The SDS and Waste Characterization

29 CFR 1910.1200

Objectives

This presentation will provide general awareness concerning:

- Brief History of the SDS
- Purpose of the SDS and how that's fulfilled
- Minimum Information Required to be Present in an SDS
- How an SDS can be used to assist in Waste Characterization for Disposal

What is an SDS?

Brief History of the SDS

"You see, it all started when…"

- **1940s – 1950s** – The Manufacturing Chemists' Association (now the American Chemical Society/Chemical Manufacturers Association) began producing "Chemical Safety Data Sheets" for hazardous materials
- **Late 1960s** – First mandatory requirements for "SDSs" appeared in the maritime industry. FORM LSB OOS-4-era
- **1983** – OSHA adopted the Hazard Communication Standard (29 CFR 1910.1200), requiring those mainly in the manufacturing sectors to evaluate chemical hazards and provide information to employees. MSDS-era
- **1987** – OSHA expanded the above requirement to encompass all industries where employees work with or are exposed to hazardous chemicals
- **2003/2012** – The United Nations introduced the Globally Harmonized System (GHS) of Classification and Labeling of Chemicals, resulting in the modern, standardized 16-section SDS format, adopted by OSHA in 2012. SDS-era

Brief History of the SDS…Maybe

SDS Purpose and How it's Fulfilled

What is the purpose of the SDS?

- Communicate comprehensive & standardized information about hazardous chemicals
- Ensuring workplace safety
- Regulatory Compliance

SDSs accomplish this by providing the following information;

- Hazard Identification
- Safe Handling & Storage
- Emergency Response
- Regulatory Compliance
- Information Accessibility

SDS Requirements can be found…

CFR 29 – Labor

Subtitle B – Regulations Relating to Labor

Chapter 17 (XVII) – Occupational Safety and Health Administration, Department of Labor

Part 1910 – Occupational Safety and Health Standards

Subpart 1200 – Hazard Communications

Mandatory SDS information can be found codified in:

Appendix D to 1910.1200 – Safety Data Sheets (Mandatory)

Minimum Information Required – 1910.1200

A safety data sheet (SDS) shall include the information specified in Table D.1 under the section number and heading indicated for sections 1-11 and 16. If no relevant information is found for any given subheading within a section, the SDS shall clearly indicate that no applicable information is available. Sections 12-15* may be included in the SDS but are not mandatory.

* SDSs are regulated by OSHA's HazCom standards for workplace exposure. Transportation and waste disposal fall outside these regulations. OSHA does not want to regulate information provided concerning both D.O.T. and RCRA.

Minimum Information Required – 1910.1200

1.	**Identification**	(a) Product identifier used on the label; (b) Other means of identification; (c) Recommended use of the chemical and restrictions on use; (d) Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party; (e) Emergency phone number.
2.	**Hazard(s) identification**	(a) Classification of the chemical in accordance with paragraph (d) of §1910.1200; (b) Signal word, hazard statement(s), symbol(s) and precautionary statement(s) in accordance with paragraph (f) of §1910.1200. (Hazard symbols may be provided as graphical reproductions in black and white or the name of the symbol, e.g., flame, skull and crossbones); (c) Describe any hazards not otherwise classified that have been identified during the classification process; (d) Where an ingredient with unknown acute toxicity is used in a mixture at a concentration ≥ 1% and the mixture is not classified based on testing of the mixture as a whole, a statement that X% of the mixture consists of ingredient(s) of unknown acute toxicity is required.

“Good” Product Identification

1. IDENTIFICATION

Product Name	Dawn Ultra Dishwashing Liquid, Original Scent
Product ID:	97591965_RET_NG
Product Type:	Finished Product - Consumer (Retail) Use Only
Recommended use	Dish Care
Restrictions on Use	Use only as directed on label.
Synonyms	Dawn Ultra Dishwashing Liquid, Pomegranate Awakening (97591967_RET_NG) Dawn Ultra Dishwashing Liquid, Apple Orchard Harvest (97591968_RET_NG)
Manufacturer	PROCTER & GAMBLE - Fabric and Home Care Division Ivorydale Technical Centre 5289 Spring Grove Avenue Cincinnati, Ohio 45217-1087 USA Procter & Gamble Inc. P.O. Box 355, Station A Toronto, ON M5W 1C5 1-800-331-3774
E-mail Address	pgsds.im@pg.com
Emergency Telephone	Transportation (24 HR) CHEMTREC - 1-800-424-9300 (U.S./ Canada) or 1-703-527-3887 Mexico toll free in country: 800-681-9531

Minimum Information Required – 1910.1200

3.	**Composition/ information on ingredients**	Except as provided for in paragraph (i) of §1910.1200 on trade secrets: **For Substances** (a) Chemical name; (b) Common name and synonyms; (c) CAS number and other unique identifiers; (d) Impurities and stabilizing additives which are themselves classified and which contribute to the classification of the substance. **For Mixtures** In addition to the information required for substances: (a) The chemical name and concentration (exact percentage) or concentration ranges of all ingredients which are classified as health hazards in accordance with paragraph (d) of §1910.1200 and (1) Are present above their cut-off/concentration limits; or (2) Present a health risk below the cut-off/concentration limits. (b) The concentration (exact percentage) shall be specified unless a trade secret claim is made in accordance with paragraph (i) of §1910.1200, when there is batch-to-batch variability in the production of a mixture, or for a group of substantially similar mixtures (*See* A.0.5.1.2) with similar chemical composition. In these cases, concentration ranges may be used.

“Good” SDS Descriptions

Section 3. Composition/information on ingredients

Substance/mixture : Substance

Other means of identification : Not available.

CAS number/other identifiers

CAS number : 78-93-3

Ingredient name	% by weight	CAS number
Methyl Ethyl Ketone	100	78-93-3

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Product AS SOLD

Pure substance/mixture : Mixture

Chemical name	CAS-No.	Concentration (%)
Phosphoric acid	7664-38-2	10 - 30
methanesulphonic acid	75-75-2	5 - 10
Sodium Xylenesulfonate	1300-72-7	1 - 5
Sulfonic acids, C10-18-alkane, sodium salts	68037-49-0	1 - 5

Product AT USE DILUTION

Chemical name	CAS-No.	Concentration (%)
Phosphoric acid	7664-38-2	1 - 5

“Bad” SDS Descriptions

3. COMPOSITION / INFORMATION ON INGREDIENTS

The product contains no substances which at their given concentration, are considered to be hazardous to health

SECTION 3: Composition/information on ingredients

3.2 Mixtures

No components need to be disclosed according to the applicable regulations.

For the full text of the H-Statements mentioned in this Section, see Section 16.

3. COMPOSITION and INFORMATION ON INGREDIENTS

Chemical Name	CAS #	WT%	Global Harmonization Classification Hazard & Precautionary Statements
Proprietary Manganese Metal Amide	Not Established	100%	SELF CLASSIFICATION Classification: Flammable Solid Cat. 1, Skin Corrosion Cat. 1A, STOT (Central Nervous System) RE Cat. 3 Hazard Statement Codes: H228, H314, H373 Hazard Symbols/Pictograms: GHS02, GHS05, GHS08

See Section 16 for full text of Hazard and Precautionary Statements

Minimum Information Required – 1910.1200

4.	**First-aid measures**	(a) Description of necessary measures, subdivided according to the different routes of exposure, i.e., inhalation, skin and eye contact, and ingestion; (b) Most important symptoms/effects, acute and delayed. (c) Indication of immediate medical attention and special treatment needed, if necessary.
5.	**Fire-fighting measures**	(a) Suitable (and unsuitable) extinguishing media. (b) Specific hazards arising from the chemical (e.g., nature of any hazardous combustion products). (c) Special protective equipment and precautions for fire-fighters.
6.	**Accidental release measures**	(a) Personal precautions, protective equipment, and emergency procedures. (b) Methods and materials for containment and cleaning up.
7.	**Handling and storage**	(a) Precautions for safe handling. (b) Conditions for safe storage, including any incompatibilities.
8.	**Exposure controls/personal protection**	(a) OSHA permissible exposure limit (PEL), American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Value (TLV), and any other exposure limit used or recommended by the chemical manufacturer, importer, or employer preparing the safety data sheet, where available. (b) Appropriate engineering controls. (c) Individual protection measures, such as personal protective equipment.

Minimum Information Required – 1910.1200

9.	**Physical and chemical properties**	(a) Appearance (physical state, color, etc.); (b) Odor; (c) Odor threshold; (d) pH; (e) Melting point/freezing point; (f) Initial boiling point and boiling range; (g) Flash point; (h) Evaporation rate; (i) Flammability (solid, gas); (j) Upper/lower flammability or explosive limits; (k) Vapor pressure; (l) Vapor density; (m) Relative density; (n) Solubility(ies); (o) Partition coefficient: n-octanol/water; (p) Auto-ignition temperature; (q) Decomposition temperature; (r) Viscosity.

“Good” Physical and Chemical Section

Methyl Ethyl Ketone **Revis**

Appearance			
Physical State	Liquid		
Color	Colorless		
Odor	Characteristic - sweet		
Odor Threshold	No information available		
Property	**Values**	**Remarks**	**• Method**
Melting Point/Range	-87 °C / -124.6 °F		
Softening Point	No data available		
Boiling Point/Range	80 °C / 176 °F		
Flash Point	-7 °C / 19.4 °F	**Method -** CC (closed cup)	
Flammability (liquid)	Highly flammable	On basis of test data	
Flammability (solid,gas)	Not applicable	Liquid	
Explosion Limits	**Lower** 1.8 Vol% **Upper** 11.5 Vol%		
Autoignition Temperature	404 °C / 759.2 °F		
Decomposition Temperature	No data available		
pH	No information available		
Viscosity	0.42 mPa.s @ 15°C		
Water Solubility	290 g/L (20°C)		
Solubility in other solvents	No information available		
Partition Coefficient (n-octanol/water)			
Component	**log Pow**		
Methyl ethyl ketone	0.29		
Vapor Pressure	105 mbar @ 20 °C		
Density / Specific Gravity	0.806		
Bulk Density	Not applicable	Liquid	
Vapor Density	2.41	(Air = 1.0)	
Particle characteristics	Not applicable (liquid)		
Other Information			
Molecular Formula	C4 H8 O		
Molecular Weight	72.11		
Explosive Properties	Not explosive Vapors may form explosive mixtures with air		
Oxidizing Properties	Not oxidising		
Evaporation Rate	3.7 - (Butyl Acetate = 1.0)		

Minimum Information Required – 1910.1200

10.	**Stability and reactivity**	(a) Reactivity; (b) Chemical stability; (c) Possibility of hazardous reactions; (d) Conditions to avoid (e.g., static discharge, shock, or vibration); (e) Incompatible materials; (f) Hazardous decomposition products.
11.	**Toxicological information**	Description of the various toxicological (health) effects and the available data used to identify those effects, including: (a) Information on the likely routes of exposure (inhalation, ingestion, skin and eye contact); (b) Symptoms related to the physical, chemical and toxicological characteristics; (c) Delayed and immediate effects and also chronic effects from short- and long-term exposure; (d) Numerical measures of toxicity (such as acute toxicity estimates). (e) Whether the hazardous chemical is listed in the National Toxicology Program (NTP) Report on Carcinogens (latest edition) or has been found to be a potential carcinogen in the International Agency for Research on Cancer (IARC) Monographs (latest edition), or by OSHA.

Reactive SDS Statement

10. Stability and reactivity	
Reactive Hazard	Yes
Stability	Moisture sensitive.
Conditions to Avoid	Exposure to moist air or water. Reacts with water, steam or acids to produce toxic vapors. Protect from sunlight and do not expose to temperatures exceeding 50 °C/122 °F.
Incompatible Materials	Strong bases, Acids, Water, Oxidizing agent
Hazardous Decomposition Products	Oxides of boron, Hydrogen fluoride
Hazardous Polymerization	Hazardous polymerization does not occur.
Hazardous Reactions	None under normal processing.

Minimum Information Required – 1910.1200

12.	**Ecological information (Non-mandatory)**	(a) Ecotoxicity (aquatic and terrestrial, where available); (b) Persistence and degradability; (c) Bioaccumulative potential; (d) Mobility in soil; (e) Other adverse effects (such as hazardous to the ozone layer).
13.	**Disposal considerations (Non-mandatory)**	Description of waste residues and information on their safe handling and methods of disposal, including the disposal of any contaminated packaging.

Standard Disposal Statement

SECTION 13. DISPOSAL CONSIDERATIONS

Product AS SOLD

Disposal methods	:	Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations. Dispose of wastes in an approved waste disposal facility.
Disposal considerations	:	Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers. Dispose of in accordance with local, state, and federal regulations.

RCRA - Resource Conservation and Recovery Authorization Act Hazardous waste	:	D002 (Corrosive)

Minimum Information Required – 1910.1200

14.	**Transport information (Non-mandatory)**	(a) UN number; (b) UN proper shipping name; (c) Transport hazard class(es); (d) Packing group, if applicable; (e) Environmental hazards (e.g., Marine pollutant (Yes/No)); (f) Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code); (g) Special precautions which a user needs to be aware of, or needs to comply with, in connection with transport or conveyance either within or outside their premises.
15.	**Regulatory information (Non-mandatory)**	Safety, health and environmental regulations specific for the product in question.
16.	**Other information, including date of preparation or last revision**	The date of preparation of the SDS or the last change to it.

DOT Descriptions

US DOT

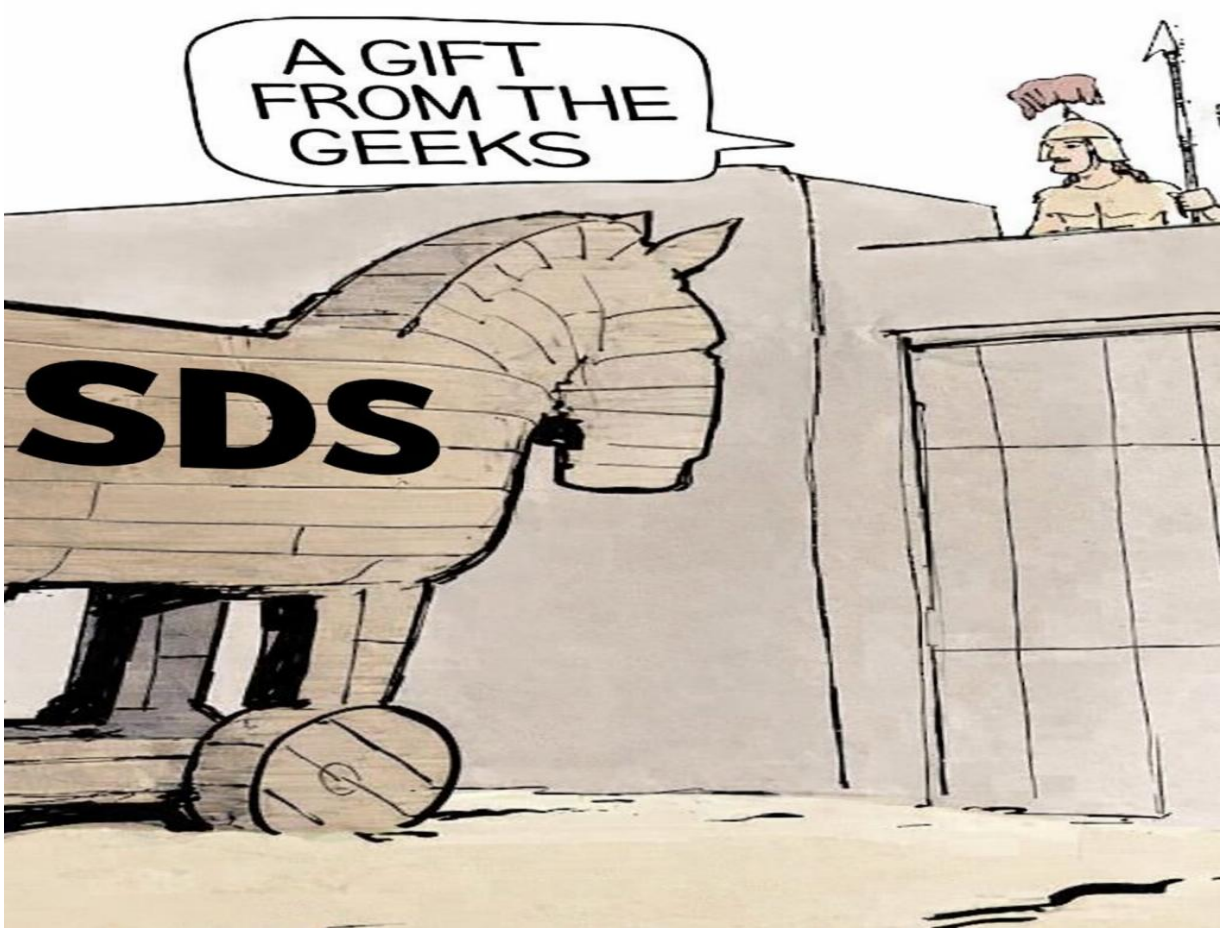
UN Number	UN2924
UN proper shipping name:	Flammable Liquid, Corrosive, N.O.S. (Contains Heavy Aromatic Petroleum Naphtha, Complex Fatty-Acid Compounds)
Transport Hazard Class(es):	3 (8)
Packing Group:	III
Environmental Hazards:	Marine Pollutant
NAERG:	NAERG 132

UN-No	UN3399
Proper Shipping Name	ORGANOMETALLIC SUBSTANCE, LIQUID, WATER-REACTIVE, FLAMMABLE
Technical Shipping Name	TRIMETHYLALUMINIUM, SOLUTION IN HEPTANE
Hazard Class	4.3
Subsidiary Hazard Class	3
Packing Group	I

DOT

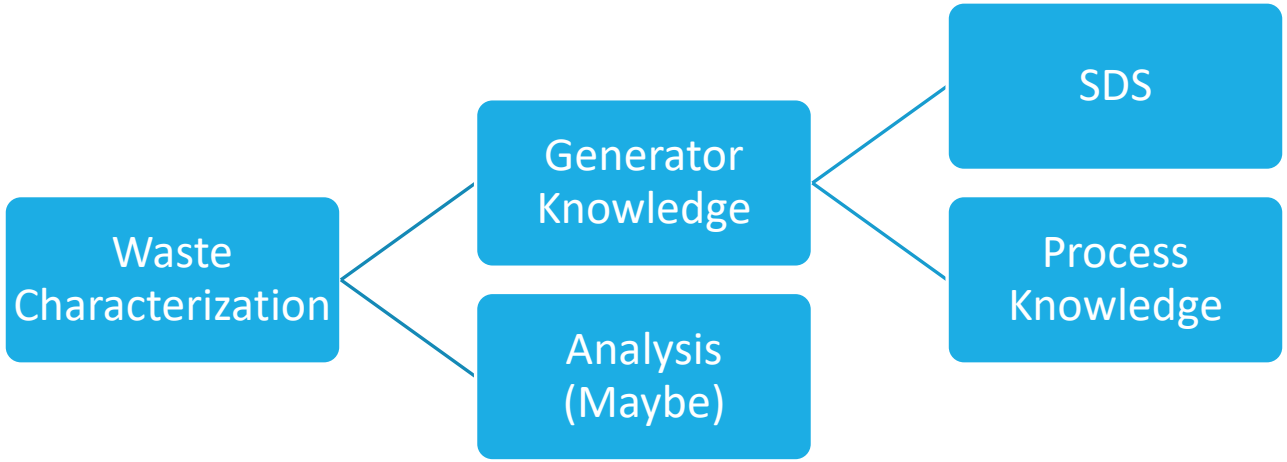
UN-No	UN2031
Proper Shipping Name	NITRIC ACID
Hazard Class	8
Subsidiary Hazard Class	5.1
Packing Group	II

A Cautionary Tale….SDS Limitations



Limitations of SDS use in Waste Characterization

- An SDS can be used as a great tool to assist in waste characterization, however, is not your sole source of information. Generator knowledge and possibly analysis will be information to use for characterization (Waste Profile form)



Limitations of SDS use in Waste Characterization

- An SDS is prepared for the chemical as a product, not a waste material. Used material often have physical or chemical changes from a process that may affect characterization. In addition, used material pick up contaminates, either purposefully or not. Also keep in mind product age and/or instructional dilution may also affect SDS information

- SDSs may not contain ALL information required for waste characterization, e.g. DOT shipping descriptions & EPA waste codes.

- SDSs may contain incorrect or misleading data, or out of date information per the manufacturer.

Limitations of SDS use in Waste Characterization – Incorrect/Misleading Information

Mixtures

Chemical name	CAS number	%
Fuels, diesel, no. 2	68476-34-6	85 - 100
Biodiesel - Fatty acid methyl esters	67762-38-3	0 - 10
Fuels, diesel, C9-18-alkane branched and linear	1159170-26-9	0 - 5
n-Nonane	111-84-2	1 - 3
Octane (All isomers)	111-65-9	1 - 2
Hexane (Other isomers)	96-14-0	0 - 1
Naphthalene	91-20-3	0 - 1
n-Heptane	142-82-5	0 - 1
n-Hexane	110-54-3	0 - 1

13. Disposal considerations

Disposal instructions Dispose in accordance with all applicable regulations. This material and its container must be disposed of as hazardous waste. Dispose of this material and its container to hazardous or special waste collection point. Incinerate the material under controlled conditions in an approved incinerator. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container.

Hazardous waste code D001: Waste Flammable material with a flash point <140 °F

US RCRA Hazardous Waste U List: Reference

Naphthalene (CAS 91-20-3) U165

Waste from residues / unused products Dispose of in accordance with local regulations.

Contaminated packaging Offer rinsed packaging material to local recycling facilities.

Limitations of SDS use in Waste Characterization - Data that's out of date

SDS DATED 12/5/2018

UN Number UN1479

UN proper shipping name: Oxidizing Solid, N.O.S. (Sodium perborate tetrahydrate)

Transport Hazard Class(es): 5.1

Packing Group: III

Environmental Hazards: Not applicable

NAERG: NAERG 140

SDS DATED 4/21/2022

UN Number Not restricted

UN proper shipping name: Not restricted

Transport Hazard Class(es): Not applicable

Packing Group: Not applicable

Environmental Hazards: Not applicable

Other Common Red Flags

Other Common Red Flags

- **Proprietary Components/Trade Secret** – Contact Manufacturer/Possible NDA
- **Beware of product dilution especially regarding pH reported in SDS** – Data concerning concentrations of products/chemicals listed on SDS and/or physical properties may be listed as the suggested use concentrations, not pure product
- **Reluctance to apply oxidizer statement and report heavy metals** – DOT vs EPA analysis for oxidizers differs; Heavy metals are rarely present at a SDS reportable threshold

Applying Information to a Waste Profile Form

Applying Information to a Waste Profile Form

What Sections Help Where:

1) Identification

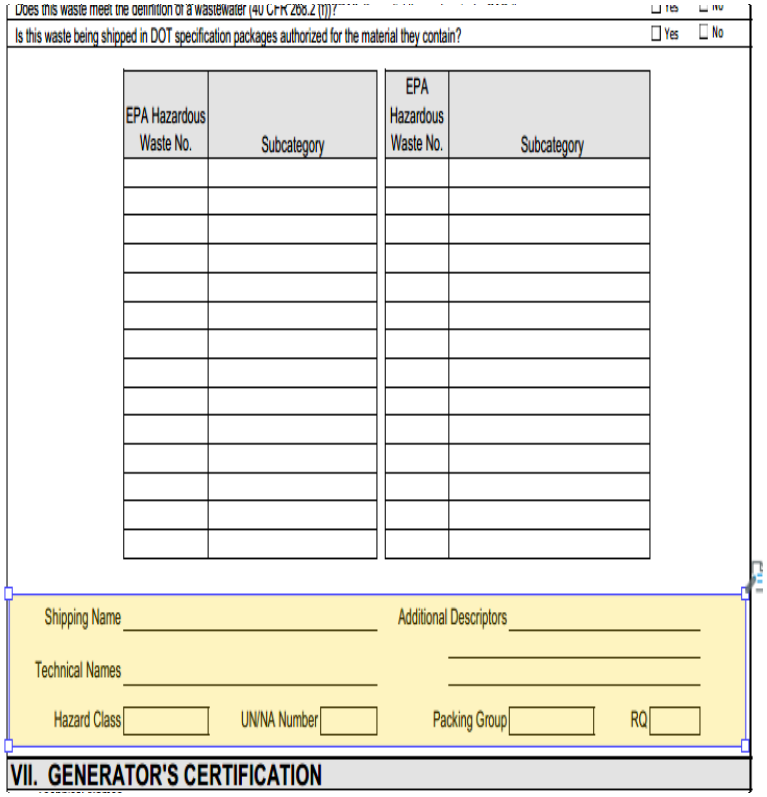
3) Composition/information on ingredients

9) Physical and Chemical Properties

10) Stability and Reactivity

13) Disposal Considerations

14) Transportation Information


Does this waste meet the definition of a wastewater (40 CFR 268.2 (i))? ☐ Yes ☐ No

Is this waste being shipped in DOT specification packages authorized for the material they contain? ☐ Yes ☐ No

EPA Hazardous Waste No.	Subcategory	EPA Hazardous Waste No.	Subcategory

Shipping Name _____ Additional Descriptors _____

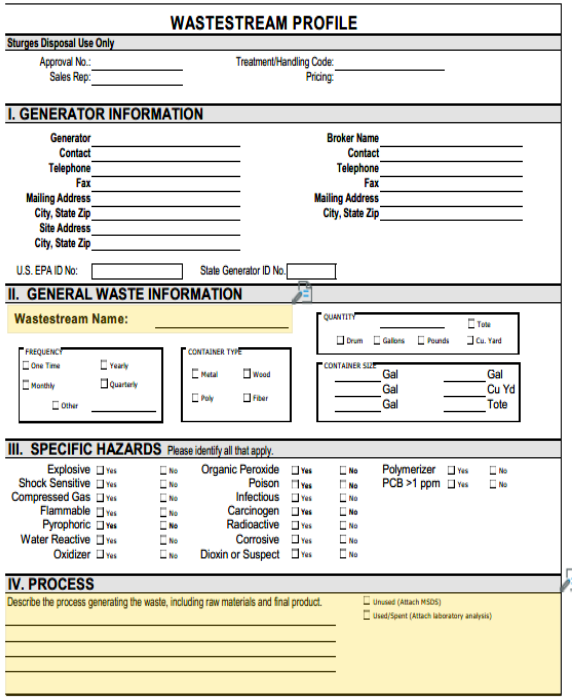
Technical Names _____

Hazard Class ____ UN/NA Number ____ Packing Group ____ RQ ____

VII. GENERATOR'S CERTIFICATION

SET Environmental, Inc

Applying Information to a Waste Profile Form



Sturges Disposal Company
123 Main Street - Somewhere, IL 65432
555-555-5555 // 800 555-5555
Fax: 555-555-5555

EPA ID No. ILD123456789

WASTESTREAM PROFILE

Sturges Disposal Use Only

Approval No.: _____ Treatment/Handling Code: _____
Sales Rep: _____ Pricing: _____

I. GENERATOR INFORMATION

Generator _____ Broker Name _____
Contact _____ Contact _____
Telephone _____ Telephone _____
Fax _____ Fax _____
Mailing Address _____ Mailing Address _____
City, State Zip _____ City, State Zip _____
Site Address _____
City, State Zip _____

U.S. EPA ID No: _____ State Generator ID No. _____

II. GENERAL WASTE INFORMATION

Wastestream Name: _____

FREQUENCY: ☐ One Time ☐ Yearly ☐ Monthly ☐ Quarterly ☐ Other _____

CONTAINER TYPE: ☐ Metal ☐ Wood ☐ Poly ☐ Fiber

QUANTITY _____ ☐ Tote ☐ Drum ☐ Gallons ☐ Pounds ☐ Cu. Yard

CONTAINER SIZE: _____ Gal _____ Gal _____ Gal _____ Cu Yd _____ Gal _____ Tote

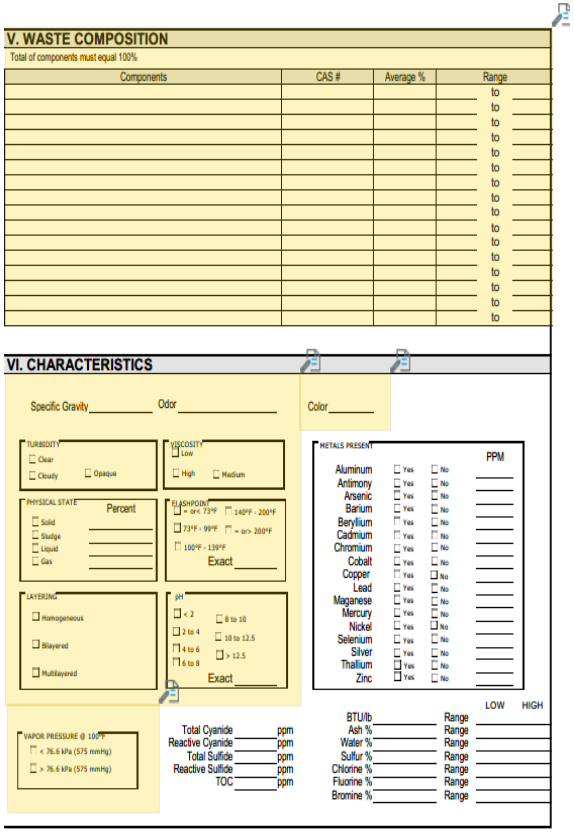
III. SPECIFIC HAZARDS Please identify all that apply.

Explosive	☐ Yes	☐ No	Organic Peroxide	☐ Yes	☐ No	Polymerizer	☐ Yes	☐ No
Shock Sensitive	☐ Yes	☐ No	Poison	☐ Yes	☐ No	PCB >1 ppm	☐ Yes	☐ No
Compressed Gas	☐ Yes	☐ No	Infectious	☐ Yes	☐ No			
Flammable	☐ Yes	☐ No	Carcinogen	☐ Yes	☐ No			
Pyrophoric	☐ Yes	☐ No	Radioactive	☐ Yes	☐ No			
Water Reactive	☐ Yes	☐ No	Corrosive	☐ Yes	☐ No			
Oxidizer	☐ Yes	☐ No	Dioxin or Suspect	☐ Yes	☐ No			

IV. PROCESS

Describe the process generating the waste, including raw materials and final product.

☐ Unused (Attach MSDS)
☐ Used/Spent (Attach laboratory analysis)



V. WASTE COMPOSITION

Total of components must equal 100%

Components	CAS #	Average %	Range
			to
			to
			to
			to
			to
			to
			to
			to
			to
			to
			to
			to
			to
			to
			to

VI. CHARACTERISTICS

Specific Gravity _____ Odor _____ Color _____

TURBIDITY: ☐ Clear ☐ Cloudy ☐ Opaque

VISCOSITY: ☐ Low ☐ High ☐ Medium

PHYSICAL STATE: Percent
☐ Solid _____
☐ Sludge _____
☐ Liquid _____
☐ Gas _____

FLASHPOINT: ☐ = or< 73°F ☐ 140°F - 200°F ☐ 73°F - 99°F ☐ = or> 200°F ☐ 100°F - 139°F Exact _____

LAYERING: ☐ Homogeneous ☐ Bilayered ☐ Multilayered

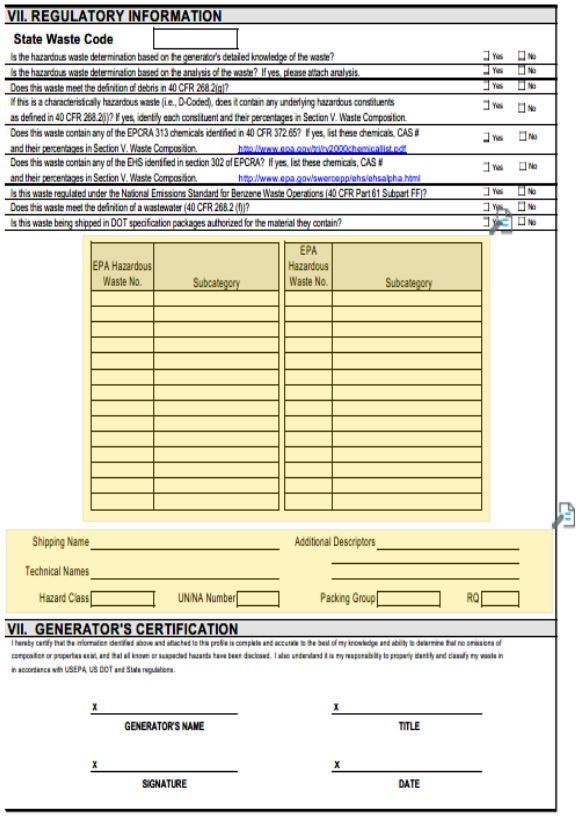
pH: ☐ < 2 ☐ 8 to 10 ☐ 2 to 4 ☐ 10 to 12.5 ☐ 4 to 6 ☐ > 12.5 ☐ 6 to 8 Exact _____

METALS PRESENT

			PPM
Aluminum	☐ Yes	☐ No	
Antimony	☐ Yes	☐ No	
Arsenic	☐ Yes	☐ No	
Barium	☐ Yes	☐ No	
Beryllium	☐ Yes	☐ No	
Cadmium	☐ Yes	☐ No	
Chromium	☐ Yes	☐ No	
Cobalt	☐ Yes	☐ No	
Copper	☐ Yes	☐ No	
Lead	☐ Yes	☐ No	
Maganese	☐ Yes	☐ No	
Mercury	☐ Yes	☐ No	
Nickel	☐ Yes	☐ No	
Selenium	☐ Yes	☐ No	
Silver	☐ Yes	☐ No	
Thallium	☐ Yes	☐ No	
Zinc	☐ Yes	☐ No	

VAPOR PRESSURE @ 100°F
☐ < 76.6 kPa (575 mmHg)
☐ > 76.6 kPa (575 mmHg)

			LOW	HIGH
Total Cyanide		ppm		
Reactive Cyanide		ppm		
Total Sulfide		ppm		
Reactive Sulfide		ppm		
TOC		ppm		
BTU/lb			Range	
Ash %			Range	
Water %			Range	
Sulfur %			Range	
Chlorine %			Range	
Fluorine %			Range	
Bromine %			Range	



VII. REGULATORY INFORMATION

State Waste Code _____

Is the hazardous waste determination based on the generator's detailed knowledge of the waste?	☐ Yes	☐ No
Is the hazardous waste determination based on the analysis of the waste? If yes, please attach analysis.	☐ Yes	☐ No
Does this waste meet the definition of debris in 40 CFR 268.2(g)?	☐ Yes	☐ No
If this is a characteristically hazardous waste (i.e., D-Coded), does it contain any underlying hazardous constituents as defined in 40 CFR 268.2(i)? If yes, identify each constituent and their percentages in Section V. Waste Composition.	☐ Yes	☐ No
Does this waste contain any of the EPCRA 313 chemicals identified in 40 CFR 372.65? If yes, list these chemicals, CAS # and their percentages in Section V. Waste Composition. http://www.epa.gov/tri/ry2000chemicallist.pdf	☐ Yes	☐ No
Does this waste contain any of the EHS identified in section 302 of EPCRA? If yes, list these chemicals, CAS # and their percentages in Section V. Waste Composition. http://www.epa.gov/swercepp/ehs/ehsalpha.html	☐ Yes	☐ No
Is this waste regulated under the National Emissions Standard for Benzene Waste Operations (40 CFR Part 61 Subpart FF)?	☐ Yes	☐ No
Does this waste meet the definition of a wastewater (40 CFR 268.2 (f))?	☐ Yes	☐ No
Is this waste being shipped in DOT specification packages authorized for the material they contain?	☐ Yes	☐ No

EPA Hazardous Waste No.	Subcategory	EPA Hazardous Waste No.	Subcategory

Shipping Name _____ Additional Descriptors _____
Technical Names _____
Hazard Class _____ UN/NA Number _____ Packing Group _____ RQ _____

VII. GENERATOR'S CERTIFICATION

I hereby certify that the information identified above and attached to this profile is complete and accurate to the best of my knowledge and ability to determine that no omissions of composition or properties exist, and that all known or suspected hazards have been disclosed. I also understand it is my responsibility to properly identify and classify my waste in in accordance with USEPA, US DOT and State regulations.

X _____ GENERATOR'S NAME
X _____ TITLE
X _____ SIGNATURE
X _____ DATE

Let’s Land This Plane

The SDS and Waste Characterization - Recap

- **The SDS can be a powerful tool in waste characterization:**
  - Useful information can be found in sections;
    - 1) Identification
    - 3) Composition/information on ingredients
    - 9) Physical and Chemical Properties
    - 10) Stability and Reactivity
    - 13) Disposal Considerations
    - 14) Transportation Information
- **There are however several limitations to be aware of when using the SDS for characterization, including;**
  - if the material has been used
  - if the material is at its original concentration
  - Understanding that products as wastes will have other regulations that apply (RCRA) and that all information may not be provided

Thank You! Comments/Questions?