



1. DEFINITION OF MATERIAL AND COMPANY

1.1 Product Name: AQM 133

1.2 Application: Membrane cleaning compound

1.3 Company Information:

Headquarters:

MEMPA PAZARLAMA INSAAT SAN. ve TIC. A.S.

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2. DEFINITION OF HAZARD

2.1 Classification of the substance or product:

Classification in accord with Directive (AT) Numbered 1272/2008:

Acute toxicity – Category 4 H302

Skin corrosion/Irritation – Category2 H315

Serious eye Defect/irritation- Category 1 H318

Classification in accord with AB Directives 67/548/AET or 1999/45/ET :

This product is classified as hazardous in accord with Preparations Directive 1999/45/EC.

Xn, HARMFUL R22, R38, R41

Please see Chapter 16 to see all details of risk phrases, hazard disclosures and notes.

2.2 Label information and records:

Labeling in accord with Directive (AT) Numbered 1272/2008:

Content: Sodium Hydroxide, Tetrasodium EDTA

Hazard pictograms:



Signal Word: Hazard

Hazard Disclosures:

H302

Hazardous in case of swallowing.



H315	Causes skin irritation.
H318	Causes serious eye damage.
Precaution disclosures :	
P280	Use protective glove/ protective cloth/ eye protection/ face protection.
P301 + P310	IN CASE OF SWALLOWING: CONSULT A POISON CONTROL CENTER or a doctor IMMEDIATELY.
P302 + P352	IF IT SMUDGES ON THE SKIN: Wash the skin with plenty of water and soap.
P333 + P313	If irritation and itching occur on the skin: Get medical aid.
P305 + P351 + P338	IF IT CONTACTS WITH THE EYE: Rinse your eye thoroughly with water for a few minutes. If you have contact lenses and it is possible, remove your lenses. Continue to rinse.
P310	Consult A POISON CONTROL CENTER or a doctor immediately.

2.3 Other hazards:

No known hazards.

3. COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Solid matter:

No data available.

3.2 Mixture:

The following details include all of the components, impurities and by products which contribute to product classification or have a technical exposure limit.

Hazardous Material(s)	% (w/w)	Classification in accord with Directive (AT) Numbered 1272/2008	Classification in accord with 67/548/EEC
Tetrasodium EDTA Index-No.: 607-428-00-2 EC-No.: 200-573-9 CAS-No.: 64-02-8 REACH No.: 01-2119517582-41	30 - 60	Acute toxicity 4 : H302 Serious eye defect/irritation 1 : H318 Acute toxicity 4 : H332	Xn R20, R41, R22
Sodium Hydroxide Index-No.: 011-002 00-6 EC-No.: 215-185-5 CAS-No.: 1310-73-2 REACH No.: 01-2119457892-27	1.0 -5.0	Skin corrosion/irritation 1A : H314 Corrosive for metals 1 : H290 Serious eye defect/irritation 1 : H318	C R35

Please see Chapter 16 to be informed about the risk phrases, hazard disclosures and all details.



4.FIRST AID MEASURES

4.1 Definition of required first aid measures:

In case of any emergency situation, evaluate the hazard before taking action. Don't put yourself at injury risk. If you have any doubts, contact with emergency response team.

Breathing:

Take exposed person outside and treat them based on the symptoms. Get medical aid.

Contact with Skin:

Get medical aid immediately. Take off contaminated clothes. Wash the clothes before wearing again. Wash them plenty of water for 15 minutes immediately. In case of substantial splashing, rinse the body with plenty of water under shower.

Contact with eye(s):

IN CASE OF CONTACT WITH EYE(S), ACTION SHOULD BE TAKEN IMMEDIATELY. Wash with plenty of water for 15 minutes immediately. Get medical aid.

Swallowing:

Get medical aid immediately by showing the label and/or SDS (Safety Data Page). If the patient is conscious, was his/her mouth and give water to drink. Don't give anything oral in case of loss of consciousness, try to heal and check the respiration and pulse. If necessary, give him/her the kiss of life.

Protecting the first aiders:

Use personal protective equipment in sufficient amounts.

4.2 Most important symptoms and effects, both acute and delayed:

Hazardous in case of swallowing. Causes skin irritation. Causes serious eye damage.

4.3 Indication of any immediate medical attention and special treatment needed:

In order to control the symptoms and clinical picture, doctor's decision should be taken into account depending on the patient's current reactions.

5.FIREFIGHTING MEASURES

5.1 Extinguishing media:

Proper fire engine:

It is not expected from this product to inflame except boiling and evaporation of all water. Remaining organic substances may ignite. Use a proper fire extinguishing setting.

5.2 Special hazards arising from the substance or mixture:

Carbon dioxides (CO_x) may form under fire. Nitrogen oxides (NO_x) may form under fire. If it spreads around, flow of fire extinguishing water into sewage system should be prevented.

5.3 Advice for Firefighters:

Special measures and protective equipment for firemen :

In case of fire, use a positive pressure close system breathing apparatus entirely covering the face and protective cloth.



6.ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures:

ADVICE FOR NON-EMERGENCY PERSONNEL

Contacting with these substances may be dangerous, don't try to clean the substance poured out. Call trained emergency response team immediately. Cleaning process should be done by only Emergency response team/staff. Until the end of cleaning process, restrict access to the area properly. 8. Use individual protective equipment which is specified in Chapter 8 (Exposure Controls/Individual Protection).

ADVICE FOR EMERGENCY RESPONDERS

Until the end of cleaning process, restrict access to the area. 8. Use individual protective equipment which is specified in Chapter 8 (Exposure Controls/Individual Protection). If possible, let some fresh air into the pouring area. Ensure that the cleaning is done by only trained personnel. Keep emergency equipment (fire, pouring, leakage etc.) ready. Inform the related state officers, occupational, health, safety and environment authorities.

6.2 Environmental precautions:

Prevent the material to access to sewages or waterways if it pours. Don't allow the materials to pollute the ground water system. Prevent the water to flow into dirty water channels. Inform the local authorities if fouls, streams, soil or sewages are polluted.

6.3 Methods and materials for containment and cleaning:

Spillages in small areas:

Collect the poured material by making it sucked by an absorbent. Put the residuals into a suitable and closed pot labelled properly. Wash the area affected.

Spillages in large areas:

Collect the poured liquids by digging ditches or holes and making liquids sucked by an absorbent. Remove the liquids by filling the recycling or recovery barrels or tankers with them. Clean the surfaces which are contaminated with the material, through water or watery cleansers. Consult with an approved waste carrier to remove the contaminated and recycled materials. Remove the material in accord with the directives (Removing Rules) specified in Chapter 13.

6.4 Reference to other sections:

Use individual protective equipment which is specified in Chapter 8 (Exposure Controls/Individual Protection). Remove the material in accord with the directives (Removing Rules) specified in Chapter 13.

7.HANDLING AND STORAGE

7.1 Conditions about safe use

Usage:

Prevent contact with skin, eyes and clothes. It should be used under sufficient ventilation conditions. Don't breathe its vapour/gas/dust. When they are not used, keep the pots closed. Ensure that all pots are labelled. Keep emergency equipment



(fire, pouring, leakage etc.) ready. 8. Use individual protective equipment which is specified in Chapter 8 (Exposure Controls/ Individual Protection). See 6.2 for Environmental Measures.

Suggestions for Hygiene:

Abide by good working and personal hygiene practices in order not to be exposed to the materials. If possible, keep a water fountain ready to wash eyes. If possible, keep a safety shower ready. Always wash your hands thoroughly after working with the chemical substances. Never eat something, drink anything or smoke while working with this product. Eye-wash station and safety shower are required. If the clothes are contaminated, take them off and wash the affected area properly. Wash and iron the clothes before wearing them again. Always wash your hands thoroughly after working with the chemical substances. Never eat something, drink anything or smoke while working with this product.

7.2 Conditions for safe storage, including any incompatibilities:

Storage conditions:

Keep it in the pots with proper labels. Keep the pots close in tight conditions. Store them separate from acids.

Proper packaging materials:

It may show compatibility or differ from HDPE (high-density polyethylene), Stainless Steel 304 and Plastic Matters; so we suggest a compatibility test before using. Mild Steel, Stainless Steel 316L, Polyurathane, Buna-N, EPDM, Polyethylene, Polypropylene, PVC, Epoxy phenolic resin, Neoprene, Chlorosulfone polyethylene rubber, Fluoroelastomer

Improper packaging materials:

Brass, 100% phenolic resin primer

7.3 Specific end uses:

Specific use(s) : Membrane cleaning compound

8.EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Permissible exposure limit:

There is not any exposure limit determined for this product. Current permissible exposure limit for the material(s) are stated below.

Source	Material(s)	Rules	ppm	mg/m3
Turkey	Sodium Hydroxide	TWA (8 Hours) 2		

*It is stated that exposure with skin including skin notation, mucous membranes and eyes has significance in general exposure amount.

Monitoring the measures:

Small amount of air is passed from an absorbent or a barrier locking up the substances, then absorbed substance is emitted or released and analysed as follows.



Material(s)	Method	Analysis	Absorbent
Sodium Hydroxide	US NIOSH: 7401	Titration	PTFE filter

DNEL

Components:

Tetrasodium EDTA

Expiration date	Means of exposure	Probable effects on health	Value
Personnel	Respiration	Short term – systematic	2.5 mg/ m ³
Personnel	Respiration	Short term – local	2.5 mg/ m ³

PNEC

Components:

Tetrasodium EDTA	Value
Fresh water	2.2 mg/l
Sea water	0.22 mg/l
Discrete release	1.2 mg/l
STP	43 mg/l
Soil	0.72mg/kg

8.2 Exposure controls:

Engineering Measures:

General ventilation is suggested. In order to control the emissions close to the source, local ventilation aiming ejection is suggested. Laboratory samples should be used in a smoke cap. Enable indoors to be ventilated mechanically.

Personal Protective Equipment:

General Suggestion

Use and selection of the personal protective equipment depends on the product's hazard characteristics, working environment and usage of the product. In general, we suggest the use of protective glasses with side shield and work uniforms protecting the arms, knees and the body as minimum measure. Anybody who visits the places where this product is used should wear protective glasses with side shield at least.

Eye/Face Protection:

While working with this product, glasses protecting against splashing are suggested. You may find effective European Standards in EN 166.

Protecting The Skin:

Wearing long gloves resistant to chemical substances is suggested while working with this product. Selecting the gauntlets depends on the working conditions and which chemicals are used, but we have positive experiences regarding the use of the gloves which are made of the following material, under mild working or using conditions. PVC. When signs of degradation are observed, the gloves should be replaced immediately. Degradation period is not determined for mixture, consult with PPE



manufacturer. You may find effective European Standards in EN 374. Wearing aprons and dinghies which are resistant to chemical substances is suggested while working with this product. You may find effective European Standards in EN ISO 20345.

Protection for Respiratory System:

When the concentrations in the air can exceed the limits given in this chapter, the use of filtered half mask or airfed respirator is recommended. Appropriate filter material depends on the amount and type of the chemical substances used. You can use this filter type: It may be found in A-B-E-K-P Effective European standards EN 140, EN 137, EN 143 and EN 14387. When it is contacted with unknown concentrations conspiratorially or in emergency, positive pressure SCBA covering the whole face should be used. If respiration protection is needed, use a complete respiration protection programme including selection, compliance test, training, maintenance and examination stages.

9. PHYSICAL AND CHEMICAL PROPERTIES

Note: These physical properties are typical values for the product and may vary according to the conditions.

9.1 Information on basic physical and chemical properties:

Physical State	Liquid
Apperance	Straw color
Odour	Light
Odour Threshold	No data available
pH (100%)	12.0-13.0
Freezing Point	-13 C°
Boiling Point	107 C°
Flushing Point	No data available
Evaporation Rate	No data available
Flammability (Solid, gas)	No data available
Lower Explosion Limit	No data available
Upper Explosion Limit	No data available
Vapor Pressure	The same with water's.
Vapor Density	Data is unavailable
Relative Density	1.3
Density	Data is unavailable
Water Solubility	Absolute
Octanol/Water Coefficient	No data available
Self-Ignition Temperature	No data available
Degradation Temperature	No data available
Viscosity	No data available
Explosive Properties	Not valid



Oxidizing Properties Not valid

9.2 Other information:

Not applicable

10. STABILITY AND REACTIVITY

10.1 Reactivity:

When it contacts with strong acids (eg. sulphuric, phosphoric, nitric, hydrochloric, chromic, sulphonic), it may generate heat, splashing or boiling and toxic vapor.

10.2 Chemical stability:

Stable under normal conditions.

10.3 Possibility of hazardous reactions:

Dangerous reactions do not occur under normal storage and usage conditions.

10.4 Conditions to avoid:

Very high temperatures

10.5 Incompatible materials:

When it contacts with strong acids (eg. sulphuric, phosphoric, nitric, hydrochloric, chromic, sulphonic), it may generate heat, splashing or boiling and toxic vapors. When it contacts with strong acids (eg. chlorine, peroxides, chromates, nitric acid, perchlorate, concentrated oxygen, permanganate), it may generate heat, fire, explosion and/or toxic vapors. When it contacts with the reactive substances (eg. aluminium), it may cause the formation of inflammable hydrogen gas.

10.6 Hazardous decomposition products:

Under fire conditions Carbon oxides, Nitrogen oxides

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects:

Product:

Acute oral toxicity	Hazardous in case of swallowing.
Acute inhalation toxicity	Based on available data, the classification criteria are not met.
Acute dermal toxicity	Based on available data, the classification criteria are not met.
Skin corrosion/irritation	Causes skin irritation.
Serious eye damage/eye irritation	Causes serious eye irritation.
Respiratory or skin sensitization	Based on available data, the classification criteria are not met.
Genotoxicity Assessment	Does not include classified content as mutagen.
Probability of Causing Cancer	Based on available data, the classification criteria are not met.

None of the substances in this product are listed as carcinogens by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP) or the American Conference of Governmental Industrial Hygienists (ACGIH).



Reproductive toxicity

Based on available data, the classification criteria are not met.

Assessment: No toxicity to reproduction

Specific target organ systemic toxicity

Remarks: Based on available data, the classification criteria are not met.

Specific target organ systemic (repeating exposure)

Based on available data, the classification criteria are not met.

Aspiration toxicity

No aspiration toxicity classification.

Components:

Tetrasodium EDTA

Acute oral toxicity

D50: > 1,780 - < 2,000 mg/kg, Rat, Other regulations, GLP: No

Acute respiration (inhalation) toxicity

LOAEC: ca.30mg/m³,6h,Rat,OECD 412 Read across(Anology)

Skin corrosion/irritation

Rabbit result: it is not irritant. OECD 404, 4h, GLP:No

Sensitivity on respiration and skin

Guinea Pig, Result:Negative, OECD 406,Read-across(Anology)

Genotoxicity / In vitro genotoxicity

Ames Test, Result : negative, OECD 471, GLP: No, Read-across(Anology)

in vitro gene on mammals mutation study, Result negative, Other regulations,GLP: no, Read-across(Anology)

in vitro chromosomal aberration test, result: negative, other regulations, GLP: No, Read-across(Anology)

In vivo genotoxicity

In vivo micronucleus test, Mouse, OECD 474, Result: negative, Read-across(Anology)

Evaluation

In vitro tests did not show mutagen effects. In vivo tests did not show mutagen effects.

Probability to cause cancer

Mouse, Oral, Other regulations, GLP: No, Result: negative, Read-across(Anology) Classification criterion is not met based on the existing information.

Desexualization effect

Rat, Oral, NOAEL:>=250 mg/kg, F1: >= 250 mg/kg,F2:>= 250 mg/kg, GLP:No, Read-across(Anology) Evalation: It is not toxic for reproduction.Teratogenicity (It may cause developmental disabilities)

Rat, Oral, NOAEL :>=1,374 mg/kg, <1,374 mg/kg Other regulations, Glp:NoEvaluation : It did not show teratogenic effects in the experiments conducted on the animals.

Specific target organ systemic toxicity

Rat, Oral, 91 d NOAEL :>=500mg/kg,



(repeating exposure)	Other Regulations Glp:No, Read-across (Analogy)
Specific target organ systemic toxicity (repeating exposure)	Mouse, Oral,721d, NOAEL:>938mg/kg, other Regulations Glp:No, Read-across (Analogy)
Specific target organ systemic Toxicity (repeating exposure)	Rat, Breathing,LOAEC,30 mg/m ³ , OECD 412 Read-across(Analogy) Target Organs: Data is unavailable.

12.ECOLOGICAL INFORMATION

12.1 Toxicity:

The following results are for the product.

Product:

Toxicity to fish	LC50:1,030 mg/l, 96hrs, Sunfish with Blue Branchia, Test material: Product LC50: 41- 2,070 mg/lt, 96hrs, Fish, Test material: Similar Product NOEC 456 mg/lt, 96 hrs, Sunfish with Blue Branchia, Test material:Product
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Toxicity to daphnia and other

Aquatic invertebrates	LC50>500 mg/lt ,24 hrs ,Daphnia Manga, Test material: product
Toxical for algea	LC50>10-100 mg/l ,72 hrs ,Algea, Test Material, Similar product

Ecotoxicology Assessment:

Acute aquatic toxicity	Not expected to be harmful to aquatic organisms.
Chronic aquatic toxicity	Not expected to demonstrate chronic toxicity to aquatic organisms.

Components:

Tetrasodium EDTA

Toxicity degree for fishes	LC50:121mg/l, 96h, Sunfish with Blue Branchia, Other regulations, GLP:No
Toxicity for Daphnia and other	EC50:610 mg/l, 24 h, Daphnia Magna,invertebrates living in water ISO 6341 GLP: No
Toxicity degree for bacteria	EC20:>500 mg/l , 0,5 h, Sewage microorganisms OECD 209 , GLP:No, Read-across(Analogy)
Toxicity degree for fishes	NOEC=>25.7 mg/l, 35d, Zebra Danio, OECD 210,Read-across(Analogy)
Toxicity for Daphnia and other invertebrates living in water	NOEC: 25mg/l, 21 d, Daphnia Manga EEC XI/681/86 Read-across (Analogy) toxicity. (Chronicle intoxication)

12.2 Persistence and degradability:

Product:



Biodegradability

Organic part of this mixture is expected to easily undergo biodegradation.

Components:

Tetrasodium EDTA

Biodegradability

0-10%, Result: It is not degraded biologically. Exposure period: 28d, OECD 302 B, GLP :No, Read across: (Anology)

12.3 Bioaccumulative potential:

Product:

Bioaccumulation

This mixture is expected to accumulate biologically.

Components:

Tetra Sodium EDTA

Bioaccumulation

Sunfish with Blue Branchia, Exposure period: 28min. Bioconcentration factor (BCF):ca. 1.1-1.8, Other Regulations, GLP: No, Bioaccumulation is impossible.

12.4 Mobility in soil:

Product:

Environmental fate and pathway

This material can dissolve in the water and it is expected to stay in the water.

Components:

Tetrasodium EDTA

Distribution in environmental media

Media:Soil, Koc:1046, log Koc:3.02, Calculated Read-across (Anology)

12.5 Results of PBT and vPvB assessment:

Product:

Assessment

This preparate does not contain any permanent content which causes bioaccumulation or is accepted as toxic (PBT). This preparate contains neither very permanent substances nor substances accepted to cause bioaccumulation (vPvB).

12.6 Other adverse effects:

Product:

Chemical oxygen demand (COD)

31mg/g

Other harmful effects related with ecology

Any adverse effect is not expected.



13. DISPOSAL CONSIDERATIONS

If this mixture is waste, end user should define the code of European Waste Catalogue according to the product and give this code to the product. Only use authorized waste carriers. Ensure that it is acted in conformity with EC, national and regional regulations.

13.1 Waste treatment methods:

Consult with an approved waste carrier to remove the contaminated and recycled materials. Any chemical waste is a potential pollutant and its mixing with urban sewage, sewages, natural streams or rivers is not proper. Remove the waste in an approved waste burner or in a waste disposal/treatment facility in accord with all effective directives. Don't throw the waste to local sewage system or usual garbage. Empty barrels should be sent for recycling or they should be removed by a licensed carrier having proper features

European Waste Code:

16 03 03* - Groups Out Of Specification and Unused Products – Inorganic waste containing hazardous material. When this product is used in any process afterwards, the most appropriate European Waste Code should be determined and assigned.

14. TRANSPORT INFORMATION

Information given in this chapter has only reference purpose and it can not substitute for the information in shipping document (consignment note). Please don't forget that proper transportation may change according to Name / Hazard Class, packaging, characteristics and transportation type. Typical Proper Transportation Names are given for this product.

LAND TRANSPORT

- 14.1 UN number:** UN 3267
- 14.2 UN proper shipping name:** CORROSIVE LIQUID, BAZIC, ORGANIC , N.O.S (Tetrasodium EDTA)
- 14.3 Transport Hazard class(es):** 8
- 14.4 Packing group:** III
- 14.5 Environmental hazards:** No
- 14.6 Special precautions for user:** Not applicable

AIR TRANSPORT (ICAO/IATA)

- 14.1 UN number:** UN 3267
- 14.2 UN proper shipping name:** CORROSIVE LIQUID, BAZIC, ORGANIC , N.O.S (Tetrasodium EDTA)
- 14.3 Transport Hazard class(es):** 8
- 14.4 Packing group:** III
- 14.5 Environmental hazards:** No
- 14.6 Special precautions for user:** Not applicable

SEA TRANSPORT (IMDG/IMO)

- 14.1 UN number:** UN 3267
- 14.2 UN proper shipping name:** CORROSIVE LIQUID, BAZIC, ORGANIC , N.O.S (Tetrasodium EDTA)
- 14.3 Transport Hazard class(es):** 8



14.4 Packing group:	III
14.5 Environmental hazards:	No
14.6 Special precautions for user:	Not applicable

in accord with Appendix 2 of Marpol 73/78'in and IBC code

15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislations specific for the substance or mixture:

Since it is not classified as hazardous, P and H phrases are not available.

INTERNATIONAL CHEMICAL CONTROLLING LAWS

Mempa declares that the chemicals completely comply with EU Directive in terms of registration, evaluation and approval (REACH). So registration of all chemicals which are used in production of our product and we export and import is done.

15.2 Chemical Risk Assessment:

Any chemical safety evaluation is not done.

16. OTHER INFORMATION

List of Related R-Sentences, Notes and Hazard Disclosures in Chapter 2.1 and 3:

H290	-It may be corrosive for metals.
H302	- Harmful in case of swallowing.
H314	- Causes serious skin burns and eye damage.
H315	- Causes skin irritation.
H318	- Causes serious eye damage.
H332	- Harmful in case of breathing.
R20	- Harmful in case of breathing.
R22	- Harmful in case of swallowing.
R35	- Causes serious burns.
R38	- Irritative for skin.
R41	- There is serious damage risk for eyes.

This safety information form contains all kinds of regulatory information in terms of health and safety. The form is based on the existing data on its issue date. Training programs should be applied for safe working conditions while using the product in any way and for using it properly. Arranging these programs and facilities are under the user's responsibility. If required, the user can make changes on this safety information form.

References:

This safety information form contains all kinds of regulatory information in terms of health and safety. The form is based on the existing data on its issue date. Training programs should be applied for safe working conditions while using the product in any way and for using it properly. Arranging these programs and facilities are under the user's responsibility.



AQM 133

MATERIAL SAFETY DATA SHEET

Issue date : 24.04.2013

Version no : 2

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