

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

1.1. Product identifier

Product form : Mixture
Trade name : ADG1

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 : EUH208 - Contains Glyoxal 40%(107-22-2). May produce an allergic reaction.
EUH210 - Safety data sheet available on request.

2.3. Other hazards

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

Component

Acrylamide-DADMAC-glyoxal copolymer(32555-39-8)	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
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ADG1

Safety Data Sheet

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

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Comments : Diallyldimethylammonium copolymer in aqueous solution

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Acrylamide-DADMAC-glyoxal copolymer	CAS-No.: 32555-39-8	6-8	Aquatic Chronic 3, H412
Glyoxal 40% substance with national workplace exposure limit(s) (ES)	CAS-No.: 107-22-2 EC-No.: 203-474-9 EC Index-No.: 605-016-00-7 REACH-no: 01-2119461733	<1	Muta. 2, H341 Acute Tox. 4 (Inhalation), H332 Eye Irrit. 2, H319 Skin Irrit. 2, H315 Skin Sens. 1, H317

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : In case of trouble go to the open air. Get medical attention.
First-aid measures after inhalation : In case of trouble go to the open air.
First-aid measures after skin contact : Rinse the skin affected with plenty of water. Then wash it again with water and soap. In case of irritation, if it persists, get medical advice.
First-aid measures after eye contact : Rinse thoroughly with plenty of water, also under eyelids, at least for 15 minutes. Get medical assistance. It is necessary having a safety shower in the work area.
First-aid measures after ingestion : If swallowed, seek medical advice immediately and show this container or label. Do not induce vomiting.

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 : Slight irritation of the repeatedly exposed area.
Symptoms/effects after eye contact : May include: itching, pain, redness, tears.
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 (CO₂), foam.
Unsuitable extinguishing media : None.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Not flammable.
Explosion hazard : None known.

ADG1

Safety Data Sheet

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

Hazardous decomposition products in case of fire : Under fire conditions thermal decomposition may produce: nitrogen oxides (NO_x) and carbon oxides (CO_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.

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 – 40 °C

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Avoid extreme temperatures (below "Minimum temperature" and above "Maximum temperature"). Keep in a covered place, with the drum well closed and within the "Recommended temperature range".
Storage temperature : 10 – 40 °C
Heat and ignition sources : Protect from sunlight. Protect from freezing.

7.3. Specific end use(s)

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

ADG1

Safety Data Sheet

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

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1. National occupational exposure and biological limit values

Glyoxal 40% (107-22-2)

Spain - Occupational Exposure Limits

VLA-ED (OEL TWA) [1]

0.1 mg/m³

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

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

ADG1

Safety Data Sheet

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

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	: Colourless to yellowish transparent liquid.
Odour	: Almost odourless.
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.
Explosive limits	: Not available
Lower explosive limit (LEL)	: Not available
Upper explosive limit (UEL)	: Not available
Flash point	: > 200 °C
Auto-ignition temperature	: Not applicable. Water-based product, free of organic solvents.
Decomposition temperature	: > 100 °C
pH	: 2 – 3
Viscosity, kinematic	: Not available
Viscosity, dynamic	: < 25 cP
Solubility	: Dilutable in all proportions.
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not available
Vapour pressure at 50 °C	: Not available
Density	: Not available
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
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

This product does not present any dangerous reactivity if used, stored and handled in accordance with this MSDS recommendations.

ADG1

Safety Data Sheet

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

10.2. Chemical stability

Stable under normal handling and storage conditions.

10.3. Possibility of hazardous reactions

There is no risk of polymerization.

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 exothermic reactions. Strong oxidizers may cause exothermic reactions.

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)	: Not classified

ADG1

LD50 oral rat	> 2000 mg/kg Reference has been taken from the toxicological data of a similar product
LD50 dermal rat	> 2000 mg/kg Reference has been taken from the toxicological data of a similar product

Glyoxal 40% (107-22-2)

LD50 oral rat	2000 – 5000
LD50 dermal rat	> 2000 mg/kg
LC50 Inhalation - Rat	2.44 mg/l/4h

Skin corrosion/irritation	: Not classified pH: 2 – 3
Serious eye damage/irritation	: Although the product is not classified as irritant we note that prolonged contact may cause mild irritation. pH: 2 – 3
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
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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ADG1

Safety Data Sheet

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

11.2.2. Other information

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

ADG1

LC50 - Fish [1]	> 10 mg/l Data for a representative polymer.
EC50 - Crustacea [1]	10 mg/l Data for a representative polymer.
EC50 72h - Algae [1]	Algal inhibition tests are not appropriate. The flocculating characteristics of the product interfere directly in the test medium preventing homogenous distribution which invalides the test.

12.2. Persistence and degradability

ADG1

Persistence and degradability	This product is not rapidly biodegradable.
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12.3. Bioaccumulative potential

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Bioaccumulative potential	This is a high molecular weight, for this reason it will not permeate the membrane cell. There will be no bio-accumulation.
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12.4. Mobility in soil

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Ecology - soil	No information available.
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12.5. Results of PBT and vPvB assessment

No additional information available

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.

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.

ADG1

Safety Data Sheet

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

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

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

ADG1

Safety Data Sheet

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

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

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 : None of the components are listed

giftige stoffen – Borstvoeding

NIET-limitatieve lijst van voor de voortplanting : None of the components are listed

giftige stoffen – Vruchtbaarheid

NIET-limitatieve lijst van voor de voortplanting : None of the components are listed

giftige stoffen – Ontwikkeling

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 health effects caused by endocrine disrupting properties	Added	
	Adverse effects on the environment caused by endocrine disrupting properties	Added	
	Aspiration hazard - comment	Added	
	SDS EU format	Added	
	Supersedes	Modified	
	Revision date	Modified	
	Issue date	Modified	
4.2	Symptoms/effects upon intravenous administration	Added	
4.3	Other medical advice or treatment	Modified	
11.1	LD50 oral rat	Modified	

ADG1

Safety Data Sheet

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

Indication of changes			
Section	Changed item	Change	Comments
12.1	EC50 Daphnia 1	Modified	
12.1	LC50 fish 1	Modified	
12.4	Ecology - soil	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.

Full text of H- and EUH-statements	
Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
Aquatic Chronic 3	Hazardous to the aquatic environment — Chronic Hazard, Category 3
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Muta. 2	Germ cell mutagenicity, Category 2
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1	Skin sensitisation, Category 1
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H341	Suspected of causing genetic defects.
H412	Harmful to aquatic life with long lasting effects.
EUH208	Contains Glyoxal 40%(107-22-2). May produce an allergic reaction.
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.