SAFETY DATA SHEET

SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. PRODUCT IDENTIFIER

chemius.net/wSD99

Product name

MEKOL B11

Name

Aluminum chloride, basic (CAS: 1327-41-9, EC: 215-477-2)

REACH Registration number

01-2119531563-43

1.2. RELEVANT IDENTIFIED USES OF THE SUBSTANCE OR MIXTURE AND USES ADVISED AGAINST

Relevant identified uses

Crosslinker - B component for water resistant adhesives

Uses advised against

No information.

1.3. DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

Supplier

MITOL, tovarna lepil, d.o.o., Sežana
Address: Partizanska c. 78 Sežana, Slovenia
Phone: +386 5 73 12 300
Fax: +386 5 73 12 390
E-mail: lilijana.kocjan@mitol.si
Point of contact for safety info: Lilijana Kocjan Žorž

1.4. EMERGENCY TELEPHONE NUMBER

112

+386 5 73 12 300 (8:00-16:00)

SECTION 2. HAZARDS IDENTIFICATION

2.1 CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

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

Met. Corr. 1; H290 May be corrosive to metals.
Eye Dam. 1; H318 Causes serious eye damage.

2.2 LABEL ELEMENTS

2.2.1. Labelling according to Regulation (EC) No 1272/2008 [CLP]

Signal word: **Danger**

H290 May be corrosive to metals.
H318 Causes serious eye damage.
P234 Keep only in original packaging.
P264 Wash hands thoroughly after handling.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
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/doctor.
P390 Absorb spillage to prevent material damage.

2.2.2. Contains:

Aluminum chloride, basic

2.2.3. Special provisions

Special hazards are not known or expected.

2.3. OTHER HAZARDS

The substances in the mixture are not classified as persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB).

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1. SUBSTANCES

Name	CAS EC Index	%	Classification according to Regulation (EC) No 1272/2008 (CLP)	Specific Conc. Limits	REACH Registration No.
Aluminum chloride, basic	1327-41-9 215-477-2 -	ca. 30	Met. Corr. 1; H290 Eye Dam. 1; H318		01-2119531563-43

3.2. MIXTURES

For substances see 3.1.

SECTION 4. FIRST AID MEASURES

4.1. DESCRIPTION OF FIRST AID MEASURES

General notes

Never give anything by mouth to an unconscious person. Place patient in recovery position and ensure airway patency. When in doubt or if feeling unwell seek medical assistance. Show the safety data sheet and label to the physician.

Following inhalation

Remove patient to fresh air - move out of dangerous area. If symptoms occur, seek medical advice.

Following skin contact

Immediately remove contaminated clothing. Areas of the body that have come into contact with the product must be rinsed with water. If symptoms develop and persist, seek medical attention. Wash contaminated clothes and shoes before reuse.

Following eye contact

Immediately flush eyes with running water, keeping eyelids apart. After initial flushing, remove any contact lenses and continue flushing. Consult a physician immediately!

Following ingestion

Rinse mouth with water and drink 1-2 glasses (2.5-3 dl) of water. Do not induce vomiting! Consult a physician. Show the physician the safety data sheet or label.

4.2. MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

Inhalation

Excessive exposure to spray mist, fog, or vapours may cause respiratory irritation.
Coughing, sneezing, nasal discharge, labored breathing.

Skin contact

Contact with skin may cause irritation (redness, itching).

Eye contact

Redness, pain, burning sensation, tearing, can cause permanent damage to the eyes.
Causes burns: signs/symptoms include corneal damage, burns, pain, lacrimation, corrosive effects, partial or complete loss of sight.

Ingestion

Irritates mucous membranes in the mouth, throat, esophagus and in gastrointestinal area.
May cause nausea/vomiting and diarrhea.

4.3. INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

Treat symptomatically.

SECTION 5. FIREFIGHTING MEASURES

5.1. EXTINGUISHING MEDIA

Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Product itself is not flammable.

Unsuitable extinguishing media

Full water jet.

5.2. SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE

Hazardous combustion products

In case of a fire toxic gases can be generated; do not inhale gases/smoke. In case of heating harmful vapours/gases can be generated.

5.3. ADVICE FOR FIREFIGHTERS

Protective actions

In case of fire or heating do not breathe fumes/vapours. Cool containers at risk with water spray. If possible remove containers from endangered area.

Special protective equipment for firefighters

Firefighters should wear appropriate protective clothing for firefighters (including helmets, protective boots and gloves) (EN 469) and self-contained breathing apparatus (SCBA) with a full face-piece (EN 137).

Additional information

Extinguishing water which has been in contact with the product may be corrosive. Contaminated firefighting water must be disposed of in accordance with the regulations; do not allow to reach the sewage system.

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1. PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

6.1.1. For non-emergency personnel

Protective equipment

Use personal protective equipment (Section 8).

Emergency procedures

Ensure adequate ventilation. Evacuate personnel to safe areas, away from the direction of the wind. Prevent access to unprotected personnel. Prevent access to unauthorised personnel. Avoid contact with spilled product or contaminated surfaces.

6.1.2. For emergency responders

Use personal protective equipment.

6.2. ENVIRONMENTAL PRECAUTIONS

Do not allow product to reach water/drains/sewage systems or permeable soil. If accidental large entry into water or ground occurs, inform responsible authorities.

6.3. METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP

6.3.1. For containment

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6.3.2. For cleaning up

Stop leak if without risk. Absorb product (with inert material), collect it in special container and dispose it to a licensed hazardous-waste disposal contractor. Dispose in accordance with applicable regulations (see Section 13).

6.3.3. Other information

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6.4. REFERENCE TO OTHER SECTIONS

See also Sections 8 and 13.

SECTION 7. HANDLING AND STORAGE

7.1. PRECAUTIONS FOR SAFE HANDLING

7.1.1. Protective measures

Measures to prevent fire

Ensure adequate ventilation.

Measures to prevent aerosol and dust generation

Use general or local exhaust ventilation to prevent inhaling vapours and aerosols.

Measures to protect the environment

Do not discharge into drains, surface water and soil. After use immediately close container tightly.

7.1.2. Advice on general occupational hygiene

Use good personal hygiene practices – wash hands at breaks and when done working with material. Do not eat, drink or smoke while working. Avoid contact with skin, eyes and clothes. Do not breathe vapours/mist. Wear suitable protective equipment; see Section 8. Remove contaminated clothes and wash them before reuse.

7.2. CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

7.2.1. Technical measures and storage conditions

Store in accordance with local regulations. Keep in tightly closed container. Keep in a cool, dry and well ventilated place. Protect against heat and direct sunlight. Keep away from strong oxidising agents. Store away from strong reducing agents. Do not store together with metals. Keep away from food, drink and animal feeding stuffs.

7.2.2. Packaging materials

The original container of producer.

7.2.3. Requirements for storage rooms and vessels

Close opened containers after use. Put the containers upright to prevent from leaking. The floor of the storage room must be impermeable and dam spilled liquid. An eye wash station and safety shower must be available where this product is used.

7.2.4. Storage class

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7.2.5. Further information on storage conditions

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7.3. SPECIFIC END USE(S)

Recommendations

See identified uses in Section 1.2.

Industrial sector specific solutions

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SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. CONTROL PARAMETERS

8.1.1. Occupational exposure limit values

No information.

8.1.2. Information on monitoring procedures

BS EN 14042:2003 Title Identifier: Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents. BS EN 482:2021 Workplace exposure. Procedures for the determination of the concentration of chemical agents. Basic performance requirements.

8.1.3. DNEL/DMEL values

For components

Name	Type	Exposure route	Exposure frequency	Value	Remark
Aluminum chloride, basic (1327-41-9)	Worker	inhalation	long term (systemic effects)	16,4 mg/m^3	
Aluminum chloride, basic (1327-41-9)	Worker	dermal	long term (systemic effects)	4,6 mg/kg bw/day	
Aluminum chloride, basic (1327-41-9)	Consumer	inhalation	long term (systemic effects)	4 mg/m^3	
Aluminum chloride, basic (1327-41-9)	Consumer	dermal	long term (systemic effects)	2,32 mg/kg bw/day	
Aluminum chloride, basic (1327-41-9)	Consumer	oral	long term (systemic effects)	2,3 mg/kg bw/day	

8.1.4. PNEC values

No information.

8.2. EXPOSURE CONTROLS

8.2.1. Appropriate engineering control

Substance/mixture related measures to prevent exposure during identified uses

Handle in accordance with good industrial hygiene and safety practice. Use good personal hygiene practices – wash hands at breaks and when done working with material. Do not eat, drink or smoke while working. Avoid contact with eyes and skin. Do not breathe vapours/aerosols.

Organisational measures to prevent exposure

Remove all contaminated clothes immediately and wash them before reuse. Keep eyewash bottles or personal eyewash units and emergency showers available.

Technical measures to prevent exposure

Provide good ventilation and local exhaust in areas with increased concentration. Keep away from food, drink and animal feeding stuffs.

8.2.2. Personal protective equipment

Eye and face protection

Wear tight fitting protective goggles and/or face protection (EN 166:2001).

Hand protection

Protective gloves (EN 374). Observe the manufacturer's instructions regarding the use, storage, maintenance and replacement of gloves. In case of damage or at the first signs of wear and tear, change the gloves immediately. The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Appropriate materials

Material	Thickness	Penetration Time	Remark
Nitrile			

Skin protection

Wear suitable protective clothing. Cotton protective clothing and shoes that cover the entire foot (EN ISO 20345:2011). At higher exposures wear chemical-resistant clothing (EN 13034:2005+A1:2009) and boots, natural rubber (EN ISO 20345:2011).

Respiratory protection

Not needed under normal use and adequate ventilation. In case of insufficient ventilation wear suitable respiratory protection. Protective mask (EN 136: 1998) or half mask (EN 140: 1999) with filter B (EN 14387: 2004).

Thermal hazards

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8.2.3. Environmental exposure controls

Substance/mixture related measures to prevent exposure

The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

-	**Physical state:**	liquid
-	**Colour:**	light yellow
-	**Odour:**	No data.

Important health, safety and environmental information

-	**pH**	No information.
-	**Melting point/freezing point**	-20 °C
-	**Initial boiling point/boiling range**	> 100 °C
-	**Flash point**	No information.
-	**Evaporation rate**	No information.
-	**Flammability (solid, gas)**	No information.
-	**Explosion limits (vol%)**	No information.
-	**Vapour pressure**	No information.
-	**Vapour density**	No information.
-	**Density**	**Density**: 1,2 – 1,3 g/cm^3
-	**Solubility**	No information.
-	**Partition coefficient**	No information.
-	**Auto-ignition temperature**	No information.
-	**Decomposition temperature**	No information.
-	**Viscosity**	**Dynamic**: 40 mPas at 20 °C
-	**Explosive properties**	No information.
-	**Oxidising properties**	No information.
-	**Particle characteristics**	No information.

9.2. OTHER INFORMATION

-	**Remarks:**	It can be corrosive to metals.

SECTION 10. STABILITY AND REACTIVITY

10.1. REACTIVITY

May be corrosive to metals.

10.2. CHEMICAL STABILITY

Product is stable under normal conditions of use, recommended handling and storage conditions. Thermal decomposition: more than 200°C.

10.3. POSSIBILITY OF HAZARDOUS REACTIONS

May be corrosive to metals.

10.4. CONDITIONS TO AVOID

Keep away from heat and sources of ignition. Avoid contact with incompatible materials.

10.5. INCOMPATIBLE MATERIALS

Strong oxidising agents. Strong reducing agents. Metals.

10.6. HAZARDOUS DECOMPOSITION PRODUCTS

Under normal use conditions no hazardous decomposition products are expected. In case of fire/explosion vapours/gases that pose a health hazard are released. Hydrogen chloride.

SECTION 11. TOXICOLOGICAL INFORMATION

11.1. INFORMATION ON HAZARD CLASSES AS DEFINED IN REGULATION (EC) NO 1272/2008

(a) Acute toxicity

Name	Exposure route	Type	Species	Time	Value	Method	Remark
Aluminum chloride, basic (1327-41-9)	oral	LD_{50}	rat		> 2000 mg/kg		
Aluminum chloride, basic (1327-41-9)	dermal	LD_{50}	rat		> 2000 mg/kg		

Additional information: The product is not classified for acute toxicity.

(b) Skin corrosion/irritation

Additional information: The product is not classified as irritating to the skin. May cause skin irritation.

(c) Serious eye damage/irritation

Additional information: Causes serious eye damage.

(d) Respiratory or skin sensitisation

Additional information: The product is not classified as sensitising.

(e) (Germ cell) mutagenicity

No information.

(f) Carcinogenicity

No information.

(g) Reproductive toxicity

No information.

Summary of evaluation of the CMR properties

The product is not classified as carcinogenic, mutagenic or toxic for reproduction.

(h) STOT-single exposure

Additional information: STOT SE (single exposure): Not classified.

(i) STOT-repeated exposure

Additional information: STOT RE (repeated exposure): Not classified.

(j) Aspiration hazard

Additional information: Aspiration hazard: Not classified.

11.2. INFORMATION ON OTHER HAZARDS

11.2.1. Endocrine disrupting properties

No information.

11.2.2. Other information

No information.

SECTION 12. ECOLOGICAL INFORMATION

12.1. TOXICITY

12.1.1. Acute (short-term) toxicity

For components

Substance (CAS Nr.)	Type	Value	Exposure time	Species	Organism	Method	Remark
Aluminum chloride, basic (1327-41-9)	LC_{50}	> 0,42 mg/L	96 h	fish	*Danio rerio*	OECD 203	Dissolved aluminium
	EC_{50}	> 200 mg/L	48 h	crustacea	*Daphnia magna*	OECD 202	

12.1.2. Chronic (long-term) toxicity

No information.

12.2. PERSISTENCE AND DEGRADABILITY

12.2.1. Abiotic degradation, physical- and photo-chemical elimination

No information.

12.2.2. Biodegradation

No information.

Additional information

This material is inorganic and not subject to biodegradation.

12.3. BIOACCUMULATIVE POTENTIAL

12.3.1. Partition coefficient

No information.

12.3.2. Bioconcentration factor (BCF)

No information.

12.4. MOBILITY IN SOIL

12.4.1. Known or predicted distribution to environmental compartments

No information.

12.4.2. Surface tension

No information.

12.4.3. Adsorption/Desorption

No information.

12.5. RESULTS OF PBT AND VPVB ASSESSMENT

Does not contain component(s) that meet(s) the criteria of PBT and/or vPvB as listed in Annex XIII of Regulation (EC) No 1907/2006.

12.6. ENDOCRINE DISRUPTING PROPERTIES

No information.

12.7. ADDITIONAL INFORMATION

For product

Do not allow to reach ground water, water courses or sewage system.
Avoid release to the environment.

SECTION 13. DISPOSAL CONSIDERATIONS

13.1. WASTE TREATMENT METHODS

13.1.1. Product / Packaging disposal

Waste chemical

Dispose of in accordance with applicable waste disposal regulation. Disposal must be made according to official regulations: deliver it to authorised collector/remover/transformer of hazardous waste. Do not allow product to reach drains/sewage systems.

Packaging

Dispose of in accordance with applicable waste disposal regulation. Deliver completely emptied containers to approved waste disposal authorities.

13.1.2. Waste treatment-relevant information

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13.1.3. Sewage disposal-relevant information

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13.1.4. Other disposal recommendations

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SECTION 14. TRANSPORT INFORMATION

14.1. UN NUMBER OR ID NUMBER

UN 2581

14.2. UN PROPER SHIPPING NAME

ALUMINIUM CHLORIDE SOLUTION

14.3. TRANSPORT HAZARD CLASS(ES)

8

14.4. PACKING GROUP

III

14.5. ENVIRONMENTAL HAZARDS

NO.

14.6. SPECIAL PRECAUTIONS FOR USER

Limited quantities

5 L

Tunnel restriction code

(E)

IMDG EmS

F-A, S-B

14.7. MARITIME TRANSPORT IN BULK ACCORDING TO IMO INSTRUMENTS

Goods may not be carried in bulk in bulk containers, containers or vehicles.

SECTION 15. REGULATORY INFORMATION

15.1. SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS/LEGISLATION SPECIFIC FOR THE SUBSTANCE OR MIXTURE

- Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (including last amendment Commission Regulation (EU) 2020/878)

- Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures

15.1.1. Information according 2004/42/EC about limitation of emissions of volatile organic compounds (VOC-guideline)

Not applicable.

15.2. CHEMICAL SAFETY ASSESSMENT

No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

SECTION 16. OTHER INFORMATION

Indication of changes

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Abbreviations and acronyms

ATE - Acute Toxicity Estimate
ADR - Agreement concerning the International Carriage of Dangerous Goods by Road
ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
CEN - European Committee for Standardisation
C&L - Classification and Labelling
CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
CAS# - Chemical Abstracts Service number
CMR - Carcinogen, Mutagen, or Reproductive Toxicant
CSA - Chemical Safety Assessment
CSR - Chemical Safety Report
DMEL - Derived Minimal Effect Level
DNEL - Derived No Effect Level
DPD - Dangerous Preparations Directive 1999/45/EC
DSD - Dangerous Substances Directive 67/548/EEC
DU - Downstream User
EC - European Community
ECHA - European Chemicals Agency
EC-Number - EINECS and ELINCS Number (see also EINECS and ELINCS)
EEA - European Economic Area (EU + Iceland, Liechtenstein and Norway)
EEC - European Economic Community
EINECS - European Inventory of Existing Commercial Substances
ELINCS - European List of notified Chemical Substances
EN - European Standard
EQS - Environmental Quality Standard
EU - European Union
Euphrac - European Phrase Catalogue
EWC - European Waste Catalogue (replaced by LoW – see below)
GES - Generic Exposure Scenario
GHS - Globally Harmonized System
IATA - International Air Transport Association
ICAO-TI - Technical Instructions for the Safe Transport of Dangerous Goods by Air
IMDG - International Maritime Dangerous Goods
IMSBC - International Maritime Solid Bulk Cargoes
IT - Information Technology
IUCLID - International Uniform Chemical Information Database
IUPAC - International Union for Pure Applied Chemistry
JRC - Joint Research Centre

Kow - octanol-water partition coefficient
LC_{50} - Lethal Concentration to 50 % of a test population
LD_{50} - Lethal Dose to 50% of a test population (Median Lethal Dose)
LE - Legal Entity
LoW - List of Wastes (see http://ec.europa.eu/environment/waste/framework/list.htm)
LR - Lead Registrant
M/I - Manufacturer / Importer
MS - Member States
MSDS - Material Safety Data Sheet
OC - Operational Conditions
OECD - Organization for Economic Co-operation and Development
OEL - Occupational Exposure Limit
OJ - Official Journal
OR - Only Representative
OSHA - European Agency for Safety and Health at work
PBT - Persistent, Bioaccumulative and Toxic substance
PEC - Predicted Effect Concentration
PNEC(s) - Predicted No Effect Concentration(s)
PPE - Personal Protection Equipment
(Q)SAR - Qualitative Structure Activity Relationship
REACH - Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
RID - Regulations concerning the International Carriage of Dangerous Goods by Rail
RIP - REACH Implementation Project
RMM - Risk Management Measure
SCBA - Self-Contained Breathing Apparatus
SDS - Safety data sheet
SIEF - Substance Information Exchange Forum
SME - Small and Medium sized Enterprises
STOT - Specific Target Organ Toxicity
(STOT) RE - Repeated Exposure
(STOT) SE - Single Exposure
SVHC - Substances of Very High Concern
UN - United Nations
vPvB - Very Persistent and Very Bioaccumulative

Key literature references and sources for data

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List of relevant H phrases

H290 May be corrosive to metals.
H318 Causes serious eye damage.

The information of this SDS is based on the present state of our knowledge and meets the requirements of EU and national laws. The user's working conditions however, are beyond our knowledge and control. The product is not to be used for purposes other than those specified under Section 1 without a written permission. It remains the responsibility of the user to ensure that the necessary steps are taken to meet the laws and regulations. Handling of the product may only be done by people above 18 years of age, who are satisfactorily informed of how to do the work, the hazardous properties and necessary safety precautions. The information given in this SDS is to describe the product only in terms of health and safety requirements and should not, therefore, be construed as guaranteeing specific properties.