

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

1.1. Product identifier

Product form : Substance
 Name : p-Toluenesulfonic acid monohydrate
 Trade name : Ketjenflex CP
 EC-No. : 203-180-0
 CAS-No. : 6192-52-5
 Other means of identification : CAS-No. 104-15-4 (anhydrous form)

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 : Manufacture
 Formulation
 Intermediate
 Industrial use
 Professional use
 Pharmaceutical intermediate
 See annex for more detailed information

1.2.2. Uses advised against

Restrictions on use : No information available

1.3. Details of the supplier of the safety data sheet

Supplier

Axcentive SARL
 Chemin de Champouse
 13320 Bouc Bel Air - France
 T +33 442 694 090 - F +33 442 694 099
info@axcentive.com

Supplier

Axcentive Asia Pte Ltd
 13 Lorong 8 Toa Payoh
 #07-01 Braddell Tech Park
 319261 Singapore
 T +65 6258 6338 - F +65 6258 6901
info@axcentive.com

1.4. Emergency telephone number

Emergency number : GLOBAL INCIDENT RESPONSE HOTLINE (ACCESS CODE: 333881): Europe: +44-2035147487, North-America: 1.866.519.4752, South-America: 1.760.476.3961, Asia Pacific: +86-4001203572, Middle East/Africa: 1-760-476-3959, Australia: +61-280363166, New Zealand: +64 800 451719

Country	Organisation/Company	Address	Emergency number	Comment
Ireland	National Poisons Information Centre Beaumont Hospital	PO Box 1297 Beaumont Road 9 Dublin	+353 1 809 2566 (Healthcare professionals-24/7) +353 1 809 2166 (public, 8am - 10pm, 7/7)	
United Kingdom	National Health Service (NHS)		111 999 (in life-threatening emergencies)	
Wales	National Health Service (NHS)		0845 46 47	

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Skin corrosion/irritation, Category 2

H315

Ketjenflex CP

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Serious eye damage/eye irritation, Category 2 H319

Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation H335

Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

May cause respiratory irritation. Causes skin irritation. Causes serious eye irritation.

2.2. Label elements

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

Hazard pictograms (CLP) :



Signal word (CLP) :

Warning

Hazard statements (CLP) :

H315 - Causes skin irritation.

H319 - Causes serious eye irritation.

H335 - May cause respiratory irritation.

Precautionary statements (CLP) :

P271 - Use only outdoors or in a well-ventilated area.

P280 - Wear protective gloves, protective clothing, eye protection, face protection.

P302+P352 - IF ON SKIN: Wash with plenty of soap and water.

P304+P340 - IF INHALED: Remove person to fresh air and keep 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.

P403+P233 - Store in a well-ventilated place. Keep container tightly closed.

2.3. Other hazards

Other hazards not contributing to the classification : None known.

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

The substance is not 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

Other information : UFI: Not required, Nano material: Not required.

SECTION 3: Composition/information on ingredients

3.1. Substances

Name	Product identifier	Conc. (% w/w)	Classification according to Regulation (EC) No. 1272/2008 [CLP]
p-Toluenesulphonic acid monohydrate	(CAS-No.) 6192-52-5 (EC-No.) 203-180-0 (REACH-no) 01-2119538811-39	100	Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335

Full text of H- and EUH-statements: see section 16

Comments : Also listed as the anhydrous form (CAS No. 104-15-4)

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : When symptoms persist or in all cases of doubt seek medical advice.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. If breathing is difficult, give oxygen. Get medical advice/attention.

Ketjenflex CP

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

First-aid measures after skin contact	: Take off immediately all contaminated clothing. Wash skin with plenty of water and soap. Get immediate medical advice/attention.
First-aid measures after eye contact	: Rinse immediately and thoroughly, pulling the eyelids well away from the eye (15 minutes minimum). Get immediate medical advice/attention.
First-aid measures after ingestion	: Rinse mouth. Drink plenty of water. Get immediate medical advice/attention.

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

Symptoms/effects	: May cause burns.
Symptoms/effects after inhalation	: May cause burns.
Symptoms/effects after eye contact	: Causes eye irritation.
Symptoms/effects after ingestion	: Burns or irritation of the linings of the mouth, throat, and gastrointestinal tract.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Foam. Dry powder. Water spray. Carbon dioxide (CO ₂).
Unsuitable extinguishing media	: Do not use water jet to extinguish.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire	: Under fire conditions, hazardous fumes will be present: Sulphur oxides.
--	---

5.3. Advice for firefighters

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

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment	: Wear recommended personal protective equipment. Remove contaminated clothing and shoes. Refer to section 8.2.
Emergency procedures	: Evacuate unnecessary personnel. Ventilate spillage area. Do not breathe dust. Avoid contact with skin and eyes. Remove all sources of ignition.

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

For containment	: Stop leak if safe to do so.
Methods for cleaning up	: Avoid dust formation. Shovel or sweep up and put in a closed container for disposal. After cleaning, flush traces away with water.
Other information	: Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

See sections 8 and 13.

Ketjenflex CP

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Handle in accordance with good industrial hygiene and safety practice. Use only outdoors or in a well-ventilated area. Avoid dust formation. Avoid contact with skin, eyes and clothing.
- Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Keep container tightly closed in a cool, well-ventilated place. Store in a dry place. Protect from moisture.
- Incompatible materials : Metals. Alkalines.
- Heat and ignition sources : Keep away from heat.

7.3. Specific end use(s)

See annex for more detailed information.

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

Monitoring methods	
Monitoring methods	If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.
Biological monitoring methods	Not established

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

p-Toluenesulfonic acid monohydrate (6192-52-5)	
DNEL/DMEL (Workers)	
Long-term - systemic effects, dermal	7 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	24.7 mg/m ³
DNEL/DMEL (General population)	
Long-term - systemic effects, oral	2.5 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	4.35 mg/m ³
Long-term - systemic effects, dermal	2.5 mg/kg bodyweight/day
PNEC (Water)	
PNEC aqua (freshwater)	0.073 mg/l

Ketjenflex CP

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

PNEC aqua (marine water)	0.007 mg/l
PNEC aqua (intermittent, freshwater)	0.73 mg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	0.35 mg/kg dwt
PNEC sediment (marine water)	0.035 mg/kg dwt
PNEC (Soil)	
PNEC soil	0.028 mg/kg dwt
PNEC (STP)	
PNEC sewage treatment plant	65 mg/l

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Ensure adequate ventilation, especially in confined areas.

8.2.2. Personal protection equipment

Personal protective equipment symbol(s):



8.2.2.1. Eye and face protection

Eye protection:			
Wear eye protection			
Type	Use	Characteristics	Standard
Safety glasses with side shields, Aqueous solution <20%		clear	EN 166
Face shield, Aqueous solution > 20%		clear	EN 166

8.2.2.2. Skin protection

Skin and body protection:	
Wear suitable protective clothing	
Type	Standard
Long sleeved protective clothing	EN ISO 13982

Hand protection:

Type	Material	Permeation	Thickness (mm)	Penetration	Standard
Protective gloves	Nitrile rubber (NBR), Polyvinylchloride (PVC), Butyl rubber, Neoprene rubber (HNBR), Viton®	5 (> 240 minutes)	0.3		EN 374

8.2.2.3. Respiratory protection

Ketjenflex CP

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Respiratory protection:			
In case of insufficient ventilation, wear suitable respiratory equipment			
Device	Filter type	Condition	Standard
Dust mask	Type FFP2	Dust protection	EN 149

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Other exposure controls

Environmental exposure controls:

Avoid release to the environment.

Other information:

Handle in accordance with good industrial hygiene and safety procedures. Do not eat, drink or smoke when using this product. Wash hands immediately after handling the product. Take off contaminated clothing and wash before reuse.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Colour	: White
Appearance	: Crystalline
Odour	: Pungent
Odour threshold	: Not available
Melting point	: ≈ 106 °C
Freezing point	: Not applicable
Boiling point	: > 185 °C (Decomposes)
Flammability	: Non flammable.
Explosive properties	: None
Explosive limits	: Not applicable
Flash point	: ≈ 180 °C
Auto-ignition temperature	: > 350 °C
Decomposition temperature	: Not available
pH	: 1 (20°C, 650g/L)
Viscosity, kinematic	: Not applicable
Solubility	: Soluble in: Water: ~700 g/l, Alcohol
Partition coefficient n-octanol/water (Log Pow)	: 0.78 (@ 20°C)
Vapour pressure	: 0.1 mbar (@ 20°C)
Density	: Not available
Relative density	: Not relevant
Relative vapour density at 20°C	: Not applicable
Particle size	: Not available
Particle size distribution	: Not available

9.2. Other information

9.2.1. Information with regard to physical hazard classes

Oxidising properties : None

9.2.2. Other safety characteristics

Bulk density : 1200 kg/m³

SECTION 10: Stability and reactivity

10.1. Reactivity

Reacts violently with: Alkalines. Corrosive to metals.

Ketjenflex CP

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Hazardous polymerisation: Will not occur.

10.4. Conditions to avoid

Protect from moisture. Keep away from heat.

10.5. Incompatible materials

Alkalines. Metals.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced. Thermal decomposition generates: Sulphur oxides.

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

p-Toluenesulphonic acid monohydrate (6192-52-5)

LD50 oral rat	> 1410 mg/kg bodyweight (OECD 401 method)
LD50 dermal rabbit	> 2000 mg/kg bodyweight OECD Guideline 402 (Acute Dermal Toxicity), read across
LC50 Inhalation - Rat	≥ 50 – 100 mg/l (rat, 8 h, read across)
Skin corrosion/irritation	: Causes skin irritation. pH: 1 (20°C, 650g/L)
Additional information	: Self-classification: Rabbit, Irritating (OECD 404 method) Classification according to Regulation (EC) No. 1272/2008 [CLP]: (Section 2 & Section 3)
Serious eye damage/irritation	: Causes serious eye irritation. pH: 1 (20°C, 650g/L)
Additional information	: Self-classification: Causes serious eye irritation. Classification according to Regulation (EC) No. 1272/2008 [CLP]: (Section 2 & Section 3)
Respiratory or skin sensitisation	: Not classified
Additional information	: Did not cause sensitisation: Test method EU B.6
Germ cell mutagenicity	: Not known to cause heritable genetic damage
Carcinogenicity	: Contains no ingredient listed as a carcinogen
Reproductive toxicity	: Not known to cause birth defects or have a deleterious effect on a developing fetus. Not known to adversely affect reproductive functions and organs

p-Toluenesulphonic acid monohydrate (6192-52-5)

NOAEL (animal/male, F1)	> 3000 mg/kg bw/day (Rat, developmental toxicity)
STOT-single exposure	: May cause respiratory irritation.
STOT-repeated exposure	: Not classified
Additional information	: NOAEL, Oral : ≥ 5001 mg/kg bw/d, "28d", (OECD 407 method) (Rat)
Aspiration hazard	: Not classified

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Adverse health effects caused by endocrine disrupting properties : Contains no substances identified as having endocrine disrupting properties

Ketjenflex CP

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

11.2.2 Other information

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment. Before neutralisation, the product may represent a danger to aquatic organisms.
Hazardous to the aquatic environment, short-term (acute)	: Not classified
Hazardous to the aquatic environment, long-term (chronic)	: Not classified

p-Toluenesulphonic acid monohydrate (6192-52-5)	
LC50 fish 1	> 325 mg/l Test organisms (species): Leuciscus idus, Guidline: OECD Guideline 203 (Fish, Acute Toxicity Test)
EC50 Daphnia 1	> 103 mg/l Test organisms (species): Daphnia magna, Guidline: OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test), Read across from analogue substance BSA
EC50 72h - Algae [1]	73 mg/l Test organisms (species): Pseudokirchnerella, Guidline: OECD Guideline 201 (Freshwater Alga and Cyanobacteria, Growth Inhibition Test), freshwater, Read across from analogue substance BSA
NOEC chronic algae	44.8 mg/l Test organisms (species): Pseudokirchnerella, Guidline: OECD Guideline 201 (Freshwater Alga and Cyanobacteria, Growth Inhibition Test), freshwater, Read across from analogue substance BSA
EC50 Micro-organisms	650 mg/l, Guidline: OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test), 3h

12.2. Persistence and degradability

p-Toluenesulfonic acid monohydrate (6192-52-5)	
Persistence and degradability	Readily biodegradable.

12.3. Bioaccumulative potential

p-Toluenesulfonic acid monohydrate (6192-52-5)	
Partition coefficient n-octanol/water (Log Pow)	0.78 (@ 20°C)
Bioaccumulative potential	No bioaccumulation.

12.4. Mobility in soil

p-Toluenesulfonic acid monohydrate (6192-52-5)	
Ecology - soil	Low potential for absorption in soil.

12.5. Results of PBT and vPvB assessment

p-Toluenesulfonic acid monohydrate (6192-52-5)	
This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII	
This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII	

12.6. Endocrine disrupting properties

Adverse effects on the environment caused by endocrine disrupting properties	: Contains no substances identified as having endocrine disrupting properties
--	---

Ketjenflex CP

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

12.7. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.
Product/Packaging disposal recommendations : Empty containers should be taken for recycling, recovery or waste in accordance with local regulation.

SECTION 14: Transport information

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

ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID number				
UN 2585	UN 2585	UN 2585	UN 2585	UN 2585
14.2. UN proper shipping name				
ARYLSULPHONIC ACIDS, SOLID (<5% free sulphonic acid)	ARYLSULPHONIC ACIDS, SOLID (<5% free sulphonic acid)			
14.3. Transport hazard class(es)				
8	8	8	8	8
				
14.4. Packing group				
III	III	III	III	III
14.5. Environmental hazards				
Dangerous for the environment : No	Dangerous for the environment : No Marine pollutant : No	Dangerous for the environment : No	Dangerous for the environment : No	Dangerous for the environment : No
No supplementary information available				

14.6. Special precautions for user

Overland transport

Transport regulations (ADR) : No additional information available
Orange plates :



Tunnel restriction code (ADR) : E
EAC code : 2X

Transport by sea

Transport regulations (IMDG) : No additional information available
EmS-No. (Fire) : F-A
EmS-No. (Spillage) : S-B

Air transport

Transport regulations (IATA) : No additional information available

Ketjenflex CP

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Inland waterway transport

Transport regulations (ADN) : No additional information available

Rail transport

Transport regulations (RID) : No additional information available

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

Not listed on REACH Annex XVII

Not listed on the REACH Candidate List

Not listed on REACH Annex XIV (Authorisation List)

Not listed on the PIC list (Regulation EU 649/2012)

Not listed on the POP list (Regulation EU 2019/1021)

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

A chemical safety assessment has been carried out

SECTION 16: Other information

Indication of changes:

SDS EU format according to COMMISSION REGULATION (EU) 2020/878. Full Layout. Exposure controls/personal protection. Endocrine disrupting properties. Respiratory protection. Toxicological information. Recommended use.

Training advice : Ensure staff are informed of and trained on the nature of exposure and basic actions to minimise exposure.

Abbreviations and acronyms:

OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
vPvB	Very Persistent and Very Bioaccumulative
SDS	Safety Data Sheet
STP	Sewage treatment plant
NOAEL	No-Observed Adverse Effect Level
LD50	Median lethal dose
IMDG	International Maritime Dangerous Goods
IATA	International Air Transport Association
EC-No.	European Community number
DNEL	Derived-No Effect Level
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008

Ketjenflex CP

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

CAS	Chemical Abstract Service number
BCF	Bioconcentration factor
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
Full text of H- and EUH-statements:	
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
Skin Irrit. 2	Skin corrosion/irritation, Category 2
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation

Safety Data Sheet applicable for regions : IE - Ireland;GB - United Kingdom

SDS EU (REACH Annex II) - RHDHV

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.