

SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifier

Trade name: **DURALEV™**
EPA Registration No: 91810-2-51517

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

Relevant identified uses: Plant protection product.
Professional use only.

1.3 Details of the supplier of the safety data sheet

Company Name: SAN Group Biotech USA, INC
Address: 1260 Avenida Chelsea, Vista, CA, 92081.
Telephone: (800) 876-2767
E-mail: wrg.sanagrow-US@san-group.com

1.4 Emergency Telephone Number

Poison control center: 1-800-222-1222.
National Pesticide Information Center (NPIC): 1-800-858-7378.
Transport Emergency (CHEMTREC): 1-800-424-9300.

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Hazards identification:

H302 Acute Oral Category IV
H320 Eye Irritation Category 2B

2.2 Label elements

Pictograms:



Signal word: **WARNING**

Hazard Statements:

H302 Harmful if swallowed.
H320 Causes eye irritation.

Precautionary statements: Avoid contact with eyes or clothing.

Environmental hazard: For terrestrial uses - Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high-water mark. Do not contaminate water when disposing of equipment washwater or rinsate.

2.3 Other hazards

Not available

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Mixtures

Substance	Concentration (%)	Classification
Cerevisane	91.2% ≤C≤ 96.9%	Not classified

In accordance with the product knowledge, no nanomaterials have been identified.

4. FIRST AID MEASURES

4.1 Description of First Aid Measures

General information:

When in doubt or if symptoms are observed, get medical advice.

HOT LINE NUMBER: Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For medical emergencies, call the poison control center at 1-800-222-1222. For non-emergency information on this product, call National Pesticide Information Center (NPIC) at 1-800-858-7378 or at <http://npic.orst.edu>

Following inhalation:	Remove person to fresh air and keep comfortable for breathing.
Following skin contact:	Wash with soap and water. Change contaminated, saturated clothing. Wash contaminated clothes before reuse. If skin irritation persists, call a physician. Call a poison control center or doctor for treatment advice.
Following eye contact:	Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.
Following ingestion:	IF SWALLOWED: Immediately call a POISON CENTER or doctor. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11.

Symptoms:

No further relevant information available.

Effects:

No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed

Notes for the doctor:

Treat symptomatically.

5. FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media:

Use dry chemical, carbon dioxide, water spray, or alcohol-resistant foam. Use agent most appropriate to extinguish fire.

Unsuitable extinguishing media:

None known.

5.2 Special hazards arising from the substance or mixture

Carbon oxides.

5.3 Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing.

Additional information

Do not inhale vapors and fumes.

Co-ordinate fire-fighting measures to the fire surroundings.

Move undamaged containers from immediate hazard area if it can be done safely.

Use caution when applying carbon dioxide in confined spaces. Carbon dioxide can displace oxygen. Use water spray jet to protect personnel and to cool endangered containers.

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Use proper personal protective equipment as indicated in section 8.

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

For terrestrial uses - Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high-water mark.

Do not contaminate water when disposing of equipment washwater or rinsate.

In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

6.3 Methods and material for containment and cleaning up

Aerate places and clean up the spill area with a large amount of water. Avoid high pressure rinsing. Pick up with suitable material and put in an appropriate waste container. Dispose of waste in compliance with local statutes and regulations.

6.4 Reference to other sections

Safe handling: see section 7. Disposal: see section 13.

Personal protection equipment: see section 8.

Additional information

Not available

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Use only in well-ventilated areas.

If local exhaust ventilation is not possible or not enough, the entire work area must be ventilated by technical means. Provide adequate ventilation as well as local exhaustion at critical locations.
 Dust should be exhausted directly at the point of origin. Normal measures for preventative fire protection.
 Avoid contact with skin, eyes and clothes. Do not eat, drink or smoke when using this product.

Advices on general occupational hygiene:

Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.
 Remove contaminated, saturated clothing.
 Work in well ventilated zones or use proper respiratory protection.

7.2 Conditions for safe storage, including any incompatibilities

Keep container out of reach of children.
 Keep container tightly closed in a dry, cool, and well-ventilated place. Keep container in upright position in order to prevent leakage. Prevent exposure to moisture.

Requirements for storage rooms and vessels:

Ensure adequate ventilation of the storage area.

Advice on joint storage:

Do not contaminate water, food, or feed by storage or disposal. Avoid contamination with other pesticides or fertilizers.

Further information on storage conditions:

Store in original container.

7.3 Specific end uses

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control Parameters

Occupational exposure limits: OSHA and ACGIH have not established specific exposure limits for this material.
Biological limit values: Not available
Exposure limits at intended use: Not available
Remark: Not available

8.2 Exposure Controls

Appropriate engineering controls:

General industrial hygiene practice.
 Technical measures and the application of suitable work processes have priority over personal protection equipment.

Individual protection measures, such as personal protective equipment:

Eye/face protection: Suitable eye protection: Wear protective eyewear.
Skin protection: Hand protection: Suitable gloves type: Wear waterproof gloves.
 Suitable protective clothing: Wear appropriate protective clothing to prevent skin exposure (long- sleeved shirt, long pants, shoes plus socks). Lab coat.

Respiratory protection: Respiratory protection is not required.

Remark:

Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
 Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

Environmental exposure controls: No special measures are necessary.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical state:	Solid
Color:	Off-white
Odor:	Characteristic Of Yeast
pH:	3.2
Melting point/freezing point:	Not available
Initial boiling point and boiling range:	Not applicable
Flash point:	Not applicable
Flammability:	Not available
Upper/lower flammability or explosive limits:	Not Flammable
Vapour pressure:	Not available
Vapour density:	Not applicable
Density:	0.65g/cm ³
Relative density:	1.32
Solubility(ies):	Water Dispersible
Partition coefficient n-octanol/water: (log value)	Not applicable
Auto-ignition temperature:	219°C
Decomposition temperature:	Not available
Viscosity:	Not available
Explosive properties:	Non Explosive
Oxidising properties:	Non Oxidizing
Solubility in other Solvents:	Not available
Particle characteristics:	Not available

9.2 Other Safety Information

Information concerning to the classes of physical hazards: Not available

Other security characteristics: No further relevant information available.

NOTE: These physical data are typical values based on material tested but may vary from sample to sample. Typical values should not be construed as a guaranteed analysis of any specific lot or as specifications for the product.

10. STABILITY AND REACTIVITY

10.1 Reactivity

No data available.

10.2 Chemical stability

The product is stable when stored at normal ambient temperatures.

10.3 Possibility of hazardous reactions

No hazardous reaction when handled and stored according to provisions.

10.4 Conditions to avoid

Avoid temperature below 0°C, direct sunlight, moisture and elevated temperatures.

10.5 Incompatible materials

Avoid any contact with strong oxidizing agent.

10.6 Hazardous decomposition products

Does not decompose when used for intended uses.

Possible decomposition at elevated temperature releasing CO and CO₂.

Additional information

Not available

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute oral toxicity: The product is not classified.

Data for mixture:

Species: Rat
 Sex: Female
 Guideline: OECD Guideline 423 (Acute Oral toxicity - Acute Toxic Class Method)

Subendpoint	Operator	Value	Unit
LD50:	>	2000	mg/kg bw

Conclusion: The product is considered to be not classified for acute oral exposure.

Acute dermal toxicity: The product is not classified.

Data for mixture:

Species: Rat
 Sex: male/female
 Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
 Exposure duration/value: Not available
 Exposure duration/unit: Not available

Subendpoint	Operator	Value	Unit
LD50:	>	2000	mg/kg bw

Conclusion: The product is considered to be not classified for acute dermal exposure.

Acute inhalation toxicity: The product is not classified.

Skin corrosion/irritation: The product is not classified.

Data for mixture:

Test type: in vivo
 Species: Rabbit
 Sex: Male
 Guideline: OECD Guideline 404 (Acute Dermal Irritation/Corrosion)
 Exposure duration/value: Not available Exposure duration/unit: Not available

Subendpoint	Basis	Time Point	Reversibility
Erythema score	mean	A slight erythema was noted on the treated area of one animal 24 hours after the patch removal;	Fully reversible within: 48 hours

Conclusion: The product is considered to be not classified as a skin irritant.

Serious eye damage/irritation: Classified as irritating cat III (Rabbit, OECD 405).

Data for mixture:

Test type: Clinical
 Species: Albino rabbit
 Sex: male/female
 Guideline: OCSP 870.2400
 Type of method: Frontal application
 Concentration: 100 mg

Subendpoint	Basis	Time Point	Reversibility
Maximum average irritation score	mean = 9.3	1h	Fully reversible within: 48h

Conclusion: The product is classified as Toxicity Category III.

Skin Sensitization: The product is not classified.

Data for mixture:

Species: Mouse
 Sex: Female
 Guideline: OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)
 Exposure duration/value: Not available
 Exposure duration/unit: Not available
 Concentration: Not available

Subendpoint	Value	Unit
Stimulation index (SI)	<1.4	

Conclusion: The product is considered to be not classified for skin sensitisation.

Specific target organ toxicity (repeated exposure):

The product is not classified.

Specific target organ toxicity (single exposure):

The product is not classified.

Carcinogenicity:

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

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

Substances: Not available
Reproductive toxicity: The product is not classified.
Germ cell mutagenicity: The product is not classified.
Sensitization to the respiratory tract: The product is not classified.
Additional information: Not available

11.2 Information on other hazards: Not available

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Based on available data, the classification criteria are not met.

Data for mixture:

Acute aquatic toxicity:

Animals/category: Fish
 Species: Daphnia magna (Big water flea).
 Test duration: 48
 Unit: h
 Guideline: OECD 202

Subendpoint	Value	Unit
NOEC (48h)	100	mg/L
EC50 (48h)	> 200	mg/L

Acute aquatic toxicity:

Animals/category: algae or cyanobacteria
 Species: Pseudokirchneriella subcapitata.
 Test duration: 72

Unit: h
Guideline: OECD 201

Subendpoint	Value	Unit
LOEC	20	mg/L
ErC50 (0-72h)	194.4	mg/L
EyC50 (0-72h)	81.6	mg/L

Acute aquatic toxicity:

Animals/category: Fish
Species: Brachydanio rerio (Zebra-fish)
Test duration: 96
Unit: h
Guideline: OECD 203

Subendpoint	Value	Unit
24h, 48h, 72h and 96h LLR50	> 100	mg/L nominal loading rate WAF
96h LOELR	>100	mg/L nominal loading rate WAF
96h NOELR	100	mg/L nominal loading rate WAF
96h LLR100	>100	mg/L nominal loading rate WAF

12.2 Persistence and degradability

This mixture is considered to be readily biodegradable.

12.3 Bioaccumulative potential

Aquatic and terrestrial bioaccumulation is expected to be negligible.

12.4 Mobility in soil

No data available.

12.5 Other adverse effects

No further relevant information available.

Additional ecotoxicological information

Not available

13. DISPOSAL CONSIDERATIONS

13.1 DISPOSAL PROCEDURES

Appropriate disposal/Product:

To avoid wastes, use all material in this container by application according to label directions.

If wastes cannot be avoided, offer remaining product to a waste disposal facility or pesticide disposal program (often such programs are run by state or local governments or by industry).

Appropriate disposal/Package:

(For plastic bags) Nonrefillable container. Do not reuse or refill this container. Completely empty bag into application equipment by shaking and tapping sides and bottom to loosen clinging particles. Then offer for recycling, if available, or dispose of empty bag in a sanitary landfill or by incineration. Do not burn unless allowed by state and local ordinances. If burned, stay out of smoke.

Additional information

Not available

14. TRANSPORT INFORMATION

14.1 UN number

The product is not hazardous according to the applicable transport regulations.

- 14.2 UN proper shipping name**
Not regulated.
- 14.3 Transport hazard class(es)**
Not regulated.
- 14.4 Packing group**
Not regulated.
- 14.5 Environmental hazards**
Not regulated.
- 14.6 Special precautions for user**
Not regulated.
- 14.7 Bulk shipping according to IMO instruments**
Not regulated.

Additional information

Not available

15. REGULATORY INFORMATION

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

This SDS has been established in accordance with HazCom 2012.

This SDS has been established in accordance with GHS regulation.

National regulations:

California Prop 65: This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

Massachusetts: No components are subject to the Massachusetts Right to Know Act. Pennsylvania: No components are subject to the Pennsylvania Right to Know Act.

New Jersey: No components are subject to the New Jersey Right to Know Act.

15.2 Chemical Safety Assessment

For this substance/mixture a chemical safety assessment is not required.

No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

Additional information

[Clean Air Act]:

This material does not contain any hazardous air pollutants.

This material does not contain any Class 1 Ozone depleters.

This material does not contain any Class 2 Ozone depleters.

[Clean Water Act]:

None of the chemicals in this product are listed as Hazardous Substances under the CWA. None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

HMIS Rating (scale 0 - 4):

Health Hazard = 0. Chronic Health Hazard = 0.

Flammability = 0. Physical Hazard = 0.

NFPA Rating (scale 0 - 4):

Health Hazard = 0. Fire Hazard = 0.

Reactivity Hazard = 0. Special = Not Applicable.

FIFRA information for SDS Section 15 (Regulatory Information):

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:

Caution

No pictogram. Harmful if swallowed.

Causes moderate eyes irritation.

16. OTHER INFORMATION

Indication of changes

Version 5: Section 13 update.

Abbreviations and acronyms

CAS: Chemical Abstract Service Number.

IATA: International Air Transport Association.

IMDG: International Maritime Dangerous Goods Code.

DPD Dangerous Preparation Directive.

UN number: United Nations number.

ADR/RID: European Agreement concerning the International Carriage of Dangerous Goods by Road/Regulations concerning the international carriage of dangerous goods by rail.

CLP: Classification, labeling and packaging.

VPvB: very persistent and very bioaccumulative substances.

DOT: Department of Transportation.

HCS/HazCom: Hazard Communication.

No EC: European Commission Number.

GHS: Globally Harmonised System of Classification and Labeling of Chemicals.

Key literature references and sources for data

No data available.

Classification for mixtures and used evaluation method:

The classification of the mixture is in accordance with the evaluation method described in HazCom 2012.

The classification of the mixture is in accordance with the evaluation method described in the GHS.