HYFLOC K220

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878
Issue date: 2/15/2024 Revision date: 2/15/2024 Supersedes version of: 12/22/2022 Version: 12.0

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

1.1. Product identifier

Product form : Mixture
Trade name : HYFLOC K220

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

1.2.1. Relevant identified uses

Main use category : Industrial use
Use of the substance/mixture : Process aid industrial applications
Function or use category : Product for water treatments

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:
C/Plató, n 6, Entlo, 5
08021 Barcelona (Spain)
Tel. +34 93 238 9090

Manufacturing:
C/Cal Gabatx, s/n
08520 Les Franqueses del Vallès (Spain)
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]

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.

Contains no PBT/vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

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 : Diallyldimethylammonium chloride homopolymer in aqueous solution

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Poly(dimethyldiallylammonium chloride)	CAS-No.: 26062-79-3	<25	Aquatic Chronic 3, H412

Full text of H and EUH statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : Go to the open air. In case of persistent trouble get medical attention and provide this Material Safety Data Sheet to your physician.

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 immediately with plenty of water (for at least 15 minutes). Take medical advice. Alternatief, onmiddellijk spoelen met Diphotérine®.

First-aid measures after ingestion : Rinse mouth out with water. Do not induce vomiting. Get medical advice/attention if you feel unwell.

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

Symptoms/effects : No effects whatsoever related to exposure to the product are known.

Symptoms/effects after skin contact : None under normal conditions.

Symptoms/effects after eye contact : None under normal conditions.

Symptoms/effects after ingestion : None under normal 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 spray. Dry powder. Foam. Carbon dioxide.

Unsuitable extinguishing media : None.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire : Some hazardous gases can be released, mainly: carbon oxides (Cox) and nitrogen oxides (Nox). In case of combustion in a poor oxygen atmosphere some vapors of hydrochloric acid and hydrocyanic acid can be formed.

5.3. Advice for firefighters

Precautionary measures fire : Use self-contained breathing apparatus and chemically protective clothing.

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

Other information : Spills produce extremely slippery surfaces.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

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

6.1.1. For non-emergency personnel

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.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

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.

Other information : Dispose of materials or solid residues at an authorized site.

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 : Ensure good ventilation of the work station. Wear personal protective equipment. Avoid contact with skin and eyes.

Handling temperature : 5 – 35

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

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : 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". Freezing will affect the physical condition but will not damage the material. Keep away from sources of ignition.

Storage conditions : Store in a well-ventilated place. Keep cool.

Storage temperature : 0 – 35 °C

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

No additional information available

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:
Ensure good ventilation of the work station.

8.2.2. Personal protection equipment

Personal protective equipment:
Use your standard work clothes. In case of long contact with the product and risk of splash of its dissolutions use full waterproof suit. Safety glasses with side-shields. PVC 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:
Wear suitable protective clothing

Hand protection:
Chemical resistant PVC gloves (to European standard EN 374 or equivalent)

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 release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Liquid
Colour	:	Clear.

Appearance	:	Liquid. clear.
Odour	:	characteristic.
Odour threshold	:	Not available
Melting point	:	Not available
Freezing point	:	-3 °C
Boiling point	:	> 100 °C
Flammability	:	Not applicable
Explosive properties	:	Product is not explosive.
Lower explosion limit	:	Not available
Upper explosion limit	:	Not available
Flash point	:	Not available
Auto-ignition temperature	:	Not available
Decomposition temperature	:	> 150 °C
pH	:	5 – 7
Viscosity, kinematic	:	Not available
Viscosity, dynamic	:	200 – 600 cP
Solubility	:	completely miscible.
Partition coefficient n-octanol/water (Log Kow)	:	< 0
Partition coefficient n-octanol/water (Log Pow)	:	< 0
Vapour pressure	:	2.3 kPa
Vapour pressure at 50 °C	:	Not available
Density	:	1 – 1.2 g/cm³
Relative density	:	Not available
Relative vapour density at 20 °C	:	0.804
Particle characteristics	:	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.

10.2. Chemical stability

Stable under normal handling and storage conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

As a general rule we recommend avoiding the contact with strong chemical reagents, such as acids, bases, reductors and oxidizers.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

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) : Testing by the inhalation route is inappropriate because human exposure by inhalation is unlikely: the substance has no vapour pressure and there is practically no exposure to inhalable aerosols.

HYFLOC K220	
LD50 oral rat	> 5000 mg/kg
LD50 dermal rat	> 5000 mg/kg

Skin corrosion/irritation : Not irritant.
pH: 5 – 7
Serious eye damage/irritation : Slightly irritating
pH: 5 – 7
Respiratory or skin sensitisation : This product is not expected to be sensitizing.
Germ cell mutagenicity : Not mutagenic.
Carcinogenicity : No information available on this specific product, however by analogy, the product is considered to be: Not carcinogenic.
Reproductive toxicity : No information available on this specific product, however by analogy, the product is considered to be: It is not toxic for reproduction
STOT-single exposure : No known effect.
STOT-repeated exposure : No known effect.
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

11.2.2. Other information

No additional information available

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

HYFLOC K220	
LC50 - Fish [1]	> 100 mg/l
EC50 - Crustacea [1]	> 100 mg/l
EC50 72h - Algae [1]	Algal inhibition tests are not appropiate. The flocculating characteristics of the product inerfere directly in the test medium preventing homogenous distribution which invalides the test.

12.2. Persistence and degradability

HYFLOC K220	
Persistence and degradability	Not readily biodegradable. This product does not hydrolyse.

Poly(dimethyldiallylammonium chloride) (26062-79-3)	
Persistence and degradability	Rapidly degradable

12.3. Bioaccumulative potential

HYFLOC K220	
Bioconcentration factor (BCF REACH)	≈ 0
Partition coefficient n-octanol/water (Log Pow)	< 0
Partition coefficient n-octanol/water (Log Kow)	< 0
Bioaccumulative potential	not bioaccumulable.

12.4. Mobility in soil

HYFLOC K220	
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	≈ 0

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. Dispose of contents/container in accordance with licensed collector's sorting instructions. Furthermore, the user must consider the possible national/local regulations.

Product/Packaging disposal recommendations : Empty containers may be reused if properly clean. This operation is an exclusive responsability of the final customer of the product.

Additional information : Keep the same recommendations provided in Sections 7 and 8 of this MSDS.

SECTION 14: Transport information

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

14.1. UN number or ID number

Not regulated for transport

14.2. UN proper shipping name

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

14.3. Transport hazard class(es)

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

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

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

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

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

14.4. Packing group

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

14.5. Environmental hazards

Other information : No supplementary information available

14.6. Special precautions for user

Overland transport
Not regulated

Transport by sea
Not regulated

Air transport
Not regulated

Inland waterway transport
Not regulated

Rail transport
Not regulated

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

REACH Annex XVII (Restriction List)

Contains no REACH substances with Annex XVII restrictions

REACH Annex XIV (Authorisation List)

Contains no REACH Annex XIV substances

REACH Candidate List (SVHC)

Contains no substance on the REACH candidate list

PIC Regulation (Prior Informed Consent)

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.

POP Regulation (Persistent Organic Pollutants)

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

Ozone Regulation (1005/2009)

Contains no substance subject to REGULATION (EU) No 1005/2009 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 September 2009 on substances that deplete the ozone layer.

Dual-Use Regulation (428/2009)

Contains no substance subject to the COUNCIL REGULATION (EC) No 428/2009 of 5 May 2009 setting up a Community regime for the control of exports, transfer, brokering and transit of dual-use items.

Explosives Precursors Regulation (2019/1148)

Contains no substance subject to Regulation (EU) 2019/1148 of the European Parliament and of the Council of 20 June 2019 on the marketing and use of explosives precursors.

Drug Precursors Regulation (273/2004)

Contains no substance subject to Regulation (EC) 273/2004 of the European Parliament and of the Council of 11 February 2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances.

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Indication of changes			
Section	**Changed item**	**Change**	**Comments**
1.1	Trade name	Modified	
1.2	Use of the substance/mixture	Modified	
1.2	Function or use category	Added	

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:	
Aquatic Chronic 3	Hazardous to the aquatic environment — Chronic Hazard, Category 3
EUH210	Safety data sheet available on request.
H412	Harmful to aquatic life with long lasting effects.

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.