SAFETY DATA SHEET

According to U.S. Code of Federal Regulations 29 CFR 1910.1200, Hazard Communication.

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

1.1. Product identifier

Product name: **FLOQUAT™ FL 5333**

Type of product: Mixture.

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

Identified uses: Processing aid for industrial applications.

Uses advised against: All non-professional uses.

1.3. Details of the supplier of the safety data sheet

Company:
SNF Inc.
1 Chemical Plant Road
Riceboro, GA 31323
United States

Telephone: 912-884-3366

Telefax: 912-884-8770

E-mail address: sds@snf.com

1.4. Emergency telephone number

24-hour emergency number: 800-424-9300 CHEMTREC (CCN 20412), Outside U.S. 703-527-3887

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to paragraph (d) of 29 CFR 1910.1200:

Eye Irrit. 2A;H319

2.2. Label elements

Labelling according to paragraph (f) of 29 CFR 1910.1200:

Hazard symbol(s):

Signal word:	Warning
Hazard statement(s):	H319 - Causes serious eye irritation
Precautionary statement(s):	P280 - Wear eye protection/ face protection P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing P337 + P313 - If eye irritation persists: Get medical advice/ attention

2.3. Other hazards

Spills produce extremely slippery surfaces.

For explanation of abbreviations see Section 16.

SECTION 3: Composition/information on ingredients

3.1. Substances
Not applicable, this product is a mixture.

3.2. Mixtures

Hazardous components

Formaldehyde

Concentration/ -range:	< 0.1%
CAS Number:	50-00-0
Classification according to paragraph (d) of 29 CFR 1910.1200:	Flam. Liq. 4;H227, Acute Tox. 3;H301, Acute Tox. 3;H311, Acute Tox. 3;H331, Skin Corr. 1B;H314, Eye Dam. 1;H318, Skin Sens. 1A;H317, Carc. 1B;H350, Muta. 2;H341

For explanation of abbreviations see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:
If inhaled, immediately remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

Skin contact:
Wash off immediately with plenty of water. Consult a physician if necessary.

Eye contact:
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

Ingestion:
Consult a physician. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person.

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

Irritating to eyes. May cause allergic skin reaction.

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

None reasonably foreseeable.

Other information:
In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Take off all contaminated clothing immediately.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:
Water. Water spray. Foam. Carbon dioxide (CO2). Dry powder.
Warning! Spills produce extremely slippery surfaces.

Unsuitable extinguishing media:
None known.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products:
Thermal decomposition may produce: hydrogen chloride gas, nitrogen oxides (NOx), carbon oxides (COx). Sulfur oxides (SOx). Hydrogen cyanide (hydrocyanic acid) may be produced in the event of combustion in an oxygen deficient atmosphere.

5.3. Advice for firefighters

Protective measures:
Wear self contained breathing apparatus for fire fighting if necessary.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions:
Avoid contact with eyes.

Protective equipment:
Wear adequate personal protective equipment (see Section 8 Exposure Controls/Personal Protection).

Emergency procedures:
Keep people away from spill/leak. Prevent further leakage or spillage if safe to do so.

6.2. Environmental precautions

The product should not be allowed to enter drains, water courses or the soil.

6.3. Methods and material for containment and cleaning up

Small spills:
Do not flush with water.Soak up condensate with inert absorbent material and collect in ventilated waste container for disposal.

Large spills:
Do not flush with water.Soak up with inert absorbent material. Shovel into suitable container for disposal.

Residues:
After cleaning, flush away traces with water.

6.4. Reference to other sections

SECTION 7: Handling and storage; SECTION 8: Exposure controls/personal protection; SECTION 13: Disposal considerations;

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid contact with skin and eyes. Use personal protective equipment.

7.2. Conditions for safe storage, including any incompatibilities

Keep containers tightly closed in a dry, cool and well-ventilated place.
Incompatible with acids and bases. Incompatible with oxidizing agents.

7.3. Specific end use(s)

This information is not available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits:

Formaldehyde

OSHA: 0.75 ppm (8 hours) - 2 ppm (15 minutes)
ACGIH: 0.1 ppm (8 hours) - 0.3 ppm (15 minutes)

8.2. Exposure controls

Appropriate engineering controls:

Use local exhaust if misting occurs. Natural ventilation is adequate in absence of mists. Ensure adequate ventilation, especially in confined areas.

Individual protection measures, such as personal protective equipment:

a) Eye/face protection:
Safety glasses with side-shields. Tightly fitting safety goggles. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).

b) Skin protection:
i) Hand protection: Impervious gloves. Be aware that liquid may permeate gloves, frequent change is advised. Suitable gloves can be recommended by the glove supplier. The selected protective gloves have to satisfy the specifications of EU Directive 89/689/EEC and the standard EN 374 derived from it.
ii) Other: Protective suit. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

c) Respiratory protection:
No personal respiratory protective equipment normally required. In case of insufficient ventilation wear suitable respiratory equipment. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

d) Additional advice:
Wash hands before breaks and immediately after handling the product. Wash hands before breaks and at the end of workday. Handle in accordance with good industrial hygiene and safety practice.

Environmental exposure controls:

Do not flush into surface water. Do not allow uncontrolled discharge of product into the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

a) Appearance:	Liquid, Brown.
b) Odour:	No data available.
c) Odour Threshold:	No data available.
d) pH:	2 - 8 (See Technical Bulletin or Product Specifications for a more precise value, if available)
e) Melting point/freezing point:	< 5°C
f) Initial boiling point and boiling range:	> 100°C

g) Flash point:	Does not flash.
h) Evaporation rate:	No data available.
i) Flammability (solid, gas):	Not applicable.
j) Upper/lower flammability or explosive limits:	Not expected to create explosive atmospheres.
k) Vapour pressure:	No data available.
l) Vapour density:	No data available.
m) Relative density:	1.0 - 1.2 (See Technical Bulletin or Product Specifications for a more precise value, if available)
n) Solubility(ies):	Completely miscible in water.
o) Partition coefficient:	~ 0
p) Autoignition temperature:	Does not self-ignite (based on the chemical structure).
q) Decomposition temperature:	No data available.
r) Viscosity:	See Technical Bulletin.
s) Explosive properties:	Not expected to be explosive based on the chemical structure.
t) Oxidizing properties:	Not expected to be oxidising based on the chemical structure.

9.2. Other information

None.

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable at normal conditions.

10.2. Chemical stability

Stable at normal ambient temperature and pressure.

10.3. Possibility of hazardous reactions

Oxidizing agents may cause exothermic reactions.

10.4. Conditions to avoid

Keep away from heat and sources of ignition. Protect from light. Protect from contamination.

10.5. Incompatible materials

Incompatible with acids and bases. Incompatible with oxidizing agents.

10.6. Hazardous decomposition products

No decomposition if stored and applied as directed. Thermal decomposition may produce: hydrogen chloride gas, nitrogen oxides (NOx), carbon oxides (COx). Sulfur oxides (SOx). Hydrogen cyanide (hydrocyanic acid) may be produced in the event of combustion in an oxygen deficient atmosphere.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Information on the product as supplied:

Acute oral toxicity:	LD50/oral/rat > 2000 mg/kg
Acute dermal toxicity:	LD50/dermal/rat > 2000 mg/kg.
Acute inhalation toxicity:	The product is not expected to be toxic by inhalation.
Skin corrosion/irritation:	Not irritating.
Serious eye damage/eye irritation:	Irritating to eyes.
Respiratory/skin sensitisation:	Contains Formaldehyde. May produce an allergic reaction.
Mutagenicity:	Not mutagenic.
Carcinogenicity:	Not carcinogenic.
Reproductive toxicity:	Not toxic for reproduction.
STOT - Single exposure:	No known effects.
STOT - Repeated exposure:	No known effect.
Aspiration hazard:	No hazards resulting from the material as supplied.

Relevant information on the hazardous components:

Formaldehyde

Acute oral toxicity:	LD50/oral/rat = 5 - 50 mg/kg (OECD 401)
Acute dermal toxicity:	LD50/dermal/rat = 270 mg/kg.
Acute inhalation toxicity:	LC50/inhalation/4 hours/rat = 588 mg/m^3 (gas) (OECD 403)
Skin corrosion/irritation:	Causes severe irritation and or burns. (OECD 404)
Serious eye damage/eye irritation:	Risk of serious damage to eyes.

Respiratory/skin sensitisation:	Sensitizing to skin. (OECD 406)
Mutagenicity:	Possible mutagen.
Carcinogenicity:	May cause cancer.
IARC:	1
Reproductive toxicity:	Not toxic for reproduction.
STOT - Single exposure:	No known effects.
STOT - Repeated exposure:	No known effect.
Aspiration hazard:	No known effects.

SECTION 12: Ecological information

12.1. Toxicity

Information on the product as supplied:

Acute toxicity to fish:	LC50/Pimephales promelas/96 hours > 100 mg/L
Acute toxicity to invertebrates:	EC50/Daphnia magna/48 hours > 50 mg/L
Acute toxicity to algae:	IC50/Algae/72 hours > 50 mg/L
Chronic toxicity to fish:	No data available.
Chronic toxicity to invertebrates:	No data available.
Toxicity to microorganisms:	No data available.
Effects on terrestrial organisms:	No data available. Readily biodegradable, exposure to soil is unlikely.
Sediment toxicity:	No data available. Readily biodegradable, exposure to sediment is unlikely.

Relevant information on the hazardous components:

Formaldehyde

Acute toxicity to fish:	LC50/Fish/96 hours = 1 - 10 mg/L
Acute toxicity to invertebrates:	EC50/Daphnia pulex/48 hours = 10 - 100 mg/L (OECD 202)
Acute toxicity to algae:	IC50/Desmodesmus subspicatus/72 hours = 1 - 10 mg/L (OECD 201)

Chronic toxicity to fish:	No chronic exposure due to ready biodegradability.
Chronic toxicity to invertebrates:	No chronic exposure due to ready biodegradability.
Toxicity to microorganisms:	EC50/activated sludge/120 hours = 34.1 mg/L
Effects on terrestrial organisms:	Not expected to be toxic.
Sediment toxicity:	Exposure to sediment is unlikely.

12.2. Persistence and degradability

Information on the product as supplied:

Degradation:	Readily biodegradable.
Hydrolysis:	No data available.
Photolysis:	No data available.

Relevant information on the hazardous components:

Formaldehyde

Degradation:	Readily biodegradable. > 90% / 14 days (OECD 301 C) ; > 90% / 28 days (OECD 301 D)
Hydrolysis:	Does not hydrolyse.
Photolysis:	Half-life (direct photolysis): 1.71 days

12.3. Bioaccumulative potential

Information on the product as supplied:

The product is not expected to bioaccumulate.

Partition co-efficient (Log Pow):	~ 0
Bioconcentration factor (BCF):	No data available.

Relevant information on the hazardous components:

Formaldehyde

Partition co-efficient (Log Pow): 0.35 @ 25°C, pH = 3.5

Bioconcentration factor (BCF): < 1

12.4. Mobility in soil

Information on the product as supplied:

No data available.

Relevant information on the hazardous components:

Formaldehyde

Koc: 15.9

12.5. Other adverse effects

None known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste from residues/unused products:

Dispose in accordance with local and national regulations.

Contaminated packaging:

Rinse empty containers with water and use the rinse-water to prepare the working solution. Reuse or recycle container after thorough cleaning. If recycling is not practicable, dispose of in compliance with local regulations.

Recycling:

In accordance with local and national regulations.

SECTION 14: Transport information

Land transport (DOT)

Not classified.

Sea transport (IMDG)

Not classified.

Air transport (IATA)

Not classified.

SECTION 15: Regulatory information

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

Information on the product as supplied:

TSCA Chemical Substances Inventory:

All components of this product are either listed as active on the inventory or are exempt from listing.

US SARA Reporting Requirements:

SARA (Section 311/312) hazard class:
Acute.

SARA Title III Sections:

Section 302 (TPQ) - Reportable Quantity:
Contains one or more of the listed substances.

Section 304 - Reportable Quantity:
Contains one or more of the listed substances.

Section 313 (De minimis concentration):
Contains one or more of the listed substances.

Clean Water Act

Section 311 Hazardous Substances (40 CFR 117.3) - Reportable Quantity:
Contains one or more of the listed substances.

Clean Air Act

Section 112(r) Accidental release prevention requirements (40 CFR 68) - Reportable Quantity:
Contains one or more of the listed substances.

CERCLA

Hazardous Substances List (40 CFR 302.4) - Reportable Quantity:
Contains one or more of the listed substances.

RCRA status :

Listed

California Proposition 65 Information:

WARNING! This product contains a chemical known in the State of California to cause cancer, Formaldehyde (gas)

Formaldehyde

SARA Title III Sections:	
Section 302 (TPQ) - Reportable Quantity:	100 lbs
Section 304 - Reportable Quantity:	100 lbs
Section 313 (De minimis concentration):	0.1%
Clean Water Act	
Section 311 Hazardous Substances (40 CFR 117.3) - Reportable Quantity:	100 lbs
Clean Air Act	
Section 112(r) Accidental release prevention requirements (40 CFR 68) - Reportable Quantity:	15000 lbs
CERCLA	
Hazardous Substances List (40 CFR 302.4) - Reportable Quantity:	100 lbs
RCRA status :	Listed
Hazardous waste number :	U122
DOT RQ (lbs):	100 lbs
California Proposition 65 Information:	Formaldehyde (gas), Listed.

SECTION 16: Other information

NFPA and HMIS Ratings:

NFPA:

Health:	2
Flammability:	0
Instability:	0

HMIS:

Health:	2
Flammability:	0
Physical Hazard:	0
PPE Code:	B

This data sheet contains changes from the previous version in section(s):

SECTION 2. Hazards identification, SECTION 3. Composition/information on ingredients, SECTION 4. First aid measures, SECTION 5. Fire-fighting measures, SECTION 8. Exposure controls/personal protection, SECTION 10. Stability and reactivity, SECTION 11. Toxicological information, SECTION 12. Ecological information, SECTION 15. Regulatory information, SECTION 16. Other Information.

Key or legend to abbreviations and acronyms used in the safety data sheet:

Acronyms
STOT = Specific target organ toxicity

Abbreviations
Acute Tox. 3 = Acute toxicity Category Code 3
Carc. 1B = Carcinogenicity Category Code 1B
Eye Dam 1 = Serious eye damage/eye irritation Category Code 1
Eye Irrit. 2A = Serious eye damage/eye irritation Category Code 2A
Flam. Liq. 4 = Flammable liquid Category Code 4
Muta. 2 = Germ cell mutagenicity Category Code 2
Skin Corr. 1B = Skin corrosion/irritation Category Code 1B
Skin Sens. 1A = Skin sensitization Category Code 1A

Hazard statements
H227 - Combustible liquid
H301 - Toxic if swallowed
H311 - Toxic in contact with skin
H314 - Causes severe skin burns and eye damage
H317 - May cause an allergic skin reaction
H318 - Causes serious eye damage
H319 - Causes serious eye irritation
H331 - Toxic if inhaled
H341 - Suspected of causing genetic defects
H350 - May cause cancer

Training advice:

Do not handle until all safety precautions have been read and understood.

This SDS was prepared in accordance with the following:

U.S. Code of Federal Regulations 29 CFR 1910.1200

Version: 21.01.a

LDCC029

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.