We create chemistry

Safety data sheet

1. Identification

Product identifier

Na-Methylate Crystals

Chemical name: sodium methylate crystals
CAS Number: 124-41-4

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

Relevant identified uses: industrial chemicals
Recommended use: initial product for chemical syntheses, process chemical

Details of the supplier of the safety data sheet

Company:
BASF SE
67056 Ludwigshafen
GERMANY
Division Monomers

Telephone: +49 621 60 42737
E-mail address: pss.monomers@basf.com

Emergency telephone number

International emergency number:
Telephone: +49 180 2273-112

2. Hazards Identification

Classification of the substance or mixture

According to UN GHS criteria

Flam. Sol. 1
Self-heat. 1
Acute Tox. 4 (oral)
Eye Dam./Irrit. 1
Skin Corr./Irrit. 1B

For the classifications not written out in full in this section the full text can be found in section 16.

Label elements

Globally Harmonized System (GHS)

Pictogram:

Signal Word:
Danger

Hazard Statement:

H228	Flammable solid.
H251	Self-heating: may catch fire.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.

Precautionary Statements (Prevention):

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/…
P260	Do not breathe dust.
P241	Use explosion-proof electrical, ventilating and lighting equipment.
P235	Keep cool.
P240	Ground and bond container and receiving equipment.
P270	Do not eat, drink or smoke when using this product.
P264	Wash contaminated body parts thoroughly after handling.

Precautionary Statements (Response):

P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER or physician.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P301 + P330 + P331	IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P301 + P312	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P363	Wash contaminated clothing before reuse.
P370 + P378	In case of fire: Use … to extinguish.

Precautionary Statements (Storage):

P405	Store locked up.
P407	Maintain air gap between stacks or pallets.
P420	Store separately.
P413	Store bulk masses greater than 1,000 kg/2,205 lbs at temperatures not exceeding 25 °C/77 °F.

Precautionary Statements (Disposal):

P501	Dispose of contents and container to hazardous or special waste collection point.

According to Regulation (EC) No 1272/2008 [CLP]

Labeling of special preparations (GHS):
Reacts violently with water.

According to UN GHS criteria

Hazard determining component(s) for labelling: Sodium methanolate

Other hazards

According to UN GHS criteria

If applicable information is provided in this section on other hazards which do not result in classification but which may contribute to the overall hazards of the substance or mixture.

When finely distributed, self-ignition is possible.

3. Composition/Information on Ingredients

Substances

Chemical nature

Sodium methanolate (Content (W/W): 100 %)
CAS Number: 124-41-4
EC-Number: 204-699-5

INDEX-Number: 603-040-00-2

For the classifications not written out in full in this section the full text can be found in section 16.

Mixtures

Not applicable

4. First-Aid Measures

Description of first aid measures

First aid personnel should pay attention to their own safety. If the patient is likely to become unconscious, place and transport in stable sideways position (recovery position). Immediately remove contaminated clothing.

If inhaled:
Keep patient calm, remove to fresh air, seek medical attention. Immediately administer a corticosteroid from a controlled/metered dose inhaler.

On skin contact:
Immediately wash thoroughly with plenty of water, apply sterile dressings, consult a skin specialist.

On contact with eyes:
Immediately wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.

On ingestion:
Immediately rinse mouth and then drink 200 - 300 ml water, do not induce vomiting, seek medical attention. Administer 50 ml of pure ethanol in a drinkable concentration. Seek medical attention.

Most important symptoms and effects, both acute and delayed

Symptoms: skin corrosion, Eye irritation, Further symptoms are possible

Hazards: No hazard is expected under intended use and appropriate handling.

Indication of any immediate medical attention and special treatment needed

Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

5. Fire-Fighting Measures

Extinguishing media

Suitable extinguishing media:
dry powder, Dry sand, alcohol-resistant foam

Unsuitable extinguishing media for safety reasons:
water, carbon dioxide

Special hazards arising from the substance or mixture

Reacts violently with water. See SDS section 7 - Handling and storage.

sodium oxides, organic vapours, corrosive gases/vapours, carbon oxides
Generation of fumes/fog. The substances/groups of substances mentioned can be released in case of fire.

Advice for fire-fighters

Special protective equipment:
Wear self-contained breathing apparatus and chemical-protective clothing.

Further information:
Collect contaminated extinguishing water separately, do not allow to reach sewage or effluent systems. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures
Avoid contact with the skin, eyes and clothing. Use breathing apparatus if exposed to vapours/dust/aerosol. Use personal protective clothing.

Environmental precautions
Do not allow to enter soil, waterways or waste water channels.

Methods and material for containment and cleaning up
For small amounts: Sweep/shovel up. Correctly dispose of recovered product immediately.
For large amounts: Sweep/shovel up. Correctly dispose of recovered product immediately.

7. Handling and Storage

Precautions for safe handling

Ensure thorough ventilation of stores and work areas. Breathing must be protected when large quantities are decanted without local exhaust ventilation. Protect against moisture. Protect from air. Protect from direct sunlight. Handle in protective atmosphere.

Protection against fire and explosion:
Take precautionary measures against static discharges. Sources of ignition should be kept well clear. Fire extinguishers should be kept handy. Avoid dust formation.

Conditions for safe storage, including any incompatibilities

Segregate from acids and acid forming substances.

Suitable materials for containers: Low density polyethylene (LDPE), Stainless steel 1.4301 (V2), Stainless steel 1.4401, glass, High density polyethylene (HDPE), Carbon steel (Iron), Stainless steel 1.4541, Stainless steel 1.4571, Alkyd resin lacquer 441
Further information on storage conditions: Keep container tightly closed in a cool, well-ventilated place. Keep under nitrogen.

Specific end use(s)

See exposure scenario(s) in the attachment to this safety data sheet.

8. Exposure Controls/Personal Protection

Control parameters

Components with occupational exposure limits

67-56-1: Methanol
1310-73-2: Sodium hydroxide

Exposure controls

Personal protective equipment

Respiratory protection:
Breathing protection if breathable aerosols/dust are formed. Particle filter with medium efficiency for solid and liquid particles (e.g. EN 143 or 149, Type P2 or FFP2)

Hand protection:
Use gauntlets.
Suitable materials also with prolonged, direct contact (Recommended: Protective index 6, corresponding > 480 minutes of permeation time according to EN ISO 374-1):
butyl rubber (butyl) - 0.7 mm coating thickness
fluoroelastomer (FKM) - 0.7 mm coating thickness
Supplementary note: The specifications are based on tests, literature data and information of glove manufacturers or are derived from similar substances by analogy. Due to many conditions (e.g. temperature) it must be considered, that the practical usage of a chemical-protective glove in practice may be much shorter than the permeation time determined through testing.
Manufacturer's directions for use should be observed because of great diversity of types.

Eye protection:
Tightly fitting safety goggles (cage goggles) (e.g. EN 166) and face shield.

Body protection:
Body protection must be chosen depending on activity and possible exposure, e.g. apron, protecting boots, chemical-protection suit (according to EN 14605 in case of splashes or EN ISO 13982 in case of dust).

General safety and hygiene measures
Avoid contact with the skin, eyes and clothing. Do not breathe dust. Handle in accordance with good industrial hygiene and safety practice. Avoid inhalation of dusts.

9. Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

State of matter:	solid	
Form:	powder, crystalline	
Colour:	colourless	
Odour:	odourless	
Odour threshold:	Not determined due to potential health hazard by inhalation.	
melting point (decomposition):	> 350 °C The substance / product decomposes therefore not determined.	(Directive 92/69/EEC, A.1)
Boiling point:	> 350 °C (1.013,25 hPa) The substance / product decomposes therefore not determined.	(Directive 92/69/EEC, A.2)
Flammability:	Flammable solid., Highly flammable.	(Directive 84/449/EEC, A.10)
Lower explosion limit:	For solids not relevant for classification and labelling.	
Upper explosion limit:	For solids not relevant for classification and labelling.	
Flash point:	not applicable, the product is a solid	
Auto-ignition temperature:	not determined	
Self-ignition temperature:	Temperature: > 25 - < 50 °C Pressure: 1.013 hPa	Test type: Self-ignition at high temperatures. (Method: Directive 92/69/EEC, A.16)
	No self ignition was observed up to the specified temperature.	
Thermal decomposition:	> 280 °C (DTA) Thermal decomposition above the indicated temperature is possible. The indicated value is for inert gas atmosphere. > 50 °C (VDI 2263, sheet 1, 1.4.1 (May 1990)) Risk of spontaneous ignition when exposed to air.	
pH value:	12,8 (10 g/l, 20 °C) Literature data.	
Viscosity, kinematic:	Study technically not feasible.	
Viscosity, dynamic:	Study technically not feasible.	
	Study technically not feasible.	
Solubility in water:	Study scientifically not justified.	
Solubility (qualitative) solvent(s):	alcohols soluble	
Partitioning coefficient n-octanol/water (log Kow):	-0,72 (25 °C; pH value: < 13)	(calculated)

Information on: Methanol

Partitioning coefficient n-octanol/water (log Kow):	*-0,77* *(20 °C)* *Literature data.*	*(measured)*

Vapour pressure:	< 0,000001 hPa (25 °C)	(calculated)
Relative density:	No data available.	
Density:	1,3 g/cm3 (20 °C) Literature data.	
Relative vapour density (air):	The product is a non-volatile solid.	
Particle characteristics		
Particle size distribution:	3,6 µm	(D10, ISO 13320-1)
	135,7 µm	(D90, ISO 13320-1)
	69,9 µm	(D50, ISO 13320-1)
Particle size distribution:	fine particles -	

9.2. Other information

Information with regard to physical hazard classes

Explosives		
Explosion hazard:	Based on the chemical structure there is no indication of explosive properties.	
Impact sensitivity:	Based on the chemical structure there is no shock-sensitivity.	
Oxidizing properties		
Fire promoting properties:	not fire-propagating Study scientifically not justified.	
Flammable solids		
Burning rate:	approx. 15 mm/s	
Pyrophoric properties		
Self-ignition temperature:	not self-igniting	Test type: Spontaneous self-ignition at room-temperature.
Self-heating substances and mixtures		
Self heating ability:	It is a substance capable of spontaneous heating.	
Substances and mixtures, which emit flammable gases in contact with water		
Formation of flammable gases:	Forms no flammable gases in the presence of water.	(UN Test N.5 (contact with water))
Corrosion to metals	Corrodes metals in the presence of water or moisture.	

Other safety characteristics

Bulk density:	500 - 600 kg/m3 (< 40 °C)	(DIN 53466)
pKA:	15,17 (20 °C)	(calculated)
Hygroscopy:	hygroscopic	

Adsorption/water - soil:	KOC: 1 The product has not been tested. The statement has been derived from the properties of the hydrolysis products.	(calculated)
Surface tension:	Based on chemical structure, surface activity is not to be expected.	
Evaporation rate:	The product is a non-volatile solid.	

10. Stability and Reactivity

Reactivity

No hazardous reactions if stored and handled as prescribed/indicated.

Corrosion to metals:	Corrodes metals in the presence of water or moisture.	
Formation of flammable gases:	Remarks:	Forms no flammable gases in the presence of water.
	Method:	Manual of tests and criteria. Test N.5.

Possibility of hazardous reactions

Exothermic reaction. Reacts with water and acids. Reacts with substances which contain active hydrogen. Self heating possible in the presence of air. Accumulation of fine dust may entail the risk of a dust explosion in the presence of air.

Conditions to avoid

Avoid all sources of ignition: heat, sparks, open flame. Avoid moisture. Avoid electro-static charge. Avoid heat.

Incompatible materials

Substances to avoid:
water, acids

Hazardous decomposition products

Hazardous decomposition products:
Methanol, Sodium hydroxide

11. Toxicological Information

Information on toxicological effects

Acute toxicity

Assessment of acute toxicity:
Of moderate toxicity after single ingestion. The toxicity of the product is based on its corrosivity.

Experimental/calculated data:
LD50 rat (oral): 1.687 mg/kg (OECD Guideline 401)
An aqueous solution was tested.

(by inhalation):Study does not need to be conducted.

LD50 rat (dermal): > 2.000 mg/kg (BASF-Test)
No mortality was observed. An aqueous solution was tested.

Information on: methanol
Assessment of acute toxicity:
Of high toxicity after single ingestion. Of high toxicity after short-term inhalation. Of high toxicity after short-term skin contact.

Irritation

Assessment of irritating effects:
Corrosive! Damages skin and eyes.

Experimental/calculated data:
Skin corrosion/irritation rabbit: Corrosive. (similar to OECD guideline 404)

Serious eye damage/irritation rabbit: irreversible damage (BASF-Test)

Respiratory/Skin sensitization

Assessment of sensitization:
As the substance is corrosive, conducting sensitization studies is not feasible. The chemical structure does not suggest a sensitizing effect.

Germ cell mutagenicity

Assessment of mutagenicity:
The substance was not mutagenic in bacteria. The substance was not mutagenic in mammalian cell culture. The substance was not mutagenic in a test with mammals. The product has not been fully tested. The statements have been derived in parts from products of a similar structure or composition.

Carcinogenicity

Assessment of carcinogenicity:
Study does not need to be conducted. The chemical structure does not suggest a specific alert for such an effect.

Reproductive toxicity

Assessment of reproduction toxicity:
Study does not need to be conducted. The chemical structure does not suggest a specific alert for such an effect.

Developmental toxicity

Assessment of teratogenicity:
Study does not need to be conducted. The chemical structure does not suggest a specific alert for such an effect.

Specific target organ toxicity (single exposure)

Assessment of STOT single:
Based on the available information there is no specific target organ toxicity to be expected after a single exposure.

Repeated dose toxicity and Specific target organ toxicity (repeated exposure)

Assessment of repeated dose toxicity:
Study does not need to be conducted. The chemical structure does not suggest a specific alert of toxicity on target organs after repeated exposure.

Information on: methanol
Assessment of repeated dose toxicity:
The substance may cause blindness after repeated ingestion. The substance may cause blindness after repeated inhalation.

Aspiration hazard

Harmful if swallowed.

12. Ecological Information

Toxicity

Assessment of aquatic toxicity:
There is a high probability that the product is not acutely harmful to aquatic organisms. The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations.
The product has not been tested. The statement has been derived from the properties of the hydrolysis products. The product gives rise to pH shifts.

Toxicity to fish:
LC50 (96 h) 15.400 mg/l, Lepomis macrochirus (Fish test acute, Flow through.)
Literature data. The product has not been tested. The statement has been derived from the properties of the hydrolysis products.

Aquatic invertebrates:
EC50 (96 h) 18.260 mg/l, Daphnia magna (DIN 38412 Part 11, semistatic)
Literature data. The product has not been tested. The statement has been derived from the properties of the hydrolysis products.

Aquatic plants:

EC50 (96 h) approx. 22.000 mg/l (growth rate), Pseudokirchneriella subcapitata (OECD Guideline 201, static)
Literature data. The product has not been tested. The statement has been derived from the properties of the hydrolysis products.

Microorganisms/Effect on activated sludge:
EC50 (3 h) > 1.000 mg/l, activated sludge (OECD Guideline 209, static)
Literature data. The product has not been tested. The statement has been derived from the properties of the hydrolysis products.

Chronic toxicity to fish:
No observed effect concentration (200 h) 7.900 mg/l, Oryzias latipes (static)
The product has not been tested. The statement has been derived from the properties of the hydrolysis products.

No observed effect concentration (30 d) 450 mg/l, Pimephales promelas (calculated)
The product has not been tested. The statement has been derived from the properties of the hydrolysis products.

Chronic toxicity to aquatic invertebrates:
No observed effect concentration (21 d) 208 mg/l, Daphnia magna (calculated)
The product has not been tested. The statement has been derived from the properties of the hydrolysis products.

Information on: Sodium hydroxide
Assessment of aquatic toxicity:
Depending on local conditions and existing concentrations, disturbances in the biodegradation process of activated sludge are possible. There is a high probability that the product is not acutely harmful to aquatic organisms.
The effect strongly depends on the pH-value. The data refers to the dissociated form of the substance.

Information on: Methanol
Assessment of aquatic toxicity:
There is a high probability that the product is not acutely harmful to aquatic organisms. The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations.
There is a high probability that the product is not acutely harmful to aquatic organisms. The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations.

Information on: Sodium hydroxide
Toxicity to fish:
LC50 (96 h) 125 mg/l, Gambusia affinis (other, static)
The product will cause changes in the pH value of the test system. The result refers to an unneutralized sample. Literature data.

Information on: Methanol
Toxicity to fish:
LC50 (96 h) 15.400 mg/l, Lepomis macrochirus (other, Flow through.)

Information on: Sodium hydroxide
Aquatic invertebrates:

EC50 (48 h) 40,4 mg/l, Ceriodaphnia sp. (other, static)
Literature data.

Information on: Methanol
Aquatic invertebrates:
EC50 (48 h) 18.260 mg/l, Daphnia magna (OECD Guideline 202, part 1, semistatic)

Information on: Methanol
Aquatic plants:
EC50 (96 h) approx. 22.000 mg/l (growth rate), Selenastrum capricornutum (OECD Guideline 201, static)

Information on: Methanol
Microorganisms/Effect on activated sludge:
EC50 (3 h) > 1.000 mg/l, (OECD Guideline 209, aquatic)

EC50 (24 h) 880 mg/l, Nitrosomonas sp. (Inhibition of nitrification, aquatic)

Assessment of terrestrial toxicity:
No toxic effects have been observed in terrestrial studies.

Soil living organisms:
No observed effect concentration (63 d) 10.000 mg/kg, Eisenia foetida (OECD Guideline 222, artificial soil)
The details of the toxic effect relate to the nominal concentration. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Terrestrial plants:
EC50 41.000 mg/l, Lactuca sativa
The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

No observed effect concentration 1.555 mg/kg, terrestrial plants
The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Other terrestrial non-mammals:
No data available.

Persistence and degradability

Assessment biodegradation and elimination (H2O):
Readily biodegradable (according to OECD criteria).

Elimination information:
90 - 100 % BOD of the ThOD (20 d) (aerobic, activated sludge, domestic, non-adapted)
Literature data. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Information on: Methanol
Assessment biodegradation and elimination (H2O):

Readily biodegradable (according to OECD criteria).

Information on: Methanol
Elimination information:
95 % BOD of the ThOD (20 d) (OECD 301D; 92/69/EWG, C.4-E) (aerobic, activated sludge, domestic, non-adapted) Readily biodegradable (according to OECD criteria).

Assessment of stability in water:
In contact with water the substance will hydrolyse rapidly.
Study technically not feasible.

Bioaccumulative potential

Assessment bioaccumulation potential:
Does not significantly accumulate in organisms.

Bioaccumulation potential:
Bioconcentration factor: 4,5 (72 h), Cyprinus carpio (measured)
The product has not been tested. The statement has been derived from the properties of the hydrolysis products.

Information on: Sodium hydroxide
Assessment bioaccumulation potential:
Accumulation in organisms is not to be expected.

Information on: Methanol
Assessment bioaccumulation potential:
Significant accumulation in organisms is not to be expected.

Mobility in soil

Assessment transport between environmental compartments:
Volatility: The substance will not evaporate into the atmosphere from the water surface.
Adsorption in soil: Adsorption to solid soil phase is not expected.

Results of PBT and vPvB assessment

According to Annex XIII of Regulation (EC) No.1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH): The product does not fulfill the criteria for PBT (Persistent/bioaccumulative/toxic) and vPvB (very persistent/very bioaccumulative). Self classification

Other adverse effects

The substance is not listed in Regulation (EC) 1005/2009 on substances that deplete the ozone layer.

Additional information

Adsorbable organically-bound halogen (AOX):
This product contains no organically-bound halogen.

Other ecotoxicological advice:
Do not release untreated into natural waters. Due to the pH-value of the product, neutralization is generally required before discharging sewage into treatment plants. Inhibition of degradation activity in activated sludge is not to be anticipated during correct introduction of low concentrations. The local regulations on waste-water treatment must be followed.

13. Disposal Considerations

Waste treatment methods

Hydrolyze product with excess of water under usage of the personal protection equipment and dispose of in accordance with local authority regulations.
Obtain the consent of pollution control authorities before discharging to wastewater treatment plants.

Contaminated packaging:
Contaminated packaging should be emptied as far as possible; then it can be passed on for recycling after being thoroughly cleaned.

14. Transport Information

Land transport

ADR

UN number or ID number:	UN1431
UN proper shipping name:	SODIUM METHYLATE
Transport hazard class(es):	4.2, 8
Packing group:	II
Environmental hazards:	no
Special precautions for user:	Tunnel code: D/E

RID

UN number or ID number:	UN1431
UN proper shipping name:	SODIUM METHYLATE
Transport hazard class(es):	4.2, 8
Packing group:	II
Environmental hazards:	no
Special precautions for user:	

Inland waterway transport
ADN

UN number or ID number:	UN1431
UN proper shipping name:	SODIUM METHYLATE
Transport hazard class(es):	4.2, 8
Packing group:	II
Environmental hazards:	no
Special precautions for user:	

Transport in inland waterway vessel
Not evaluated

Sea transport

IMDG

UN number or ID number:	UN 1431
UN proper shipping name:	SODIUM METHYLATE
Transport hazard class(es):	4.2, 8
Packing group:	II
Environmental hazards:	no Marine pollutant: NO
Special precautions for user:	EmS: F-A; S-L

Air transport

IATA/ICAO

UN number or ID number:	UN 1431
UN proper shipping name:	SODIUM METHYLATE
Transport hazard class(es):	4.2, 8
Packing group:	II
Environmental hazards:	No Mark as dangerous for the environment is needed
Special precautions for user:	

Maritime transport in bulk according to IMO instruments

Maritime transport in bulk is not intended.

Further information
Specific national features of transport regulations must be observed. They are to be found in the shipping documents.

15. Regulatory Information

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

If other regulatory information applies that is not already provided elsewhere in this safety data sheet, then it is described in this subsection.

16. Other Information

Full text of classifications, hazard symbols and hazard statements, if mentioned in section 2 or 3:

Flam. Sol.	Flammable solids
Self-heat.	Self-heating substances and mixtures
Acute Tox.	Acute toxicity
Eye Dam./Irrit.	Serious eye damage/eye irritation
Skin Corr./Irrit.	Skin corrosion/irritation

The data contained in this safety data sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. This safety data sheet is neither a Certificate of Analysis (CoA) nor technical data sheet and shall not be mistaken for a specification agreement. Identified uses in this safety data sheet do neither represent an agreement on the corresponding contractual quality of the substance/mixture nor a contractually designated use. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.

Vertical lines in the left hand margin indicate an amendment from the previous version.