

# SAFETY DATA SHEET

## Rely+On Virkon Tablet



Version 1.0      Revision Date: 01/20/2021      SDS Number: 203000009486      Date of last issue: -  
Country / Language: US / EN

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### SECTION 1. IDENTIFICATION

Product name : Rely+On Virkon Tablet  
Product code : 00000000058198725  
EPA registration number : 39967-138

#### Manufacturer or supplier's details

Company : LANXESS Corporation  
Product Safety & Regulatory Affairs  
111 RIDC Park West Drive  
15275-1112 Pittsburgh, United States of America

Responsible Department : +1800LANXESS

Emergency telephone : Chemtrec (800) 424-9300  
International (703) 527-3887  
Lanxess Emergency Phone (800) 410-3063

#### Recommended use of the chemical and restrictions on use

Recommended use : Cleaning agent


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### SECTION 2. HAZARDS IDENTIFICATION

#### GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Skin irritation : Category 2  
Serious eye damage : Category 1

#### GHS label elements

Hazard pictograms : 

The GHS hazard pictogram for skin irritation and eye damage, consisting of a red diamond border containing a black silhouette of a hand being washed under a running faucet.

Signal Word : Danger

Hazard Statements : Causes skin irritation.  
Causes serious eye damage.

Precautionary Statements : **Prevention:**  
Wash skin thoroughly after handling.  
Wear protective gloves/ eye protection/ face protection.

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### Response:

IF ON SKIN: Wash with plenty of soap and water.  
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.  
If skin irritation occurs: Get medical advice/ attention.  
Take off contaminated clothing and wash before reuse.

### Other hazards

None known.

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

### Components

Chemical name	CAS-No.	Concentration (% w/w)
pentapotassium bis(peroxymonosulphate) bis(sulphate)	70693-62-8	$\geq 30 - < 50$
malic acid	6915-15-7	$\geq 20 - < 30$
sulphamidic acid	5329-14-6	$\geq 5 - < 10$
sodium dodecylbenzenesulfonate	25155-30-0	$\geq 1 - < 5$
potassium hydrogensulphate	7646-93-7	$\geq 1 - < 5$
dipotassium peroxodisulphate	7727-21-1	$\geq 1 - < 5$
dipotassium disulphate	7790-62-7	$\geq 1 - < 5$

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

## SECTION 4. FIRST AID MEASURES

If inhaled : Get medical attention immediately.  
Call a physician or poison control center immediately.  
Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus.  
If not breathing, if breathing is irregular or respiratory arrest occurs, provide artificial respiration, or oxygen by a trained professional, using a pocket type respirator.  
It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.  
If unconscious, place in recovery position and get medical attention immediately.  
Maintain open airway.  
Loosen tight clothing such as a collar, tie, belt or waistband.

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In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

In case of skin contact : Get medical attention immediately.  
Wash off immediately with soap and plenty of water.  
Rinse immediately contaminated clothing and skin with plenty of water before removing clothes.  
Remove contaminated clothing and shoes.  
Continue to rinse for at least 10 minutes.  
Chemical burns must be treated promptly by a physician.  
In the event of any complaints or symptoms, avoid further exposure.

In case of eye contact : Get medical attention immediately.  
Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids.  
Remove contact lenses, if present and easy to do. Continue rinsing.  
In case of contact, flush eyes with plenty of water for at least 30 minutes. Use fingers to ensure that eyelids are separated and that the eye is being irrigated.  
Continue to rinse for at least 10 minutes.  
Chemical burns must be treated promptly by a physician.

If swallowed : Get medical attention immediately.  
If swallowed, call a poison control center or doctor immediately.  
Rinse mouth with water.  
DO NOT induce vomiting unless directed to do so by a physician or poison control center.  
If vomiting occurs, the head should be kept low so that vomit does not enter the lungs.  
If unconscious, place in recovery position and get medical attention immediately.  
Maintain open airway.  
Never give anything by mouth to an unconscious person.  
Give small amounts of water to drink.  
Chemical burns must be treated promptly by a physician.  
Loosen tight clothing such as a collar, tie, belt or waistband.

### Most important symptoms and effects, both acute and delayed

Symptoms : May cause irritation with symptoms of reddening and itching.  
Eye: Corrosive with symptoms of reddening, tearing, swelling, burning and possible permanent damage.

Effects : May cause mechanical irritation (abrasion).  
: Causes skin irritation.  
: Causes serious eye damage.

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### SECTION 5. FIRE-FIGHTING MEASURES

- Suitable extinguishing media : In case of fire, use water spray (fog), foam or dry chemical.
- Unsuitable extinguishing media : Carbon dioxide (CO<sub>2</sub>)  
High volume water jet
- Specific hazards during fire fighting : Toxic and irritating gases/fumes may be given off during burning or thermal decomposition.  
Water runoff from fire fighting may be corrosive.
- Hazardous combustion products : Sulfur oxides  
Metal oxides  
Carbon dioxide (CO<sub>2</sub>)  
Carbon monoxide  
Nitrogen oxides (NO<sub>x</sub>)  
Halogenated compounds  
  
Phosphorus oxides
- Further information : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire.  
No action shall be taken involving any personal risk or without suitable training.
- Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.  
If potential for exposure exists refer to Section 8 for specific personal protective equipment.

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### SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : No action shall be taken involving any personal risk or without suitable training.  
Put on appropriate personal protection equipment.  
Do not touch or walk through spilled material.  
Evacuate personnel to safe areas.  
Keep unnecessary and unprotected personnel from entering.  
Avoid breathing dust.  
Ensure adequate ventilation.  
In case of inadequate ventilation wear respiratory protection.
- Environmental precautions : Prevent product from entering drains.  
Prevent further leakage or spillage if safe to do so.  
If the product contaminates rivers and lakes or drains inform respective authorities.
- Methods and materials for : Move containers from spill area.

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containment and cleaning up      Keep people away from and upwind of spill/leak.  
Dispose of wastes in an approved waste disposal facility.  
Do not allow into the sewerage system, surface waters or groundwater or into the soil.  
Use approved industrial vacuum cleaner for removal.  
Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air).

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### SECTION 7. HANDLING AND STORAGE

Advice on safe handling      :    Avoid contact with skin and eyes.  
Do not get in eyes or mouth or on skin.  
Do not swallow.  
Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use.  
Empty containers retain product residue; observe all precautions for product.  
Put on appropriate personal protection equipment.  
Remove contaminated clothing and protective equipment before entering eating areas.  
Workers should wash hands and face before eating, drinking and smoking.  
Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed.  
Avoid formation of respirable particles.  
Do not breathe vapors/dust.  
For personal protection see section 8.  
Smoking, eating and drinking should be prohibited in the application area.  
Dispose of rinse water in accordance with local and national regulations.

Conditions for safe storage      :    Store in accordance with local regulations.  
Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink.  
Keep container closed when not in use.  
Containers that have been opened must be carefully resealed and kept upright to prevent leakage.  
Do not store in unlabeled containers.  
Use appropriate container to avoid environmental contamination.  
Empty containers retain residue and can be dangerous.  
Do not reuse container.

Further information on storage stability      :    Keep in a dry place.

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### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
dipotassium peroxodisulphate	7727-21-1	TWA	0.1 mg/m <sup>3</sup> (Persulphate)	ACGIH

**Engineering measures** : Use process enclosures, local exhaust ventilation or other engineering controls to keep airborne levels below recommended exposure limits.  
If user operations generate dust, fumes or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

#### Personal protective equipment

**Respiratory protection** : Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

#### Hand protection

**Material** : Butyl rubber - IIR  
**Break through time** : < 60 min

#### Eye protection

: If contact with product is possible, wear safety glasses with side shields.  
If inhalation hazards exist, a full-face respirator may be required instead.

#### Skin and body protection

: Wear suitable protective clothing.

#### Hygiene measures

: When using do not eat or drink.  
When using do not smoke.  
Wash hands before breaks and at the end of workday.

### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance** : Solid, tablet

**Physical state** : solid

**Color** : yellow

**Odor** : odorless

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Odor Threshold : No data available

pH : 2.5 - 3  
Concentration: 1 %

Melting point/range : No data available

Boiling point/boiling range : No data available

Flash point : No data available

Evaporation rate : No data available

Self-ignition : No data available

Burning number : 1 (68 °F / 20 °C)  
Method: VDI 2263-1

Upper explosion limit / Upper flammability limit : No data available

Lower explosion limit / Lower flammability limit : No data available

Vapor pressure : No data available

Relative density : No data available

Density : 1.35 g/cm<sup>3</sup> (68 °F / 20 °C)

Solubility(ies)  
Water solubility : 65 g/l

Solubility in other solvents : No data available

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

Decomposition temperature : No data available

Viscosity  
Viscosity, dynamic : No data available

Viscosity, kinematic : No data available

Explosive properties : No data available

Oxidizing properties : No data available

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### SECTION 10. STABILITY AND REACTIVITY

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Conditions to avoid : Exposure to moisture.

Incompatible materials : Incompatible with acids.  
Strong bases  
Combustible substances  
Halogenated compounds  
Oxidizing agents  
brass  
Copper  
Cyanides  
Heavy metal salts

Hazardous decomposition products : Chlorine  
Sulfur oxides

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### SECTION 11. TOXICOLOGICAL INFORMATION

The most important known symptoms and effects are described in Section 2 and/or Section 4.

#### Information on likely routes of exposure

Skin contact  
Eye contact  
Ingestion

#### Acute toxicity

Not classified based on available information.

#### Product:

Acute oral toxicity : LD50 (Rat, male and female): 4,123 mg/kg  
Method: OECD Test Guideline 401

Acute inhalation toxicity : LC50 (Rat, male and female): 3.7 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Assessment: The substance or mixture has no acute inhalation toxicity  
Remarks: the particle size measurements of the product indicate that it is not respirable and therefore not bioavailable by the inhalation route.

Acute dermal toxicity : LD50 (Rat, male and female): > 5,000 mg/kg  
Remarks: Extrapolation according to Regulation (EC) No. 440/2008

#### Components:

##### **pentapotassium bis(peroxymonosulphate) bis(sulphate):**

Acute oral toxicity : LD50 (Rat, male and female): 500 mg/kg  
Method: OECD Test Guideline 423



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Acute inhalation toxicity : LC0 (Rat, male): > 5 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Method: OECD Test Guideline 403  
Assessment: The substance or mixture has no acute inhalation toxicity  
Remarks: Highest producible concentration.

Acute dermal toxicity : LD50 (Rat, male and female): > 5,000 mg/kg  
Method: OECD Test Guideline 402  
Remarks: Extrapolation according to Regulation (EC) No. 440/2008

### malic acid:

Acute oral toxicity : LD50 (Rat, male and female): 3,500 mg/kg  
Method: OECD Test Guideline 401  
GLP: no

Acute inhalation toxicity : LC0 (Rat, male and female): > 1.306 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Method: OECD Test Guideline 403  
Remarks: Highest producible concentration.

Acute dermal toxicity : LD50 (Rabbit, female): > 5,000 mg/kg  
Method: OECD Test Guideline 401  
GLP: no

### sulphamidic acid:

Acute oral toxicity : LD50 (Rat, female): 2,140 mg/kg  
Method: OECD Test Guideline 401  
GLP: yes

Acute dermal toxicity : LD50 (Rat, male and female): > 2,000 mg/kg  
Method: OECD Test Guideline 402  
GLP: yes  
Assessment: The substance or mixture has no acute dermal toxicity

### sodium dodecylbenzenesulfonate:

Acute oral toxicity : LD50 (Rat): 438 mg/kg

### potassium hydrogensulphate:

Acute oral toxicity : LD50 (Rat): 2,340 mg/kg

### dipotassium peroxodisulphate:

Acute oral toxicity : LD50 (Rat): 700 mg/kg

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Acute inhalation toxicity : LC0 (Rat): > 2.95 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Remarks: Highest producible concentration.

Acute dermal toxicity : LD50 (Rabbit): > 10,000 mg/kg

### **dipotassium disulphate:**

Acute oral toxicity : LD50 (Rat, male): 2,140 mg/kg  
Method: OECD Test Guideline 401  
Remarks: Test results on an analogous product

Acute inhalation toxicity : Assessment: Corrosive to the respiratory tract.

Assessment: The component/mixture is toxic after short term inhalation.

### **Skin corrosion/irritation**

Causes skin irritation.

#### **Product:**

Species : Rabbit  
Method : OECD Test Guideline 404  
Result : Irritating to skin.

#### **Components:**

##### **pentapotassium bis(peroxymonosulphate) bis(sulphate):**

Species : Rabbit  
Method : OECD Test Guideline 404  
Result : Causes burns.

##### **malic acid:**

Species : Rabbit  
Method : OECD Test Guideline 404  
Result : No skin irritation

##### **sulphamidic acid:**

Species : Rabbit  
Method : OECD Test Guideline 404  
Result : Irritating to skin.

##### **sodium dodecylbenzenesulfonate:**

Assessment : Irritating to skin.

##### **potassium hydrogensulphate:**

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Assessment : Causes burns.

### **dipotassium peroxodisulphate:**

Species : Rabbit  
Method : OECD Test Guideline 404  
Result : Irritating to skin.

### **dipotassium disulphate:**

Assessment : Causes severe burns.

### **Serious eye damage/eye irritation**

Causes serious eye damage.

### **Product:**

Remarks : May cause irreversible eye damage.

### **Components:**

#### **pentapotassium bis(peroxymonosulphate) bis(sulphate):**

Species : Rabbit  
Result : Risk of serious damage to eyes.  
Method : OECD Test Guideline 405

#### **malic acid:**

Species : Rabbit  
Result : Irritating to eyes.  
Method : OECD Test Guideline 405

#### **sulphamidic acid:**

Species : Rabbit  
Result : Irritating to eyes.  
Method : OECD Test Guideline 405

#### **sodium dodecylbenzenesulfonate:**

Assessment : Risk of serious damage to eyes.

#### **dipotassium peroxodisulphate:**

Result : Irritating to eyes.

#### **dipotassium disulphate:**

Assessment : Risk of serious damage to eyes.

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### Respiratory or skin sensitization

#### Skin sensitization

Not classified based on available information.

#### Respiratory sensitization

Not classified based on available information.

#### Product:

Routes of exposure : Skin contact  
Species : Guinea pig  
Method : OECD Test Guideline 406  
Result : Did not cause sensitization on laboratory animals.

Routes of exposure : Inhalation  
Species : Mammal - species unspecified  
Method : Expert judgment  
Result : Does not cause respiratory sensitization.

#### Components:

##### **pentapotassium bis(peroxymonosulphate) bis(sulphate):**

Routes of exposure : Skin contact  
Species : Guinea pig  
Method : OECD Test Guideline 406  
Result : Does not cause skin sensitization.

##### **malic acid:**

Routes of exposure : Skin contact  
Species : Guinea pig  
Method : OECD Test Guideline 406  
Result : Did not cause sensitization on laboratory animals.  
GLP : yes

##### **sulphamidic acid:**

Result : Did not cause sensitization on laboratory animals.

##### **dipotassium peroxodisulphate:**

Routes of exposure : Inhalation  
Species : Mammal - species unspecified  
Result : May cause sensitization by inhalation.

Routes of exposure : Skin contact  
Species : Mouse  
Method : OECD Test Guideline 429  
Result : May cause sensitization by skin contact.

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**Germ cell mutagenicity**

Not classified based on available information.

**Components:****pentapotassium bis(peroxymonosulphate) bis(sulphate):**

Genotoxicity in vitro : Test system: Mammalian-Animal  
 Metabolic activation: with and without metabolic activation  
 Method: OECD Test Guideline 476  
 Result: positive  
 GLP: yes

Test system: Bacteria  
 Metabolic activation: with and without metabolic activation  
 Method: OECD Test Guideline 471  
 Result: negative  
 GLP: yes

Test system: Mammalian-Human  
 Metabolic activation: with and without metabolic activation  
 Method: OECD Test Guideline 473  
 Result: positive  
 GLP: yes

Genotoxicity in vivo : Species: Mammalian-Animal  
 Application Route: Oral  
 Method: OECD Test Guideline 474  
 Result: negative

**malic acid:**

Genotoxicity in vitro : Remarks: Not mutagenic in a standard battery of genetic toxicological tests.

**sulphamidic acid:**

Genotoxicity in vitro : Test system: Mammalian-Human  
 Metabolic activation: with and without metabolic activation  
 Method: OECD Test Guideline 487  
 Result: negative  
 GLP: yes

Test system: Mammalian-Animal  
 Metabolic activation: with and without metabolic activation  
 Method: OECD Test Guideline 476  
 Result: negative

Test system: Bacteria  
 Metabolic activation: with and without metabolic activation  
 Method: OECD Test Guideline 471  
 Result: negative

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### **dipotassium peroxodisulphate:**

Genotoxicity in vitro : Remarks: Not mutagenic in a standard battery of genetic toxicological tests.

### **Carcinogenicity**

Not classified based on available information.

**IARC** No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**OSHA** No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

**NTP** No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

### **Reproductive toxicity**

Not classified based on available information.

### **Components:**

#### **pentapotassium bis(peroxymonosulphate) bis(sulphate):**

Effects on fetal development : Remarks: No teratogenic or fetotoxic effects were found at all dose levels tested.

#### **malic acid:**

Effects on fetal development : Remarks: No known significant effects or critical hazards.

### **STOT-single exposure**

Not classified based on available information.

### **Components:**

#### **potassium hydrogensulphate:**

Assessment : May cause respiratory irritation.

#### **dipotassium peroxodisulphate:**

Assessment : May cause respiratory irritation.

### **STOT-repeated exposure**

Not classified based on available information.

### **Repeated dose toxicity**

### **Components:**

#### **pentapotassium bis(peroxymonosulphate) bis(sulphate):**

Species : Rat, male and female  
LOAEL : > 1,000 mg/kg

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Application Route : Oral  
Exposure time : 28 d  
Number of exposures : 7 days/week  
Method : OECD Test Guideline 407  
Remarks : Subacute toxicity

Species : Rat, male and female  
LOAEL : 600 mg/kg  
Application Route : Oral  
Exposure time : 90 d  
Number of exposures : 7 days/week  
Method : OECD Test Guideline 408  
Remarks : Subchronic toxicity

### malic acid:

Remarks : No known significant effects or critical hazards.

### sodium dodecylbenzenesulfonate:

Species : Rat  
NOAEL : 220 mg/kg  
Application Route : Oral  
Dose : 220 mg/kg  
Remarks : Chronic toxicity

### Aspiration toxicity

Not classified based on available information.

### Further information

#### Product:

Remarks : No data available

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## SECTION 12. ECOLOGICAL INFORMATION

### Ecotoxicity

#### Components:

##### pentapotassium bis(peroxymonosulphate) bis(sulphate):

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 53 mg/l  
Exposure time: 96 h  
Method: OECD Test Guideline 203  
GLP: yes  
Remarks: Fresh water

Toxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): 3.5 mg/l  
aquatic invertebrates : Exposure time: 48 h  
Method: OECD Test Guideline 202

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GLP: yes  
Remarks: Fresh water

Toxicity to algae/aquatic plants : EC50 (*Pseudokirchneriella subcapitata* (microalgae)): > 1 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201  
GLP: yes  
Remarks: Fresh water

NOEC (*Pseudokirchneriella subcapitata* (microalgae)): 0.5 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201  
GLP: yes  
Remarks: Fresh water

### malic acid:

Toxicity to fish : LC50 (*Danio rerio* (zebra fish)): > 100 mg/l  
Exposure time: 96 h  
Method: OECD Test Guideline 203  
GLP: yes  
Remarks: Fresh water

Toxicity to daphnia and other aquatic invertebrates : EC50 (*Daphnia magna* (Water flea)): 240 mg/l  
Exposure time: 48 h  
Method: OECD Test Guideline 202  
GLP: yes  
Remarks: Fresh water

Toxicity to algae/aquatic plants : EC50 (algae): > 100 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201  
GLP: yes  
Remarks: Fresh water

NOEC (algae): 100 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201  
GLP: yes  
Remarks: Fresh water

### sulphamidic acid:

Toxicity to fish : LC50 (*Pimephales promelas* (fathead minnow)): 70.3 mg/l  
Exposure time: 96 h  
Method: OECD Test Guideline 203  
GLP: no  
Remarks: Fresh water

Toxicity to daphnia and other aquatic invertebrates : EC50 (*Daphnia magna* (Water flea)): 71.6 mg/l  
Exposure time: 48 h



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Method: OECD Test Guideline 202  
GLP: yes  
Remarks: Fresh water

Toxicity to algae/aquatic plants : EC50 (Desmodesmus subspicatus (green algae)): 48 mg/l  
End point: Growth rate  
Exposure time: 72 h  
Method: OECD Test Guideline 201  
GLP: yes  
Remarks: Fresh water

NOEC (Desmodesmus subspicatus (green algae)): 18 mg/l  
End point: Growth rate  
Exposure time: 72 h  
Method: OECD Test Guideline 201  
GLP: yes  
Remarks: Fresh water

Toxicity to fish (Chronic toxicity) : NOEC (Danio rerio (zebra fish)): >= 60 mg/l  
Exposure time: 34 d  
Method: OECD Test Guideline 210

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 19 mg/l  
Exposure time: 21 d  
Method: OECD Test Guideline 211

Toxicity to microorganisms : EC50: > 200 mg/l  
End point: Respiration inhibition  
Exposure time: 3 h  
Method: OECD Test Guideline 209  
GLP: yes  
Remarks: Fresh water

### **sodium dodecylbenzenesulfonate:**

Toxicity to fish (Chronic toxicity) : NOEC (Oncorhynchus kisutch (coho salmon)): 3.1 mg/l  
Exposure time: 3 Days

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 4 mg/l  
Exposure time: 7 Days

### **dipotassium peroxodisulphate:**

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 76.3 mg/l  
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 120 mg/l  
Exposure time: 48 h

Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (microalgae)): 83.7 mg/l

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Exposure time: 72 h  
Method: OECD Test Guideline 201

### Ecotoxicology Assessment

Chronic aquatic toxicity : This product has no known ecotoxicological effects.

#### dipotassium disulphate:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 680 mg/l  
Exposure time: 96 h  
Remarks: Fresh water

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 720 mg/l  
Exposure time: 48 h  
Remarks: Fresh water

Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (microalgae)): 1,492 mg/l  
Exposure time: 96 h  
Remarks: Fresh water

EC10 (Pseudokirchneriella subcapitata (microalgae)): 656 mg/l  
Exposure time: 96 h  
Remarks: Fresh water

Toxicity to fish (Chronic toxicity) : NOEC (Pimephales promelas (fathead minnow)): > 595 mg/l  
Exposure time: 7 Days  
Remarks: Fresh water

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Ceriodaphnia dubia (Water flea)): 790 mg/l  
Exposure time: 7 Days  
Remarks: Fresh water

### Persistence and degradability

#### Components:

##### pentapotassium bis(peroxymonosulphate) bis(sulphate):

Biodegradability : Result: The methods for determining the biological degradability are not applicable to inorganic substances.

##### malic acid:

Biodegradability : aerobic  
Result: Readily biodegradable.  
Biodegradation: 67.5 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301B  
GLP: yes

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### **sulphamidic acid:**

Biodegradability : Result: The methods for determining the biological degradability are not applicable to inorganic substances.

### **dipotassium peroxodisulphate:**

Biodegradability : Result: The methods for determining the biological degradability are not applicable to inorganic substances.

### **dipotassium disulphate:**

Biodegradability : Result: The methods for determining the biological degradability are not applicable to inorganic substances.

### **Bioaccumulative potential**

#### **Components:**

#### **pentapotassium bis(peroxymonosulphate) bis(sulphate):**

Partition coefficient: n-octanol/water : log Pow: < 0.3  
Method: OECD Test Guideline 117

#### **malic acid:**

Partition coefficient: n-octanol/water : log Pow: -1.26

#### **sulphamidic acid:**

Partition coefficient: n-octanol/water : log Pow: -4.34

#### **sodium dodecylbenzenesulfonate:**

Bioaccumulation : Bioconcentration factor (BCF): 220

Partition coefficient: n-octanol/water : log Pow: 0.45

#### **Mobility in soil**

No data available

#### **Other adverse effects**

No data available

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## SECTION 13. DISPOSAL CONSIDERATIONS

### **Disposal methods**

RCRA - Resource Conservation and Recovery Authorization Act : If discarded in its purchased form, this product would not be a hazardous waste either by listing or by characteristic. However, under RCRA, it is the responsibility of the product user to

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determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste. (40 CFR 261.20-24)

- Waste from residues : The product should not be allowed to enter drains, water courses or the soil.  
Do not contaminate ponds, waterways or ditches with chemical or used container.  
Send to a licensed waste management company.
- Contaminated packaging : Empty remaining contents.  
Dispose of as unused product.  
Do not re-use empty containers.
- 

### SECTION 14. TRANSPORT INFORMATION

#### International Regulations

##### IATA-DGR

Not regulated as a dangerous good

##### IMDG-Code

Not regulated as a dangerous good

##### Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

#### Domestic regulation

##### 49 CFR

- UN/ID/NA number : UN 3077  
Proper shipping name : Environmentally hazardous substance, solid, n.o.s.  
(SODIUM DODECYLBENZENE SULFONATE)  
Class : 9  
Packing group : III  
Labels : 9



- ERG Code : 171  
RQ : 21,166.71 lb  
Marine pollutant : no

When in individual containers of less than the Product RQ, this material ships as non-regulated.

#### Hazard and Handling Notes.

Risk of serious damage to eyes, Keep dry., Keep separated from foodstuffs

#### Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet.

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Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

### SECTION 15. REGULATORY INFORMATION

#### CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
sodium dodecylbenzenesulfonate	25155-30-0	1000	21166

#### SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

**SARA 311/312 Hazards** : Skin corrosion or irritation  
Serious eye damage or eye irritation

**SARA 313** : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

#### US State Regulations

##### Massachusetts Right To Know

sodium dodecylbenzenesulfonate	25155-30-0	>= 3 - < 5
dipotassium peroxodisulphate	7727-21-1	>= 1 - < 5

##### Pennsylvania Right To Know

pentapotassium bis(peroxymonosulphate) bis(sulphate)	70693-62-8	>= 30 - < 50
malic acid	6915-15-7	>= 20 - < 30
sodium hydrogencarbonate (Solution)	144-55-8	>= 7 - < 13
sulphamidic acid	5329-14-6	>= 5 - < 10
Polyphosphoric acids, sodium salts	68915-31-1	>= 3 - < 7
sodium dodecylbenzenesulfonate	25155-30-0	>= 3 - < 5
dipotassium peroxodisulphate	7727-21-1	>= 1 - < 3

##### California Prop. 65

This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

##### TSCA inventory

TSCA : This product is regulated under the United States Federal Insecticide, Fungicide and Rodenticide Act (FIFRA).

##### TSCA list

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

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### FIFRA information

EPA registration number : 39967-138

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

Signal Word : DANGER

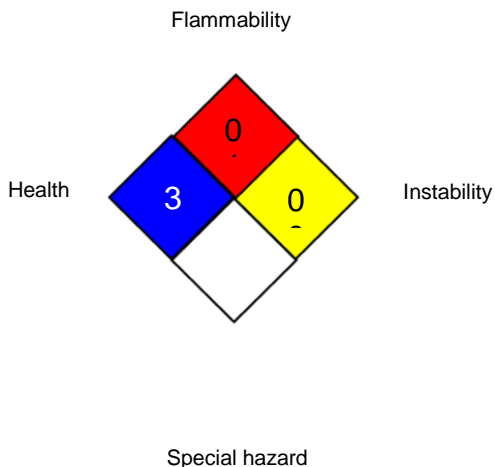
Hazard Statements : Powder is corrosive. Causes irreversible eye damage and skin burns. Harmful if swallowed or absorbed through skin. Corrosive statement does not refer to 1% in-use solution.

Hazard Statements : FIFRA Registered Composition:  
Active Ingredients:  
Potassium peroxymonosulfate (CAS# 10058-23-8) 21.41%  
Sodium chloride (CAS# 7647-14-5) 1.5%  
Other Ingredients 77.09%  
Total: 100%"

## SECTION 16. OTHER INFORMATION

### Further information

#### NFPA 704:



#### HMIS® IV:

HEALTH	/	3
FLAMMABILITY		0
PHYSICAL HAZARD		0

HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "\*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

### Full text of other abbreviations

ACGIH : USA. ACGIH Threshold Limit Values (TLV)  
ACGIH / TWA : 8-hour, time-weighted average

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AllC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

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The data contained in this Safety Data Sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. 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 to be a guidance for processing and does not contain any 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. It is the responsibility of the recipient of the product to ensure that any proprietary rights and existing laws and legislation are observed.