According to the Regulation No. 1907/2006/EC (REACH) and No. 2015/830/EC

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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Mixture name: Acrisolon 336

Chemical name: Polyamines aqueous solution.

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

Relevant identified uses: Corrosion inhibitor for boilers condensate line treatment.

1.3. Details of the supplier of the safety data sheet

Company: CPL

1.4. Emergency telephone

Poisoning control and information burea

Address: Šiltnamių g. 29, LT -2043 Vilnius

Telephone number: 8 5 236 20 52
Fax: 8 5 236 21 42
E-mail: info@tox.lt
Work time: All day (24 hours).

SECTION 2: Hazards Identification

2.1. Classification of the substance or mixture

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

Skin Corrosion 1 H314 Causes severe skin burns and eye damage.

Eye Damage 1 H318 Causes serious eye damage.

STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.

Aguatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.

2.2. Label elements

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





Signal Word: Dangerous.

Dangerous components of the mixture: Diethylaminoethanol, 2-aminoethanol, (Z)-N-9-octadecenylpropane-1 3-diamine.

Hazard Statement:

H314 Causes severe skin burns and eye damage.

H318 Causes serious eye damage.

H373 May cause damage to organs through prolonged or repeated exposure.

H411 Toxic to aquatic life with long lasting effects.

According to the Regulation No. 1907/2006/EC (REACH) and No. 2015/830/EC

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Precautionary Statements:

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P264 Wash hands thoroughly after handling.

P270 Do no eat, drink or smoke when using this product.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P301+P312+P330 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

Rinse mouth.

P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

P363 Wash contaminated clothing before reuse.

P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

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 doctor/physician.

P309+P311 IF exposed or you feel unwell: Call a POISON CENTER or doctor/physician.

P405 Store locked up

P501 Dispose of contents/container to accordance with local regulations.

P273 Avoid release to the environment.

P391 Collect spillage.

2.3. Other hazards

No specific dangers known, if the regulations/notes for storage and handling are considered.

SECTION 3: Composition/Information on Ingredients

3.1. Substances

Not applicable.

3.2. Mixtures

Chemical name: Polyamines aqueous solution.

CAS No.	EINECS No.	Index No.	REACH Registration No.	Name	Concentration range (%)	Classification according to Regulation (EC) No 1272/2008 [CLP]	
100-37-8	202-845-2	603-048- 006	01-2119488937- 14-0001	Diethylaminoeth anol	5 - 10	Flam. Liq. 3 H226 Acute Tox. 4 H302 Acute Tox. 4 H332 Acute Tox. 4 H312 Skin Corr. 1B H314 Eye Dam. 1 H318	
141-43-5	205-483-3	-	01-2119486455- 28	2-aminoethanol	1 - 5	Acute Tox 4 H302 Acute Tox. 4 H332 Acute Tox. 4 H312 Skin Corr. 1B H314 Eye Dam. 1 H318 STOT SE 3 H335 Aquatic Chronic 3 H412	
3710-84-7	223-055-4	-	01-2119962470- 39-0001	Diethylhydroxyl- amine	1 - 5	Flam Liq 3 H226 Acute Tox 4 H312 Acute Tox. 4 H332 STOT SE 3 H335 Aquatic Chronic 3 H412	
7173-62-8	230-528-9	-	-	(Z)-N-9- octadecenylprop ane-1 3-diamine	1 – 5	Acute Tox. 4 H302 Skin Corr. 1B H314 STOT RE 1 H372 Aquatic Acute 1 H400 Aquatic Chronic 1 H410	

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According to the Regulation No. 1907/2006/EC (REACH) and No. 2015/830/EC

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SECTION 4: First-Aid Measures

4.1. Description of first aid measures

Remove contaminated clothing.

If inhaled:

Remove person to fresh air and keep comfortable for breathing. Get medical advice/attention

On skin contact:

Remove contaminated clothing, footwear, watches, etc. And clean thoroughly before re-using them. Wash immediately with plenty of water. Seek medical treatment in all cases of irritation or burns.

On contact with eyes:

Rinse immediately with plenty of water for at least 15 minutes. Immediately obtain medical attention.

On ingestion:

Immediately rinse mouth and drink at least 1.5 liters of water. <u>Do NOT induce vomiting</u>. Seek medical attention.

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

If inhaled: May cause respiratory irritation.

On skin contact: May cause skin irritation or corrosion.

On contact with eyes: Causes serious eye damage. On ingestion: Harmful if swallowed.

Delayed symptoms:

If inhaled: May cause respiratory irritation or cough.
On skin contact: Irritation, redness and skin burns.
On contact with eyes: Pain, tearing, redness, eye damage.

On ingestion: Stomach pains.

4.4. Indication of any immediate medical attention and special treatment needed

Treatment: No information available.

SECTION 5: Fire-Fighting Measures

5.1. Extinguishing media

Suitable extinguishing media:

All types of extinguishing media are suitable: water, dry powder, carbon dioxide, foam, sand and other.

5.2. Special hazards arising from the substance or mixture

Dangerous products of combustion of the mixture: NO_x, CO₂, CO.

5.3. Advice for fire-fighters

Wear protective working tools such boots, coveralls, gloves, eye and face protection.

EN 469 - Protective clothing for firemen.

SECTION 6: Accidental Release Measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Avoid contact with skin and eyes. Wear personal protective equipment as described under Heading 8.

6.1.2. For emergency responders

Avoid contact with skin and eyes. Wear personal protective equipment as described under Heading 8.

6.2. Environmental precautions

Do not wash product down sewage and drainage systems or into bodies of water.

6.3. Methods and material for containment and cleaning up

Absorb the spillage into sand or other inert material, shovel into suitable containers. If containment is not possible and material enters the drain, dilute as much as possible with water.

According to the Regulation No. 1907/2006/EC (REACH) and No. 2015/830/EC

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6.4. Reference to other sections

Information regarding exposure controls/personal protection and disposal considerations can be found in section 8 and 13.

SECTION 7: Handling and Storage

7.1. Precautions for safe handling

No special measures necessary provided product is used correctly. In the workplace do not eat, drink or smoke.

Protection against fire and explosion: No special precautions necessary.

7.2. Conditions for safe storage, including any incompatibilities

The product should be stored in a cool, dry area in PVC or HDPE containers.

Storage stability:

Keep storage area should be dry, cool, 0 to 35 °C. Away from fire and explosions.

Unsuitable (incompatible) storage of chemicals: strong acids.

7.3. Specific end use(s)

Corrosion inhibitor for boilers condensate line treatment.

The concentrated product is dosed using a dosing pump in the system.

SECTION 8: Exposure Controls/Personal Protection

8.1. Control parameters

Components with occupational exposure limits: HN 23:2011 Lithuania

Substan	Exposure limits				
Name	CAS No	Long -term effects, mg/l	Long -term effects, ppm	Short-term exposure, mg/l	Short-term exposure, ppm
Diethylhydroxylamine	3710-84-7	20	5	40	10

Information about diethylhydroxylamine CAS No. 3710-84-7 DNEL (DEHA):

DNEL for workers, Systemic, long-term, by inhalation: 3.65 mg/m³;

DNEL for workers, systemic, acute, inhalation: 45.6 mg/m³;

DNEL for workers, local, long-term, by inhalation: 2.92 mg/m³;

DNEL for workers, local, short-term, by inhalation: 8.76 mg / m³;

DNEL for workers, local, chronic, dermal: 0.26 mg / kg / d;

DNEL for workers, local, short-term , dermal: 4.7 mg / kg / d;

DNEL for users, systemic, prolonged, dermal: 4.7 mg / kg /;

DNEL for users, systemic, long-term, by inhalation: 3.65 mg / m³;

PNEC (DEHA):

PNEC: Gel water 8.2 µm / I;

PNEC: Sea water 0.82 µm / I

PNEC: Sediment (fresh water) 0,0652 mg / kg;

PNEC: Sediment (sea water) 0.00652 mg / kg;

PNEC: Soil: 0.0082 mg / kg of soil.

According to the Regulation No. 1907/2006/EC (REACH) and No. 2015/830/EC

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Information about 2-aminoethanol CAS No.141-43-5 DNEL (2-aminoethanol):

DNEL for workers, long-term systemic effects, dermal: 1 mg/kg bw/day; DNEL for workers, long-term local effects, inhalation: 3,3 mg / m³;

DNEL for consumers, long-term systemic effects, dermal: 0,24 mg/kg bw/day;

DNEL for consumers, long-term systemic effects, ingestion: 3,75 mg/kg bw/day

DNEL for consumers, long-term local effects, inhalation: 2 mg/m³.

PNEC (2-aminoethanol):

PNEC: Gel water 0,085 μ m / I; PNEC: Sea water 0.0085 μ m / I

PNEC: Sediment (fresh water) 0,434 mg / kg; PNEC: Sediment (sea water) 0.0434 mg / kg;

PNEC: Soil 0.0367 mg / kg of soil. PNEC: Sewage treatment plant 100 mg/l PNEC: Intermittent water 0,028 mg/l

Information about diethylaminoethanol:

DNEL for workers, oral- acute systemic effects 5,0 mg/kg bw/day
DNEL for workers, inhalation – acute systemic effects 8,2 mg/m³
DNEL for workers, skin – acute systemic effects 0,8 mg/kg bw/day

DNEL for workers, inhalation – long-term systemic effects 5,0 mg/m³ DNEL for workers, skin – long-term systemic effects 0,4 mg/kg bw/day

PNEC (diethylaminoethanol):

PNEC Fresh water: 0.016 mg / I PNEC Seaweed: 0.0016 mg./I

PNEC Sludge (fresh water): 4.1 mg./kg.
PNEC Sludge (seawater): 0.41 mg./kg.
PNEC sewage treatment plant: 22.52 mg./l

PNEC Soil: 0,805 mg./kg

8.2. Exposure controls

8.2.1. Personal protective equipment

General safety and hygiene measures: General indoor ventilation. Do not eat, drink or smoke when working with product to avoid contact with skin or mouth. Immediately after working with cement or cement-containing materials, workers should wash or shower or use skin moisturizers. Remove contaminated clothing, footwear, etc., and clean thoroughly before re-using them.

Respiratory protection. Respiratory protection means (respirators, gas mask) with P2 / A2 type filter. **Eye protection.** Wear approved glasses or safety goggles to preset contact with eyes according to EN 166.

Skin protection. Wear rubber gloves according to EN 374, usual work clothes.

8.2.2. Environmental exposure controls

Do not wash product down sewage and drainage systems or into bodies of water.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Form: Liquid;

Colour:Colorless or yellow;Odour:Amine smell product;Odour threshold:Not determined;

pH, (20 °C): >13,0; Melting / freezing point: -2°C;

Density (20 °C): $0.98 \pm 0.05 \text{g/cm}^3$; **Solubility:** Soluble in water;

According to the Regulation No. 1907/2006/EC (REACH) and No. 2015/830/EC

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Boiling point/range: $100 \div 130 \, ^{\circ}\text{C};$

Flash point: 80°C;

Evaporation rate: Not determined; Flammability: Not self-igniting;

Partitioning coefficient n-octanol/water (log Kow): Not applicable;

Self ignition:Not determined;Thermal decomposition:Not determined;Explosion hazard:Not explosive;Viscosity, dynamic:Not determined;

Oxidizing properties: None.

9.2. Other Information

No data available.

SECTION 10: Stability and Reactivity

10.1. Reactivity

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

10.2. Chemical stability

The product is stable if stored and handled as prescribed/indicated (see Heading 7).

10.3. Possibility of hazardous reactions

The heat released by mixing with strong acids (exothermic reaction).

10.4. Conditions to avoid

Avoid freezing. Keep away from strong acids. Avoid nitrosating agents

10.5. Incompatible materials

Strong acids, nitrosating agents

10.6. Hazardous decomposition products

The product is stable, but heating may release hazardous decomposition products: CO, CO₂, NO_x.

SECTION 11: Toxicological Information

11.1. Information on toxicological effects

Acute toxicity

Eye contact. Direct contact with product may cause eye damage.

Skin contact. Direct contact with product may cause skin irritation or corrosion. Tests with rabbits: LD50 = 2 000 mg/kg (2-aminoethanol), LD50 = 277 mg/kg (diethylaminoethanol), LD50=1300 mg/kg (DEHA). ATE_{mix}=5500 mg/kg.

Ingestion. Harmful if swallowed. Tests with rats: LD50 = 1 089 mg/kg (2-aminoethanol), LD50 = 11 mg/kg (diethylaminoethanol), LD50=2190 mg/kg (DEHA). ATE_{mix} =2500 mg/kg.

Inhalation. Not Harmful if inhaled. Tests with rats LD50 = 20 mg/l (2-aminoethanol), LD50 = 7.500 mg/m³ (diethylaminoethanol), LD50= 3140 mg/m³ (DEHA). ATE_{mix}=55 mg/l.

11.2. Chronic effects

Inhalation. Not volatile.

Carcinogenicity. None.

Mutagenicity. None.

Reproductive toxicity. Suspected reproductive toxicity for human.

Contact dermatitis/Sensitizing effect. Allergic and sensitive people may develop dermatitis.

11.3. Medical conditions aggravated by exposure

None.

According to the Regulation No. 1907/2006/EC (REACH) and No. 2015/830/EC

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SECTION 12: Ecological Information

12.1. Toxicity

Aquatic Chronic Category 2. Toxic to aquatic life with long lasting effects.

The addition of large amounts of product to water may cause a rise in pH (alkalinity).

Information about diethylhydroxylamine CAS No. 3710-84-7.

LC50 134 mg / I / 96 h / Pimephales promelas

EC50 8.9 mg / I / 24 h / Daphnia madna

EC50> 101 mg / I / 72 h / Pseudokirchnerella subcapitata

Information about diethylaminoethanol CAS No. 100-37-8.

LC50 44 mg / I / 96 h /Leuciscus idus (Golden orfe)

EC50 122 mg / I / 24 h / Daphnia magna (Dafnija)

EC50 20 mg / I 96 h / Desmodesmus subspicatus (green algae)

Information about 2-aminoethanol CAS No.141-43-5.

LC50 349 mg / I / 96 h / Cyprinus carpio (Carp)

EC50 65 mg / I / 48 h / Daphnia madna

EC50 2.8 mg / I / 72 h / Pseudokirchnerella subcapitata

NOEC 0,85 mg/l / 21 days / Oryzias latipes (Orange-red killifish)

NOEC 0,85 mg / I / 21 days / Daphnia magna (Water flea)

12.2. Persistence and degradability

Completely soluble in water.

12.3. Bioaccumulative potential

Bioaccumulative potential low.

12.4. Mobility in soil

Not volatile.

12.5. Results of PBT and vPvB assessment

The product does not fulfill the criteria for PBT (Persistent/bioaccumulative/toxic) and vPvB (very persistent/very bioaccumulative).

12.6. Other adverse effects

Additional advice: No data available.

SECTION 13: Disposal Considerations

13.1. Waste treatment methods

Not classified as harmful to aquatic organisms. Not classified as harmful to birds. Not allowed to dispose of empty containers or waste into the environment. Dispose of according to the local legislation. Empty containers should be returned to the supplier.

SECTION 14: Transport Information

The product is not covered by the international regulation on the transport of dangerous goods (IMDG/IATA, ADR/RID) and therefore no classification is required. No special precautions are needed apart from those mentioned under Heading 8.

14.1. UN Number

None.

14.2. Proper Shipping Name

None.

According to the Regulation No. 1907/2006/EC (REACH) and No. 2015/830/EC

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14.3. Transport hazard class(es)

None.

14.4. Packing Group

None.

14.5. Environmental hazards

Yes.

14.6. Special precautions for user

None

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

None.

SECTION 15: Regulatory Information

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

This safety datasheet complies with the requirements of Regulation (EC) No. 453/2010/EC, Regulation (EC) No 1272/2008 [CLP], Regulation No 2015/830/EC.

15.2. Chemical Safety Assessment

Chemical Safety Assessment not required.

SECTION 16: Other Information

Acrisolon 336 - For professional use only.

Acrisolon 336 - Safety data sheets and technical information developed by the manufacturer.

Full tex of H-Statemens:

- H226 Flammable liquid and vapour.
- H302 Harmful if swallowed.
- H311 Toxic in contact with skin.
- H312 Harmful in contact with skin.
- H314 Causes severe skin burns and eye damage.
- H331 Toxic if inhaled.
- H332 Harmful if inhaled.
- H361 Suspected of damaging fertility or the unborn child .

Abbreviations:

CAS – Chemical Abstracts Service

EINECS – European Inventory of Existing Chemical Substances

GHS – Globally Harmonised System of Classification and Labelling of Chemicals

CLP - Classification, labelling and packaging of substances and mixtures

LC50 - Lethal concentration

DNEL - Derived no-effect level

PNEC – Predicted No Effect Concentration

According to the Regulation No. 1907/2006/EC (REACH) and No. 2015/830/EC

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Product Acrisolon 336 Label

Skin Corrosion 1 Eye Damage 1 STOT RE 2 Aquatic Chronic 2

Pictogram:



Signal Word: Danger.

Dangerous components of the mixture: Diethylaminoethanol, 2-aminoethanol, (Z)-N-9-octadecenylpropane-1 3-diamine.

Hazard Statement:

H314 Causes severe skin burns and eye damage.

H318 Causes serious eye damage.

H373 May cause damage to organs through prolonged or repeated exposure.

H411 Toxic to aquatic life with long lasting effects.

Precautionary Statements:

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P301+P312+P330 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth.

P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

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 doctor/physician.

P273 Avoid release to the environment.

The information on this data sheet reflects the currently available knowledge and is reliable provided that the product is used under the prescribed conditions and in accordance with the application specified on the packaging and/or in the technical guidance literature. Any other use of the product, including the use of the product in combination with any other product or any other process, is the responsibility of the user. It is implicite that the user is responsible for determining appropriate safety measures and for applying the legislation covering his own activities. Safety data sheet available for professional user on request.