MATERIAL SAFETY DATA SHEET

SECTION 1 PRODUCT AND COMP ANY IDENTIFICATION

Product name:	2× SDS Loading Buffer
Catalog Number:	E-IR-R329
Application:	For research use only

SECTION 2 HAZARDS IDENTIFICATION

2. HAZARD STATEMENT

Classification according to GHS

Proclin 300

2.1 GHS Classification

Acute toxicity, Oral (Category 4), H302

Acute toxicity, Inhalation (Category 4), H332

Acute toxicity, Dermal (Category 5), H313

Skin corrosion/irritation (Category 1B), H314

Serious eye damage/eye irritation (Category 1), H318

Skin sensitization (Category 1), H317

Short-term (acute) aquatic hazard (Category 2), H401

Long-term (chronic) aquatic hazard (Category 2), H411

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 GHS Label elements, including precautionary statements

Pictogram

Signal Word Danger

H302 + H332 Harmful if swallowed or if inhaled.

H313 May be harmful in contact with skin.

H314 Causes severe skin burns and eye damage.

H317 May cause an allergic skin reaction.

H411 Toxic to aquatic life with long lasting effects.

Precautionary Statements

Prevention

P261 Avoid breathing mist or vapors.

P264 Wash skin thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

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

P272 Contaminated work clothing should not be allowed out of the workplace.

P273 Avoid release to the environment.

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response

P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Rinse mouth.

P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.

P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.

P305 + P351 + P338 + IF IN EYES: Rinse cautiously with water for several minutes.

P310 Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor.

P312 Call a POISON CENTER/ doctor if you feel unwell.

P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.

P362 + P364 Take off contaminated clothing and wash it before reuse.

P391 Collect spillage.

Storage

P405 Store locked up.

Disposal

P501 Dispose of contents/ container to an approved waste disposal plant.

2.3 Health hazards

H302 Harmful if swallowed.

H332 Harmful if inhaled.

H313 May be harmful in contact with skin.

H314 Causes severe skin burns and eye damage.

H318 Causes serious eye damage.

H317 May cause an allergic skin reaction.

2.4 Environmental hazards

H401 Toxic to aquatic life.

H411 Toxic to aquatic life with long lasting effects.

2.5 Other hazards - none

Dimethyl sulfoxide (DMSO)

2.1 GHS Classification

Flammable liquids (Category 4), H227

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 GHS Label elements, including precautionary statements

Pictogram: none

Signal Word: Warning

H227 Combustible liquid.

Precautionary Statements

P210 Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking.

P280 Wear protective gloves/ eye protection/ face protection.

P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

P403 + P235 Store in a well-ventilated place. Keep cool.

P501 Dispose of contents/ container to an approved waste plant.

2.3 Physical and chemical hazards: H227 Combustible liquid.

2.4 Health hazards: Referring to current information, no health hazard.

2.5 Environmental hazards: Referring to current information, no environmental hazard.

2.6 Other hazards: Rapidly absorbed through skin.

Carbamide peroxide (CP)

2.1 GHS Classification

Oxidizing solids (Category 3), H272

Acute toxicity, Oral (Category 5), H303

Skin corrosion/irritation (Category 1), H314

Serious eye damage/eye irritation (Category 1), H318

Specific target organ toxicity-single exposure (Category 3), respiratory tract irritation,H335

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 GHS Label elements, including precautionary statements

Pictogram

Signal Word Danger

H272 May intensify fire; oxidizer.

H303 May be harmful if swallowed.

H314 Causes severe skin burns and eye damage.

H335 May cause respiratory irritation.

Precautionary Statements

Prevention

P210 Keep away from heat.

P220 Keep/Store away from clothing/ combustible materials.

P221 Take any precaution to avoid mixing with combustibles.

P260 Do not breathe dust.

P264 Wash skin thoroughly after handling.

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

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response

P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.

P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.

P305 + P351 + P338 +P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor.

P312 Call a POISON CENTER/ doctor if you feel unwell.

P363 Wash contaminated clothing before reuse.

P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

Storage

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

P405 Store locked up.

Disposal

P501 Dispose of contents/ container to an approved waste disposal plant.

2.3 Physical and chemical hazards

H272 May intensify fire; oxidizer.

2.4 Health hazards

H303 May be harmful if swallowed.

H314 Causes severe skin burns and eye damage.

H318 Causes serious eye damage.

H335 May cause respiratory irritation.

2.5 Environmental hazards

Referring to current information, no environmental hazard.

2.6 Other hazards-none

Ammonium persulphate

2.1 GHS Classification

Oxidizing solids (Category 3), H272

Acute toxicity, Oral (Category 4), H302

Acute toxicity, Dermal (Category 5), H313

Skin corrosion/irritation (Category 2), H315

Serious eye damage/eye irritation (Category 2A), H319

Respiratory sensitization (Category 1), H334

Skin sensitization (Category 1), H317

Specific target organ toxicity-single exposure (Category 3), respiratory tract irritation,H335

Short-term (acute) aquatic hazard (Category 3), H402

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 GHS Label elements, including precautionary statements

Pictogram

Signal Word: Danger

H272 May intensify fire; oxidizer.

H302 Harmful if swallowed.

H313 May be harmful in contact with skin.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H335 May cause respiratory irritation.

H402 Harmful to aquatic life.

Precautionary Statements

Prevention

P210 Keep away from heat.

P220 Keep/Store away from clothing/ combustible materials.

P221 Take any precaution to avoid mixing with combustibles.

P261 Avoid breathing dust.

P264 Wash skin thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

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

P272 Contaminated work clothing should not be allowed out of the workplace.

P273 Avoid release to the environment.

P280 Wear protective gloves/ eye protection/ face protection.

P284 Wear respiratory protection.

Response

P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Rinse mouth.

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

P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.

P337 + P313 If eye irritation persists: Get medical advice/ attention.

P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTER/doctor.

P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

Storage

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

P405 Store locked up.

Disposal

P501 Dispose of contents/ container to an approved waste disposal plant.

2.3 Physical and chemical hazards: H272 May intensify fire; oxidizer.

2.4 Health hazards

H302 Harmful if swallowed.

H313 May be harmful in contact with skin.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H317 May cause an allergic skin reaction.

H335 May cause respiratory irritation.

2.5 Environmental hazards: H402 Harmful to aquatic life.

2.6 Other hazards-none

SECTION 3 INFORMATION ON INGREDIENTS

Ingredient	Physical form	Concentration	CAS No.	EC No.
Proclin 300	Odorless and colorless, liquid	0-0.05%	55965-84-9	911-418-6
Dimethyl sulfoxide (DMSO)	Odorless and colorless, liquid	4.5%-5%	67-68-5	200-664-3
Carbamide peroxide (CP)	Odorless and colorless, liquid	0.050%	124-43-6	204-701-4
Ammonium persulphate	Odorless and colorless, liquid	0.20%	7727-54-0	231-786-5

SECTION 4 FIRST-AID MEASURES

4.1 General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

4.2 If inhaled

If breathed in, move person into fresh air.If not breathing, give artificial respiration. Consult a physician.

4.3 In case of skin contact

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.

4.4 In case of eye contact

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

4.5 If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

SECTION 5 FIRE FIGHTING MEASURES

5.1 Suitable extinguishing media

Suitable: Water spray, alcohol-resistant foam, dry chemical, carbon dioxide or appropriate foam.

For small fires, use media such as “alcohol” foam, dry chemical or carbon dioxide.

For large fires, apply water from as far as possible. Use large quantities of water applied as a mist or spray. Solid streams of water may be ineffective. Cool affected containers with flooding quantities of water.

5.2 Special precautions for fire-fighters

Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

5.3 Special hazards arising from the substance or mixture

Carbon oxides, Nitrogen oxides (NOx), Sulphur oxides, Hydrogen chloride gas.

SECTION 6 ACCIDENTAL RELEASE MEASURES

6.1 Person-related safety precautions

Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations.

Vapors can accumulate in low areas.

6.2 Measures for environmental protection

Prevent further leakage or spillage if safe to do so. Do not let enter drains. Discharge into the environment must be avoided.

6.3 Measures for containment and cleaning

Contain spillage, and then collect with non-combustible absorbent material (eg. sand, diatomaceous earth, vermiculite).

Place in a container for disposal according to local regulations. Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal. Sweep up and shovel. Contain spillage, and then collect

with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). Keep in suitable, closed containers for disposal.

SECTION 7 HANDLING AND STORAGE

7.1 Handling

Wear appropriate protective clothing and safety gloves.

Avoid inhalation.

Avoid contact with eyes, skin and clothing.

Mechanical exhaust required.

Keep away from ignition sources, heat and flame.

No smoking at working site.

Incompatibilities: Strong oxidizing agents, Strong acids. Handling and unloading should be light, to prevent packaging broken, damp and cause losses.

Working place should be equipped with appropriate varieties and quantities of fire fighting equipment and leakage emergency treatment equipment.

7.2 Storage

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

Keep away from heat, sparks and flame.

Keep away from sources of ignition.

Incompatible: Strong oxidizing agents, Strong acids.

Storage place should be equipped with appropriate varieties and quantities of fire fighting equipment and leakage emergency treatment equipment.

SECTION 8 EXPOSURE CONTROL/PPE

8.1 Engineering Controls

Mechanical exhaust required. Safety shower and eye bath.

8.2 Personal Protective Equipment

Respiratory: Government approved respirator if needed.

Eye/face: Chemical safety goggles if needed.

Clothing: Wear appropriate protective clothing.

Hand/skin: Protective gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body protection: Wear suitable protective clothing according to the concentration and amount of the substance at the workplace.

8.3 Other Protect

No smoking, drinking and eating at working site. Wash thoroughly after handling.

SECTION 9 PHYSICAL/CHEMIICAL PROPERTIES

Proclin 300

9.1 Information on basic physical and chemical properties

a) Physical state liquid

b) Color light yellow

c) Odor No data available

d) Melting point/freezing point -40 °C

e) Initial boiling point and boiling range189 °C

f) Flammability (solid, gas): No data available

g) Upper/lower flammability or explosive limits: No data available

h) Flash point 118 °C - closed cup

i) Autoignition temperature: No data available

j) Decomposition temperature: No data available

k) pH 4.1 at 100 g/l

l) Viscosity Viscosity, kinematic: No data available
Viscosity, dynamic: 58.8 mPa.s at 25 °C

m) Water solubility soluble

n) Partition coefficient: n-octanol/water: No data available

o) Vapor pressure No data available

p) Density 1.03 g/cm3 Relative density No data available

q) Relative vapor density :No data available

r) Particle characteristics: No data available

s) Explosive properties No data available

t) Oxidizing properties No data available

9.2 Other safety information

No data available

Dimethyl sulfoxide (DMSO)

9.1 Information on basic physical and chemical properties

a) Physical state clear, liquid

b) Color clear

c) Odor odorless

d) Melting point/freezing point: Melting point/range: 16-19 °C

e) Initial boiling point and boiling range: 189 °C

f) Flammability (solid,gas): No data available

g) Upper/lower flammability or explosive limits

Upper explosion limit: 28.5 %(V)

Lower explosion limit: 2.6 %(V)

h) Flash point 87 °C-closed cup-ASTM D 93

i) Autoignition temperature: 300-302 °C at 1,013 hPa

j) Decomposition temperature> 190 °C

k) pH Not applicable

l) Viscosity Viscosity, kinematic: No data available
Viscosity, dynamic: 2.14 mPa.s at 20 °C

m) Water solubility completely miscible

n) Partition coefficient: n-octanol/water: log Pow: -1.35 at 20 °C-Bioaccumulation is not expected.

o) Vapor pressure 0.55 hPa at 20 °C

p) Density 1.1 g/mL

Relative density No data available

q) Relative vapor density: No data available

r) Particle characteristics: No data available

s) Explosive properties: Not classified as explosive.

t) Oxidizing properties none

9.2 Other safety information

Surface tension 43.5 mN/m at 20 °C

Dissociation constant 35.1

Relative vapor density: 2.70-(Air = 1.0)

Carbamide peroxide (CP)

9.1 Information on basic physical and chemical properties

a) Physical state crystalline

b) Color white

c) Odor No data available

d) Melting point/freezing point: Melting point/range: 90-93 °C-lit.

e) Initial boiling point and boiling range: No data available

f) Flammability (solid,gas): No data available

g) Upper/lower flammability or explosive limits: No data available

h) Flash point Not applicable

i) Autoignition temperature: No data available

j) Decomposition temperature: No data available

k) pH No data available

l) Viscosity Viscosity, kinematic: No data available
Viscosity, dynamic: No data available

m) Water solubility No data available

n) Partition coefficient: n-octanol/water: No data available

o) Vapor pressure 31.1 hPa at 30 °C

p) Density 1.390 g/cm3 at 20 °C
Relative density: No data available

q) Relative vapor density: No data available

r) Particle characteristics: No data available

s) Explosive properties No data available

t) Oxidizing properties The substance or mixture is classified as oxidizing with the category 3.

9.2 Other safety information: No data available

Ammonium persulphate

9.1 Information on basic physical and chemical properties

a) Physical state powder

b) Color white

c) Odor No data available

d) Melting point/freezing point: Decomposes before melting.

e) Initial boiling point and boiling range: Decomposes below the boiling point.

f) Flammability (solid,gas): No data available

g) Upper/lower flammability or explosive limits: No data available

h) Flash point No data available

i) Autoignition temperature: No data available

j) Decomposition temperature: No data available

k) pH 1.0-2 at 228 g/l at 25 °C

l) Viscosity Viscosity, kinematic: No data available
Viscosity, dynamic: No data available

m) Water solubility 228 g/l at 20 °C-completely soluble

n) Partition coefficient: n-octanol/water: No data available

o) Vapor pressure No data available

p) Density 1.980 g/cm3
Relative density No data available

q) Relative vapor density: No data available

r) Particle characteristics: No data available

s) Explosive properties Not classified as explosive.

t) Oxidizing properties The substance or mixture is classified as oxidizing with the category 3.

9.2 Other safety information

Relative vapor density: 7.88-(Air = 1.0)

SECTION 10 STABILITY AND REACTIVITY

10.1 Reactivity

No data available

10.2 Chemical stability

Stable under recommended storage conditions

10.3 Possibility of hazardous reactions

No data available

10.4 Conditions to avoid

Heat, flames and sparks

10.5 Incompatible materials

Strong oxidizing agent, Light sensitive, Alcohols, Organic materials, Heavy metals, Powdered metals, Strong reducing agents, Amines, Mercaptans.

10.6 Hazardous decomposition products

Other decomposition products: No data available

Hazardous decomposition products formed under fire conditions: Carbon oxides, Nitrogen oxides (NOx), Sulphur oxides, Hydrogen chloride gas.

SECTION 11 TOXICOLOGICAL INFORMATION

Proclin 300

11.1 Information on toxicological effects Mixture

Acute toxicity

LD50 Oral - Rat - 862 mg/kg

Acute toxicity estimate Inhalation - 4 h - 16.67 mg/l - vapor(Calculation method)

LD50 Dermal - Rabbit - 2,800 mg/kg

Skin corrosion/irritation

Skin - Rabbit

Result: Corrosive

Remarks: Mixture causes burns.

Serious eye damage/eye irritation

Eyes - Rabbit

Result: Corrosive to eyes

Respiratory or skin sensitization- Guinea pig

Result: May cause sensitization by skin contact.

Germ cell mutagenicity: No data available

Carcinogenicity: No data available

Reproductive toxicity: No data available

Specific target organ toxicity - single exposure: No data available

Specific target organ toxicity - repeated exposure: No data available

Aspiration hazard: No data available

11.2 Additional Information

Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

Components

Modified alkyl carboxylate

Acute toxicity

Oral: No data available

Inhalation: No data available

Dermal: No data available

Skin corrosion/irritation: No data available

Serious eye damage/eye irritation: No data available

Respiratory or skin sensitization: No data available

Germ cell mutagenicity: No data available

Carcinogenicity: No data available

Reproductive toxicity: No data available

Specific target organ toxicity - single exposure: No data available

Specific target organ toxicity - repeated exposure: No data available

Aspiration hazard: No data available

Mixture of 5-Chloro-2-methyl-4-isothiazolin-3-one and 2-Methyl-2H -isothiazol-3-one (3:1)

Acute toxicity

LD50 Oral - Rat - male and female - 66 mg/kg

(OECD Test Guideline 401)

LC50 Inhalation - Rat - male and female - 4 h - 0.171 mg/l - aerosol

(OECD Test Guideline 403)

LD50 Dermal - Rabbit - male - 87.12 mg/kg

Remarks: (ECHA)

Skin corrosion/irritation

Skin - Rabbit

Result: Corrosive, category 1C - where responses occur after exposures between 1 hour and 4 hours and observations up to 14 days.

(OECD Test Guideline 404)

Serious eye damage/eye irritation

Eyes - Rabbit

Result: Causes serious eye damage.

Remarks: (ECHA)

Respiratory or skin sensitization

Maximization Test - Guinea pig

Result: positive

(OECD Test Guideline 406)

Germ cell mutagenicity

Test Type: Ames test

Test system: Salmonella typhimurium

Result: positive

Test Type: In vitro mammalian cell gene mutation test

Test system: mouse lymphoma cells

Result: positive

Test Type: Ames test

Test system: Salmonella typhimurium

Result: Positive results were obtained in some in vitro tests.

Test Type: UDS (Unscheduled DNA synthesis assay)

Test system: rat hepatocytes

Result: negative

Test Type: Mutagenicity (mammal cell test): chromosome aberration.

Test system: Human lymphocytes

Result: positive

Method: OECD Test Guideline 475

Species: Mouse - male and female - Bone marrow

Result: negative

Method: OECD Test Guideline 486

Species: Rat - male - Liver cells

Result: negative

Method: US-EPA

Species: Mouse - male and female - Bone marrow

Result: negative

Method: US-EPA

Species: Rat - male - Liver cells

Result: negative

Method: OECD Test Guideline 474

Species: Mouse - male and female - Red blood cells (erythrocytes)

Result: negative

Carcinogenicity: No data available

Reproductive toxicity: No data available

Specific target organ toxicity - single exposure: No data available

Specific target organ toxicity - repeated exposure

Aspiration hazard: No data available

Dimethyl sulfoxide (DMSO)

11.1 Information on toxicological effects

Acute toxicity

LD50 Oral-Rat-male and female-28,300 mg/kg

(OECD Test Guideline 401)

LC0 Inhalation-Rat-male and female-4 h-> 5.33 mg/l-dust/mist

(OECD Test Guideline 403)

LD50 Dermal-Rat-male and female-40,000 mg/kg

Remarks: (ECHA)

Skin corrosion/irritation

Skin-Rabbit

Result: slight irritation-4 h

(OECD Test Guideline 404)

Serious eye damage/eye irritation

Eyes-Rabbit

Result: slight irritation-24 h

(OECD Test Guideline 405)

Respiratory or skin sensitization

Maximization Test-Guinea pig

Result: negative

(OECD Test Guideline 406)

Local lymph node assay (LLNA)-Mouse

Result: negative

(OECD Test Guideline 429)

Germ cell mutagenicity

Test Type: Ames test

Test system: Salmonella typhimurium

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 471

Result: negative
Test Type: sister chromatid exchange assay
Test system: Chinese hamster ovary cells
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 479
Result: negative
Test Type: Mutagenicity (mammal cell test): chromosome aberration.
Test system: Chinese hamster ovary cells
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 473
Result: negative
Test Type: Mutagenicity (in vivo mammalian bone-marrow cytogenetic test, chromosomal analysis)
Species: Rat
Application Route: Intraperitoneal
Method: OECD Test Guideline 474
Result: negative
Carcinogenicity: No data available
Reproductive toxicity: No data available
Specific target organ toxicity-single exposure: No data available
Specific target organ toxicity-repeated exposure: No data available
Aspiration hazard: No data available

11.2 Additional Information

Repeated dose toxicity-Rat-male and female-Oral-18 Months-NOAEL (No observed adverse effect level)-3,300 mg/kg-LOAEL (Lowest observed adverse effect level)-9,900 mg/kg
Repeated dose toxicity-Monkey-male and female-Dermal-18 Months-NOAEL (No observed adverse effect level)->= 8,910 mg/kg-LOAEL (Lowest observed adverse effect level)-990 mg/kg
RTECS: PV6210000
Exposure to large amounts can cause:, redness of skin, Itching, burning, sedation, Headache, Nausea, Dizziness
To the best of our knowledge, the chemical, physical, and toxicological properties have notbeen thoroughly investigated.

Carbamide peroxide (CP)

11.1 Information on toxicological effects

Acute toxicity
LD50 Oral-Rat-female-> 2,000 mg/kg
(OECD Test Guideline 423)
Symptoms: Irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract.
Symptoms: mucosal irritations, Cough, Shortness of breath, Possible damages:, damage of respiratory tract, Inhalation may lead to the formation of oedemas in the respiratory tract. Dermal: No data available
Skin corrosion/irritation
Remarks: After long-term exposure to the chemical: Causes skin burns.
Serious eye damage/eye irritation

Eyes-In vitro study

Result: Irreversible effects on the eye-4 h (OECD Test Guideline 437)

Remarks: Causes serious eye damage.

Respiratory or skin sensitization: No data available

Germ cell mutagenicity: No data available

Carcinogenicity: No data available

Reproductive toxicity: No data available

Specific target organ toxicity-single exposure: No data available

Specific target organ toxicity-repeated exposure: No data available

Aspiration hazard: No data available

11.2 Additional Information

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., Cough, Shortness of breath, Headache, Nausea, To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

Ammonium persulphate

11.1 Information on toxicological effects

Acute toxicity

LD50 Oral-Rat-689 mg/kg

Inhalation: No data available

LD50 Dermal-Rat-> 2,000 mg/kg

Skin corrosion/irritation

Skin-Rabbit

Result: No skin irritation

Serious eye damage/eye irritation

Eyes-Rabbit

Result: No eye irritation

Eyes-Rabbit

Result: Mild eye irritation

(OECD Test Guideline 405)

Respiratory or skin sensitization

- Guinea pig

Result: Causes sensitization.

(OECD Test Guideline 406)

Germ cell mutagenicity: No data available

Carcinogenicity: No data available

Reproductive toxicity: No data available

Specific target organ toxicity-single exposure: May cause respiratory irritation.

Specific target organ toxicity-repeated exposure: No data available

Aspiration hazard: No data available

11.2 Additional Information

RTECS: SE0350000

To the best of our knowledge, the chemical, physical, and toxicological properties have not

been thoroughly investigated.

SECTION 12 ECOLOGICAL INFORMATION

Proclin 300

12.1 Toxicity

Mixture: No data available

12.2 Persistence and degradability: No data available

12.3 Bioaccumulative potential: No data available

12.4 Mobility in soil: No data available

12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Endocrine disrupting properties: No data available

12.7 Other adverse effects: No data available

Components

Modified alkyl carboxylate: No data available

Mixture of 5-Chloro-2-methyl-4-isothiazolin-3-one and 2-Methyl-2H -isothiazol-3-one (3:1)

Toxicity to fish flow-through test LC50 - Oncorhynchus mykiss (rainbow trout)- 0.19 mg/l - 96 h(US-EPA)

Toxicity to daphnia and other aquatic invertebrates

flow-through test LC50 - Daphnia magna (Water flea) - 0.18 mg/l - 48 h(US-EPA)

Toxicity to bacteria static test EC50 - activated sludge - 4.5 mg/l - 3 h(OECD Test Guideline 209)

Toxicity to

fish(Chronic toxicity)semi-static test NOEC - Oncorhynchus mykiss (rainbow trout) -0.098 mg/l - 35 d(OECD Test Guideline 215)

Toxicity to daphnia and other aquatic invertebrates(Chronic toxicity)

flow-through test NOEC - Daphnia magna (Water flea) - 0.1 mg/l - 21 d(US-EPA)

Dimethyl sulfoxide (DMSO)

12.1 Toxicity

Toxicity to fish static test LC50-Danio rerio (zebra fish)-> 25,000 mg/l-96 h(OECD Test Guideline 203)

Toxicity to daphnia and other aquatic invertebrates

static test EC50-Daphnia magna (Water flea)-24,600 mg/l-48 h(OECD Test Guideline 202)

Toxicity to algae static test ErC50-Pseudokirchneriella subcapitata (green algae) -17,000 mg/l-72 h(OECD Test Guideline 201)

Toxicity to bacteria EC50-activated sludge-10-100 mg/l-30 min(ISO 8192)

12.2 Persistence and degradability

Biodegradability aerobic-Exposure time 28 d

Result: 31 %-Not readily biodegradable.(OECD Test Guideline 301D)

12.3 Bioaccumulative potential: No data available

12.4 Mobility in soil: No data available

12.5 Results of PBT and vPvB assessment: PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Endocrine disrupting properties: No data available

12.7 Other adverse effects

Stability in water-0.12-1.2 h at 30 °C pH 7

Remarks: Hydrolyzes readily.

Carbamide peroxide (CP)

12.1 Toxicity: No data available

12.2 Persistence and degradability: No data available

12.3 Bioaccumulative potential: No data available

12.4 Mobility in soil: No data available

12.5 Results of PBT and vPvB assessment: PBT/vPvB assessment not available as chemical safety assessment not required/notconducted

12.6 Endocrine disrupting properties: No data available

12.7 Other adverse effects hydrogen peroxide: Discharge into the environment must be avoided.

Ammonium persulphate

12.1 Toxicity

Toxicity to fish LC50-Oncorhynchus mykiss (rainbow trout)-76 mg/l-96 h

Toxicity to daphnia and other aquatic invertebrates

EC50-Daphnia magna (Water flea)-120 mg/l-48 h

12.2 Persistence and degradability: No data available

12.3 Bioaccumulative potential: No data available

12.4 Mobility in soil: No data available

12.5 Results of PBT and vPvB assessment: PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Endocrine disrupting properties: No data available

12.7 Other adverse effects: No data available

SECTION 13 DISPOSAL CONSIDERATION

13.1 Disposal methods

Dispose of waste in accordance to applicable national, regional, or local regulations. Burn in a chemical incinerator equipped with an afterburner and scrubber b highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

13.2 Contaminated packaging

Dispose in the same manner as unused product.

SECTION 14 TRANSPORT INFORMATION

RID/ADR: Non-Hazardous for Transport: This substance is considered to be non-hazardous for transport.

IATA: Non-Hazardous for Air Transport.

IMO: Non-Hazardous for Sea Transport.

SECTION 15 REGULATORY INFORMATION

This material safety data sheet complies with the requirements of Regulation (EC) No. 1272/2008 and its amendments.

SECTION 16 OTHER INFORMATION

IMPORTANT! Read the safety data sheets before the use and disposal of this product. Insure that this information is understood by the operators exposed to this product. Use this product for the intended purpose as indicated in the instruction manual.

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as guide. We make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from this use. Users should make their own investigation to determine the suitability of the information for their particular purposes. In no way shall we be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising from using the above information.