

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

**Product identifier**

**Product Name** GRADE & YIELD QD

**Other means of identification**

**Product Code** 20437

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

**Recommended Use** Quick drying marking 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)

Acute toxicity - Oral	Category 4
Acute toxicity - Dermal	Category 4
Serious eye damage/eye irritation	Category 2B
Specific target organ toxicity (single exposure)	Category 1 - (H370)
Flammable liquids	Category 2

**Label elements**

**Emergency Overview**

**Danger**

**Hazard statements**

Harmful if swallowed or in contact with skin  
Causes eye irritation  
Causes damage to organs  
Highly flammable liquid and vapor



**Appearance** Aqueous solution

**Physical state** Liquid

**Odor** Alcoholic

**Precautionary Statements - Prevention**

Wash face, hands and any exposed skin thoroughly after handling  
Do not eat, drink or smoke when using this product  
Wear protective gloves/protective clothing/eye protection/face protection  
Do not breathe dusts or mists  
Keep away from heat/sparks/open flames/hot surfaces  
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

**Precautionary Statements - Response**

Specific treatment (see Section 4 on SDS)  
IF exposed: Call a POISON CENTER or doctor  
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. Call a POISON CENTER or doctor if you feel unwell. Wash contaminated clothing before reuse

IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell. Rinse mouth

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**

- Toxic to aquatic life with long lasting effects

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Chemical Name	CAS No.	Weight-%
Ethyl alcohol	64-17-5	70-76
Water	7732-18-5	10-16
1,2-Propylene glycol	57-55-6	4-6
Isopropyl alcohol	67-63-0	3-5
Methanol	67-56-1	2-6
Trade Secret 1	Proprietary	0.3-0.5
C.I. Acid Blue 9, disodium salt	3844-45-9	0.3-0.5
Trade Secret 2	Proprietary	0.06-0.08

\*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 friction, 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**

<b>Methods for containment</b>	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).
<b>Methods for cleaning up</b>	Use clean non-sparking tools to collect absorbed material. May be ignited by friction, heat, sparks or flames. Collect spillage. Soak up with inert absorbent material. 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 container tightly closed in a dry 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 <sup>3</sup>	IDLH: 3300 ppm TWA: 1000 ppm, 1900 mg/m <sup>3</sup>
Isopropyl alcohol 67-63-0	STEL: 400 ppm TWA: 200 ppm	TWA: 400 ppm, 980 mg/m <sup>3</sup> (vacated) STEL: 500 ppm, 1225 mg/m <sup>3</sup>	IDLH: 2000 ppm TWA: 400 ppm, 980 mg/m <sup>3</sup> STEL: 500 ppm, 1225 mg/m <sup>3</sup>
Methanol 67-56-1	STEL: 250 ppm TWA: 200 ppm	TWA: 200 ppm, 260 mg/m <sup>3</sup> (vacated) STEL: 250 ppm, 325 mg/m <sup>3</sup>	IDLH: 6000 ppm TWA: 200 ppm, 260 mg/m <sup>3</sup> STEL: 250 ppm, 325 mg/m <sup>3</sup>

**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. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

**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**

<b>Physical state</b>	Liquid	<b>Odor</b>	Alcoholic
<b>Appearance</b>	Aqueous solution	<b>Odor threshold</b>	No information available
<b>Color</b>	Dark purple	<b>Remarks • Method</b>	
<b>Property</b>	<b>Values</b>		
<b>pH</b>	7.0		±1 @ 21°C
<b>Melting point / freezing point</b>	-7 °C / 20 °F		
<b>Boiling point / boiling range</b>	77 °C / 170.6 °F		
<b>Flash point</b>	16 °C / 60 °F		
<b>Evaporation rate</b>	> 1		Closed cup kPa @ 20 °C
<b>Flammability (solid, gas)</b>	No information available		
<b>Flammability Limit in Air</b>			
<b>Upper flammability limit:</b>	No information available		
<b>Lower flammability limit:</b>	No information available		
<b>Vapor pressure</b>	No information available		
<b>Vapor density</b>	No information available		
<b>Specific Gravity</b>	0.8498 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 (%)	78.877% (5.592 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 irritation. May cause nausea, diarrhea, and/or vomiting. May cause drowsiness or dizziness. May cause central nervous system depression.

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Ethyl alcohol 64-17-5	= 7060 mg/kg ( Rat )	-	= 124.7 mg/L ( Rat ) 4 h
Water 7732-18-5	> 90 mL/kg ( Rat )	-	-
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 <sup>3</sup> ( Rat ) 4 h
Methanol 67-56-1	= 6200 mg/kg ( Rat )	= 15800 mg/kg ( Rabbit )	= 22500 ppm ( Rat ) 8 h = 64000 ppm ( Rat ) 4 h
Trade Secret 1	= 1840 mg/kg ( Rat )	-	-

**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.

Chemical Name	ACGIH	IARC	NTP	OSHA
Ethyl alcohol - 64-17-5	A3	-	Known	X
Isopropyl alcohol - 67-63-0	-	Group 3	-	X
C.I. Acid Blue 9, disodium salt - 3844-45-9	-	Group 3	-	-

**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 86.08715 % 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 1,933.00 mg/kg  
 Dermal LD50 1,889.00 mg/kg  
 Mist 11.90 mg/l

**12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

Toxic to aquatic life with long lasting effects

0.8666 % 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	-	13400-15100: 96 h Pimephales promelas mg/L LC50 flow-through 12.0-16.0: 96 h Oncorhynchus mykiss mL/L LC50 static 100: 96 h Pimephales promelas mg/L LC50 static	9268-14221: 48 h Daphnia magna mg/L LC50 10800: 24 h Daphnia magna mg/L EC50 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 51600: 96 h Oncorhynchus mykiss mg/L LC50 static 51400: 96 h Pimephales promelas mg/L LC50 static 710: 96 h Pimephales promelas mg/L LC50	1000: 48 h Daphnia magna mg/L EC50 Static 10000: 24 h Daphnia magna mg/L EC50
Isopropyl alcohol 67-63-0	1000: 96 h Desmodesmus subspicatus mg/L EC50 1000: 72 h Desmodesmus subspicatus mg/L EC50	1400000: 96 h Lepomis macrochirus µg/L LC50 9640: 96 h Pimephales promelas mg/L LC50 flow-through 11130: 96 h Pimephales promelas mg/L LC50 static	13299: 48 h Daphnia magna mg/L EC50
Methanol 67-56-1	-	100: 96 h Pimephales promelas mg/L LC50 static 28200: 96 h Pimephales promelas mg/L LC50 flow-through 18-20: 96 h Oncorhynchus mykiss mL/L LC50 static 13500-17600: 96 h Lepomis macrochirus mg/L LC50 flow-through 19500-20700: 96 h Oncorhynchus mykiss mg/L LC50 flow-through	-

**Persistence and degradability**

No information available.

**Bioaccumulation**

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.

Chemical Name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Methanol - 67-56-1	-	Included in waste stream: F039	-	U154

Chemical Name	California Hazardous Waste Status
Ethyl alcohol - 64-17-5	Toxic Ignitable
Isopropyl alcohol - 67-63-0	Toxic Ignitable
Methanol - 67-56-1	Toxic Ignitable

**14. TRANSPORT INFORMATION**

**DOT**

UN/ID 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/NDL Complies

**EINECS/ELINCS** No information available

**Legend:**

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory  
**DSL/NDL** - 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 %
Isopropyl alcohol - 67-63-0	1.0
Methanol - 67-56-1	1.0

**SARA 311/312 Hazard Categories**

<b>Acute health hazard</b>	Yes
<b>Chronic Health Hazard</b>	No
<b>Fire hazard</b>	Yes
<b>Sudden release of pressure hazard</b>	No
<b>Reactive Hazard</b>	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**

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

Chemical Name	California Proposition 65
Ethyl alcohol - 64-17-5	Carcinogen Developmental
Methanol - 67-56-1	Developmental

**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
C.I. Acid Blue 9, disodium salt - 3844-45-9	-	X	-

**U.S. EPA Label Information**

**EPA Pesticide Registration Number** Not applicable

**16. OTHER INFORMATION**

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

**Prepared By** Technical Department

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**Version** 4

**Revision Note**

New information on raw ingredient has become available.

**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**