We create chemistry

Safety Data Sheet
Plurafac® LF 221

1. Identification

Product identifier used on the label

Plurafac® LF 221

Recommended use of the chemical and restriction on use
Recommended use*: Chemical

* The “Recommended use” identified for this product is provided solely to comply with a Federal requirement and is not part of the seller's published specification. The terms of this Safety Data Sheet (SDS) do not create or infer any warranty, express or implied, including by incorporation into or reference in the seller's sales agreement.

Details of the supplier of the safety data sheet

Company:
BASF CORPORATION
100 Park Avenue
Florham Park, NJ 07932, USA

Telephone: +1 973 245-6000

Emergency telephone number

CHEMTREC: 1-800-424-9300
BASF HOTLINE: 1-800-832-HELP (4357)

Other means of identification
Chemical family: alcohol ethoxylate

2. Hazards Identification

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

Classification of the product

Acute Tox.	4 (oral)	Acute toxicity
Eye Dam./Irrit.	2A	Serious eye damage/eye irritation
Aquatic Acute	2	Hazardous to the aquatic environment - acute
Aquatic Chronic	3	Hazardous to the aquatic environment - chronic

Label elements

Pictogram:

Signal Word:
Warning

Hazard Statement:

H319	Causes serious eye irritation.
H302	Harmful if swallowed.
H412	Harmful to aquatic life with long lasting effects.
H401	Toxic to aquatic life.

Precautionary Statements (Prevention):

P280	Wear eye/face protection.
P273	Avoid release to the environment.
P270	Do not eat, drink or smoke when using this product.
P264	Wash with plenty of water and soap thoroughly after handling.

Precautionary Statements (Response):

P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P301 + P312	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P330	Rinse mouth.
P337 + P311	If eye irritation persists: Call a POISON CENTER or doctor/physician.

Precautionary Statements (Disposal):

P501	Dispose of contents/container to hazardous or special waste collection point.

Hazards not otherwise classified

No specific dangers known, if the regulations/notes for storage and handling are considered.

Labeling of special preparations (GHS):
The following percentage of the mixture consists of components(s) with unknown hazards regarding the acute toxicity: 95 % dermal
The following percentage of the mixture consists of components(s) with unknown hazards regarding the acute toxicity: 95 % Inhalation - vapour
This surfactant complies with the biodegradability criteria as laid down in Regulation (EC) No.648/2004 on detergents. Data to support this assertion are held at the disposal of the competent authorities of the Member States and will be made available to them at their direct request or at the request of a detergent manufacturer.
The following percentage of the mixture consists of components(s) with unknown hazards regarding the acute toxicity: 95 % Inhalation - mist

3. Composition / Information on Ingredients

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

CAS Number	Weight %	Chemical name
111905-53-4	75.0 - < 100.0%	Alcohols, C13-15-branched and linear, butoxylated ethoxylated

4. First-Aid Measures

Description of first aid measures

General advice:
Remove contaminated clothing.

If inhaled:
Keep patient calm, remove to fresh air, seek medical attention.

If on skin:
Wash thoroughly with soap and water.

If in eyes:
Wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.

If swallowed:
Immediately rinse mouth and then drink plenty of water, do not induce vomiting, seek medical attention. Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed

Symptoms: The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11., Further important symptoms and effects are so far not known.

Indication of any immediate medical attention and special treatment needed

Note to physician

Treatment:	Treat according to symptoms (decontamination, vital functions), no known specific antidote.

5. Fire-Fighting Measures

Extinguishing media

Suitable extinguishing media:
water spray, dry powder, foam

Special hazards arising from the substance or mixture

Hazards during fire-fighting:
harmful vapours, carbon oxides
Evolution of fumes/fog. The substances/groups of substances mentioned can be released in case of fire.

Advice for fire-fighters

Protective equipment for fire-fighting:
Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.

Further information:
The degree of risk is governed by the burning substance and the fire conditions. Contaminated extinguishing water must be disposed of in accordance with official regulations.

6. Accidental release measures

Further accidental release measures:
High risk of slipping due to leakage/spillage of product.

Personal precautions, protective equipment and emergency procedures
Use personal protective clothing. Information regarding personal protective measures see, section 8.

Environmental precautions
Do not discharge into drains/surface waters/groundwater.

Methods and material for containment and cleaning up
For small amounts: Pick up with absorbent material (e.g. sand, sawdust, general-purpose binder).
Dispose of absorbed material in accordance with regulations.
For large amounts: Pump off product.
Place absorbed material in the same container as the spilled substance/product for disposal.

7. Handling and Storage

Precautions for safe handling
Shut containers immediately after taking product because product takes up the humidity of air.

Conditions for safe storage, including any incompatibilities

Suitable materials for containers: High density polyethylene (HDPE), Low density polyethylene (LDPE), Stainless steel 1.4301 (V2), Stainless steel 1.4306 (V2A), Stainless steel 1.4361, Stainless steel 1.4401, Stainless steel 1.4541, Stainless steel 1.4571, Stove-lacquer RDL 50, Stainless steel 1.4439, Stainless steel 1.4539

Further information on storage conditions: Containers should be stored tightly sealed in a dry place.
The packed product is not damaged by low temperatures or by frost. Bulk must be protected from solidification.
Protect from temperatures above: 70 °C
Properties of the product change irreversibly on exceeding the limit temperature.

8. Exposure Controls/Personal Protection

No occupational exposure limits known.

Personal protective equipment

Respiratory protection:
Wear respiratory protection if ventilation is inadequate. Breathing protection if breathable aerosols/dust are formed.

Hand protection:
Chemical resistant protective gloves

Eye protection:
Tightly fitting safety goggles (chemical goggles) and face shield.

Body protection:
Body protection must be chosen based on level of activity and exposure.

General safety and hygiene measures:
Wearing of closed work clothing is required additionally to the stated personal protection equipment. Keep away from food, drink and animal feeding stuffs. Avoid contact with skin and eyes. Remove contaminated clothing. Wash contaminated clothing before reuse.

9. Physical and Chemical Properties

Form:	liquid	
Odour:	product specific	
Odour threshold:	not determined	
Colour:	colourless to yellowish	
pH value:	approx. 7 (50 g/l, 20 °C)	(DIN EN 1262)
solidification temperature:	approx. 5 °C	(DIN ISO 2207)
Boiling point:	> 250 °C	
Flash point:	> 200 °C	(DIN ISO 2592)
Flammability:	not self-igniting	
Lower explosion limit:	For liquids not relevant for classification and labelling. The lower explosion point may be 5 - 15 °C below the flash point.	
Upper explosion limit:	For liquids not relevant for classification and labelling.	
Autoignition:	> 300 °C	
Vapour pressure:	< 0.1 hPa (20 °C)	
Density:	approx. 1.00 g/cm3 (25 °C)	(DIN 51757)
	approx. 0.97 g/cm3 (70 °C)	(DIN 51757)
Relative density:	No data available.	
Vapour density:	not determined	
Partitioning coefficient n-octanol/water (log Pow):	not applicable	
Self-ignition temperature:	not self-igniting	
Thermal decomposition:	> 350 °C (DTA)	
Viscosity, dynamic:	100 mPa.s (23 °C)	(DIN EN 12092)
	approx. 5,000 mPa.s (10 °C)	(DIN EN 12092)
Particle size:	The substance / product is marketed or used in a non solid or granular form.	
Solubility in water:	soluble	
Miscibility with water:	miscible in all proportions	
Solubility (qualitative):	soluble solvent(s): Ethanol,	
Evaporation rate:	Value can be approximated from Henry's Law Constant or vapor pressure.	
Other Information:	If necessary, information on other physical and chemical parameters is indicated in this section.	

10. Stability and Reactivity

Reactivity
No hazardous reactions if stored and handled as prescribed/indicated.

Oxidizing properties:
not fire-propagating

Chemical stability
The product is stable if stored and handled as prescribed/indicated.

Possibility of hazardous reactions
No hazardous reactions when stored and handled according to instructions.
The product is chemically stable.

Conditions to avoid
Avoid humidity. See MSDS section 7 - Handling and storage.

Incompatible materials
caustics, halogens, Alkalines, acids, reactive chemicals

Hazardous decomposition products

Decomposition products:
Hazardous decomposition products: No hazardous decomposition products if stored and handled as prescribed/indicated.

Thermal decomposition:
> 350 °C (DTA)

11. Toxicological information

Primary routes of exposure

Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

Acute Toxicity/Effects

Acute toxicity
Assessment of acute toxicity: Of moderate toxicity after single ingestion.

Oral
Type of value: LD50
Species: rat
Value: > 300 - 2,000 mg/kg

Inhalation
Type of value: LC50
Species: rat
not determined

Dermal

Type of value: LD50
Species: rat
not determined

Assessment other acute effects
No data available.

Skin
Species: rabbit
Result: Irritant.
Method: OECD Guideline 404

Eye
Species: rabbit
Result: Irritant.
Method: OECD Guideline 405

Sensitization
Assessment of sensitization: No data available.

Aspiration Hazard
No aspiration hazard expected.

Chronic Toxicity/Effects

Repeated dose toxicity
Assessment of repeated dose toxicity: No adverse effects were observed after repeated exposure in animal studies.

Genetic toxicity
Assessment of mutagenicity: The substance was not mutagenic in bacteria. The substance was not mutagenic in a test with mammals.

Carcinogenicity
Assessment of carcinogenicity: No data available.

Reproductive toxicity
Assessment of reproduction toxicity: No data available.

Teratogenicity
Assessment of teratogenicity: No data available.

Symptoms of Exposure

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11., Further important symptoms and effects are so far not known.

12. Ecological Information

Toxicity

Toxicity to fish
LC50 (96 h) > 1 - 10 mg/l, Leuciscus idus (static)

Aquatic invertebrates
EC50 (48 h) > 1 - 10 mg/l, Daphnia magna (semistatic)

Aquatic plants
EC50 (72 h), algae
not determined

Chronic toxicity to fish
No data available.

Chronic toxicity to aquatic invertebrates
No observed effect concentration (21.0 d) > 0.1 - 1 mg/l, Daphnia magna (OECD Guideline 202, part 2, semistatic)

Assessment of terrestrial toxicity
No data available concerning terrestrial toxicity.

Microorganisms/Effect on activated sludge

Toxicity to microorganisms
DEV-L2 activated sludge/EC10: > 1,000 mg/l

Persistence and degradability

Elimination information

>= 90 % Bismuth-active substance (mod. OECD 301E)

> 60 % BOD of the ThOD (28 d) (OECD Guideline 301 F) Readily biodegradable.

Bioaccumulative potential

Bioaccumulation potential
Accumulation in organisms is not to be expected.

Mobility in soil

Assessment transport between environmental compartments
The substance will not evaporate into the atmosphere from the water surface.
Adsorption to solid soil phase is possible.

Additional information

Sum parameter

Chemical oxygen demand (COD): 2,160 mg/g

Adsorbable organically-bound halogen (AOX):
This product contains no organically-bound halogen.

Add. remarks environm. fate & pathway:
Treatment in biological waste water treatment plants has to be performed according to local and administrative regulations.

Other ecotoxicological advice:
Inhibition of degradation activity in activated sludge is not to be anticipated during correct introduction of low concentrations. Do not release untreated into natural waters.

13. Disposal considerations

Waste disposal of substance:
Dispose of in accordance with national, state and local regulations. It is the waste generator's responsibility to determine if a particular waste is hazardous under RCRA.

Container disposal:
Dispose of in accordance with national, state and local regulations.

14. Transport Information

Land transport
USDOT

Not classified as a dangerous good under transport regulations

Sea transport
IMDG

Not classified as a dangerous good under transport regulations

Air transport
IATA/ICAO

Not classified as a dangerous good under transport regulations

15. Regulatory Information

Federal Regulations

Registration status:
Chemical TSCA, US released / listed

EPCRA 311/312 (Hazard categories): Refer to SDS section 2 for GHS hazard classes applicable for this product.

CERCLA RQ	CAS Number	Chemical name
5000 LBS	64-19-7; 67-64-1	Acetic acid; Acetone
1000 LBS	75-07-0; 123-38-6	acetaldehyde; propionaldehyde
100 LBS	; 106-88-7; 3266-23-7; 123-72-8; 123-91-1	propylene oxide; 1,2-epoxypropane methyloxirane; 1,2-epoxy-n-butane; 2,3-epoxy butane; butyraldehyde; 1,4-dioxane
10 LBS	75-21-8	Ethylene Oxide

Safe Drinking Water & Toxic Enforcement Act, CA Prop. 65:

WARNING: This product can expose you to chemicals including ETHYLENE OXIDE, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information, go to www.P65Warnings.ca.gov.

[Other Prop 65 components may be present in the product.]

NFPA Hazard codes:
Health: 2 Fire: 1 Reactivity: 0 Special:

HMIS III rating
Health: 2 Flammability: 1 Physical hazard: 0

16. Other Information

SDS Prepared by:
BASF NA Product Regulations
SDS Prepared on: 2018/02/05

We support worldwide Responsible Care® initiatives. We value the health and safety of our employees, customers, suppliers and neighbors, and the protection of the environment. Our commitment to Responsible Care is integral to conducting our business and operating our facilities in a safe and environmentally responsible fashion, supporting our customers and suppliers in ensuring the safe and environmentally sound handling of our products, and minimizing the impact of our operations on society and the environment during production, storage, transport, use and disposal of our products.