We create chemistry

Safety data sheet

1. Substance/preparation and manufacturer/supplier identification

Product name:
NA-ETHYLATE SOL. 21 %

Use: Chemical

Recommended use: Raw material, process chemical, initial product for chemical syntheses

Manufacturer/supplier:
BASF South East Asia Pte Ltd.
128 Beach Road #18-01
Guoco Midtown, 189773, Singapore
Telephone: +65 8322 4420
Telefax number: +65 6 334-0330
E-mail address: benny.zou@basf.com

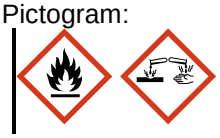
Emergency information:
Singapore Emergency Toll-Free Number:
Telephone: 1800-723-1361
International emergency number:
Telephone: +49 180 2273-112

2. Hazard identification

Classification of the substance and mixture:
Flammable liquids: Cat.3
Corrosive to metals: Cat.1
Acute toxicity: Cat.5 (oral)
Skin corrosion: Cat.1A
Serious eye damage: Cat.1

Label elements and precautionary statement:

Pictogram:



Signal Word:
Danger

Hazard Statement:

H226	Flammable liquid and vapour.
H290	May be corrosive to metals.
H303	May be harmful if swallowed.
H314	Causes severe skin burns and eye damage.

Precautionary Statements (Prevention):

P280	Wear protective gloves, protective clothing and eye protection or face protection.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P260	Do not breathe mist or vapour.
P243	Take action to prevent static discharges.
P241	Use explosion-proof electrical, ventilating and lighting equipment.
P264	Wash contaminated body parts thoroughly after handling.
P234	Keep only in original packaging.
P233	Keep container tightly closed.
P242	Use non-sparking tools.
P240	Ground and bond container and receiving equipment.

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.
P363	Wash contaminated clothing before reuse.
P390	Absorb spillage to prevent material damage.
P370 + P378	In case of fire: Use … to extinguish.

Precautionary Statements (Storage):

P405	Store locked up.
P406	Store in a corrosion-resistant container with a resistant inner liner.
P403 + P235	Store in a well-ventilated place. Keep cool.

Precautionary Statements (Disposal):

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

Other hazards which do not result in classification:
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.
Possible risk by inhalation of aerosols.

The following percentage of the mixture consists of components(s) with unknown hazards regarding the acute toxicity: 0 - 1 %, oral

3. Composition/information on ingredients

Chemical nature

Substance nature: mixture

Preparation based on:
sodium ethanolate, ethanol

Hazardous ingredients

ethanol

Content (W/W): >= 75 % - <= 100 %	Flam. Liq.: Cat. 2
CAS Number: 64-17-5	Eye Irrit.: Cat. 2A

sodium ethanolate

Content (W/W): >= 15 % - < 25 %	Flam. Sol.: Cat. 1
CAS Number: 141-52-6	Self-heat.: Cat. 1
	Skin Corr.: Cat. 1A
	Acute Tox.: Cat. 4 (oral)
	Eye Dam.: Cat. 1

sodium hydroxide

Content (W/W): >= 0.2 % - < 1 %	Met. Corr.: Cat. 1
CAS Number: 1310-73-2	Skin Corr.: Cat. 1A
	Eye Dam.: Cat. 1

4. First-Aid Measures

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

If inhaled:
Keep patient calm, remove to fresh air, seek medical attention.

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.

Note to physician:
Symptoms: skin corrosion, Eye irritation
Hazards: No hazard is expected under intended use and appropriate handling.
Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

5. Fire-Fighting Measures

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

Unsuitable extinguishing media for safety reasons:
water, carbon dioxide

Specific hazards:
Risk of exothermic reaction.

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

Further information:
Vapours are heavier than air and may accumulate in low areas and travel a considerable distance up to the source of ignition. Collect contaminated extinguishing water separately, do not allow to reach sewage or effluent systems. Sealed containers should be protected against heat as this results in pressure build-up.

6. Accidental Release Measures

Personal precautions:
Sources of ignition should be kept well clear.Use personal protective clothing.Avoid inhalation.Avoid contact with skin and eyes.

Environmental precautions:
Do not discharge into drains/surface waters/groundwater.Contain contaminated water/firefighting water.

Methods for cleaning up or taking up:
For large amounts: Pump off product.
For residues: Pick up with suitable absorbent material (e.g. sand, sawdust, general-purpose binder, kieselguhr). Dispose of absorbed material in accordance with regulations.

Additional information: Release of substance/product can cause fire or explosion.

7. Handling and Storage

Handling

Ensure thorough ventilation of stores and work areas. Protect against moisture. Protect against heat.

Protection against fire and explosion:
Avoid all sources of ignition: heat, sparks, open flame. Take precautionary measures against static discharges. Use antistatic tools. Render equipment and apparatus inert (nitrogen, inert gases) and ground before putting into operation. Fire extinguishers should be kept handy.

Storage

Segregate from acids and acid forming substances. Keep away from water.

Suitable materials for containers: Carbon steel (Iron), Stainless steel 1.4401, Stainless steel 1.4301 (V2), High density polyethylene (HDPE), Low density polyethylene (LDPE), enamelled, glass
Further information on storage conditions: Keep container tightly closed in a cool, well-ventilated place. Keep under dry nitrogen. Protect against moisture. Protect against heat. Keep away from sources of ignition - No smoking.

Protect from temperatures below: 0 °C
The product crystallizes below the limit temperature.

8. Exposure controls and personal protection

Components with occupational exposure limits

ethanol, 64-17-5;
STEL value 1,000 ppm (ACGIHTLV)
TWA value 1,880 mg/m3 ; 1,000 ppm (OEL (SG))

sodium hydroxide, 1310-73-2;
CLV 2 mg/m3 (ACGIHTLV)
STEL value 2 mg/m3 (OEL (SG))

Personal protective equipment

Respiratory protection:
Wear respiratory protection if ventilation is inadequate. Gas filter for gases/vapours of organic compounds (boiling point >65 °C, e. g. EN 14387 Type A)

Hand protection:
Chemical resistant protective gloves (EN ISO 374-1)
Suitable materials also with prolonged, direct contact (Recommended: Protective index 6, corresponding > 480 minutes of permeation time according to EN ISO 374-1):
fluoroelastomer (FKM) - 0.7 mm coating thickness
butyl rubber (butyl) - 0.7 mm coating thickness

Suitable materials for short-term contact (recommended: At least protective index 2, corresponding > 30 minutes of permeation time according to EN ISO 374-1)
nitrile rubber (NBR) - 0.4 mm coating thickness
polyvinylchloride (PVC) - 0.7 mm coating thickness
chloroprene rubber (CR) - 0.5 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:
Safety glasses with side-shields (frame goggles) (f.e. 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 vapour/spray. Handle in accordance with good industrial hygiene and safety practice.

9. Physical and Chemical Properties

Form:	liquid	
Colour:	yellow to brown	
Odour:	perceptible, of ethanol	
Odour threshold:	Not determined due to potential health hazard by inhalation.	
pH value:	approx. 11	(ISO 1148)
crystallization temperature:	-5 °C	
Boiling point:	approx. 91 °C	
Flash point:	23 °C	(DIN 51755)
Evaporation rate:	not determined, Value can be approximated from Henry's Law Constant or vapor pressure.	
Flammability (solid/gas):	Flammable liquid and vapour.	(other)
Lower explosion limit:	2.6 %(V) Information applies to the solvent. For liquids not relevant for classification and labelling.	(DIN 51649-1)
Upper explosion limit:	19.0 %(V) Information applies to the solvent. For liquids not relevant for classification and labelling.	(DIN 51649-1)

Ignition temperature:	420 °C	(DIN 51794)
Thermal decomposition:	It is not a self-decompositionable substance.	
Self ignition:	not self-igniting	
Explosion hazard:	not explosive	
Fire promoting properties:	not fire-propagating	
Vapour pressure:	approx. 31 mbar (20 °C)	(measured)
	approx. 165 mbar (50 °C)	(measured)
Density:	0.878 g/cm3 (20 °C)	(ISO 2811-3)
	0.855 g/cm3 (50 °C)	(ISO 2811-3)
Relative vapour density (air):	combustible vapours	
Solubility in water:	hydrolyzes (20 °C)	
Hygroscopy:	hygroscopic	
Partitioning coefficient n-octanol/water (log Pow):	not applicable	
Information on: ethanol		
Partitioning coefficient n-octanol/water (log Pow):	-0.31 (25 °C) Literature data.	(measured)

Viscosity, dynamic:	24 mPa.s (20 °C)	(DIN 51562)
Viscosity, kinematic:	approx. 27 mm2/s (20 °C)	

Particle characteristics

Particle size distribution: The substance / product is marketed or used in a non solid or granular form. -

10. Stability and Reactivity

Conditions to avoid:
Avoid all sources of ignition: heat, sparks, open flame. Avoid contact with air. Avoid moisture.

Thermal decomposition: It is not a self-decompositionable substance.

Substances to avoid:
water, acids

Corrosion to metals: Corrosive effect on:
Aluminium

Hazardous reactions:
Exothermic reaction. Reacts with water and acids.

Hazardous decomposition products:
sodium hydroxide, ethanol

11. Toxicological Information

Routes of exposure

Acute inhalation toxicity

Experimental/calculated data:
rat (by inhalation): 8 h (IRT)
No mortality within the stated exposition time as shown in animal studies. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Assessment of acute toxicity

The toxicity of the product is based on its corrosivity.

Information on: ethanol

Assessment of acute toxicity

Virtually nontoxic after a single ingestion. Virtually nontoxic by inhalation.

Symptoms

skin corrosion Eye irritation

The following percentage of the mixture consists of components(s) with unknown hazards regarding the acute toxicity: 0 - 1 %, oral

Irritation

Assessment of irritating effects:
The break through time determined in the in-vitro membrane barrier test indicates that the test substance is expected to cause skin necrosis in vivo within 14 days after a 1-hour exposure.

Experimental/calculated data:
Skin corrosion/irritation: Corrosive. (OECD Guideline 435)

Serious eye damage/irritation rabbit: irreversible damage (BASF-Test)
The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Information on: sodium hydroxide
Assessment of irritating effects:
Highly corrosive! Damages skin and eyes.

Information on: sodium hydroxide
Experimental/calculated data:
Skin corrosion/irritation rabbit: Corrosive.
Data refer to a diluted aqueous solution of the substance.

Respiratory/Skin sensitization

Experimental/calculated data:
Non-sensitizing.The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Information on: ethanol
Assessment of sensitization:
Skin sensitizing effects were not observed in animal studies.

Germ cell mutagenicity

Information on: ethanol
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.

Information on: sodium methanolate
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

Information on: ethanol
Assessment of carcinogenicity:
The International Agency for Research on Cancer (IARC) has classified this substance as a Group 1 (known) human carcinogen. The whole of the information assessable provides no indication of a carcinogenic effect.

Information on: sodium ethanolate
Assessment of carcinogenicity:
The whole of the information assessable provides no indication of a carcinogenic effect.

Reproductive toxicity

Information on: sodium ethanolate
Assessment of reproduction toxicity:
The results of animal studies suggest a fertility impairing effect with high doses. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Information on: ethanol
Assessment of reproduction toxicity:

The potential to impair fertility cannot be excluded when given at high doses.

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

Information on: ethanol
Assessment of repeated dose toxicity:
The substance may cause damage to the liver after repeated ingestion. Repeated inhalative uptake of the substance did not cause substance-related effects. The substance may cause damage to the peripheral nervous system after repeated ingestion of high doses. The substance may cause damage to the central nervous system after repeated ingestion of high doses. Based on the chemical structure a neurotoxic effect by repeated administration cannot be excluded.
---

12. Ecological Information

Ecotoxicity

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: ethanol
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.

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: ethanol
Toxicity to fish:
LC50 (96 h) 13,000 mg/l, Salmo gairdneri, syn. O. mykiss (Fish test acute, static)
The details of the toxic effect relate to the nominal concentration. Literature data.

Information on: sodium hydroxide
Aquatic invertebrates:
EC50 (48 h) 40.4 mg/l, Ceriodaphnia sp. (other, static)
Literature data.

Information on: ethanol
Aquatic invertebrates:
LC50 (48 h) 12,340 mg/l, Daphnia magna (Daphnia test acute, static)
The details of the toxic effect relate to the nominal concentration. Literature data.

(48 h) 5,012 mg/l, Ceriodaphnia dubia (Daphnia test acute)
The details of the toxic effect relate to the nominal concentration. Literature data.

Information on: ethanol
Aquatic plants:
EC50 (4 d) 675 mg/l (growth rate), Chlorella vulgaris (Algal growth inhibition test)
The details of the toxic effect relate to the nominal concentration. Literature data.

Information on: ethanol
Microorganisms/Effect on activated sludge:
Toxic limit concentration (16 h) 6,500 mg/l, Pseudomonas putida (other, aquatic)
The details of the toxic effect relate to the nominal concentration. Literature data.

Mobility

Assessment transport between environmental compartments:
Due to the product characteristics the test is impossible.

Persistence and degradability

Information on: sodium hydroxide

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

Information on: ethanol
Elimination information:
89 % BOD of the ThOD (14 d) (OECD 301C; ISO 9408; 92/69/EWG, C.4-F) (aerobic, Inoculum conforming to MITI requirements (OECD 301C))
Literature data.

84 % BOD of the ThOD (20 d) (other) (aerobic, activated sludge, domestic, non-adapted)
Literature data.

Bioaccumulation potential

Information on: ethanol
Assessment bioaccumulation potential:
No significant accumulation in organisms is expected as a result of the distribution coefficient of n-octanol/water (log Pow).

Additional information

Other ecotoxicological advice:
Due to the pH-value of the product, neutralization is generally required before discharging sewage into treatment plants. The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations. Do not release untreated into natural waters.

13. Disposal Considerations

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

Domestic transport:

UN number or ID number:	UN 2920
UN proper shipping name:	CORROSIVE LIQUID, FLAMMABLE, N.O.S. (SODIUM ETHYLATE/SODIUM ETHANOLATE, ETHANOL)
Transport hazard class(es):	8, 3
Packing group:	II
Environmental hazards:	no
Special precautions for user:	None known

Sea transport
IMDG

UN number or ID number:	UN 2920
UN proper shipping name:	CORROSIVE LIQUID, FLAMMABLE, N.O.S. (SODIUM ETHYLATE/SODIUM ETHANOLATE, ETHANOL)
Transport hazard class(es):	8, 3
Packing group:	II
Environmental hazards:	no Marine pollutant: NO
Special precautions for user:	EmS: F-E; S-C

Air transport
IATA/ICAO

UN number or ID number:	UN 2920
UN proper shipping name:	CORROSIVE LIQUID, FLAMMABLE, N.O.S. (SODIUM ETHYLATE/SODIUM ETHANOLATE, ETHANOL)
Transport hazard class(es):	8, 3
Packing group:	II
Environmental hazards:	No Mark as dangerous for the environment is needed
Special precautions for user:	None known

Maritime transport in bulk according to IMO instruments

Maritime transport in bulk is not intended.

15. Regulatory Information

Other regulations

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

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

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.