Safety Data Sheet

according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

Revision date: 23.04.2018	*Version: 6.2*	*Print date: 23.04.2018*

SECTION 1: Identification

Product identifier

Trade name/designation:	Methanol ACS
Product No.:	BDH1135
Synonymes:	no data available
CAS No.:	67-56-1
Other means of identification:	

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

Recommended Use:	For Further Manufacturing Use Only
Uses advised against:	Not for Human or Animal Drug Use

Details of the supplier of the safety data sheet

Supplier

VWR International LLC

Street	100 Matsonford Road Radnor Corporate Center, Building One, Suite 200 P. O. Box 6660
Postal code/city	Radnor, PA 19087
Telephone	+1-800-932-5000 toll-free within US/Canada +1-610-386-1700
Telefax:	+1-610-728-2103

Emergency telephone

Telephone +1-800-424-9300 (Chemtrec, 24 hrs/day, 7 days/week, USA)

Preparation Information

VWR International - Product Information Compliance

E-mail sds@vwr.com

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910.1200 (OSHA HCS)

Hazard classes and hazard categories	Hazard statements
Flammable liquid, category 2	H225
Acute toxicity, category 3, oral, dermal and inhalation	H301+H311+H331
Specific target organ toxicity (single exposure), category 1	H370

2.2 Label elements

Labelling in accordance with 29 CFR 1910.1200 (OSHA HCS)

Hazard pictograms

Signal word: Danger

Hazard statements	
H225	Highly flammable liquid and vapor.
H301+H311+H331	Toxic if swallowed, in contact with skin or if inhaled.
H370	Causes damage to organs.

Precautionary statements	
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P243	Take precautionary measures against static discharge.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352	IF ON SKIN: Wash with plenty of water/…
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P308+P310	IF exposed or concerned: Immediately call a POISON CENTER/doctor.

Hazards not otherwise classified (HNOC)

none/none

SECTION 3: Composition / information on ingredients

3.1 Substances

Substance name	Methanol
Molecular formula	H3COH
Molecular weight	32.04 g/mol
CAS No.	67-56-1

SECTION 4: First aid measures

4.1 General information

IF exposed: Immediately call a POISON CENTER/doctor. If unconscious place in recovery position and seek medical advice. Never give anything by mouth to an unconscious person or a person with cramps. Change contaminated, saturated clothing. Do not leave affected person unattended.

After inhalation

Immediately call a POISON CENTER/doctor. Remove casualty to fresh air and keep warm and at rest. If breathing is irregular or stopped, administer artificial respiration.

In case of skin contact

After contact with skin, wash immediately with plenty of water and soap. Remove contaminated, saturated clothing immediately. In case of skin reactions, consult a physician.

After eye contact

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist. Protect uninjured eye. Remove contact lenses, if present and easy to do. Continue rinsing.

In case of ingestion

Immediately call a POISON CENTER/doctor. Do NOT induce vomiting. Rinse mouth thoroughly with water. Give nothing to eat or drink.

4.2 Most important symptoms/effects, acute and delayed

no data available

4.3 Indication of any immediate medical attention and special treatment needed

no data available

4.4 Self-protection of the first aider

First aider: Pay attention to self-protection!

4.5 Information to physician

no data available

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Water spray
ABC-powder
Carbon dioxide (CO2)
Nitrogen

Extinguishing media which must not be used for safety reasons
no restriction

5.2 Specific hazards arising from the chemical

In case of fire may be liberated:
Carbon monoxide
Carbon dioxide (CO2)

5.3 Advice for firefighters

DO NOT fight fire when fire reaches explosives.
Protective equipment and precautions for firefighters
Wear a self-contained breathing apparatus and chemical protective clothing.

Additional information

Do not allow run-off from fire-fighting to enter drains or water courses.
Do not inhale explosion and combustion gases.
Use caution when applying carbon dioxide in confined spaces. Carbon dioxide can displace oxygen.
Use water spray/stream to protect personnel and to cool endangered containers.
In case of fire: Evacuate area.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

In case of major fire and large quantities: Remove persons to safety.

6.2 Environmental precautions

Discharge into the environment must be avoided.

6.3 Methods and material for containment and cleaning up

Spilled product must never be returned to the original container for recycling. Collect in closed and suitable containers for disposal.

6.4 Additional information

Clear spills immediately.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Avoid: Inhalation Avoid contact with eyes and skin. Use extractor hood (laboratory). If handled uncovered, arrangements with local exhaust ventilation have to be used. If local exhaust ventilation is not possible or not sufficient, the entire working area must be ventilated by technical means. Keep away from sources of ignition - No smoking. Usual measures for fire prevention. Take precautionary measures against static discharges.

7.2 Conditions for safe storage, including any incompatibilities

Recommended storage temperature: Ambient temperature
Keep container tightly closed and in a well-ventilated place. Store in a place accessible by authorized persons only. Keep/Store away from combustible materials.

7.3 Specific end use(s)

no data available

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Ingredient (Designation)	Regulatory information	Country	Limit value type (country of origin)	Limit value
Methanol	NIOSH	US	LTV	260 mg/m³ - 200 ppm
Methanol	NIOSH	US	STV	325 mg/m³ (1) - 250 ppm (1)
Methanol	OSHA	US	LTV	260 mg/m³ - 200 ppm

8.2 Engineering controls

Appropriate engineering controls
Technical measures and the application of suitable work processes have priority over personal protection equipment. If handled uncovered, arrangements with local exhaust ventilation have to be used.

Personal protection equipment (PPE)
Wear suitable protective clothing. When handling with chemical substances, protective clothing must be worn.

Eye/face protection
Eye glasses with side protection

Skin protection
Wear suitable gloves. When handling with chemical substances, protective gloves must be worn. In the case of wanting to use the gloves again, clean them before taking off and air them well. Check leak tightness/impermeability prior to use.

By short-term hand contact

Suitable material:	NBR (Nitrile rubber)
Thickness of the glove material:	0,38 mm
Breakthrough time (maximum wearing time):	-

By long-term hand contact

Suitable material:	Butyl caoutchouc (butyl rubber)
Thickness of the glove material:	0,30 mm
Breakthrough time (maximum wearing time):	> 480 min

Respiratory protection
Respiratory protection necessary at: aerosol or mist formation If exposure limits are exceeded or irritation is experienced, NIOSH approved respiratory protection should be worn.

Additional information
Wash hands before breaks and after work. Avoid contact with skin and eyes. When using do not eat, drink or smoke. Provide eye shower and label its location conspicuously.

Environmental exposure controls
no data available

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

(a) Appearance	
Physical state:	liquid
Color:	colorless
(b) Odour:	characteristic
(c) Odour threshold:	no data available

Safety relevant basic data

(d) pH:	7 (20 °C)
(e) Melting point/freezing point:	-98 °C
(f) Initial boiling point and boiling range:	64.6 °C (1013 hPa)
(g) Flash point:	11 °C (closed cup)
(h) Evaporation rate:	no data available
(i) Flammability (solid, gas):	Highly flammable liquid and vapor.
(j) Flammability or explosive limits	
Lower explosion limit:	5.5 % (v/v)
Upper explosion limit:	36.5 % (v/v)
(k) Vapour pressure:	128 hPa (20 °C)
(l) Vapour density:	1.11 (20 °C)
(m) Relative density:	0.7918 g/cm³ (20 °C)
(n) Solubility(ies)	
Water solubility (g/L):	soluble (20 °C)
Soluble (g/L) in Ethanol:	no data available
(o) Partition coefficient: n-octanol/water:	-0.77 (20 °C)
(p) Auto-ignition temperature:	455 °C (DIN 51794)
(q) Decomposition temperature:	no data available
(r) Viscosity	
Kinematic viscosity:	no data available
Dynamic viscosity:	0.614 mPa*s (20 °C)
(s) Explosive properties:	not applicable
(t) Oxidising properties:	not applicable

9.2 Other information

Bulk density:	not applicable
Refraction index:	1.33066 (589 nm; 20 °C)
Dissociation constant:	no data available
Surface tension:	no data available
Henry constant:	no data available

SECTION 10: Stability and reactivity

10.1 Reactivity

Vapors may form explosive mixtures with air.

10.2 Chemical stability

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

10.3 Possibility of hazardous reactions

Formation of explosive mixtures with:
Oxidising agent
Nitrogen oxides (NOx)
Material, oxygen-rich, combustible
Nitric acid
Chlorine
Bromine
Exothermic reaction with:
Reducing agent
Acid
Acid halides
Alkali (lye), concentrated
Violent reaction with:
Alkali metals
Alkaline earth metal
Formation of:
Hydrogen

10.4 Conditions to avoid

UV-radiation/sunlight
Heat
This material is combustible and can be ignited by heat, sparks, flames, or other sources of ignition (e.g. static electricity, pilot lights, or mechanical/electrical equipment).

10.5 Incompatible materials

light metals
Plastic articles

10.6 Hazardous decomposition products

no data available

10.7 Additional information

Slowly corrodes aluminium and zinc under hydrogen evolution.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute effects
Acute oral toxicity:
LD50: > 5628 mg/kg - Rat - (IUCLID)

LDLo: > 143 mg/kg - Human - (RTECS)

Acute dermal toxicity:
LD50: > 15800 mg/kg - Rabbit

Acute inhalation toxicity:
TCLo: > 160 ppm (4h) - Human

Irritant and corrosive effects
Primary irritation to the skin:
not applicable

Irritation to eyes:
not applicable

Irritation to respiratory tract:
not applicable

Respiratory or skin sensitization
In case of skin contact: not sensitising
After inhalation: not sensitising

STOT-single exposure
Causes damage to organs.

STOT-repeated exposure
not applicable

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)
Carcinogenicity
The table below indicates whether each agency has listed any ingredient as a carcinogen.

no data available	ACGIH	IARC	NTP	OSHA

Germ cell mutagenicity
No indications of human germ cell mutagenicity exist.

Reproductive toxicity
No indications of human reproductive toxicity exist.

Aspiration hazard
not applicable

Other adverse effects
no data available

Additional information
no data available

SECTION 12: Ecological information

12.1 Ecotoxicity

Fish toxicity:
LC50: 24000 mg/l (96 h) - Poirier, S.H., M.L. Knuth, C.D. Anderson-Buchou, L.T. Brooke, A.R. Lima, and P.J. Shubat 1986. Comparative Toxicity of Methanol and N,N-Dimethylformamide to Freshwater Fish and Invertebrates. Bull.Environ.Contam.Toxicol. 37(4):615-621

Daphnia toxicity:
LC50: 3290 mg/l (48 h) - Guilhermino, L., T. Diamantino, M.C. Silva, and A.M.V.M. Soares 2000. Acute Toxicity Test with Daphnia magna: An Alternative to Mammals in the Prescreening of Chemical Toxicity?. Ecotoxicol.Environ.Saf. 46(3):357-362

EC50: 24500 mg/l (48 h) - Randall, T.L., and P.V. Knopp 1980. Detoxification of Specific Organic Substances by Wet Oxidation. J.Water Pollut.Control Fed. 52(8):2117-2130

Algae toxicity:
no data available

Bacteria toxicity:
no data available

12.2 Persistence and degradability
no data available

12.3 Bioaccumulative potential
Partition coefficient: n-octanol/water: -0.77 (20 °C)

12.4 Mobility in soil:
no data available

12.5 Results of PBT/vPvB assessment
no data available

12.6 Other adverse effects
no data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Appropriate disposal / Product
Dispose according to legislation. Consult the appropriate local waste disposal expert about waste disposal.

Waste code product: 070104

Appropriate disposal / Package

Dispose according to legislation. Handle contaminated packages in the same way as the substance itself.

Additional information

no data available

SECTION 14: Transport information

Land transport (DOT)

UN-No.:	1230
Proper Shipping Name:	METHANOL
Class(es):	3 (6.1)
Classification code:	FT1
Hazard label(s):	3+6.1
Packing group:	II
Environmental hazards:	No
Marine pollutant:	no data available

Special precautions for user:

Sea transport (IMDG)

UN-No.:	1230
Proper Shipping Name:	METHANOL
Class(es):	3 (6.1)
Classification code:	
Hazard label(s):	3+6.1
Packing group:	II
Environmental hazards:	No
MARINE POLLUTANT:	No

Special precautions for user:

Segregation group:	-
EmS-No.	F-E S-D

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

not relevant

Air transport (ICAO-TI / IATA-DGR)

UN-No.:	1230
Proper Shipping Name:	METHANOL
Class(es):	3 (6.1)
Classification code:	
Hazard label(s):	3
Packing group:	II

Special precautions for user:

SECTION 15: Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture

SARA 313 Components

Listed

Massachusetts Right To Know Components

Listed

Pennsylvania Right To Know Components

Listed

New Jersey Right To Know Components

Listed

California Prop. 65 Components

Listed

SECTION 16: Other information

Abbreviations and acronyms

ACGIH - American Conference of Governmental Industrial Hygiensts
DOT - Department of Transportation
IARC - International Agency for Research on Cancer
IATA-DGR - International Air Transport Association-Dangerous Goods Regulations
ICAO-TI - International Civil Aviation Organization-Technical Instructions
IMDG - International Maritime Code for Dangerous Goods
LTV - Long Term Value
NIOSH - National Institute for Occupational Safety and Health
NTP - National Toxicology Program
OSHA - Occupational Safety & Health Administration
PBT - Persistent, Bioaccumulative and Toxic
PEL - Permissible Exposure Limit
STV - Short Term Value
SVHC - Substances of Very High Concern
TDG - Transport of Dangerous Goods
TLV - Threshold Limit Value
vPvB - very Persistent, very Bioaccumulative

Additional information

Indication of changes: general update

The above information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guidance. The information in this document is based on the present state knowledge and is applicable to the product with regard to appropriate safty precautions. It does not represent any guarantee of the properties of the product. VWR International and his Affiliates shall not be held liable for any damage resulting from handling.