C TECHNOLOGIES, INC.

SDS - CHEM013 – Measurement Standard

C Technologies, Inc. does not manufacture CHEM013. CHEM013 is manufactured exclusively for C Technologies by GFS Chemicals. Attached you will find the SDS.

SAFETY DATA SHEET

1. Identification

Product Identifier **IN-SPEC® PATENT BLUE COLOR STANDARD, CUSTOM UV-VISIBLE REFERENCE MATERIAL**

Other means of identification

Product code 8416

Recommended use professional, scientific and technical activities: other professional, scientific and technical activities

Recommended restrictions None known

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company Name GFS Chemicals, Inc.
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2. Hazard(s) Identification

Physical hazards	Flammable liquids	Category 4
Health hazards	Reproductive toxicity	Category 1
	Specific target organ toxicity, single exposure	Category 1
	Specific target organ toxicity, repeated exposure	Category 1
Environmental hazards	Not classified.	
OSHA defined hazards	Not classified.	

Label elements

Signal word Danger

Hazard Statement Combustible liquid. May damage fertility or the unborn child. Causes damage to organs. Causes damage to organs through prolonged or repeated exposure.

Precautionary statement

Prevention Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from flames and hot surfaces-No smoking. Do not breathe mist or vapor. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves/protective clothing/eye protection/face protection.

Response In case of fire: Use appropriate media to extinguish. If exposed or concerned: Get medical advice/attention.

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

Disposal Dispose of contents/container to an appropriate treatment and disposal facility in accordance with product characteristics at time of disposal.

Hazard(s) not otherwise classified (HNOC) None known

Supplemental information 1-3% of the mixture consists of component(s) of unknown acute hazards to the aquatic environment. 1-3% of the mixture consists of component(s) of unknown long-term hazards to the aquatic environment.

3. Composition/Information on Ingredients

Mixtures

Chemical Name	Common name and synonyms	CAS number	%
WATER		7732-18-5	90 – 100
METHYL ALCOHOL	WOOD ALCOHOL METHANOL	67-56-1	1 - < 3
PATENT BLUE VIOLET	ACID BLUE 1 CI 42045	129-17-9	< 0.1

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First Aid Measure

Inhalation	Move to fresh air. Call a physician if symptoms develop or persist.
Skin contact	Wash off with soap and water. Get medical attention if irritation develops and persists.
Eye contact	Rinse with water. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth. Get medical attentions if symptoms occur.
Most Important symptoms/effects, acute and delayed	Direct contact with eyes may cause temporary irritation. Prolonged exposure may cause chronic effects.
Indication of immediate medical attention and special treatment needed	Provide general supportive measure and treat symptomatically. Keep victim under observation. Symptoms may be delayed.
General Information	IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

5. Fire Fighting Measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder, Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use a solid water stream as it may scatter and spread fire.
Specific hazards arising from the chemical	The product is combustible, and heating may generate vapors which may form explosive vapor/air mixtures. During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	Combustible liquid.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Stop leak if you can do so without risk. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Should not be released into the environment. Prevent entry into waterways, sewer, basements or confined areas. Clean up in accordance with all applicable regulations. Large Spills: Dike the spilled material, where this is possible. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water. Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.

7. Handling and Storage

Precautions for safe handling	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from open flames, hot surfaces and sources of ignition. Do not breathe mist or vapor. Avoid prolonged exposure. When using, do not eat, drink or smoke. Pregnant or breastfeeding women must not handle this product. Should be handled in closed systems, if possible. Provide adequate ventilation. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Store locked up. Keep away from heat, sparks and open flame. Store in a cool, dry place out of direct sunlight. Store in original tightly closed container. Store in a well-ventilated place. Keep in an area equipped with sprinklers. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure Controls/Personal Protection

Occupational exposure limits

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

U.S. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	CAS #	Type	Value
METHYL ALCOHOL	67-56-1	PEL	260 mg/m3 200 ppm

U.S. ACGIH Threshold Limit Values

Components	CAS #	Type	Value
METHYL ALCOHOL	67-56-1	STEL	250 ppm
		TWA	200 ppm

U.S. NIOSH Pocket Guide to Chemical Hazards

Components	CAS #	Type	Value
METHYL ALCOHOL	67-56-1	STEL	325 mg/m3 250 ppm
		TWA	260 mg/m3 200ppm

Biological Limit Values

ACGIH Biological Exposure Indices

Components	CAS #	Value	Determinant	Specimen	Sampling Time
METHYL ALCOHOL	67-56-1	15 mg/l	Methanol	Urine	*

* For sampling details, please see the source document.

Exposure guidelines

US - California OELs: Skin designation

METHYL ALCOHOL (CAS 67-56-1) Can be absorbed through the skin.

US - Minnesota Haz Subs: Skin designation applies

METHYL ALCOHOL (CAS 67-56-1) Skin designation applies.

US - Tennessee OELs: Skin designation

METHYL ALCOHOL (CAS 67-56-1) Can be absorbed through the skin.

US ACGIH Threshold Limit Values: Skin designation

METHYL ALCOHOL (CAS 67-56-1) Can be absorbed through the skin.

US NIOSH Pocket Guide to Chemical Hazards: Skin designation

METHYL ALCOHOL (CAS 67-56-1) Can be absorbed through the skin.

Appropriate engineering controls	Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

Eye/face protection	Wear safety glasses with side shields (or goggles).
Skin protection	
Hand protection	Wear appropriate chemical resistant gloves.
Other	Wear appropriate protective clothing. Use of an impervious apron is recommended.
Respiratory protection	If ventilation is not sufficient to effectively prevent buildup of aerosols or mists, appropriate NIOSH/MSHA respiratory protection must be provided. Chemical respirator with organic vapor cartridge.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	Observe any medical surveillance requirements. When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical & Chemical Properties

Appearance	Clear
Physical state	Liquid
Form	Liquid
Color	Dark blue
Odor	Slight
Odor threshold	Not available
pH	Not available.
Melting point/Freezing point	< 32 °F (< 0 °C) estimated
Initial boiling point and boiling range	212 °F (100 °C) estimated
Flash point	> 141.8 °F (> 61.0 °C)
Evaporation rate	Not available
Flammability (solid, gas)	Not applicable
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available
Flammability limit – upper (%)	Not available
Explosive limit – lower (%)	Not available
Explosive limit – upper (%)	Not available
Vapor pressure	Not available
Vapor density	Not available
Relative density	Not available
Solubility (ies)	
Solubility (water)	Not available
Partition coefficient (n-octanol water)	Not available
Auto-ignition temperature	Not available
Decomposition temperature	Not available

Viscosity	Not available

Other Information

Density	1.00 g/cm3 estimated
Explosive Properties	Not explosive
Flammability Class	Combustible IIIA estimated
Flash Point class	Combustible IIIA
Oxidizing properties	Not oxidizing.
Percent volatile	> 99 %
Specific gravity	1 estimated
VOC	< 2.5 %

10. Stability & Reactivity Information

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	May include oxides of carbon

11. Toxicological Information

Information on likely routes of exposure

Inhalation	May cause damage to organs by inhalation. May cause damage to organs through prolonged or repeated exposure by inhalation.
Skin contact	No adverse effects due to skin contact are expected.
Eye contact	Direct contact with eyes may cause temporary irritation.
Ingestion	Expected to be a low ingestion hazard.
Symptoms related to the physical, chemical and toxicological characteristics	Direct contact with eyes may cause temporary irritation.

Information on toxicological effects

Acute toxicity

Components	Species	Test Results
METHYL ALCOHOL (CAS 67-56-1)		
Acute		
Dermal		
LD50	Rabbit	15800mg/kg
Inhalation		
LC50	Rat	87.5 mg/l, 6 Hours
Oral		
LD50	Rat	5628 mg/kg

Skin corrosion/irritation Prolonged skin contact may cause temporary irritation.

Serious eye damage/eye irritation May irritate eyes.

Respiratory or skin sensitization

Respiratory sensitization Not a respiratory sensitizer.

Skin sensitization This product is not expected to cause skin sensitization.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity Not classifiable as to carcinogenicity to humans.

IARC Monographs. Overall Evaluation of Carcinogenicity

PATENT BLUE VIOLET (CAS 129-17-9) 3 Not classifiable as to carcinogenicity to humans.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

Reproductive toxicity May damage fertility or the unborn child.

Specific target organ toxicity - single exposure Causes damage to organs.

Specific target organ toxicity - repeated exposure Causes damage to organs through prolonged or repeated exposure.

Aspiration hazard Not an aspiration hazard.

Chronic effects Causes damage to organs through prolonged or repeated exposure. Prolonged inhalation may be harmful.

12. Ecological Information

Ecotoxicity This product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Components		Species	Test Results
METHYL ALCOHOL (CAS 65-56-1)			
Aquatic			
Crustacea	EC50	Water Flea (Daphnia magna)	> 10000 mg/l, 48 hours
Fish	LC50	Bluegill (Lepomis macrochirus)	13500 - 17600 mg/l, 96 hours

Persistence and degradability No data is available on the degradability of any ingredients in the mixture.

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)

METHYL ALCOHOL -0.77

PATENT BLUE VIOLET 0.572

Mobility in soil No data available.

Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal Considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport Information

DOT	Not regulated as dangerous goods.
IATA	Not regulated as dangerous goods.
IMDG	Not regulated as dangerous goods.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not established.

15. Regulatory Information

US federal regulations: This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
Not regulated

CERCLA/SARA Hazardous Substances
METHYL ALCOHOL (CAS 67-56-1) Listed.

SARA 304 Emergency release notification
Not regulated

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
Not Regulated

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 extremely hazardous substance
Not Listed

SARA 311/312	Yes
Hazardous chemical	
Classified hazard	Flammable (gases, aerosols, liquids, or solids)
Categories	Reproductive toxicity Specific target organ toxicity (single or repeated exposure)

SARA 313 (TRI Reporting)

Chemical Name	**CAS Number**	**% by wt.**

METHYL ALCOHOL 67-56-1 1 - <3

Other Federal Regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

METHYL ALCOHOL (CAS 67-56-1)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations

California Proposition 65

WARNING: This product can expose you to METHYL ALCOHOL, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

California Proposition 65 - CRT: Listed date/Developmental toxin

METHYL ALCOHOL (CAS 67-56-1) Listed: March 16, 2012

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

METHYL ALCOHOL (CAS 67-56-1)

International Inventories

Country(s) or region	Inventory name	on inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of New and Existing Chemicals (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

* A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s).
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing
country(s).

16. Other Information

Manufacturer's Issue date	May-14-2015
Manufacturer's Revision Date	July-26-2018
Manufacturer's Version No.	04
Disclaimer	GFS Chemicals, Inc. cannot anticipate all conditions under which this

	information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.
Revision information	Hazard(s) identification: Response Handling and storage: Precautions for safe handling Handling and storage: Conditions for safe storage, including any incompatibilities Exposure controls/personal protection: PPE Symbols Stability and reactivity: Conditions to avoid Toxicological information: Acute toxicity Toxicological information: Inhalation Regulatory information: California Proposition 65