1. Identification

Product identifier used on the label

Zetag® 8848FS (US)

Recommended use of the chemical and restriction on use
Recommended use*: flocculation agent; Paper water management

* 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: Emulsion based on: polyacrylamide, cationic

2. Hazards Identification


Classification of the product

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin Corr./Irrit.</td>
<td>2</td>
<td>Skin corrosion/irritation</td>
</tr>
<tr>
<td>Eye Dam./Irrit.</td>
<td>2B</td>
<td>Serious eye damage/eye irritation</td>
</tr>
<tr>
<td>Aquatic Acute</td>
<td>3</td>
<td>Hazardous to the aquatic environment - acute</td>
</tr>
</tbody>
</table>

Label elements
Pictogram:
Signal Word:
Warning

Hazard Statement:
H320 Causes eye irritation.
H315 Causes skin irritation.
H402 Harmful to aquatic life.

Precautionary Statements (Prevention):
P280 Wear protective gloves.
P273 Avoid release to the environment.
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.
P303 + P352 IF ON SKIN (or hair): Wash with plenty of soap and water.
P332 + P313 If skin irritation occurs: Get medical advice/attention.
P337 + P311 If eye irritation persists: Call a POISON CENTER or doctor/physician.
P362 + P364 Take off contaminated clothing and wash before reuse.

Precautionary Statements (Disposal):
P501 Dispose of contents/container to hazardous or special waste collection point.

Hazards not otherwise classified

If applicable information is provided in this section on other hazards which do not result in classification but which may contribute to the overall hazards of the substance or mixture.


Emergency overview

WARNING:
Causes eye irritation.
CAUSES SKIN IRRITATION.
Acute exposure to petroleum distillate vapour may cause dizziness, drowsiness, headache, nausea, and irritation of the respiratory tract. Prolonged and repeated exposure may cause central nervous system damage, as well as heart and blood disorders. Aspiration of petroleum distillates may cause chemical pneumonitis.
Prolonged exposure may cause dryness or cracking of the skin.
Prolonged or repeated contact may result in dermatitis.
Caution - Slippery when wet!
Use NIOSH approved respirator as needed to mitigate exposure.
Wear full face shield if splashing hazard exists.
Eye wash fountains must be easily accessible.
Wear chemical resistant protective gloves.

3. Composition / Information on Ingredients

4. First-Aid Measures

Description of first aid measures

General advice:
Immediately remove contaminated clothing.

If inhaled:
If difficulties occur after vapour/aerosol has been inhaled, remove to fresh air and seek medical attention.

If on skin:
Wash affected areas thoroughly with soap and water. Seek medical attention.

If in eyes:
Immediately 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 induce vomiting or give anything by mouth if the victim is unconscious or having convulsions.

Most important symptoms and effects, both acute and delayed

Symptoms: Eye irritation, skin irritation, CNS depression
Hazards: No hazard is expected under intended use and appropriate handling.

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:
dry powder, foam, water spray

Unsuitable extinguishing media for safety reasons:
water jet

Additional information:
If water is used, restrict pedestrian and vehicular traffic in areas where slip hazard may exist.

Special hazards arising from the substance or mixture
Hazards during fire-fighting:
harmful vapours
Evolution of fumes/fog. The substances/groups of substances mentioned can be released in case of fire. Spilled product is slippery underfoot. Very slippery when wet.

Advice for fire-fighters
Protective equipment for fire-fighting:
Wear a self-contained breathing apparatus.

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

Personal precautions, protective equipment and emergency procedures
Use personal protective clothing. Keep people away and stay on the upwind side.

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

Methods and material for containment and cleaning up
Spills should be contained, solidified, and placed in suitable containers for disposal.

7. Handling and Storage

Precautions for safe handling
Keep away from sources of ignition - No smoking.

Protection against fire and explosion:
Take precautionary measures against static discharges.

Conditions for safe storage, including any incompatibilities
Further information on storage conditions: Keep container tightly closed and dry; store in a cool place.

Storage stability:
Avoid extreme heat.
8. Exposure Controls/Personal Protection

Components with occupational exposure limits
Distillates (petroleum), hydrotreated light

Adipic acid

Advice on system design:
No applicable information available.

Personal protective equipment

Respiratory protection:
Wear a NIOSH-certified (or equivalent) organic vapour/particulate respirator.

Hand protection:
Chemical resistant protective gloves

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

Body protection:
Impermeable protective clothing

General safety and hygiene measures:
Handle in accordance with good industrial hygiene and safety practice. No eating, drinking, smoking or tobacco use at the place of work.

9. Physical and Chemical Properties

Form: emulsion
Odour: mineral oil-like
Odour threshold: No data available.
Colour: cream, almost white
pH value: approx. 4
Melting point: No data available.
Boiling point: No data available.
Sublimation point: No data available.
Flash point: > 100 °C

No flash point - Measurement made up to the indicated temperature, pilot light extinguishes. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Flammability: not highly flammable
10. Stability and Reactivity

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

Corrosion to metals:
No corrosive effect on metal.

Oxidizing properties:
not fire-propagating

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

Peroxides: 0.000 %
The product does not contain peroxides.
Conditions to avoid
Avoid extreme temperatures. Avoid freezing. Avoid all sources of ignition: heat, sparks, open flame.

Incompatible materials
reactive chemicals

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

Thermal decomposition:
No decomposition if stored and handled as prescribed/indicated.

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: No known acute effects.

Oral
Type of value: LD50
Species: rat
Value: > 2,000 mg/kg
The product has not been tested. The statement has been derived from the properties of the individual components.

Irritation / corrosion
Assessment of irritating effects: Irritating to eyes and skin.

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

Eye
Species: rabbit
Result: Irritant.

Sensitization
Assessment of sensitization: Based on the ingredients, there is no suspicion of a skin-sensitizing potential.

Aspiration Hazard
No aspiration hazard expected.

Chronic Toxicity/Effects
Repeate d dose toxicity
Assessment of repeated dose toxicity: Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses. The product has not been tested. The statement has been derived from the properties of the individual components.

Genetic toxicity
Assessment of mutagenicity. Based on the ingredients, there is no suspicion of a mutagenic effect.

Carcinogenicity
Assessment of carcinogenicity: None of the components in this product at concentrations greater than 0.1% are listed by IARC; NTP; OSHA or ACGIH as a carcinogen. The whole of the information assessable provides no indication of a carcinogenic effect.

Reproductive toxicity
Assessment of reproductive toxicity: Based on the ingredients, there is no suspicion of a toxic effect on reproduction.

Teratogenicity
Assessment of teratogenicity: No teratogenic effects reported.

Other Information
The product has not been tested. The statements on toxicology have been derived from products of a similar structure and composition.

Symptoms of Exposure
Eye irritation, skin irritation, CNS depression

12. Ecological Information

Toxicity
Aquatic toxicity
Assessment of aquatic toxicity: Acutely harmful for aquatic organisms.

Toxicity to fish
LC50 (96 h) 10 - 100 mg/l, Oncorhynchus mykiss
(under static conditions in the presence of 10 mg/L humic acid) The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Aquatic invertebrates
EC50 (48 h) 10 - 100 mg/l, daphnia
(under static conditions in the presence of 10 mg/L humic acid)

Aquatic toxicity

Information on: cationic polyacrylamide
Assessment of aquatic toxicity:
The hydrolysis products are not acutely harmful to aquatic organisms. Acute effects on aquatic organisms are due to the cationic charge of the polymer, which is quickly neutralised in natural water courses by irreversible adsorption onto particles, hydrolysis and dissolved organic carbon. Fish toxicity and aquatic toxicity are drastically reduced by rapid irreversible adsorption onto suspended and/or dissolved organic matter.
Persistence and degradability

Assessment biodegradation and elimination (H2O)
Not readily biodegradable (by OECD criteria). The substance can be virtually eliminated from water in suitable effluent treatment plants by biodegradation, stripping and mechanical separation.

Information on Stability in Water (Hydrolysis)

Information on: cationic polyacrylamide
(pH value > 6)
In contact with water the substance will hydrolyse rapidly.

Bioaccumulative potential

Assessment bioaccumulation potential
Based on its structural properties, the polymer is not biologically available. Accumulation in organisms is not to be expected.

Mobility in soil

Assessment transport between environmental compartments
No data available.

Information on: cationic polyacrylamide

Adsorption to solid soil phase is expected.

Additional information

Sum parameter

Chemical oxygen demand (COD):
not determined

Other ecotoxicological advice:
Must not be discharged into the environment. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

13. Disposal considerations

Waste disposal of substance:
Dispose of in accordance with national, state and local regulations. Do not discharge into drains/surface waters/groundwater.

Container disposal:
Recommend crushing, puncturing or other means to prevent unauthorized use of used containers. Dispose of in accordance with national, state and local regulations.

RCRA:
Not a hazardous waste under RCRA (40 CFR 261).
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):
Acute;

State regulations

<table>
<thead>
<tr>
<th>State RTK</th>
<th>CAS Number</th>
<th>Chemical name</th>
</tr>
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<tbody>
<tr>
<td>PA</td>
<td>64742-47-8</td>
<td>Distillates (petroleum), hydrotreated light</td>
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<tr>
<td>MA</td>
<td>64742-47-8</td>
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<tr>
<td>NJ</td>
<td>64742-47-8</td>
<td>Distillates (petroleum), hydrotreated light</td>
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</table>

CA Prop. 65:
WARNING: THIS PRODUCT CONTAINS A CHEMICAL(S) KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER AND BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM.

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: 2015/10/14

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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.

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