

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier

Product Name **GRADE & YIELD BROWN**

Other means of identification

Product Code 20571

Recommended use of the chemical and restrictions on use

Recommended Use Brown meat branding ink

Uses advised against Follow the directions for use on the label when applying this product

Details of the supplier of the safety data sheet

Manufacturer Address

PSSI Chemical Innovations
3729 Peddle Hollow Road
Kieler, WI 53812 USA

Emergency telephone number

Company Phone Number 888-671-5366
Emergency Telephone Chemtrec 1-800-424-9300

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Specific target organ toxicity (single exposure)	Category 1 - (H370)
Serious eye damage/eye irritation	Category 2B
Flammable liquids	Category 2

Label elements

Emergency Overview

DANGER

Hazard statements

Causes damage to organs
Causes eye irritation
Highly flammable liquid and vapor



Physical state Liquid **Color** Dark brown / Black **Odor** Alcoholic

Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling
Do not breathe dusts or mists
Do not eat, drink or smoke when using this product
Keep away from heat/sparks/open flames/hot surfaces. No smoking
Keep container tightly closed
Ground/bond container and receiving equipment
Use only non-sparking tools
Take precautionary measures against static discharge
Use explosion-proof electrical/ventilating/lighting/equipment
Wear protective gloves/protective clothing/eye protection/face protection

Precautionary Statements - Response

IF exposed: Call a POISON CENTER or doctor/physician
Specific treatment (see Section 4 on SDS)
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): Take off immediately all contaminated clothing. Rinse skin with water/ shower
In case of fire: Use CO₂, dry chemical, or foam for extinction

Precautionary Statements - Storage

Store locked up. Store in a well-ventilated place. Keep cool

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

Not applicable

Other Information

- May be harmful if swallowed
- Toxic to aquatic life with long lasting effects

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Weight-%
Water	7732-18-5	10-30
Ethyl alcohol	64-17-5	50-70
1,2-Propylene glycol	57-55-6	1-10
Isopropyl alcohol	67-63-0	1-5
Methanol	67-56-1	1-5

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

First aid measures

Eye contact Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after first 5 minutes, then continue rinsing eye. Seek immediate medical attention/advice.

Skin contact Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Wash contaminated clothing and shoes before reuse. Get medical attention if irritation develops and persists.

Inhalation Remove to fresh air. Administer oxygen if breathing is difficult. Call a physician immediately.

Ingestion Do NOT induce vomiting. Drink plenty of water. Never give anything by mouth to an unconscious person. Call a physician immediately.

Most important symptoms and effects, both acute and delayed

Symptoms See Section 11 for symptom information.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Dry chemical. Water spray (fog). Carbon dioxide (CO2). Foam.

Unsuitable extinguishing media None.

Specific hazards arising from the chemical

Flammable. Vapors may travel to source of ignition and flash back.

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

Explosion data

Sensitivity to Mechanical Impact None.

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

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Cool containers with flooding quantities of water until well after fire is out.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Use personal protection recommended in Section 8. Ensure adequate ventilation, especially in confined areas.

For emergency responders Isolate area. Keep unnecessary personnel away.

Environmental precautions

Environmental precautions Prevent entry into waterways, sewers, basements or confined areas. See section 12 for additional ecological information.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so. Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see Section 13).

Methods for cleaning up Use clean non-sparking tools to collect absorbed material. May be ignited by friction, heat, sparks or flames. Soak up with inert absorbent material. Collect spillage. Sweep up and shovel into suitable containers for disposal. Following product recovery, flush area with water.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling

Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Take precautionary measures against static discharges. Do not eat, drink or smoke when using this product. Use personal protection recommended in Section 8. Avoid contact with skin, eyes or clothing. Use only in well-ventilated areas. Avoid breathing vapors or mists. Wash thoroughly after handling. Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Storage Conditions

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep from freezing. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity).

Incompatible materials

Reacts violently with strong oxidants such as nitric acid and silver nitrate causing fire and explosion hazard. Reacts slowly with calcium hypochlorite and ammonia causing fire and explosion hazard.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Ethyl alcohol 64-17-5	STEL: 1000 ppm	TWA: 1000 ppm, 1900 mg/m ³	IDLH: 3300 ppm TWA: 1000 ppm, 1900 mg/m ³
Isopropyl alcohol 67-63-0	STEL: 400 ppm TWA: 200 ppm	TWA: 400 ppm, 980 mg/m ³ (vacated) STEL: 500 ppm, 1225 mg/m ³	IDLH: 2000 ppm TWA: 400 ppm, 980 mg/m ³ STEL: 500 ppm, 1225 mg/m ³
Methanol 67-56-1	STEL: 250 ppm TWA: 200 ppm	TWA: 200 ppm, 260 mg/m ³ (vacated) STEL: 250 ppm, 325 mg/m ³	IDLH: 6000 ppm TWA: 200 ppm, 260 mg/m ³ STEL: 250 ppm, 325 mg/m ³

Appropriate engineering controls

Engineering Controls

Showers, eyewash stations, ventilation system.

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear safety glasses with side shields (or goggles).

Skin and body protection

Wear protective Neoprene™ gloves or rubber gloves. Normal work clothing (long sleeved shirt and long pants) is recommended. Apron recommended.

Respiratory protection

If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn.

General Hygiene Considerations

Wash face, hands and any exposed skin thoroughly after handling. Wash contaminated clothing and shoes before reuse. Do not eat, drink or smoke when using this product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Liquid	Odor	Alcoholic
Appearance	Aqueous solution	Odor threshold	No information available
Color	Dark brown / Black	Remarks • Method	
Property	Values		
pH	9		±1 @ 21°C
Melting point / freezing point	< -6.7 °C / < 20 °F		
Boiling point / boiling range	77 °C / 170.6 °F		
Flash point	16 °C / 60 °F		Closed cup
Evaporation rate	> 1		
Flammability (solid, gas)	No information available		
Flammability Limit in Air			
Upper flammability limit:	No information available		
Lower flammability limit:	No information available		
Vapor pressure	No information available		
Vapor density	No information available		
Specific Gravity	0.885 g/cc		
Water solubility	Completely soluble		
Solubility in other solvents	No information available		
Partition coefficient	No information available		
Autoignition temperature	No information available		
Decomposition temperature	No information available		
Kinematic viscosity	No information available		
Dynamic viscosity	No information available		

Explosive properties	No information available
Oxidizing properties	No information available
VOC Content (%)	66.42% (4.909 lbs/gal)

10. STABILITY AND REACTIVITY

Reactivity

No data available

Chemical stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

Conditions to avoid

Heat, flames and sparks.

Incompatible materials

Reacts violently with strong oxidants such as nitric acid and silver nitrate causing fire and explosion hazard. Reacts slowly with calcium hypochlorite and ammonia causing fire and explosion hazard.

Hazardous Decomposition Products

Carbon monoxide. Carbon dioxide (CO2).

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation

Inhalation of vapors in high concentration may cause irritation of respiratory system. May cause central nervous system depression with nausea, headache, dizziness, vomiting, and incoordination.

Eye contact

Irritating to eyes. Symptoms include itching, burning, redness, and tearing of eyes.

Skin Contact

May cause slight irritation. Prolonged skin contact may defat the skin and produce dermatitis.

Ingestion

May cause drowsiness or dizziness. Ingestion may cause central nervous system depression, gastrointestinal irritation, nausea, vomiting, and diarrhea.

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Ethyl alcohol 64-17-5	= 7060 mg/kg (Rat)	-	= 124.7 mg/L (Rat) 4 h
1,2-Propylene glycol 57-55-6	= 20 g/kg (Rat)	= 20800 mg/kg (Rabbit)	-
Isopropyl alcohol 67-63-0	= 1870 mg/kg (Rat)	= 4059 mg/kg (Rabbit)	= 72600 mg/m ³ (Rat) 4 h
Methanol 67-56-1	= 6200 mg/kg (Rat)	= 15840 mg/kg (Rabbit)	= 22500 ppm (Rat) 8 h

Information on toxicological effects

Symptoms

No information available.

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

Sensitization

No information available.

Germ cell mutagenicity

No information available.

Carcinogenicity

Ethanol has been shown to be carcinogenic in long-term studies only when consumed as alcoholic beverage.

The table below indicates whether each agency has listed any ingredient as a carcinogen:

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

ACGIH (American Conference of Governmental Industrial Hygienists)

A3 - Animal Carcinogen

IARC (International Agency for Research on Cancer)

Group 3 - "not classifiable as human carcinogens"

NTP (National Toxicology Program)

Known - Known Carcinogen

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

X - Present

Reproductive toxicity

No information available.

STOT - single exposure

H370 - Causes damage to organs.

STOT - repeated exposure

No information available.

Aspiration hazard

No information available.

Numerical measures of toxicity - Product Information

Unknown Acute Toxicity

0 % of the mixture consists of ingredient(s) of unknown toxicity

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

Oral LD50

2,183.70 mg/kg

Dermal LD50	7,912.60 mg/kg
Mist	13.507 mg/l
Vapor	1,218.8717 mg/l

12. ECOLOGICAL INFORMATION

Ecotoxicity

Toxic to aquatic life with long lasting effects
 0 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

Chemical Name	Algae/aquatic plants	Fish	Crustacea
Ethyl alcohol 64-17-5	-	12.0 - 16.0: 96 h Oncorhynchus mykiss mL/L LC50 static 13400 - 15100: 96 h Pimephales promelas mg/L LC50 flow-through 100: 96 h Pimephales promelas mg/L LC50 static	9268-14221: 48 h Daphnia magna mg/L LC50 2: 48 h Daphnia magna mg/L EC50 Static
1,2-Propylene glycol 57-55-6	19000: 96 h Pseudokirchneriella subcapitata mg/L EC50	41-47: 96 h Oncorhynchus mykiss mL/L LC50 static 51400: 96 h Pimephales promelas mg/L LC50 static 51600: 96 h Oncorhynchus mykiss mg/L LC50 static 710: 96 h Pimephales promelas mg/L LC50	1000: 48 h Daphnia magna mg/L EC50 Static
Isopropyl alcohol 67-63-0	1000: 72 h Desmodesmus subspicatus mg/L EC50 1000: 96 h Desmodesmus subspicatus mg/L EC50	11130: 96 h Pimephales promelas mg/L LC50 static 9640: 96 h Pimephales promelas mg/L LC50 flow-through 1400000: 96 h Lepomis macrochirus µg/L LC50	13299: 48 h Daphnia magna mg/L EC50
Methanol 67-56-1	-	13500-17600: 96 h Lepomis macrochirus mg/L LC50 flow-through 18-20: 96 h Oncorhynchus mykiss mL/L LC50 static 19500 - 20700: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 28200: 96 h Pimephales promelas mg/L LC50 flow-through 100: 96 h Pimephales promelas mg/L LC50 static	-

Persistence and degradability

No information available.

Bioaccumulation

No information available.

Chemical Name	Partition coefficient
Ethyl alcohol - 64-17-5	-0.32
Isopropyl alcohol - 67-63-0	0.05
Methanol - 67-56-1	-0.77

Mobility

Soluble in water.

Other adverse effects

No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes Disposal should be in accordance with applicable regional, national and local laws and regulations.
Contaminated packaging Dispose of in accordance with federal, state and local regulations.

14. TRANSPORT INFORMATION

DOT

UNID No.	1993
Proper shipping name	Flammable liquids, n.o.s. (contains ethanol and isopropanol)
Hazard Class	3
Packing Group	II
Emergency Response Guide Number	128

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	No information available

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372
Note: Isopropyl alcohol only needs to be reported if it is being manufactured by the strong acid process. Facilities that process or otherwise use isopropyl alcohol are NOT covered and should NOT file a report.

Chemical Name	SARA 313 - Threshold Values %
Methanol - 67-56-1	1.0

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, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Methanol 67-56-1	5000 lb	-	RQ 5000 lb final RQ RQ 2270 kg final RQ

US State Regulations

California Proposition 65

WARNING! "This product can expose you to chemicals which is [are] known to the State of California to cause birth defects or other reproductive harm. For more information go to www.p65warnings.ca.gov." Methanol 67-56-1;

Ethyl alcohol is only a considered a Proposition 65 developmental hazard when it is ingested as an alcoholic beverage

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Ethyl alcohol 64-17-5	X	X	X
1,2-Propylene glycol 57-55-6	X	-	X
Isopropyl alcohol 67-63-0	X	X	X
Methanol 67-56-1	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. OTHER INFORMATION

<u>NFPA</u>	Health hazards 1	Flammability 4	Instability 0	Physical and Chemical Properties None
<u>HMIS</u>	Health hazards 1	Flammability 4	Physical hazards 0	Personal protection B (safety glasses, gloves)

Prepared By Technical Department
Issue Date 30-Apr-2014
Revision Date 02-Mar-2021
Version 5
Revision Note SDS section(s) updated: 3, 9, 11, 13, 15

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 health hazards given on this SDS apply to this product in its concentrated form (as supplied) and may differ significantly at use dilution. The signs and symptoms of exposure apply only to negligence in handling or misuse of the concentrated product and not to the routine exposure of the diluted product under conditions of ordinary use.

End of Safety Data Sheet