

SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING**Product identifier****Product Name:** GRO-SPURT GS-5**Other means of identification****Common Name:** GS-5**UN/ID No** UN1993**Synonyms** Gibberillin A3, GA3
Isopropanol - 99.5%**Product Categories** Plant Growth regulator**Recommended use of the chemical and restrictions on use****Sale and Use Restrictions** Not applicable**Recommended Use** Agricultural Professional use**Uses advised against** Consumer use**Details of the supplier of the safety data sheet****Supplier Address**Grospurt Enterprises, Inc.
PO Box 74031 Hillcrest Park PO
3882 Main Street
Vancouver, B.C. B5V5C8
Canada
www.grospurt.com**Emergency telephone number****Company Phone Number** Grospurt Enterprises, Inc. : 1-844-616-1444 FX: 1-604-326-1102**Emergency Telephone** Grospurt Enterprises, Inc. : 1-604-818-8280


2. HAZARDS IDENTIFICATION

Classification

Acute toxicity - Oral	Category 4
Serious eye damage/eye irritation	Category 2
Specific target organ toxicity (single exposure)	Category 3
Flammable liquids	Category 2

Label elements

Emergency Overview

Danger		
Hazard statements		
Harmful if swallowed		
Causes severe eye irritation		
May cause drowsiness or dizziness		
Highly flammable liquid and vapor		
		
Appearance Alcoholic solution	Physical state Liquid	Odor Pleasant, Alcoholic

Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling
 Do not eat, drink or smoke when using this product
 Avoid breathing dust/fume/gas/mist/vapors/spray
 Use only outdoors or in a well-ventilated area
 Keep away from heat/sparks/open flames/hot surfaces. — No smoking
 Keep container tightly closed
 Ground/bond container and receiving equipment (if metal)
 Use explosion-proof electrical/ventilating/lighting equipment
 Use only non-sparking tools
 Take precautionary measures against static discharge
 Wear protective gloves/protective clothing/eye protection/face protection
 Keep cool

Precautionary Statements - Response

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 If eye irritation persists: Get medical advice/attention
 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
 IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing
 Call a POISON CONTROL CENTER or doctor/physician if you feel unwell
 IF SWALLOWED: Call a POISON CONTROL CENTER or doctor/physician if you feel unwell
 Rinse mouth
 In case of fire: Use CO₂, dry chemical, or foam for extinction

Precautionary Statements - Storage

Store in a well-ventilated place. Keep container tightly closed
 Store locked up
 Store in a dry place

Explosive properties: Fire or intense heat may cause violent rupture of packages.

Specific hazards arising from the chemical

Highly flammable liquid and vapor. Vapors may form explosive mixture with air. Vapors may travel to areas away from work site before igniting/flashing back to vapor source. Flash back possible over considerable distance. Keep product and empty container away from heat and sources of ignition. Vapors may accumulate in confined areas (basement, tanks, hopper/tank cars, etc.). The product causes irritation of eyes, skin and mucus membranes.

Hazardous combustion products Carbon monoxide, Carbon dioxide (CO₂).

Specific methods:

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge Yes. May be ignited by heat, sparks or flames.

Special firefighting procedures:

Highly flammable liquid and vapor. No action shall be taken involving any personal risk without suitable training. Evacuate surrounding areas. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Material may burn with invisible flame. As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Do not use a solid water stream as it may scatter and spread fire. Water spray may be useful in minimizing or dispersing vapors and to protect personnel. Use water spray to keep fire-exposed containers cool.

Component
Isopropyl Alcohol
67-63-0 (90-95)

ACGIH - test
40

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions: Keep unnecessary and unprotected personnel away. Avoid dust formation. Avoid breathing dust/fume/gas/mist/vapors/spray. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Keep people away from and upwind of spill/leak. Use personal protective equipment. See Section 8 for information on appropriate personal protective equipment.

For emergency responders Use personal protection recommended in Section 8. Remove all sources of ignition. Ventilate the area. Pay attention to flashback. Be aware that gases can spread at ground level (heavier than air) and pay attention to the wind direction.

Environmental precautions

Environmental precautions: Prevent further leakage or spillage if safe to do so. Prevent from entering into soil, ditches, sewers, waterways or groundwater. Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained.

Methods and material for containment and cleaning up

Methods for Containment Dike to collect large liquid spills. Use non-sparking tools. Prevent from entering into soil, ditches, sewers, waterways or groundwater. Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to state, local, federal regulations.

Methods for clean-up: Clean-up methods - small spillage: Ventilate area. Absorb spill with suitable inert absorbent material and place in a chemical waste container. Clean-up methods - large spillage: Large spills present a vapor explosion and liquid fire hazard; evacuate area and ensure response by personnel trained and equipped to respond to flammable material incident or off-site emergency responders or fire department.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations. Avoid dust formation.

7. HANDLING AND STORAGE

Precautions for safe handling

Handling: Protect from physical damage. Ensure adequate ventilation. Avoid breathing dust/fume/mist/vapor/spray. Use personal protective equipment as required. Do not get in eyes, on skin, or on clothing. Take off contaminated clothing and wash it before reuse. Ground/bond container and receiving equipment (if metal). Take precautionary measures against static discharge. Keep container tightly closed in a dry and well-ventilated place. Keep product and empty container away from heat and sources of ignition. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose these containers to heat, flame, sparks, static electricity, or other sources of ignition. They may explode and cause injury or death.

Conditions for safe storage, including any incompatibilities

Technical measures/precautions: Ensure adequate ventilation, especially in confined areas: Mechanical ventilation required if used indoors on a continuous basis. Eye wash and safety shower should be easily accessible.

Materials to avoid: Aldehydes Halogenated hydrocarbons Halogens Strong acids Strong bases Strong oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Control parameters****Exposure Guidelines**

Chemical Name	ACGIH TLV	OSHA Exposure Limits:	NIOSH IDLH
Isopropyl Alcohol 67-63-0	STEL: 400 ppm TWA: 200 ppm	TWA: 400 ppm TWA: 980 mg/m ³	IDLH: 2000 ppm TWA: 400 ppm TWA: 980 mg/m ³ STEL: 500 ppm STEL: 1225 mg/m ³
Gibberellic Acid 77-06-5	-	-	-

Appropriate engineering controls

Engineering measures: Eye wash and safety shower should be easily accessible. Ensure adequate ventilation. Mechanical ventilation required if used indoors on a continuous basis.

Individual protection measures, such as personal protective equipment

- Eye/face protection** Wear safety glasses with side shields (or goggles). If splashes are likely to occur, wear: Goggles, Face protection shield.
- Skin and body protection** Chemical resistant gloves. Recommended Use: Neoprene, Nitrile, Nitrile rubber, Polyvinylchloride, Polyvinyl alcohol or nitrile-butyl rubber gloves (consult with the specific manufacturer to confirm performance).
- Respiratory protection** Ensure adequate ventilation, especially in confined areas. Avoid breathing vapor, aerosol or mist. Use NIOSH-approved air-purifying respirator with organic vapor cartridge or canister, as appropriate. A respiratory protection program that meets or is equivalent to OSHA 29 CFR 1910.134 and ANSI Z88.2 should be followed whenever workplace conditions warrant a respirator's use.
- General Hygiene Considerations** Handle in accordance with good industrial hygiene and safety practice. When using do not eat, drink or smoke. Keep away from food, drink and animal feeding stuffs. Avoid breathing (dust, vapor, mist, gas). Avoid contact with eyes, skin and clothing. Use personal protective equipment as required. Wash face, hands and any exposed skin thoroughly after handling. Take off contaminated clothing and wash it before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Liquid	Odor	Pleasant, Alcoholic
Appearance	Alcoholic solution	Odor threshold	No information available
Color	Clear, Colorless to Light yellow		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	No information available	
Melting point/freezing point	No information available	
Boiling point / boiling range	82-83 °C / 180-181 °F	
Flash point	16.5 °C / 62 °F	
Evaporation rate	1.5	CC (closed cup) n-Butyl acetate = 1
Flammability (solid, gas)	No information available	
Flammability Limits in Air		
Upper flammability limit	12% (V)	
Lower flammability limit	2% (V)	
Vapor pressure	33	torr @ 20 °C
Vapor density	2.1	Air=1
Specific Gravity	0.78-0.79	
Water solubility	Miscible in water	
Solubility in other solvents	No Data Available	
Partition coefficient	No Data Available	
Autoignition temperature	425 °C / 797 °F	
Decomposition temperature	No Data Available	
Kinematic viscosity	No information available	
Dynamic viscosity	No Data Available	
Explosive properties	No Data Available	
Oxidizing properties	No Data Available	

Other information

Softening point	No Data Available
Molecular weight	No Data Available
VOC Content (%)	
VOC Content (%)	95%
Density	0.78-0.79 g/cc
Bulk density	No Data Available

10. STABILITY AND REACTIVITY

Reactivity

Reactivity	Stable under recommended storage conditions in original container.
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Chemical stability

Possibility of Hazardous Reactions	May react with oxidizing agents.
Hazardous polymerization	Hazardous polymerization does not occur.

Conditions to avoid

Keep away from direct sunlight. Heat, flames and sparks. Incompatible materials. Keep out of reach of children.

Incompatible materials

Materials to avoid: Aldehydes Halogenated hydrocarbons Halogens Strong acids Strong bases Strong oxidizing agents.

Hazardous Decomposition Products

Hazardous Decomposition Products Under fire conditions: Carbon monoxide, Carbon dioxide (CO₂).

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information	Harmful if swallowed. Causes severe eye irritation. May cause drowsiness or dizziness.
Inhalation	May cause respiratory irritation. May cause drowsiness or dizziness. Avoid breathing vapors or mists.
Eye contact	Causes severe eye irritation: redness, stinging, tearing and swelling.
Skin Contact	May be harmful in contact with skin: Avoid contact with skin and clothing.
Ingestion	Harmful if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Isopropyl Alcohol 67-63-0	= 1870 mg/kg (Rat)	= 4059 mg/kg (Rabbit)	= 72600 mg/m ³ (Rat) 4 h
Gibberellic Acid 77-06-5	= 6300 mg/kg (Rat)	>2000 mg/kg (Rabbit)	-

Information on toxicological effects

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization	Skin Sensitization, Respiratory Sensitization: Not classified.
Mutagenic effects:	Gibberellic Acid (CAS# 77-06-5): Histidine reversion (Ames). Genotoxicity in vitro - Human - lymphocyte. DNA Damage. Genotoxicity in vitro - Mammal - lymphocyte: DNA Damage.
Carcinogenicity	Category 3: Not Classifiable.

Chemical Name	ACGIH	IARC	NTP	OSHA
Isopropyl Alcohol 67-63-0		Group 3		

Reproductive toxicity	Isopropyl alcohol has shown fetotoxicity in laboratory animals at doses which are maternally toxic.
STOT - single exposure	Category 3: May cause respiratory irritation. May cause drowsiness or dizziness.
STOT - repeated exposure	Not classified.
Chronic toxicity	Prolonged skin contact may defat the skin and produce dermatitis.
Target Organ Effects	Eyes, Skin, Mucous Membrane, Central nervous system, Respiratory system, Heart, Gastrointestinal tract (GI).
Neurological effects	May affect the central nervous system causing dizziness, headache or nausea.
Other adverse effects	Gibberellic Acid (CAS# 77-06-5): To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.
Aspiration hazard	This material, if ingested or vomited can cause lung injury.

Numerical measures of toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document .

ATEmix (oral)	1945 mg/kg
ATEmix (dermal)	4285 mg/kg
ATEmix (inhalation-vapor)	76647 mg/l

12. ECOLOGICAL INFORMATION

Ecotoxicity

5.28 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Isopropyl Alcohol 67-63-0	1000: 96 h Desmodesmus subspicatus mg/L EC50 1000: 72 h Desmodesmus subspicatus mg/L EC50	9640: 96 h Pimephales promelas mg/L LC50 flow-through 1400000: 96 h Lepomis macrochirus µg/L LC50 11130: 96 h Pimephales promelas mg/L LC50 static		13299: 48 h Daphnia magna mg/L EC50
Gibberellic Acid 77-06-5		>150:96h Oncorhynchus mykiss mg/L LC50 >10: 96h Salmo trutta mg/L LC50		

Persistence and degradability

READILY BIODEGRADABLE.

Bioaccumulation

Bioaccumulative potential: Not expected. Bioconcentration factor (BCF) Isopropyl alcohol (CAS#67-63-1): <100 or Log Pow <3.

Mobility

This product is miscible in water. If product enters soil, one or more constituents will be mobile and may contaminate ground water. Isopropyl alcohol (CAS#67-63-1): Koc =1.1 (estimated).

Chemical Name	Partition coefficient
Isopropyl Alcohol 67-63-0	0.05
Gibberellic Acid 77-06-5	0.24

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes Dispose of in accordance with federal, state and local regulations.

Contaminated packaging Dispose of in accordance with federal, state and local regulations. Do not reuse container.

14. TRANSPORT INFORMATION

Limited quantity (LQ) < 1 Liter

DOT

UN/ID No UN1993
Proper Shipping Name: Flammable liquids, n.o.s. (Isopropanol)
Hazard Class 3
Packing Group: II
Emergency Response Guide Number 128

IATA

UN/ID No UN1993
Proper Shipping Name: Flammable liquids, n.o.s. (Isopropanol)

Hazard Class 3
Packing Group: II

IMDG

UN/ID No UN1993
Proper Shipping Name: Flammable liquids, n.o.s. (Isopropanol)
Hazard Class 3
Packing Group: II

15. REGULATORY INFORMATION

International Inventories**Legend:**

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List

Federal Regulations**SARA 313**

No SARA 313 chemicals are present above the reporting threshold.

SARA 311/312 Hazard Categories

Acute health hazard	Yes
Chronic Health Hazard	No
Fire hazard	Yes
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

State Regulations (RTK)**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations**U.S. EPA Label Information**

EPA Pesticide Registration Number Not applicable

16. OTHER INFORMATION

NFPA Rating

Health hazards 2

Flammability 3

Instability 0

Physical and Chemical Properties -

HMIS Rating

Health hazards 2*

Flammability 3

Physical hazards 0

Personal protection B

Chronic Hazard Star Legend

* = *Chronic Health Hazard*

Prepared by

Environmental Health and Safety Department

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Revision Note

Disclaimer

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.

End of Safety Data Sheet