

Section 1 – Product and Company Identification

Product Name	FL33 Verification Fluid
Part Number	600-00170
Intended Use	Reference material for laboratory use only.
Manufacturer/Distributor	AMETEK - Spectro Scientific One Executive Drive Chelmsford, MA 01824 United States of America www.spectrosci.com Telephone: 1-978-486-0123 E-mail: service.spectrosci@ametek.com
In case of emergency, contact	CHEMTREC (A/C 619107) 1-800-424-9300 (US & Canada) 1-703-741-5970 (International)

Section 2 – Hazard(s) Identification

Classification of the substance or mixture:

Physical Hazards	Not classified
Health Hazards	Aspiration Hazard - Category 1
Environmental Hazards	Hazardous to the aquatic environment, acute hazard - Category 3 Hazardous to the aquatic environment, long-term hazard - Category 3
OSHA Defined Hazards	Not classified.

Label Elements

Signal Word



Danger

Hazard Statement May be fatal if swallowed and enters airways. Harmful to aquatic life with long lasting effects.

Precautionary Statement

Prevention Avoid release to the environment.

Response	If swallowed: Immediately call poison control center/doctor. Do NOT induce vomiting
Storage	Store locked up.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazards Not Otherwise Classified (HNOC)	Repeated exposure may cause skin dryness or cracking.
Supplemental Information	None.

Section 3 – Composition / Information on Ingredients		
Mixtures		
Chemical Name	CAS #	%
Distillates (petroleum), hydrotreated light naphthenic	64742-53-6	70-80
Distillates (petroleum), hydrotreated middle	64742-46-7	25-35
Distillates (petroleum), hydrotreated light	64742-47-8	15-25
Butylated hydroxytoluene	128-37-0	0.25-1
Phenol, isobutylated, phosphate (3:1)	68937-40-6	0.25-1
Composition comments: The specific chemical identity and/or exact percentage of component(s) have been withheld as a trade secret. All concentrations are in percent by weight. Components not listed are either non-hazardous or are below reportable limits.		

Section 4 – First Aid Measures	
Inhalation	Move to fresh air. Seek medical attention if symptoms develop or persist.
Skin Contact	Wash thoroughly with soap and water. Seek medical attention if irritation develops or persists.
Eye Contact	Remove contact lenses. Flush eye thoroughly with running water. Seek medical attention if irritation develops or persists.
Ingestion	Seek medical attention or call poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content does not get into the lungs.
Most important delayed symptoms / effects, acute and delayed	Swallowing of the liquid, or vomiting as a result, may result in aspiration into the lungs. Aspiration may cause pulmonary edema and pneumonitis. Be aware that symptoms of lung edema (shortness of breath) may develop up to 24 hours after exposure. Repeated exposure may cause skin dryness or cracking.

Indication of immediate medical attention and special treatment needed Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

General Information Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

Section 5 – Fire-Fighting Measures

Suitable Extinguishing Media Use suitable extinguishing media (e.g., foam, dry chemical powder, carbon dioxide (CO₂), sand, earth).

Unsuitable Extinguishing Media Do not use water jet as an extinguisher, as this will spread the fire.

Specific Hazards arising from the Chemical 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.

Firefighting Equipment / Instructions Cool containers exposed to heat with water spray and remove container if no risk is involved.

Specific Methods Use standard firefighting procedures and consider the hazards of other involved materials.

General Fire Hazards Will burn if involved in a fire.

Section 6 – Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. 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

Large Spills: Stop the flow of material, if this is without risk. 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. Clean contaminated area with oil-removing material.

Small Spills: Wipe up with absorbent material. 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 release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

Section 7 – Handling and Storage

Precautions for Safe Handling Do not taste or swallow. Avoid prolonged or repeated contact with skin. Avoid prolonged exposure. Use only in well-ventilated areas. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Observe good industrial hygiene practices. Eating, drinking, and smoking should be prohibited in areas where this material is handled, stored, and processed.

Conditions for Safe Storage, including any Incompatibilities Store locked up. Keep away from heat and sources of ignition. 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).

Section 8 – Exposure Controls/Personal Protection

Occupational Exposure Limits

Component	Limit	Reference
Distillates (petroleum), hydrotreated light naphthenic (CAS 64742-53-6)	5 mg/m ³ (PEL)	OSHA Table Z-1 – 29 CFR 1910.1000 (Mist.)
	5 mg/m ³ (TWA)	US ACGIH Threshold Limit Values
	1800 mg/m ³ (Ceiling)	US NIOSH Pocket Guide to Chemical Hazards
Distillates (petroleum), hydrotreated middle (CAS 64742-46-7)	5 mg/m ³ (PEL)	OSHA Table Z-1 – 29 CFR 1910.1000 (Mist.)
	5 mg/m ³ (TWA)	US ACGIH Threshold Limit Values (Inhalable fraction)
	10 mg/m ³ (STEL)	US NIOSH Pocket Guide to Chemical Hazards (Mist.)
	5 mg/m ³ (TWA)	US NIOSH Pocket Guide to Chemical Hazards (Mist.)
Butylated hydroxytoluene (CAS 128-37-0)	2 mg/m ³ (TWA)	US ACGIH Threshold Limit Values (Inhalable fraction and vapor)
	10 mg/m ³ (TWA)	US NIOSH Pocket Guide to Chemical Hazards
Distillates (petroleum), hydrotreated light (CAS 64742-47-8)	100 mg/m ³ (TWA)	US NIOSH Pocket Guide to Chemical Hazards

Biological Limit Values No biological exposure limits noted for the ingredients.

Engineering Controls Use good industrial hygiene practices. If airborne dust is generated, ensure adequate ventilation.

Eye / Face Protection Safety glasses with side shields (or goggles).

Hand Protection	Wear appropriate chemical resistant gloves when handling material. Full contact glove material: PVC, neoprene, nitrile rubber; layer thickness >0.35 mm; breakthrough time 240 min. Splash contact glove material: nitrile; layer thickness >0.35 mm; breakthrough time 240 min.
Skin Protection	Wear suitable protective clothing. Chemical / oil resistant clothing is recommended.
Respiratory Protection	Use respiratory protection if exposure exceeds established limits.
Thermal Hazards	Wear appropriate thermal protective clothing, when necessary.
General Protective & Hygienic Measures	Wash hands with soap and water after handling. Do not store with food or drink.

Section 9 – Physical and Chemical Properties			
Appearance	Red Liquid	Vapor Density	Not available
Odor	Not available	Relative Density	Not available
Melting Point	Not available	Solubility in Water	Not available
Initial Boiling Point	Not available	Partition Co-efficient	Not available
Flash Point	Not available	Autoignition Temperature	Not available
Evaporation Rate	Not available	Decomposition Temperature	Not available
Flammability	Not applicable	Explosive Properties	Not explosive
Lower Explosive Limit	Not available	Viscosity	<=20.5 cm ² /s (40°C / 104°F)
Upper Explosive Limit	Not available	Oxidizing Properties	Not oxidizing
Vapor Pressure	Not available	pH	Not applicable

Section 10 – Stability and Reactivity	
Reactivity	The product is stable and non-reactive under normal conditions of use, storage, and transport.
Chemical Stability	Stable under normal conditions.
Possibility of Hazardous Reactions	No dangerous reaction known under normal use.
Conditions to Avoid	Keep away from heat, sparks and open flame or any other ignition source. Protect from direct sunlight or ultraviolet light. Contact with incompatible materials.
Incompatible Materials	Strong oxidizing agents.
Hazardous Decomposition Products	Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors. Soot.

Section 11 – Toxicological Information

Information on likely routes of exposure

Inhalation	Inhalation of oil mist or vapors formed during heating of the product will irritate the respiratory system and provoke coughing.
Skin Contact	Repeated exposure may cause skin dryness or cracking.
Eye Contact	Direct contact with eyes may cause temporary irritation.
Ingestion	Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia.

Symptoms related to the physical, chemical and toxicological characteristics Swallowing or vomiting of the liquid may result in aspiration into the lungs. Aspiration may cause pulmonary edema and pneumonitis. Be aware that symptoms of lung oedema (shortness of breath) may develop up to 24 hours after exposure. Repeated exposure may cause skin dryness or cracking.

Information on Toxicological Effects

Acute Toxicity - Not expected to be acutely toxic.

Component	Species	Test Results
Butylated hydroxytoluene	Rat	> 2000 mg/kg - Acute Dermal LD50
	Rat	> 2930 mg/kg - Acute Oral LD50

Skin Corrosion / Irritation	Repeated exposure may cause skin dryness or cracking
Serious Eye Damage / Eye Irritation	Direct contact with eyes may cause temporary irritation.
Respiratory Sensitization	Not a respiratory sensitizer.
Skin Sensitization	Not classified.
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	Butylated hydroxytoluene. 3 – Not Classifiable as to carcinogenicity to humans. Distillates (petroleum), hydrotreated light naphthenic. 3 – Not Classifiable as to carcinogenicity to humans.
NTP Report on Carcinogens	Distillates (petroleum), hydrotreated light naphthenic. Known to be human carcinogen.
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)	Not listed.

Reproductive Toxicity	This product is not expected to cause reproductive or developmental effects.
Specific Target Organ Toxicity	Single Exposure - Not Classified. Repeated Exposure – Not Classified.
Aspiration Hazard	May be fatal if swallowed and enters airway.
Chronic Effects	Prolonged inhalation may be harmful.
Further Information	Symptoms may be delayed.

Section 12 – Ecological Information		
Ecotoxicity	Harmful to aquatic life with long lasting effects.	
Component	Species	Test Results
Butylated hydroxytoluene	Daphnia magna	0.07 mg/l, 21 days – Chronic Crustacea NOEC
Persistence and Degradability	No data available.	
Bioaccumulative Potential	No data available on bioaccumulation.	
Mobility in Soil	No data available for this product.	
Other Adverse Effects	Oil spills are generally hazardous to the environment.	

Section 13 – Disposal Considerations	
Disposal Instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.
Local Disposal Regulations	Dispose in accordance with all applicable regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner.
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.

Section 14 – Transport Information

This material is not regulated as a hazardous material / dangerous goods for shipment.

Section 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, Subpart D) – Not Regulated

CERCLA Hazardous Substance List (40 CFR 302.4) – Not Listed

SARA 304 Emergency Release Notification – Not Regulated

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053) – Not Listed

Toxic Substances Control Act (TSCA) – All components of the mixture on the TSCA 8(b) inventory are designated “active”

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely Hazardous substance – Not Listed

SARA 311/312 Hazardous Chemical – Yes (Aspiration Hazard)

SARA 313 (TRI Reporting) – Not Regulated

Other Federal Regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List – Not Regulated

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

Massachusetts RTK – Substance List Butylated hydroxytoluene, Distillates (petroleum), hydrotreated light, Distillates (petroleum), hydrotreated light, naphthenic, Distillates (petroleum), hydrotreated middle

New Jersey Worker and Community Right-to-Know Act Butylated hydroxytoluene, Distillates (petroleum), hydrotreated light

Pennsylvania Worker and Community Right-to-Know Act Butylated hydroxytoluene, Distillates (petroleum), hydrotreated light, Distillates (petroleum), hydrotreated middle

Rhode Island - RTK Butylated hydroxytoluene, Distillates (petroleum), hydrotreated light, Distillates (petroleum), hydrotreated light, naphthenic, Distillates (petroleum), hydrotreated middle

California Proposition 65 California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals

currently listed as carcinogens or reproductive toxins. For more information go to www.P65Warnings.ca.gov.

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

- Distillates (petroleum), hydrotreated light (CAS 64742-47-8)
- Distillates (petroleum), hydrotreated light naphthenic (CAS 64742-53-6)
- Distillates (petroleum), hydrotreated middle (CAS 64742-46-7)
- Phenol, isobutylenated, phosphate (3:1) (CAS 68937-40-6)

International Inventories

Country(s) or Region	Inventory Name	On Inventory (Yes/No)*
Australia	Australian Inventory of Industrial Chemicals (AICIS)	Yes
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	Europe European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
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)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA)	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).

Section 16 – Other Information

AMETEK - Spectro Scientific 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.

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