O)=O

---

### InChI

1S/C16H18O9/c17-9-3-1-8(5-10(9)18)2-4-13(20)25-12-7-16(24,15(22)23)6-11(19)14(12)21/h1-5,11-12,14,17-19,21,24H,6-7H2,(H,22,23)/b4-2+/t11-,12-,14-,16+/m1/s1

---

### InChI key

CWVRJTMFETXNAD-JUHZACGLSA-N

---

35



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100468 Supelco

## L(+)-Ascorbic Acid

for analysis EMSURE® ACS,Reag. Ph Eur

100468

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L(+)-Ascorbic Acid MSDS (material safety data sheet) or SDS, CoA and CoQ, dossiers, brochures and other available documents.

- [SDS](#)
- [Application Notes](#)
- [CoA](#)
- [Required Licenses](#)

CAS #: 50-81-7 EC Number: 200-002-2 Molar Mass:  
176.12 g/mol Hill Formula: C<sub>6</sub>H<sub>8</sub>O<sub>6</sub> Grade: ACS,Reag. Ph Eur

### Recommended Products



1831  
Millipore  
L-Ascorbic Acid,  
Free Acid • CAS 50-  
81-7 • Calbiochem



100165  
Supelco  
Boric acid



111799  
Supelco  
Sulfanilamide



112292  
Sigma-Aldrich  
Sodium 1-octanesulfonate



100317  
Supelco  
Hydrochloric acid  
fuming 37%

Transport Information	
Declaration (transport by sea) IMDG-Code	No Dangerous Good
Specifications	
Assay (iodometric)	99.0 - 100.5 %
Identity (IR-spectrum)	conforms
Appearance	white or almost white, crystalline powder
Appearance of solution (50 g/l CO <sub>2</sub> -free water)	clear ( $\leq$ 3 NTU) and not so intense in colour than reference solution BY;
pH (50 g/l CO <sub>2</sub> -free water)	2.1 - 2.6
Spec. rotation [ $\alpha$ <sup>20</sup> D (100 g/l, water)]	+20.5 - +21.5 °
Chloride (Cl)	$\leq$ 50 ppm
Sulfate (SO <sub>4</sub> )	$\leq$ 20 ppm
Cu (Copper)	$\leq$ 5 ppm
Fe (Iron)	$\leq$ 2 ppm
Heavy metals (ACS)	$\leq$ 10 ppm
Oxalic acid	$\leq$ 0.2
Related substances (HPLC) (Impurity C)	$\leq$ 0.15 %
Related substances (HPLC) (Impurity D)	$\leq$ 0.15 %
Related substances (HPLC) (unspecified impurities singly)	$\leq$ 0.10 %
Related substances (HPLC) (sum of impurities (except impurity C and D))	$\leq$ 0.2 %
Sulfated ash (600 °C)	$\leq$ 0.05 %
Loss on Drying (105 °C)	$\leq$ 0.1 %

#### Recently Viewed



1831  
Millipore  
L-Ascorbic Acid,  
Free Acid - CAS 50-  
81-7 - Calbiochem

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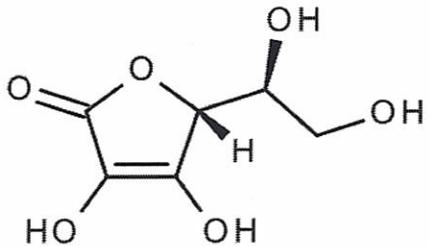
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**Research. Development. Production.**  
We are a leading supplier to the global Life Science industry: solutions and services for research, development and production of biotechnology and pharmaceutical drug therapies.



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Description	
Catalogue Number	100468

Product Information	
CAS number	50-81-7
EC number	200-066-2
Grade	ACS,Reag. Ph Eur
Hill Formula	C <sub>6</sub> H <sub>8</sub> O <sub>6</sub>
Molar Mass	176.12 g/mol
HS Code	2936 27 00
Structure formula Image	 <p>Chiral</p>
Quality Level	MQ300

Physicochemical Information	
Density	1.65 g/cm <sup>3</sup> (20 °C)
Ignition temperature	380 °C
pH value	2.2 - 2.5 (50 g/l, H <sub>2</sub> O, 20 °C)
Bulk density	500 - 900 kg/m <sup>3</sup>
Solubility	330 g/l

Toxicological Information	
LD 50 oral	LD50 Rat 11900 mg/kg

Safety Information according to GHS	
RTECS	CI7650000
Storage class	10 - 13 Other liquids and solids
WGK	WGK 3 highly hazardous to water

Storage and Shipping Information	
Storage	Store at +15°C to +25°C.

Transport Information	
Declaration (railroad and road) ADR, RID	Kein Gefahrgut
Declaration (transport by air) IATA-DGR	No Dangerous Good

Description  
Product Information  
Physicochemical Information  
Toxicological Information  
Safety Information according to GHS  
Storage and Shipping Information  
Transport Information  
Specifications  
Key Spec Table  
Pricing & Availability

3050 Spruce Street, Saint Louis, MO 63103, USA

Website: [www.sigmaaldrich.com](http://www.sigmaaldrich.com)Email USA: [techserv@sial.com](mailto:techserv@sial.com)Outside USA: [eurtechserv@sial.com](mailto:eurtechserv@sial.com)

## Product Specification

Product Name:

Sodium tungstate dihydrate - ACS reagent, ≥99%

**Product Number:****223336**Na2WO4 · 2H2O

CAS Number:

10213-10-2

MDL:

MFCD00149190

Formula:

Na2O4W · 2H2O

Formula Weight:

329.85 g/mol

**TEST****Specification**

Appearance (Color)

White

Appearance (Form)

Powder or Crystals

ICP Major Analysis

Confirmed

Confirms Na and W Components

Gravimetric Analysis

99.0 - 101.0 %

Insoluble matter

≤ 0.01 %

Chloride Content

≤ 0.005 %

Assay

≤ 0.001 %

Heavy Metals(as Lead) and Iron

Molybdenum (Mo)

≤ 0.001 %

Sulfate (SO<sub>4</sub>)

≤ 0.01 %

Titratable base

≤ 0.02 meq

Meets ACS Requirements

Current ACS Specification

Recommended Retest Period

4 Years

Specification: PRD.3.ZQ5.10000020970

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## **PROPERTIES**

**grade**

ACS reagent

**Quality Level**

200

**Assay**

≥99%

**form**

crystalline powder

**reaction suitability**

reagent type: catalyst

core: tungsten

**impurities**

≤0.01% insolubles

≤0.02 meq/g Titr. free base

**pH**

9-11.5 (20 °C, 100 g/L)

**mp**

698 °C (lit.)

**anion traces**chloride ( $\text{Cl}^-$ ): ≤0.005%sulfate ( $\text{SO}_4^{2-}$ ): ≤0.01%**cation traces**

Mo: ≤0.001%

heavy metals and iron (as Pb): ≤0.001%

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Outside USA: [eurtechserv@sial.com](mailto:eurtechserv@sial.com)

## Product Specification

Product Name:  
Sodium molybdate - ~~≥98%~~

Product Number: **243655**  
CAS Number: 7631-95-0  
MDL: MFCD00003486  
Formula: MoNa<sub>2</sub>O<sub>4</sub>  
Formula Weight: ~~205.92 g/mol~~



### TEST

### Specification

Appearance (Color)	<del>White</del>
Appearance (Form)	Conforms to Requirements
Granular Powder	
X-Ray Diffraction	Conforms to Structure
Molybdenum	45.7 - 47.5 %
% Mo With Lead Acetate	

Specification: PRD.0.ZQ5.10000029417

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## **PROPERTIES**

**Quality Level**

100

---

**Assay**

≥98%

---

**form**

granular

---

**reaction suitability**

reagent type: catalyst

core: molybdenum

---

**mp**

687 °C (lit.)

---

**density**

3.78 g/mL at 25 °C (lit.)

---

**SMILES string**

[Na+].[Na+].[O-][Mo]([O-])(=O)=O

---

**InChI**

1S/Mo.2Na.4O/q;2\*+1;;2\*-1

---

**InChI key**

TVXXNOYZHKPKGW-UHFFFAOYSA-N

---

# 38

# Specification



1.00573.1000 ortho-Phosphoric acid 85% for analysis EMSURE® ACS,ISO,Reag. Ph Eur

Specification		
Assay (alkalimetric)	≥ 85.0	%
Identity	passes test	
Appearance of solution	passes test	
Color	≤ 10	Hazen
Chloride (Cl)	≤ 2	ppm
Fluoride (F)	≤ 1	ppm
Nitrate (NO <sub>3</sub> )	≤ 3	ppm
Phosphite and Hypophosphite (as H <sub>3</sub> PO <sub>3</sub> )	≤ 20	ppm
Hypophosphite, phosphite	passes test	
Heavy metals (as Pb)	≤ 10	ppm
Sulfate (SO <sub>4</sub> )	≤ 20	ppm
As (Arsenic)	≤ 0.5	ppm
Ca (Calcium)	≤ 20	ppm
Cd (Cadmium)	≤ 0.5	ppm
Co (Cobalt)	≤ 0.5	ppm
Cu (Copper)	≤ 0.5	ppm
Fe (Iron)	≤ 10	ppm
K (Potassium)	≤ 5	ppm
Mg (Magnesium)	≤ 5	ppm
Mn (Manganese)	≤ 0.5	ppm
Na (Sodium)	≤ 200	ppm
Ni (Nickel)	≤ 1.0	ppm
Pb (Lead)	≤ 0.5	ppm
Sb (Antimony)	≤ 5	ppm
Zn (Zinc)	≤ 2	ppm
Matter precipitated by ammonia	passes test	
Volatile acids (as Acetic acid)	≤ 10	ppm
Substances reducing potassium permanganate (as O)	≤ 10	ppm
Insoluble matter	≤ 10	ppm

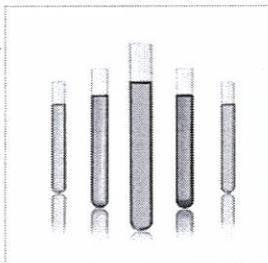
Dr. Nina Hegmann  
Responsible laboratory manager quality control

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822187 Sigma-Aldrich

## Tween® 80



**Tween® 80 for synthesis. CAS 9005-65-6, pH 5 - 7 (50 g/l, H<sub>2</sub>O, 20 °C).**

[View Products on SigmaAldrich.com](#)

Tween® 80 MSDS (material safety data sheet) or SDS, CoA and CoQ, dossiers, brochures and other available documents.

- [SDS](#)
- [CoA](#)
- [Technical Information](#)

CAS #: [9005-65-6](#) EC Number: [500-019-9](#)

822187

[View Pricing & Availability](#)

### Recommended Products



**817061**  
SAFC  
Tween® 80  
(Polysorbate)



**822184**  
Sigma-Aldrich  
Tween® 20



**655207**  
Millipore  
TWEEN® 80,  
PROTEIN GRADE®  
Detergent, 10%  
Solution...



**840123**  
Sigma-Aldrich  
Span® 80



**104873**  
Supelco  
Potassium  
dihydrogen  
phosphate

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### Overview

Description  
Product Information  
Applications  
Physicochemical Information  
Toxicological Information  
Safety Information according to GHS  
Storage and Shipping Information  
Transport Information  
Specifications  
Key Spec Table  
Pricing & Availability

### Key Spec Table

CAS #	EC Number
<a href="#">9005-65-6</a>	<a href="#">500-019-9</a>

### Pricing & Availability

Catalogue Number	Availability	Packaging	Qty/Pack	Price	Quantity	
8221870050	— <a href="#">Contact Customer Service</a>	Plastic bottle	50 ml	Upon Order Completion	—	<a href="#">Add To Favorites</a>
8221870500	— <a href="#">Contact Customer Service</a>	Plastic bottle	500 ml	Upon Order Completion	—	<a href="#">Add To Favorites</a>
8221871000	— <a href="#">Contact Customer Service</a>	Plastic bottle	1 l	Upon Order Completion	—	<a href="#">Add To Favorites</a>
8221872500	— <a href="#">Contact Customer Service</a>	Plastic bottle	2.5 l	Upon Order Completion	—	<a href="#">Add To Favorites</a>

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Description	
Catalogue Number	822187

Product Information	
CAS number	9005-65-6
EC number	500-019-9
HS Code	3402 42 00
Quality Level	MQ200

Applications	
Application	Tween® 80 for synthesis. CAS 9005-65-6, pH 5 - 7 (50 g/l, H <sub>2</sub> O, 20 °C).

Physicochemical Information	
Boiling point	>100 °C (1013 hPa)
Density	1.07 g/cm <sup>3</sup> (25 °C)
Flash point	>113 °C
pH value	5 - 7 (50 g/l, H <sub>2</sub> O, 20 °C)
Vapor pressure	<1.33 hPa (20 °C)
Viscosity kinematic	300 - 500 mm <sup>2</sup> /s (25 °C)

Toxicological Information	
LD 50 oral	LD50 Rat 42200 mg/kg

Safety Information according to GHS	
RTECS	WG2932500
Storage class	10 - 13 Other liquids and solids
WGK	WGK 1 slightly hazardous to water

Storage and Shipping Information	
Storage	Store below +30°C.

Transport Information	
Declaration (railroad and road) ADR, RID	Kein Gefahrgut
Declaration (transport by air) IATA-DGR	No Dangerous Good
Declaration (transport by sea) IMDG-Code	No Dangerous Good

Specifications	
Density (d 20 °C/ 4 °C)	1.060 - 1.090
Saponification value	45 - 55
Hydroxyl value	65 - 80
Identity (IR)	passes test
Due to its specific melting range the product may be solid, liquid, a solidified melt or a supercooled melt.	

#### Recently Viewed



822187

Type in Product Names, Product Numbers, or CAS Numbers to see suggestions.



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P1379 ► Sigma-Aldrich.

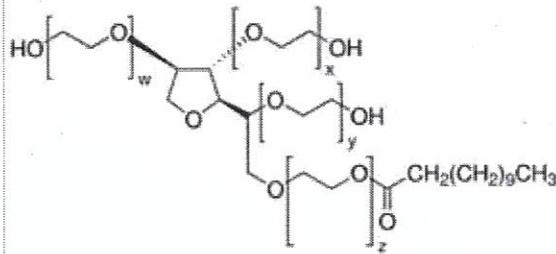
## TWEEN® 20

★★★★★ 5.0 (4)

2 of 4 reviewers received a sample product or took part in a promotion

Write a review

viscous liquid



All Photos (1)

### Synonym(s):

Polyethylene glycol sorbitan monolaurate, Polyoxyethylenesorbitan monolaurate

### CAS Number:

9005-64-5

### MDL number:

MFCD00165986

### NACRES:

NA.21

Feedback



## Select an Option

SKU

<https://www.sigmaaldrich.com/VN/en/product/sial/p1379>

**Quality Level**

300

**Assay**

≥40.0% (GC)

**form**

viscous liquid

**mol wt**

~1228

**composition**

lauric acid, ≥40% (balance primarily myristic, palmitic, and stearic acids)

**technique(s)**

DNA extraction: suitable

RNA extraction: suitable

cell culture | mammalian: suitable

protein purification: suitable

**impurities**

≤3.0% water

**refractive index** $n_{20/D}$  1.468 (lit.)**CMC**

0.06 mM (20-25°C)

**acid number**

≤2.2 mg/g

**hydroxyl value**

96-108 mg/g

**transition temp**

cloud point 76 °C

**density**

1.095 g/mL at 25 °C (lit.)

**HLB**

16.7

**suitability**

complies for IR spectroscopy

**InChI**

Type in Product Names, Product Numbers, or CAS Numbers to see suggestions.



# Specification Sheet

**Product Name** Chloro(dimethyl)octylsilane 97%

**Product Number** 246859

**Product Brand** ALDRICH

**CAS Number** 18162-84-0

**Molecular Weight** 206.83

## TEST

## SPECIFICATION

**Appearance (Color)** Colorless

**Appearance (Form)** Liquid

**Infrared spectrum** Conforms to Structure

**Purity (GC)** ≥96.5 %

## **Phần 8: Kiểm soát phơi nhiễm/bảo vệ cá nhân**

### 8.1 Các thông số kiểm soát

Các thành phần có các thông số cần kiểm soát tại nơi làm việc

## 8.2 Kiểm soát phơi nhiễm

## Biên pháp và thiết bị bảo hộ cá nhân

#### Bảo vệ mắt/mắt

Sử dụng thiết bị bảo vệ mắt được thử nghiệm và phê duyệt theo tiêu chuẩn phù hợp của chính phủ như NIOSH (Hoa Kỳ) hoặc EN 166(EU). Kính bảo hộ vừa khít

Bảo vệ da

## yêu cầu

### Bảo vệ cơ thể

quần áo bảo hộ

Bảo vệ hồ hấp

bắt buộc khi có hơi/thuốc xit.

Các khuyến nghị của chúng tôi về lọc thiết bị bảo vệ hô hấp dựa trên các tiêu chuẩn sau: DIN EN 143, DIN 14387 và các tiêu chuẩn đi kèm khác liên quan đến hệ thống thiết bị bảo vệ hô hấp đã sử dụng.

Loại bô lọc đề xuất: Bô lọc loại ABEK

Công ty phải đảm bảo rằng việc bảo trì, lau chùi và kiểm tra thi dẫn của nhà sản xuất. Các phương pháp này phải được lập thành

#### Kiểm soát việc phơi nhiễm môi trường

Không để sản phẩm đi vào hệ thống cống rãnh.

## Phần 9: Các tính chất vật lý và hóa học

### 9.1 Thông tin cơ bản về các đặc tính vật lý và hóa học



- e) Điểm sôi/khoảng sôi **222 - 225 °C** - tliệu.  
ban đầu
- f) Khả năng bắt cháy chưa có dữ liệu  
(chất rắn, khí)
- g) Giới hạn trên/dưới của chưa có dữ liệu  
tính dễ cháy hoặc dễ nổ
- h) Điểm cháy chưa có dữ liệu
- i) Nhiệt độ tự bốc cháy chưa có dữ liệu
- j) Nhiệt độ phân hủy chưa có dữ liệu
- k) Độ pH chưa có dữ liệu
- l) Độ nhớt Độ nhớt, động học: chưa có dữ liệu  
Độ nhớt, động lực: chưa có dữ liệu
- m) Độ hòa tan trong nước chưa có dữ liệu
- n) Hệ số phân tán: n-octanol/nước chưa có dữ liệu
- o) Áp suất hóa hơi chưa có dữ liệu
- p) Mật độ **0.873 g/cm<sup>3</sup>** ở 25 °C - tliệu.  
Tỷ trọng tương đối chưa có dữ liệu
- q) Tỷ trọng hơi tương đối chưa có dữ liệu
- r) Đặc điểm hạt chưa có dữ liệu
- s) Đặc tính cháy nổ chưa có dữ liệu
- t) Đặc tính ôxy hóa chưa có dữ liệu

## **9.2 Thông tin an toàn khác** chưa có dữ liệu

### **Phần 10: Tính ổn định và tính phản ứng**

#### **10.1 Khả năng phản ứng** chưa có dữ liệu

#### **10.2 Tính ổn định**

Sản phẩm ổn định về mặt hóa học trong điều kiện môi trường chuẩn (nhiệt độ phòng).

