

# Superior<sup>®</sup> SL Smoke Fluid

## Safety Data Sheet

Revision Date: 10/29/2015  
*replaces all previous editions*

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### Section 1. Product and Company Identification

#### 1.1 Product Identifiers:

Product Name: Superior<sup>®</sup> SL Smoke Fluid

#### 1.2 Recommended use:

Smoke generating fluid exclusively for use in approved professional smoke generating equipment, for Sewer Smoke Testing and other approved professional air flow marking applications. **For Professional Use ONLY. Use only as directed.**

#### 1.3 Details of the supplier of the Safety Data Sheet

Supplier: Superior Signal Company LLC  
P.O. Box 96, Spotswood, NJ, USA

Phone: 732-251-0800

Fax: 732-251-9442

Email: info@superiorsignal.com

#### 1.4 Emergency telephone number:

Emergency Phone: 732-251-0800

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### Section 2. Hazards Identification

#### 2.1 Globally Harmonized System (GHS) Hazard Classification:

OSHA Classification in accordance with 29 CFR 1910 (OSHA HCS): hazardous.

This SDS meets the requirements of GHS Revision 3, HCS 2012 (29 CFR 1910.1200).

GHS Classifications: Aspiration Hazard, Category 1.

#### 2.2 GHS Label elements including precautionary statements:

Hazard pictograms:



GHS Signal word: Danger

Hazard Statement: May be fatal if swallowed and enters airways.

Precautionary Statements:

**Prevention:** Do not breathe gas/mist/vapors/spray. Wear protective gloves, eye or face protection. Avoid release to the environment. When used as directed, product does not pose hazard.

**Response:**

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Do NOT induce vomiting.

If exposed or concerned, get medical advice/attention.

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician if you feel unwell.

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IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing. If skin irritation occurs, get medical attention.

**Storage:** Store in accordance with local/regional/national/international regulation. Store locked up.

**Disposal:** Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal. See section 13 of this SDS for disposal instructions.

## 2.3 Other hazards which are not included in the classification criteria:

Vapor concentrations above recommended exposure levels are irritating to the eyes and the respiratory tract, may cause headaches and dizziness, are anesthetic, and may have other central nervous system effects. Prolonged or repeated skin contact without proper cleaning can clog the pores of the skin resulting in disorders such as oil acne/folliculitis.

Prolonged/repeated contact may cause defating of the skin which can lead to dermatitis. Used oil may contain harmful impurities. Ingestion may result in nausea, vomiting, and/or diarrhea.

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## Section 3. Composition / Information on Ingredients

Substance

Chemical Name	CAS Number	Weight - %
Petroleum distillates, hydro treated light	64742-47-8	100
Products containing mineral oil with less than 3% DMSO extract as measured by IP 346		

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## Section 4. First-Aid Measures

General advice: Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

**4.1 Inhalation:** Move to fresh air. If breathing is difficult, give oxygen and continue to monitor. If not breathing, give artificial respiration. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. Call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt, or waistband.

**4.2 Skin contact:** Wash skin with plenty of soap and water. Remove contaminated clothing and shoes. If symptoms persist, seek medical attention. Wash contaminated clothing before use.

**4.3 Eye contact:** Immediately flush eyes thoroughly with water for several minutes. Remove contact lenses after one to two minutes and continue flushing for several more minutes. If redness, itching or burning sensation develops, seek medical attention.

**4.4 Ingestion: Aspiration hazard if swallowed.** Material can enter lungs and cause damage. If any of the following delayed signs and symptoms appear within the next 6 hours, transport to the nearest medical facility: fever greater than 101 ° F (38.3°C), shortness of breath, chest congestion or continued coughing or wheezing. Give nothing by mouth. Get medical attention immediately. Call a poison center or physician. DO NOT INDUCE VOMITING. Never give anything by mouth to an unconscious person. Gently wipe or rinse the inside of the mouth with water. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt, or waistband.

**4.5 Most important acute and delayed symptoms/effects:** Aspiration: If material enters lungs, signs and symptoms may include coughing, choking, wheezing, difficulty in breathing, chest congestion, shortness of breath, and/or fever greater than 101 ° F (38.3 ° C). The onset of respiratory symptoms may be delayed for several hours after exposure.

Eye Contact: Excessive exposure may cause temporary redness and mild irritation to eyes.

Skin Contact: May cause redness, defating and cracking of skin.

Ingestion: May cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

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Inhalation: May cause central nervous system (CNS) depression. May cause drowsiness and dizziness, nausea or vomiting, headache, drowsiness/fatigue, dizziness/vertigo, unconsciousness.

Chronic health effects: Chronic exposure may cause respiratory irritation.

Relevant routes of exposure: Eye, skin, inhalation.

**4.6 Indication of immediate medical attention and notes for physicians:** Persons with pre-existing skin, eye, or respiratory conditions may be at an increased risk from the irritant properties of this material. Attending physician should treat exposed patients symptomatically. Aspiration during swallowing or vomiting may severely damage the lungs. If evacuation of stomach contents is necessary, use method least likely to cause aspiration.

**Protection of First Aiders:** No action should be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

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## Section 5. Fire-Fighting Measures

### 5.1 Flammable Properties:

Flash point: 122°C / 252°F (COC)

Lower explosion limit: Not available

Upper explosion limit: Not available

Thermal decomposition: When heated, hazardous gases may be released including sulfur compounds.

Fire and Explosion Hazard: Material will burn. **Not a fire or explosion hazard.**

### 5.2 Extinguishing media:

**Suitable extinguishing media:** Combustible material. Use CO<sub>2</sub>, dry chemical, or foam. Water can be used to cool and protect product.

**Unsuitable extinguishing media:** Forceful application of fire extinguishing agents or water spray may spread burning material.

### 5.3 Special hazards arising from the chemical:

**Unusual fire and explosion hazards:** When heated, hazardous gases may be released including: sulfur dioxide. A solid stream of water will spread the burning material. Material creates a special hazard because it floats on water. This material is harmful to aquatic life.

**Hazardous Combustion Products:** During a fire, smoke may contain the original material in addition to combustion products of varying composition, which may be toxic and/or irritating.

### 5.4 Special protective equipment and precautions for firefighters:

**Fire Fighting Procedures:** Keep personnel away. Isolate fire and deny unnecessary entry. Do not apply direct water stream. Use fine water spray or foam. Cool surroundings with water to localize fire zone.

**Special Protective Equipment for Firefighters:** No special protective equipment required. Wear positive-pressure self-contained breathing apparatus (SCBA) and protective firefighting clothing (includes firefighting helmet, coat, trousers, boots, and gloves) to protect against other burning material. If protective equipment is not available or not used, fight fire from a protected location or safe distance.

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## Section 6. Accidental Release Measures

### 6.1 Personal precautions, protective equipment and emergency procedures:

Use personal protective equipment. Avoid breathing mists. Avoid skin and eye contact. Evacuate personnel to safe areas.

Spilled material may cause a slipping hazard. Use appropriate safety equipment. See Section 8 for information on personal protection equipment.

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## 6.2 Environmental precautions and protective procedures:

Prevent further leakage or spillage if safe to do so. Do not let product enter drains, sewers, waterways, and/or groundwater. In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

## 6.3 Methods and material for containment and cleaning up:

Contain spilled material if possible. Eliminate all ignition sources including smoking, flares, sparks or flames in immediate area. All equipment used when handling the product must be grounded. Collect in suitable and properly labeled containers. See Section 13, Disposal Considerations, for additional information.

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## Section 7. Handling and Storage

### 7.1 Precautions for safe handling:

Avoid breathing process mists. Avoid contact with eyes, skin and clothing. Use with adequate ventilation. Material can accumulate static charges which may cause an electrical spark (ignition source). When the material is handled in bulk, an electrical spark could ignite any flammable vapors from liquids or residues that may be present (e.g., during switch-loading operations). Use proper bonding and/or ground procedures. However, bonding and grounds may not eliminate the hazard from static accumulation. Consult local applicable standards for guidance. Do not eat, drink and/or smoke in work areas. Wash hands after use. Remove contaminated clothing and protective equipment before entering eating areas.

### 7.2 Conditions for safe storage (including any incompatibilities):

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Store in accordance with good manufacturing practices. Storage containers should be grounded and bonded. Fixed storage containers, transfer containers and associated equipment should be grounded and bonded to prevent accumulation of static charge. Odorous and toxic fumes may form from the decomposition of this product if stored at temperatures in excess of 113° F (45° C) for extended periods of time or if heat sources in excess of 250° F (121° C) are used. Store away from incompatible materials. See section 10 for incompatible materials.

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## Section 8. Exposure Controls and Personal Protection

Consult with a Health and Safety Professional for specific selections.

### 8.1 Control parameter: Occupational exposure limits

ACGIH TLV (Absorbed through skin.) TWA: 200 mg/m<sup>3</sup>, (as total hydrocarbon vapor) 8 hours.

NIOSH 100 mg/m<sup>3</sup> TWA 10 hour(s)

OSHA PEL: 100 PPM

Oil mist, mineral:

ACGIH TWA [Mist]: 5 mg/m<sup>3</sup>

ACGIH STEL [Mist]: 10 mg/m<sup>3</sup>

**8.2 Appropriate engineering controls:** Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

### 8.3 Personal protective equipment:

**Eye protection:** Use safety glasses with side shields.

**Body protection:** No special clothing is required. See Hand protection.

**Hand protection:** Contact should be minimized. Use butyl rubber, Nitrile, or neoprene gloves. Use good industrial hygiene practices. In case of skin contact, wash hands and arms with soap and water. Use caution when opening covers of storage and transportation containers. 3-nitroaniline crystals may be present on the interior surface of these openings. 3-nitroaniline is toxic by dermal exposure.

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**Respiratory protection:** Concentration in air determines the level of respiratory protection needed. When airborne concentrations exceed the exposure limit, use only NIOSH certified respiratory equipment. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations.

**Other:** Remove contaminated clothing and wash before reuse. For non-fire emergencies, respiratory protection may be necessary and wear appropriate protective clothing to avoid contact with material. Have eyewash station in work area. Do not consume or store food in the work area. Wash hands before smoking or eating. Concentration of H<sub>2</sub>S in tank headspaces may reach hazardous values, especially in case of prolonged storage. This situation is especially relevant for those operations which involve direct exposure to the vapors in the tank.

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## Section 9. Physical and Chemical Properties

Physical state: Liquid  
Color: Bright and Clear  
Odor: Characteristic of Petroleum  
Odor threshold: No Data Available  
pH: No Data Available  
Freezing Point: No Data Available  
Boiling Point / Range: No Data Available  
Flash Point (COC): 122°C / 252°F  
Evaporation rate: No Data Available  
Upper Explosive Limits (% air): No Data Available  
Lower Explosive Limits (% air): No Data Available  
Flammability (solid, gas): Not Applicable  
Vapor pressure: <1 mm Hg  
Vapor density (air=1): > 1  
Relative Density: 0.85  
Auto-ignition temperature: Not Determined  
Decomposition temperature: Not Determined  
Solubility in water: Negligible, 0-1 %  
Partition coefficient, n-octanol/water: > 4  
Viscosity @ 40°C: No Data  
Viscosity @ 100°C: No Data

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## Section 10. Stability and Reactivity

**10.1 Chemical stability:** Stable under normal temperature conditions and recommended use.

**10.2 Possibility of hazardous reactions:** No hazardous reactions if stored and handled as prescribed.

**10.3 Conditions to avoid:** Avoid heat, sparks, open flames and other ignition sources.

**10.4 Incompatible materials:** Strong oxidizers

**10.5 Hazardous decomposition products:**

Decomposition products depend upon temperature, air supply and the presence of other materials. Smoke, carbon monoxide, sulfur oxides, hydrogen sulfide, aldehydes, and other petroleum decomposition products in the case of incomplete combustion. Processing may release fumes and other decomposition products. Fumes can be irritating.

**10.6 Hazardous Polymerization:** Will not polymerize.

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## Section 11. Toxicological Information

11.1 Information on the likely routes of exposure: Inhalation, ingestion, skin and eye contact, central nervous system.

11.2 Information on toxicological effects:

Acute toxicity (similar material)

Oral LD50: > 5,000 mg/kg - Rat

Inhalation 4 h LC50: > 5.2 mg/l - Rat

Dermal LD50: > 2,000 mg/kg - Rabbit

Skin corrosion/irritation:	Causes mild skin irritation (Rabbit) Classification: Not classified as irritant
Serious eye damage/irritation:	Slight or no eye irritation (Rabbit) Classification: Not classified as irritant
Inhalation:	May cause mild respiratory tract irritation Classification: Not classified
Respiratory sensitization:	Did not cause sensitization on laboratory animals, mouse Classification: Does not cause respiratory sensitization
Skin sensitization:	Did not cause sensitization on laboratory animals, guinea pig Classification: Does not cause skin sensitization
Ingestion:	May cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

Repeated dose toxicity

Inhalation Rat: No toxicologically significant effects were found.

Mutagenicity: Tests on bacterial or mammalian cell cultures did not show mutagenic effects

Reproductive Toxicity: No known significant effects or critical hazards.

Teratogenicity: No known significant effects or critical hazards.

Specific target organ toxicity (STOT):

STOT-single exposure: Classification: Not classified

STOT -repeated exposure: Classification: Not classified

Aspiration Hazard: Risk of chemical pneumonia after aspiration. May be fatal if swallowed and enters airways. (Based on physical data.)

Chronic effects: Prolonged inhalation may be harmful. May cause headaches and dizziness, is an anesthetic and may have other central nervous system effects.

Further information: Prolonged and/or repeated skin contact with low viscosity materials may defat the skin resulting in possible irritation and dermatitis

Symptoms related to the physical, chemical and toxicological characteristics:

Adverse symptoms may include the following:

Eye contact: Pain or irritation, watering, redness

Inhalation: Nausea or vomiting, headache, drowsiness/fatigue dizziness/vertigo, unconsciousness

Skin contact: Irritation, redness, defatting of skin

11.3 Carcinogenicity: Not considered a carcinogen by IARC, NTP, OSHA, ACGIH.

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## Section 12. Ecological Information

### TOX DATA

TEST	VALUE		SPECIES	SOURCE
LC50	45mg/L	96H	Pimephales promelas	IUCLID
LC50	2.2mg/L	96H	Lepomis macrochirus	EPA
LC50	2.4mg/L	96H	Oncorhynchus mykiss	EPA

**12.1 Mobility:** Partly evaporates from water or soil surfaces, but a significant proportion will remain after one day. If product enters soil, one or more constituents will be mobile and may contaminate groundwater. Floats on water. Large volumes may penetrate soil and could contaminate groundwater

**12.2 Aquatic and terrestrial ecotoxicity:** Toxic long-term

**12.3 Persistence and degradability:** Readily degradable

**12.4 Bioaccumulative potential:** Low bioaccumulation expected. Contains constituents with the potential to bio accumulate.

**12.5 Other adverse effects:** Films formed on water may affect oxygen transfer and damage organisms.

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## Section 13. Disposal Considerations

### 13.1 Disposal methods:

Uncontaminated discarded product is not a hazardous waste under RCRA. Do not dump into any sewers, on the ground or into any body of water. All disposal practices must comply with all federal, state, and local laws and regulations. Offer surplus and non-recyclable material to a licensed disposal company. Contact a licensed professional waste disposal service for disposal.

### 13.2 Container disposal:

Empty container retains product residue. Observe all hazard precautions. Do not distribute, make available, furnish or reuse empty container except for storage and shipment of original product. Remove all product residue. Puncture or otherwise destroy empty container and dispose of in a facility permitted for nonhazardous waste.

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## Section 14. Transport Information

**14.1 UN number:** Not regulated

**14.2 UN proper shipping name:** Not regulated

**14.3 Transport hazard class:** Not regulated

**14.4 Packaging group (if applicable):** Not regulated

**14.5 Marine Pollutant (Yes/No):** No

**14.6 Special precaution:** No information available

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## Section 15. Regulatory Information

### U.S. Regulations

**15.1 USA TSCA:** Listed on the TSCA Inventory.

### 15.2 SARA Section 311/312 Hazard Categories:

Acute Hazard: Yes

Chronic Hazard: Yes

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Fire Hazard: No  
Reactive Hazard: No  
Sudden Pressure Release: No

## 15.3 CERCLA Hazardous Substance SARA Section 304 Release Reporting:

<u>Component(s)</u>	<u>Reportable Quantity</u>
None	

## 15.4 SARA Section 302 Extremely Hazardous Substances:

<u>Component(s)/CAS Number</u>	<u>Concentration</u>	<u>Min</u>	<u>Max</u>
None			

## 15.5 SARA Section 313 Toxic Chemicals:

<u>Component(s)/CAS Number</u>	<u>Reporting Threshold</u>	<u>Min – Concentration – Max</u>
None		

This material is classified as an oil under Section 311 of the Clean Water Act (CWA) and the Oil Pollution Act of 1990 (OPA). Discharges or spills which produce a visible sheen on waters of the United States, their adjoining shorelines, or into conduits leading to surface waters must be reported to the EPA's National Response Center at (800) 424-8802.

**15.6 California Proposition 65:** This product is not known to contain chemical(s) known to the State of California to cause cancer or reproductive harm.

**15.7 Pennsylvania Worker and Community Right To Know Act: Hazardous Substances:** NONE

**15.8 New Jersey Worker and Community Right To Know Act: Hazardous Substances:** NONE

## 15.9 International Regulations:

### Canadian Regulations:

WHMIS Statement: This product has been classified in accordance with the hazard criteria of the *Controlled Products Regulations* and the SDS contains all the information required by the *Controlled Products Regulations*. This product is classified as not controlled in accordance with the Canadian Controlled Products Regulations.

This product complies with RoHS (Restriction on Hazardous Substances).

### Other requirements: Inventory Listing:

TSCA - <i>United States Toxic Substances Control Act Section 8(b) Inventory</i>	LISTED
DSL - <i>Canadian Domestic Substances List</i>	LISTED
NDSL - <i>Non-Domestic Substances List</i>	NOT LISTED
EINECS - <i>European Inventory of Existing Chemical Substances/European</i>	LISTED
ELINCS - <i>List of Notified Chemical Substances</i>	NOT LISTED
ENCS - <i>Japan Existing and New Chemical Substances</i>	LISTED
IECSC - <i>China Inventory of Existing Chemical Substances</i>	LISTED
KECL - <i>Korean Existing and Evaluated Chemical Substances</i>	LISTED
PICCS - <i>Philippines Inventory of Chemicals and Chemical Substances</i>	LISTED
AICS Australia - <i>Australian Inventory of Chemical Substances</i>	LISTED

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## Section 16. Other Information

### 16.1 NFPA and HMIS Hazard Ratings:

NFPA and HMIS ratings have been assigned to this product based on the hazards of its ingredient(s). Because the user is most aware of the application of the product, the user must ensure that the proper personal protective equipment (PPE) is provided consistent with information contained in the product SDS. This information is intended solely for the use of individuals trained in the particular hazard rating system.



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Key: 0 = least, 1 = slight, 2 = moderate, 3 = high, 4 = extreme

## NFPA (National Fire Protection Association) - Classification

Health 1 slight  
Flammability 1 slight  
Instability or Reactivity 0 minimal

## HMIS<sup>®</sup> [Hazardous Materials Identification System (Paint & Coating)] - Classification

Health 1 slight  
Flammability 1 slight  
Reactivity 0 minimal

NFPA, HMIS<sup>®</sup> rating involves data interpretations that may vary from company to company. They are intended only for rapid, general identification of the magnitude of the specific hazard. To deal adequately with the safe handling of this material, all the information contained in this SDS must be considered. This information is supplied solely for the use of individuals trained in the particular hazard rating system.

### 16.2 Revision information:

Date of this revision: 10/27/2015 (Version 1.0)  
Revision summary: GHS/OSHA compliant SDS

**16.3 Training advice: For Professional use, only as directed.** Provide adequate information, instruction and training for operators. Additional references static charges include American Petroleum Institute 2003 (Protection Against Ignitions Arising out of Static, Lightning and Stray Currents) or National Fire Protection Agency 77 (Recommended Practice on Static Electricity) or CENELEC CLC/TR 50404 (Electrostatics - Code of practice for the avoidance of hazards due to static electricity).

### 16.4 Key or legend to abbreviations and acronyms used in the safety data sheet:

ACGIH	American Conference of Governmental Industrial Hygienists
BEI	Biological Exposure Index
LC50	Median Lethal Concentration
LD50	Median Lethal Dose
NOAEL	No observed adverse effect level
NOEC	No Observed Effect Concentration
NOEL	No Observed Effect Level
OECD	Organization for Economic Co-operation and Development
OPPTS	Office of Prevention, Pesticides, and Toxic Substances
OEL	Occupational Exposure Limit
PEL	Permissible Exposure Limit
ppm	parts per million
STEL	Short Term Exposure Limit
TLV	Threshold Limit Value
TWA	Time Weighted Average
Action Level	An exposure value set by OSHA that is lower than the PEL that will trigger the need for activities such as exposure monitoring and medical surveillance.

### Declare to reader:

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 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.

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**End of SDS**