

APPENDIX A

SDS Development Checklist

Safety Data Sheet (SDS) Checklist

This SDS Checklist was developed to provide ACAA member companies the information necessary to develop a Safety Data Sheet (SDS) for Coal Combustion Products.

When used in concert with the SDS Guidance Document and the SDS Template for Coal Combustion Products (CCPs), the checklist can be used by ACAA Member Companies to develop the SDSs required based on Company and product specific information on their CCPs. Prior to developing an SDS using the SDS Guidance Document and associated Appendices, confirm that the CCP formulation meets the composition specifications detailed in Appendix C (Composition Summary Workbook). Should the CCP being evaluated have additional substances present, or have substances above the maximum percentage identified, the SDS Guidance Document should not be used until an assessment of the compositional differences is evaluated to confirm that the compositional differences do not result in additional GHS classifications of the CCP.

This checklist specifies the information required/recommended for inclusion in the SDS per the OSHA HazCom 2012 Rule as specified in 29 CFR 1910.1200, the OSHA recognized ANSI Z400.1 Standard (Hazard Evaluation and Safety Data Sheet and Precautionary Labeling Preparation Standard), or recommendations based on expert judgement.

An SDS Template that can be used to communicate the necessary information detailed on a Section by Section basis is available as Appendix B to the SDS Guidance Document.

Additional information and further guidance on how to populate the SDS, including appropriate information to be provided can be found in the SDS Guidance Document.

General SDS Development Information

- ✓ Although specifically required in Section 16, it is recommended that the date of SDS development/update and the SDS Version (i.e., New or Revision number) be included in the SDS Header
- ✓ Paginate the SDS
- ✓ Include a Legal Disclaimer at the end of the SDS Section 16 (last section)

SECTION 1. IDENTIFICATION

Provide the following information in the SDS. See the SDS Guidance Document for additional detail on the required information.

- ✓ Product identifier (name used on label), common names/synonyms
- ✓ Name, address, email and telephone number of the manufacturer, packager or supplier
- ✓ Emergency telephone number and any restrictions to the availability
- ✓ Recommended uses
- ✓ Any restricted uses

SECTION 2. HAZARDS IDENTIFICATION

Provide the following information in the SDS for the CCP. See the SDS Guidance Document and Appendix D: SDS Section 2 Data, to select the data applicable to the CCP composition. Individual data tables in Appendix D provide the information listed below for each CCP Classification.

- ✓ Hazard classification
- ✓ Signal word
- ✓ Hazard statements
- ✓ Pictograms
- ✓ Precautionary statements
- ✓ Hazards not otherwise classified

SECTION 3. COMPOSITION / INFORMATION ON INGREDIENTS

Provide the following information on the composition of the product. See the SDS Guidance Document to select appropriate substances and related information from the list of identified hazardous constituents.

- ✓ Disclose substances that:
 - Are present above their threshold limits or;
 - Result in a classification of the final product regardless of their respective threshold limits
- ✓ Provide the following information on those substances:
 - Substance name
 - Chemical Abstracts Service (CAS) number
 - Percentage of the ingredient in the CCP. A range may be provided.

SECTION 4. FIRST AID MEASURES

See the SDS Guidance Document for the appropriate information to populate the section.

- ✓ Describe the first aid measures organized by relevant route of exposure (inhalation, skin and eye contact, ingestion)
- ✓ Provide information on the most important health effects and symptoms (both acute and delayed)
- ✓ Indicate information related to the need for immediate medical attention and special treatment needed, when necessary

SECTION 5. FIREFIGHTING MEASURES

See the SDS Guidance Document for the appropriate information to populate the section.

- ✓ Provide information on suitable and unsuitable extinguishing media
- ✓ Identify special hazards arising from the substance or mixture, including hazardous combustion products
- ✓ Provide any special advice for firefighters

SECTION 6. ACCIDENTAL RELEASE MEASURES

See the SDS Guidance Document for the appropriate information to populate the section.

- ✓ Specify any personal precautions, protective equipment and emergency procedures
- ✓ Indicate any environmental precautions
- ✓ Provide information on the methods and materials necessary for containment and cleanup procedures

SECTION 7. HANDLING AND STORAGE

See the SDS Guidance Document for the appropriate information to populate the section.

- ✓ Provide precautions for safe handling (e.g., protective measures, measures to prevent fire, aerosol and dust generation, measures to protect the environment, and advice on general occupational hygiene)
- ✓ Indicate proper storage conditions including any incompatibilities and specific storage requirements or ventilation requirements

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Provide information on the Occupation Exposure Limits (OELs) associated with substances disclosed in Section 2 of the SDS. See the SDS Guidance Document for the list of OEL's identified based on identified CCP constituents, as determined in Appendix C.

- ✓ Provide appropriate occupational exposure limits for particulates not otherwise regulated (PNOR) and substances disclosed in Section 3 based on manufacture/market jurisdiction. OELs to be provided, where available include OSHA permissible exposure limits (PEL), American Conference of Governmental Industrial Hygienists (ACGIH), Threshold Limit Values (TLV), California EPA PEL
- ✓ Detail appropriate exposure controls, including engineering controls, personal protective equipment, and environmental exposure controls

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Provide information on the following physical and chemical properties. If no information is available or if the data is not applicable, do not delete the parameter; rather, note that data is "Not available" or that the parameter is "Not applicable". See the SDS Guidance Document for more information.

- ✓ Odor
- ✓ Odor threshold
- ✓ pH
- ✓ Melting point/freezing point
- ✓ Initial boiling point and boiling range
- ✓ Flash point
- ✓ Evaporation rate
- ✓ Flammability
- ✓ Upper/lower flammability or explosive limits
- ✓ Vapor pressure
- ✓ Vapor density
- ✓ Relative density
- ✓ Solubility(ies)
- ✓ Partition coefficient: n-octanol/water
- ✓ Auto-ignition temperature
- ✓ Decomposition temperature
- ✓ Viscosity

Additional information such as particle size, etc. may also be provided.

SECTION 10. STABILITY AND REACTIVITY

See the SDS Guidance Document for the appropriate information to provide in the section.

- ✓ Reactivity
- ✓ Chemical stability
- ✓ Possibility of hazardous reactions
- ✓ Conditions to avoid
- ✓ Incompatible materials
- ✓ Hazardous decomposition products

SECTION 11. TOXICOLOGICAL INFORMATION

Available information on the recognized GHS Human Health Classification Categories should be provided. Where data is not available or not known, that should be indicated.

See the SDS Guidance Document and Appendix E: SDS Section 11 Data, for the appropriate toxicological information to populate the section based on the CCP composition and corresponding toxicity information on the Human Health Hazards.

The following categories should be included:

- ✓ Acute Toxicity [include information on the route of exposure (inhalation, ingestion, skin and eye contact)]
- ✓ Skin Corrosion/Irritation
- ✓ Eye Damage/Irritation
- ✓ Skin or Respiratory Sensitization
- ✓ Germ Cell Mutagenicity
- ✓ Carcinogenicity
- ✓ Reproductive Toxicity
- ✓ STOT - Single Exposure
- ✓ STOT – Repeated Exposure
- ✓ Aspiration Hazard

Note: Additional data on component substances may also be provided, but is not required; however, under carcinogenicity, it is required to declare any components (such as respirable crystalline silica) listed on the U.S. National Toxicology Program (NTP) Report on Carcinogens (latest edition) or has been found to be a carcinogen in the International Agency for Research on Cancer (IARC) Monographs (latest edition), or as a carcinogen by OSHA.

SECTION 12. ECOLOGICAL INFORMATION

This section is non-mandatory. Enter “No data available” or if desired, provide available data for component substances following the format indicated in the SDS Guidance Document.

- ✓ Ecotoxicity data (aquatic and terrestrial, where available)
- ✓ Persistence and degradability
- ✓ Bioaccumulative potential
- ✓ Mobility in soil
- ✓ Other adverse effects

SECTION 13. DISPOSAL CONSIDERATIONS

This section is non-mandatory; however, it is recommended that information on proper disposal, recycling or reclamation of the product be included. Refer to the SDS Guidance Document and information related to Section 8 (Exposure Controls/Personal Protection) for appropriate information.

- ✓ Reference Section 8 for safe handling precautions
- ✓ Describe appropriate disposal containers to use
- ✓ Recommend appropriate disposal methods
- ✓ Describe any physical and chemical properties that may affect disposal activities
- ✓ Include language discouraging sewage disposal

SECTION 14. TRANSPORT INFORMATION

This section is non-mandatory however, it is recommended to include information related to U.S. transportation (e.g., U.S. DOT) as detailed in the SDS Guidance Document.

- ✓ UN Number (4 figure identification number)
- ✓ Proper UN shipping name
- ✓ Transport hazard class(es)
- ✓ Packing group number, if applicable

SECTION 15. REGULATORY INFORMATION

This section is not mandatory; however, it is recommended to include the following information related to the presence of the finished product and components above identified thresholds on relevant safety, health and environmental regulatory lists. Information on the recommended lists is present in the SDS Guidance.

- ✓ TSCA Inventory/California Proposition 65 Listing
- ✓ Applicable State Right-to-Know Lists (Massachusetts, New Jersey, Pennsylvania and Rhode Island). Appropriate lists include those where the product is manufactured, packaged or distributed

Note: Additional information related to the presence of component substances on other environmental listings such as SARA 311/312, SARA 313 TRI, CWA or CAA may also be included.

SECTION 16. OTHER INFORMATION

Populate this section with the following information to assist the user in understanding the information provided in the SDS. See the SDS Guidance Document for information that may be required to populate this section.

- ✓ Date of preparation/last revision
- ✓ The abbreviations and acronyms used in the SDS
- ✓ Other hazards including information related to the HMIS Hazard Rating System
- ✓ Legal disclaimer