

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

1.1. Product identifier

Product form : Mixture
Trade name : Himoloc TG22
Type of product : Flocculant

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

1.2.1. Relevant identified uses

Use of the substance/mixture : Product for paper and paperboard manufacturing

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

DERYPOL, S.A HQ:	Manufacturing:
C/Plató, n 6, Entlo, 5	C/Cal Gabatx, s/n
08021 Barcelona (Spain)	08520 Les Franqueses del Vallès (Spain)
Tel. +34 93 238 9090	Tel. +34 93 8496188
	regulatory@derypol.com

1.4. Emergency telephone number

Emergency number : +34 93 849 6188
9:00-13:00 h 15:00-17:00 h (GMT + 1)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP] Mixtures/Substances: SDS EU > 2015: According to Regulation (EU) 2015/830, 2020/878 (REACH Annex II)

Not classified

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

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

EUH-statements : EUH210 - Safety data sheet available on request.

2.3. Other hazards

Other hazards which do not result in classification : Spills will produce extremely slippery surfaces in case of contact with water.

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Comments : Cationic acrylamide copolymer in aqueous dispersion

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according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Adipic acid substance with national workplace exposure limit(s) (ES, PT)	CAS-No.: 124-04-9 EC-No.: 204-673-3 EC Index-No.: 607-144-00-9 REACH-no: 01-2119457561-38	0,2- <2,5	Eye Irrit. 2, H319

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: Beware of possible existing spills of product. See previously the Safety Data Sheet and act accordingly.
First-aid measures after inhalation	: In case of trouble go to the open air.
First-aid measures after skin contact	: Remove the maximum amount of product by using absorbent paper and then rinse with plenty of water. In case of persistent irritation get medical advise.
First-aid measures after eye contact	: Rinse immediately and thoroughly, pulling the eyelids well away from the eye (15 minutes minimum).
First-aid measures after ingestion	: Do not induce vomiting. Rinse mouth out with water. Consult a doctor.

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

Symptoms/effects	: Not expected to present a significant hazard under anticipated conditions of normal use.
Symptoms/effects after inhalation	: None expected.
Symptoms/effects after skin contact	: None expected.
Symptoms/effects after eye contact	: It causes itching and redness.
Symptoms/effects after ingestion	: Gastrointestinal discomfort. Repeated ingestion of the product is considered highly unlikely route of exposure if working in adequate sanitary and hygiene conditions.
Symptoms/effects upon intravenous administration	: Likely routes of exposure: skin and eye.
Chronic symptoms	: None known.

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

Treat symptomatically. Any ingredient in significant proportion according to the criteria laid down in Regulation 1272/2008 is mentioned in paragraph 3.2 of this Safety Data Sheet. Get medical attention urgently.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Water, water spray, dry powder, carbon dioxide (CO ₂), foam.
Unsuitable extinguishing media	: None.

5.2. Special hazards arising from the substance or mixture

Fire hazard	: Not flammable.
Explosion hazard	: None known.
Hazardous decomposition products in case of fire	: Under fire conditions thermal decomposition may produce: HCl, NH ₃ , nitrogen oxides (NO _x), carbon oxides (CO _x) and sulfur oxides (SO _x).

5.3. Advice for firefighters

Precautionary measures fire	: Stop leak if safe to do so.
Firefighting instructions	: Fight fire with normal precautions from a reasonable distance.
Protection during firefighting	: Do not attempt to take action without suitable protective equipment.

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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Do not step on the spill and avoid contact with water. The affected area, in contact with water, will become extremely slippery.

6.1.2. For emergency responders

Protective equipment : Use personal protective equipment. Keep away from people without protection. Slipping hazard if spilled load. Avoid contact with eyes and skin. Do not breathe vapors or spray mist. Personal protective equipment, see section 8.

6.2. Environmental precautions

Avoid the ground to be contaminated, natural water courses and wastewater drainage. If contamination occurs inform the corresponding authorities immediately.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : For small spills use inert absorbent materials and remove with a shovel; then flush the affected area with pressured water. For large spills contain them with absorbent material and pump out the product to adequate containers; then flush the affected area with pressured water.

6.4. Reference to other sections

See Section 8 to have information related to most appropriate personal protection equipment.
See Section 13 to have information related to waste management.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : We recommend handling the product in a well ventilated area. Ensure you have a safety shower and eye wash fountain available. Keep absorbent material as a precaution against spills. Use normal personal hygiene and housekeeping measures when handling any chemical product.

Handling temperature : 10 – 30 °C

Hygiene measures : Use normal personal hygiene and housekeeping measures when handling any chemical product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep in a covered place with the drum well closed and within the recommended temperature range. Avoid extreme temperatures on long storage periods, especially at low temperatures, the product may undergo an emulsion degradation process. If this occurs we recommend mixing the product and moving it to a warmer storage zone.

Storage temperature : 0 – 40 °C

Heat and ignition sources : Protect from sunlight. Direct sunlight may provoke slight product coloration and / or colored spots on its surface, which does not mean any degradation. Store in a well-ventilated place.

7.3. Specific end use(s)

For all the expected uses of the product the indications given above are considered appropriate.

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1. National occupational exposure and biological limit values

Himoloc TG22	
Portugal - Occupational Exposure Limits	
Local name	Ácido adípico
OEL TWA	5 mg/m ³
Spain - Occupational Exposure Limits	
Local name	Ácido adípico
VLA-ED (OEL TWA) [1]	5 mg/m ³
Adipic acid (124-04-9)	
Portugal - Occupational Exposure Limits	
Local name	Ácido adípico
OEL TWA	5 mg/m ³
Spain - Occupational Exposure Limits	
Local name	Ácido adípico
VLA-ED (OEL TWA) [1]	5 mg/m ³

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Natural ventilation is adequate in open areas. Provide mechanical ventilation in confined spaces.

8.2.2. Personal protection equipment

Personal protective equipment:

Safety glasses. Gloves.

Personal protective equipment symbol(s):



8.2.2.1. Eye and face protection

Eye protection:

Safety glasses with side-shields

8.2.2.2. Skin protection

Skin and body protection:

Use a chemical resistant apron or full protective equipment depending on the handling level and contact risks with the product and its dissolutions

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Hand protection:

Use latex gloves, or natural rubber gloves

Other skin protection

Materials for protective clothing:

Use your standard work clothes. In case of long contact with the product and risk of splash of its dissolutions use full waterproof suit

8.2.2.3. Respiratory protection

Respiratory protection:

Not necessary under normal conditions and provided good general ventilation

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:

Avoid spills that contaminate the underground, surface water streams and sewer system.

Other information:

You should always have a safety shower and eyewash in the area where the product is handled. Wash your hands and anybody area that has resulted exposed to the product before drinking, eating, using the services and end of the work period. Be aware of your exposure to products used in your workplace and act responsibly to avoid contaminating other areas. Try to develop good health habits, check with your company responsible for help.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: white.
Appearance	: White milky liquid.
Molecular mass	: Medium molecular weight.
Odour	: Salty odor.
Odour threshold	: Not available
Melting point	: < 0 °C
Freezing point	: Not available
Boiling point	: > 100 °C
Flammability	: Not applicable. Water-based product, free of organic solvents. Not applicable. Water-based product, free of organic solvents.
Explosive limits	: Not available
Lower explosive limit (LEL)	: Not available
Upper explosive limit (UEL)	: Not available
Flash point	: Not applicable. Water-based product, free of organic solvents.
Auto-ignition temperature	: Not applicable. Water-based product, free of organic solvents.
Decomposition temperature	: Not available
pH	: 3.5 – 5.5
Viscosity, kinematic	: Not available
Viscosity, dynamic	: ≤ 5000 cP
Solubility	: Water soluble. Concentrations above 3% become very viscous. Product solubility limit depend on dissolution conditions (concentration, pH, temperature, preparation system - agitation).
Partition coefficient n-octanol/water (Log Kow)	: < 3
Vapour pressure	: Not available
Vapour pressure at 50 °C	: Not available
Density	: 1.2 g/cm ³
Relative density	: Not available
Relative vapour density at 20 °C	: Not available
Particle size	: Not applicable
Particle size distribution	: Not applicable
Particle shape	: Not applicable
Particle aspect ratio	: Not applicable

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Particle aggregation state	: Not applicable
Particle agglomeration state	: Not applicable
Particle specific surface area	: Not applicable
Particle dustiness	: Not applicable

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product has no hazardous reactivity beyond that specified in paragraph 10.5. However there may be a risk of water contamination of the product during handling and use. Water or water-based products, will dissolve partially and imperfectly the product, and may cause it to be very difficult to use in the application (gel formation, clogged pipes and pumps). As a general rule we recommend avoiding the contact with strong chemical reagents, such as acids, bases, reductors and oxidizers.

10.2. Chemical stability

This product is stable. After long periods at rest we may observe a slight floatation that does not mean any degradation; the product can recover its original homogeneity easily by agitation.

10.3. Possibility of hazardous reactions

No risk of explosion or polymerization or inflammation on contact with air, even at high temperatures (<100 ° C) and in the presence of ignition sources.

10.4. Conditions to avoid

None for safety reasons. For keeping the original properties of the product follow the recommendations given in Section 7.

10.5. Incompatible materials

Strong bases may provoke ammonia vapours.

10.6. Hazardous decomposition products

None under normal conditions. Thermal decomposition products (in case of fire) are indicated in Section 5.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: The product is not expected to be toxic by inhalation.

Adipic acid (124-04-9)

LD50 oral rat	5560 mg/kg
LD50 dermal rabbit	7940 mg/kg
LC50 Inhalation - Rat (Dust/Mist)	> 7.7 mg/l/4h

Skin corrosion/irritation	: Not classified pH: 3.5 – 5.5
Serious eye damage/irritation	: Not classified pH: 3.5 – 5.5
Respiratory or skin sensitisation	: No data available.
Germ cell mutagenicity	: No data available.
Carcinogenicity	: No data available.

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Reproductive toxicity	: No data available.
STOT-single exposure	: No data available.
STOT-repeated exposure	: No data available.
Aspiration hazard	: No aspiration hazard is expected in normal use.

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Adverse health effects caused by endocrine disrupting properties	: No data available
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11.2.2. Other information

Potential adverse human health effects and symptoms	: No symptoms expected if the product is properly handled, No effects whatsoever related to exposure to the product are known.
Other information	: Through our experience and according to the information available, the product is not harmful to health if handled correctly according to the recommendations given.

SECTION 12: Ecological information

12.1. Toxicity

Hazardous to the aquatic environment, short-term (acute)	: Not classified
Hazardous to the aquatic environment, long-term (chronic)	: Not classified

Adipic acid (124-04-9)

LC50 - Fish [1]	> 1000 mg/l Danio rerio
EC50 - Crustacea [1]	46 mg/l Daphnia magna (OCDE 202)
NOEC (chronic)	6.3 mg/l Daphnia magna (21 days)

12.2. Persistence and degradability

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Persistence and degradability	Abiotic degradation: Hydrolysis > 70% (28 days, pH 6 - 8, OECD 111). It is equivalent to a rapid biodegradability in accordance with Directive 67/548/CE, Annex VI.
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Adipic acid (124-04-9)

Biodegradation	70 % (28 days, OECD 301 D)
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12.3. Bioaccumulative potential

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Partition coefficient n-octanol/water (Log Kow)	< 3
Bioaccumulative potential	This is a high molecular weight, for this reason it will not permeate the membrane cell. There will be no bio-accumulation.

Adipic acid (124-04-9)

Partition coefficient n-octanol/water (Log Pow)	0.093 25 °C, pH 3.3
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12.4. Mobility in soil

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Ecology - soil	It may be easily removed by an abiotic process of adsorption.
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12.5. Results of PBT and vPvB assessment

No additional information available

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12.6. Endocrine disrupting properties

Adverse effects on the environment caused by endocrine disrupting properties : No data available

12.7. Other adverse effects

Other adverse effects : None to mention.
Additional information : In aqueous solution this product may be eliminated by flocculation and precipitation. It is easily removed from the aqueous media in presence of suspended matter. This product does not contain halogen organic compounds.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : If this product must be disposed as a waste the final user must do it accordingly with the European, national and local regulations. Use only authorised companies. Empty containers and residual product must not be washed out with water, this would provoke an inappropriate dissolution of the product and it would increase the amount of waste to dispose. Exhaust as much as possible the product and dispose the empty container taking into account Section 13.1.
Additional information : Keep the same recommendations provided in Sections 7 and 8 of this MSDS. Refer to Section 2 of this Safety Data Sheet.

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

14.1. UN number or ID number

UN-No. (ADR) : Not applicable
UN-No. (IMDG) : Not applicable
UN-No. (IATA) : Not applicable
UN-No. (ADN) : Not applicable
UN-No. (RID) : Not applicable

14.2. UN proper shipping name

Proper Shipping Name (ADR) : Not applicable
Proper Shipping Name (IMDG) : Not applicable
Proper Shipping Name (IATA) : Not applicable
Proper Shipping Name (ADN) : Not applicable
Proper Shipping Name (RID) : Not applicable

14.3. Transport hazard class(es)

ADR
Transport hazard class(es) (ADR) : Not applicable

IMDG
Transport hazard class(es) (IMDG) : Not applicable

IATA
Transport hazard class(es) (IATA) : Not applicable

ADN
Transport hazard class(es) (ADN) : Not applicable

RID
Transport hazard class(es) (RID) : Not applicable

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14.4. Packing group

Packing group (ADR)	: Not applicable
Packing group (IMDG)	: Not applicable
Packing group (IATA)	: Not applicable
Packing group (ADN)	: Not applicable
Packing group (RID)	: Not applicable

14.5. Environmental hazards

Dangerous for the environment	: No
Marine pollutant	: No
Other information	: No supplementary information available

14.6. Special precautions for user

Overland transport

Not applicable

Transport by sea

Not applicable

Air transport

Not applicable

Inland waterway transport

Not applicable

Rail transport

Not applicable

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list $\geq 0,1$ % / SCL

Contains no REACH Annex XIV substances

Contains no substance subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

Contains no substance subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

15.1.2. National regulations

Germany

Water hazard class (WGK) : WGK 1, Slightly hazardous to water (Classification according to AwSV, Annex 1)

Hazardous Incident Ordinance (12. BImSchV) : Is not subject of the Hazardous Incident Ordinance (12. BImSchV)

Netherlands

SZW-lijst van kankerverwekkende stoffen : None of the components are listed

SZW-lijst van mutagene stoffen : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : None of the components are listed

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15.2. Chemical safety assessment

The product should be considered a mixture. Given its classification is not necessary to perform a chemical safety assessment thereof.

SECTION 16: Other information

Indication of changes			
Section	Changed item	Change	Comments
	Adverse effects on the environment caused by endocrine disrupting properties	Added	
	Adverse health effects caused by endocrine disrupting properties	Added	
	SDS EU format	Added	
	Supersedes	Modified	
	Revision date	Modified	
	Issue date	Modified	
2.2	EUH-statements	Added	
4.2	Symptoms/effects upon intravenous administration	Added	
4.3	Other medical advice or treatment	Modified	
7.1	Hygiene measures	Added	
9.1	Colour	Modified	
16	Other information	Added	

Abbreviations and acronyms

	REACH EC 1907/2006 regulation. Concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals. CLP: Classification, Labelling and Packaging. EC Regulation 1272/2008. DNEL: Derived No Effect Level. PNEC: Predicted No Effect Concentration. PBT: Persistent, Bioaccumulative and Toxic. vPvB: very Persistent and very Bioaccumulative.
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Other information : The latest version of the MSDS of this product can be obtained through the link <https://www.derypol.com/en/technical-documentation/>.

Full text of H- and EUH-statements

Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
H319	Causes serious eye irritation.
EUH210	Safety data sheet available on request.

Safety Data Sheet applicable for regions : DE;DK;ES;FI;FR;IT;NL;PL;PT;GB;RU;SE

Safety Data Sheet (SDS), EU

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.