



P&WC

Version: 2.2
Effective date: 04/09/2020
Previous Date: 29/08/2019

SAFETY DATA SHEET

BETZ CP1654 (Hyfloc CP 654)

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

1.1. Product identifier

Trade name or designation of the mixture BETZ CP1654 (Hyfloc CP 654)

Date of first issue 27/02/2012

Version number 2.2

Revision date 04/09/2020

Supersedes date 29/08/2019

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

Identified uses Flocculant

Uses advised against None known.

1.3. Details of the supplier of the safety data sheet

JV Process and Water Chemicals LLC

Address: Street V. Kadirov 10, Chirchik city,
Tashkent Region, Republic of Uzbekistan, 111727

Tel: +99871 209 10 40

Email address: info@pwch.uz

www.pwch.uz

1.4. Emergency telephone number

Multilingual emergency number (24/7)

Street V. Kadirov 10, Chirchik city,
Tashkent Region,
Republic of Uzbekistan, 111727

Tel: +99871 209 10 40

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 as amended

This mixture does not meet the criteria for classification according to Regulation (EC) 1272/2008 as amended.

2.2. Label elements

Label according to Regulation (EC) No. 1272/2008 as amended

Hazard pictograms None.

Signal word None.

Hazard statements The product does not need to be labelled in accordance with Regulation (EC) 1272/2008 (CLP Regulation) as amended.

Precautionary statements

Prevention Not available.

Response Not available.



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Storage	Not available.
Disposal	Not available.
Supplemental label information	EUH210 - Safety data sheet available on request.
2.3. Other hazards	None known.

SECTION 3: Composition/information on ingredients

Mixtures

Chemical description	Polyacrylamide Powder				
Chemical name	%	CAS-No. / EC No.	REACH Registration No.	Index No.	Notes
Adipic acid	3 - < 5	124-04-9 204-673-3	01-2119457561-38	607-144-00-9	
Classification:	Eye Irrit. 2;H319				
Citric acid	3 - < 5	77-92-9 201-069-1	01-2119457026-42	-	
Classification:	Eye Irrit. 2;H319				

The classification of the above substance(s) is given, including the hazard class, category code and hazard statements which are assigned in accordance with their physicochemical, health and environmental hazards. Please refer to section 16 where the full text of each relevant H-statement is listed.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation	Move to fresh air.
Skin contact	Wash off immediately with plenty of water.
Eye contact	Flush eyes with water as a precaution.
Ingestion	Not available.

4.2. Most important symptoms and effects, both acute and delayed Not applicable.

4.3. Indication of any immediate medical attention and special treatment needed Not available.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Dry chemical, CO2, water spray or regular foam.
Unsuitable extinguishing media	None.

5.2. Special hazards arising from the substance or mixture Dusts may form an explosive mixture with air.

5.3. Advice for firefighters

Special protective equipment for firefighters	Self contained breathing apparatus. (CEN : EN 137) Protective clothing (CEN : EN 469) Protective gloves (CEN : EN 659) Helmet (CEN : EN 443)
Special fire fighting procedures	Use standard firefighting procedures and consider the hazards of other involved materials. Prevent spillage and fire-fighting water from entering in public sewers or the immediate environment.



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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel Protective clothing

For emergency responders Use personal protection recommended in Section 8 of the SDS.

6.2. Environmental precautions Prevent from entering sewers or the immediate environment.
Accidental release of large quantities into the aquatic environment may harm aquatic organisms.

6.3. Methods and material for containment and cleaning up After cleaning, flush away traces with water.
Absorb onto inert material and dispose of according to Controlled Waste Regulations.
Aqueous solutions or powders that become wet produce extremely slippery conditions.

6.4. Reference to other sections Please refer also to section no. 8 'Exposure controls' for further information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling Observe good industrial hygiene practices.

7.2. Conditions for safe storage, including any incompatibilities Storage temperature: between 4°C and 32°C.
Store in tightly closed original container in a dry and cool place.

7.3. Specific end use(s) Only for professional and industrial users

Shelf life 720 days

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

UK. EH40 Workplace Exposure Limits (WELs)

Additional components	Type	Value	Form
Dust (CAS N/A)	TWA	4 mg/m ³	Respirable dust.
		10 mg/m ³	Inhalable dust.

Biological limit values No biological exposure limits noted for the ingredient(s).

Recommended monitoring procedures Not available.

Derived no effect levels (DNELs)

Workers

Components	Value	Assessment factor	Notes
Adipic acid (CAS 124-04-9)			
Long-term, Local, Inhalation	5 mg/m ³		
Long-term, Systemic, Dermal	38 mg/kg	20	
Long-term, Systemic, Inhalation	264 mg/m ³	5	
Short-term, Local, Inhalation	5 mg/m ³		
Short-term, Systemic, Dermal	38 mg/kg	20	
Short-term, Systemic, Inhalation	264 mg/m ³	5	

Predicted no effect concentrations (PNECs)

Components	Value	Assessment factor	Notes
Adipic acid (CAS 124-04-9)			
Freshwater	0,126 mg/l	50	
Intermittent releases	0,46 mg/l	100	
Marine water	0,0126 mg/l	500	
Sediment (freshwater)	0,484 mg/kg		
Sediment (marine water)	0,0484 mg/kg		
Soil	0,0228 mg/kg		
STP	59,1 mg/l	10	
Citric acid (CAS 77-92-9)			
Freshwater	0,44 mg/l	1000	



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Marine water	0,044 mg/l	10000
Sediment (freshwater)	34,6 mg/kg	1
Sediment (marine water)	3,46 mg/kg	1
Soil	33,1 mg/kg	
STP	1000 mg/l	10

8.2. Exposure controls

Appropriate engineering controls Adequate ventilation to maintain air contaminants below exposure limits.

Individual protection measures, such as personal protective equipment

Eye/face protection Safety goggles.
CEN : EN 166

Skin protection

- Hand protection Nitrile gloves (Protection against unintentional short-term contact)
Coating thickness: 0.5 mm
Penetration time: > 480 min
CEN : EN 374-1/2/3/4; EN 420

- Other Protective clothing if splashing or repeated contact with product is likely.
CEN : EN ISO 13688

Respiratory protection In case of insufficient ventilation, use a breathing mask with filter type: P2
CEN : EN 140; EN 143; EN 149

Thermal hazards Not available.

Environmental exposure controls Prevent from entering in public sewers or the immediate environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

Colour White to off-white

Physical state Powder

Odour None

Odour threshold Not available.

pH (concentrated product) Not available.

pH in aqueous solution 3,6 (0,5% SOL.)

Melting point/freezing point Not available.

Initial boiling point and boiling range Not available.

Flash point > 101 °C P-M(CC)

Evaporation rate Not applicable.

Flammability (solid, gas) Not applicable.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) Not available.

Flammability limit - upper (%) Not available.

Vapour pressure < 1 mm Hg

Vapour pressure temp. 21 °C

Vapour density < 1 (Air = 1)

Relative density Not available.

Relative density temperature 21 °C

Solubility

Solubility (water) 1 %



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Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not applicable.
Decomposition temperature	Not available.
Viscosity	Not applicable.
Viscosity temperature	21 °C
Explosive properties	Not available.
Oxidising properties	Not available.

9.2. Other information

Shelf life	720 days
VOC	0 % (Calculated)

SECTION 10: Stability and reactivity

10.1. Reactivity	Not available.
10.2. Chemical stability	Material is stable under normal conditions.
10.3. Possibility of hazardous reactions	Not applicable.
10.4. Conditions to avoid	None under normal conditions.
10.5. Incompatible materials	Strong oxidising agents. Alkalies.
10.6. Hazardous decomposition products	Hydrogen chloride. Ammonia. Nitrogen oxides (NOx). Carbon oxides.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Product	Test Results
BETZ CP1654 (Hyfloc CP 654) (Mixture)	Acute Dermal LD50 Rabbit: > 2000 mg/kg (Estimated value based on results of similar product) Acute Inhalation LC50 Rat: > 20 mg/l 4 h (Estimated value based on results of similar product) Acute Oral LD50 Rat: > 5000 mg/kg (Estimated value based on results of similar product)

Components	Test Results
Adipic acid (124-04-9)	Acute Dermal LD50 Rabbit: > 2000 mg/kg Acute Inhalation LC50 Rat: > 7,7 mg/l 4 hour Acute Oral LD50 Rat: > 2000 mg/kg
Citric acid (77-92-9)	Acute Dermal LD50 Rabbit: > 2000 mg/kg Acute Oral LD50 Rat: 5400 mg/kg

Acute toxicity	Based on available data, the classification criteria are not met.
Skin corrosion/irritation	Based on available data, the classification criteria are not met.
Serious eye damage/irritation	May be irritating to eyes.
Respiratory or skin sensitisation	Based on available data, the classification criteria are not met.
Specific target organ toxicity - repeated exposure	Based on available data, the classification criteria are not met.
Specific target organ toxicity - single exposure	Based on available data, the classification criteria are not met.
Carcinogenicity	Based on available data, the classification criteria are not met.
Germ cell mutagenicity	Based on available data, the classification criteria are not met.
Reproductive toxicity	Based on available data, the classification criteria are not met.



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Information on likely routes of exposure

Ingestion	May cause irritation of the gastrointestinal tract.
Inhalation	Prolonged or excessive inhalation may cause respiratory tract irritation.
Skin contact	May be irritating to the skin.
Eye contact	May be irritating to eyes.

Symptoms Not available.

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

Mixture versus substance information None known.

Other information Not available.

SECTION 12: Ecological information

12.1. Toxicity

Product	Species	Test Results
BETZ CP1654 (Hyfloc CP 654) (CAS Mixture)		Algal inhibition tests are not appropriate.
Aquatic		
Crustacea	EC50 Daphnia magna	10 - 100 mg/l, 48 hours, Based on test data for structurally similar materials.
Fish	LC50 Zebra fish	1 - 10 mg/l, 96 hours, Based on test data for structurally similar materials.

12.2. Persistence and degradability

<70 % degradation in 28 days
CO2 Evolution (Modified Sturm Test) (OECD 301B)

12.3. Bioaccumulative potential Bioaccumulation is unlikely.
Because of the high molecular weight of the polymer diffusion through biological membranes is very small.

Partition coefficient n-octanol/water (log Kow)

Adipic acid	0,08
Citric acid	-1,64

Bioconcentration factor (BCF)

Citric acid	3
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12.4. Mobility in soil Not available.

12.5. Results of PBT and vPvB assessment Not a PBT or vPvB substance or mixture.

12.6. Other adverse effects Not available.

Summary The effects of this product on aquatic organisms are rapidly and significantly reduced by the presence of dissolved organic carbon and inorganic sorbents such as clays and silts in the aquatic environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Contaminated packaging According to Controlled Waste Regulations.

EWC (European Waste Code) recommendation : 15 01 02
15 Waste packaging; absorbents, wiping cloths, filter materials and protective clothing not otherwise specified.
15 01 Packaging (including separately collected municipal packaging waste).
15 01 02 Plastic packaging.
Depending on the origin and state of the waste, other EWC numbers may be applicable too.



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Disposal methods/information According to Controlled Waste Regulations.

EWC (European Waste Code) recommendation : 16 03 06

16 Wastes not otherwise specified in the list.

16 03 Off-specification batches and unused products.

16 03 06 Organic wastes

Depending on the origin and state of the waste, other EWC numbers may be applicable too.

SECTION 14: Transport information

ADR

Not regulated as dangerous goods.

RID

Not regulated as dangerous goods.

ADN

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

SECTION 15: Regulatory information

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

EU regulations

Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I and II, as amended

Not listed.

Regulation (EC) No. 850/2004 On persistent organic pollutants, Annex I as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 1 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 2 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 3 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex V as amended

Not listed.

Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry, as amended

Not listed.

Regulation (EC) No. 1907/2006, REACH Article 59(10) Candidate List as currently published by ECHA

Not listed.

Authorisations

Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorization, as amended

Not listed.

Restrictions on use

Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended

Not listed.

Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work, as amended.

Not listed.

Other EU regulations

Directive 2012/18/EU on major accident hazards involving dangerous substances, as amended

Not listed.

National regulations Not available.



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15.2. Chemical safety assessment Not available.

Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

SECTION 16: Other information

List of abbreviations

COD: Chemical Oxygen Demand
IATA: International Air Transport Association
IMDG Code: International Maritime Dangerous Goods Code.
CAS: Chemical Abstract Service.
EC-No: European Commission Number
CLP: Classification, Labeling and Packaging REGULATION (EC) No 1272/2008 on classification, labeling and packaging of substances and mixtures.
CEN: European Committee for Standardization (Comité Européen de Normalisation).
TWA: Time Weighted Average.
STEL: Short-term Exposure Limit.
LD50: Lethal Dose 50%.
LC50: Lethal Concentration 50%.
EC50: Effective Concentration 50%.
NOEL: No observed effect level.
BOD: Biochemical oxygen demand.
TOC: Total Organic Carbon.
ADR: European agreement concerning the international carriage of dangerous goods by road (Accord européen relatif transport des marchandises dangereuses par route).
ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures).
RID: Regulations concerning the international carriage of dangerous goods by rail (Règlement International concernant le transport de marchandises dangereuses par chemin de fer).
Safety data sheets of raw materials.

References

Information on evaluation method leading to the classification of mixture

The physical, health and environmental hazards of this mixture are assessed by applying the classification criteria for each hazard class or differentiation in Parts 2 to 5 of Annex I to Regulation (EC) No 1272/2008 (CLP).

Full text of any H-statements not written out in full under Sections 2 to 15

H319 Causes serious eye irritation.

Revision information

SECTION 2: Hazards identification: Prevention
SECTION 2: Hazards identification: Supplemental label information
SECTION 3: Composition/information on ingredients: Composition comments
SECTION 4: First aid measures: Inhalation
SECTION 4: First aid measures: Skin contact
SECTION 7: Handling and storage: 7.2. Conditions for safe storage, including any incompatibilities
SECTION 8: Exposure controls/personal protection: Environmental exposure controls
SECTION 8: Exposure controls/personal protection: - Hand protection
SECTION 8: Exposure controls/personal protection: Respiratory protection
SECTION 11: Toxicological information: Aspiration hazard
SECTION 11: Toxicological information: Other information
SECTION 11: Toxicological information: Respiratory or skin sensitisation
SECTION 15: Regulatory information: National regulations
GHS: Classification

Training information

Provide training on safe handling while considering the type of application and exposure scenarios.



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Based on EC Directive / Regulations (EC) No 1907/2006 (REACH)
(EC) No 1272/2008
(EU) No 1357/2014
(EU) 2015/830

Further information Correction in Section: 8