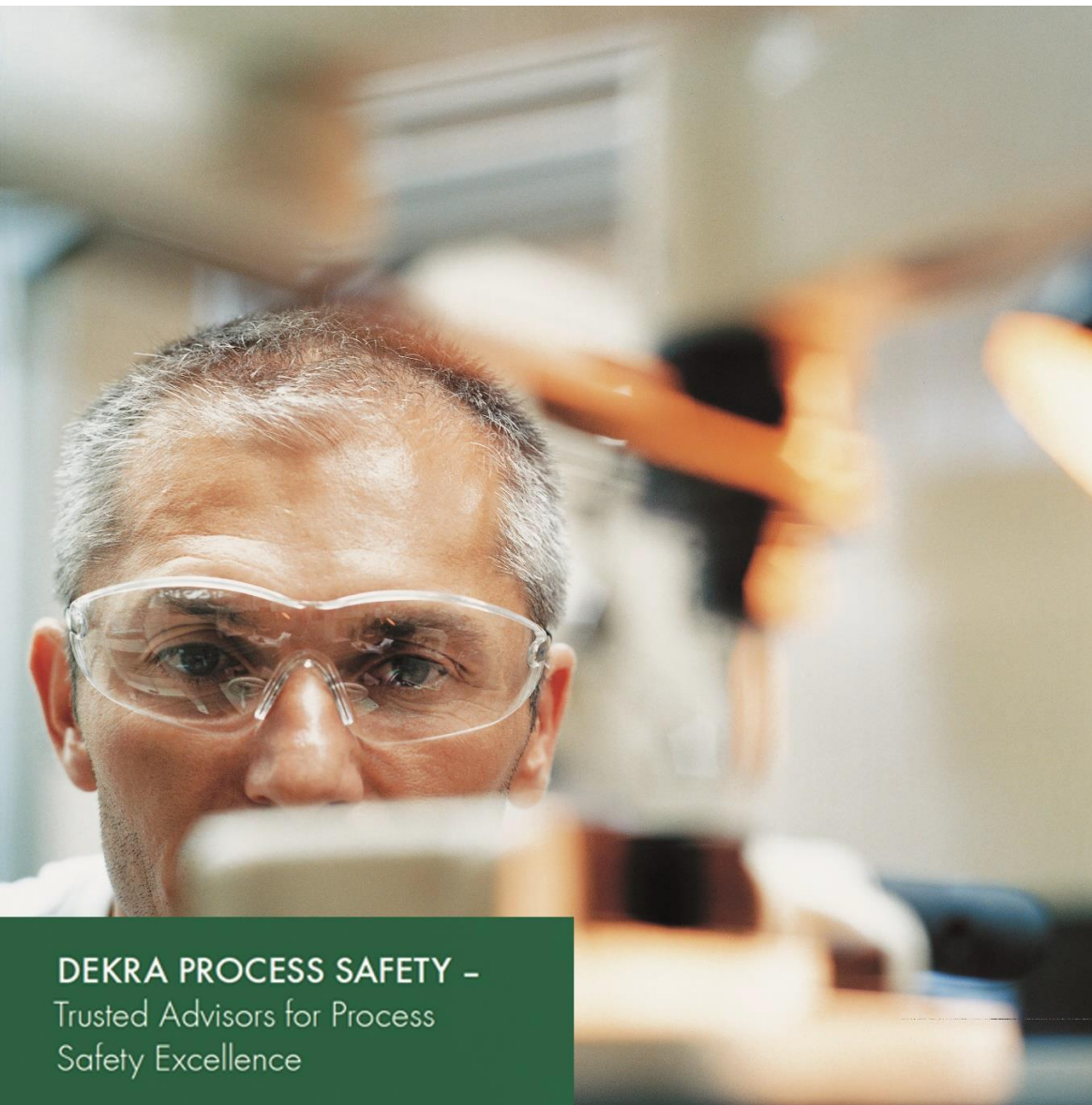


DEKRA Process Safety SAMPLE COLLECTION AND SHIPPING GUIDE



DEKRA PROCESS SAFETY –
Trusted Advisors for Process
Safety Excellence

Collecting Samples

Powders / Dusts

- Samples collected must be representative of the powder/dust in the process or the building that is being evaluated.
- In buildings, samples may be obtained from the higher locations (I-beams, on top of drop ceilings, top of lighting fixtures, etc.) as finer particles may settle in those locations.
- If a number of different (physically and/or chemically dissimilar) materials are used in the process or building, appropriate samples may need to be collected from multiple locations in order to properly evaluate the fire and explosion hazards.
- For dust cloud explosion testing purposes powder samples must be the driest and finest that might be present in the process/facility.
- Samples should be packed and labelled in accordance with regulatory requirements where such regulation exists. Where no special packaging requirement exists, samples should ideally be placed in wide-mouth sample jars (plastic or glass). Sample container should be packaged in a cardboard box with suitable packing material to prevent damage in transit. Samples may be placed in a Ziploc bag but should be double bagged or placed in another container to prevent leakage.

Sample collection and submittal of metals or metal alloys: In accordance with NFPA 484 (Standard for Combustible Metals) "Sample shall be maintained in suitable inert gas or vacuum packaging." Metal dusts that have been oxidized may not provide accurate dust explosion characteristics as compared to "freshly" processed powders.

Liquids

- Liquid(s) collected must be representative sample of the process that is being evaluated.
- Samples sent for flammability or reactivity testing such as Flash Points, Flammability Limits, DSC, ARC, RC1, etc., must be sent in appropriate tightly sealed glass containers, taped closed or otherwise packaged to prevent the loss of volatile material.
- Samples should be packed & labelled in accordance with regulatory requirements where such regulation exists. Where no special packaging requirement exists, rigid plastic containers are preferred provided they are compatible with the liquid and can be securely tightly sealed. Lids or caps should be taped shut so they do not loosen during transit. Bottles should be placed in sealed, clear plastic bags.
- Inside packages (samples) shall have OSHA Global Harmonized System (GHS) for Hazardous Material labels. Outer packaging should ideally be filled with vermiculite or other absorbent padding material to absorb any inadvertent leakage in transit.
- Where studies require provision of non-proprietary liquid materials, these can be procured directly by our laboratories if a representative grade exists. Any costs will be passed directly in the study invoice.

Gases

- Gases should be collected or transported in suitable receptacles which are of sufficient design pressure and construction to safely contain the gas throughout storage, transportation and use. Gas cylinders should conform to Compressed Gas Association (CGA) standards.
- Please liaise with our laboratories to ensure that the gas container is furnished with compatible fittings for connection to our laboratory test equipment.
- Cylinders containing flammable, corrosive or toxic gases must be shipped with the cylinder outlet plugged or capped.

ALL samples and packages should be clearly identified with the following information (in addition to any specific regulatory data prescribed for the substance):

- Sample name:**
- Batch/Lot number, if applicable: Date sample collected:**
- If applicable, equipment/location where sample was taken from (be specific):**
- Weight of sample:**
- Any other pertinent information or instruction: (Example "Open under Nitrogen" or "Keep refrigerated") Regulatory label on the packaging (where applicable)**

We encourage you to contact the quote author/sample receipt department for any further information that you may require on sample collection, packaging, shipping or testing.

Don Churchwell – Dusts & Powders

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Michael Carolan – Liquids & Gases

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Collection of Dust Sample

1. Representative samples from inside process equipment, dust collectors, elevated surfaces of buildings, etc. can be gently collected, being careful not to create a dust cloud. Use a natural bristle brush and non-metal collection tool.



2. Place sample in labelled, compatible, containers - Plastic containers, glass jars, and/or double-bagged plastic bags may be used. For hazardous materials, OSHA GHS labelling is required on each container.



3. Securely place containers in an appropriate outer packaging with absorbent filler to minimize movement and damage during transport. Please include:

- ✓ Safety Data Sheet (SDS)
- ✓ Billing Information Request form,
- ✓ Purchase Order, referencing our Quotation Number
- ✓ Appropriate DOT Hazardous Materials Shipping labels



4. Ship in properly regulated package to:

**Sample Receipt Coordinator
DEKRA Process Safety
113 Campus Drive
Princeton, New Jersey 08540 USA**



Shipping Samples

This document is provided in good faith & is intended to provide guidance only. It is the consignor’s responsibility to ensure samples are shipped in accordance with local and international regulations and applicable laws. In any case where you are unsure expert advice, specific to the sample(s) to be shipped, and mode of shipment used, should be sought.

- All samples sent to DEKRA Process Safety must be sent safely, securely, and in accordance with all local, national, and international laws, where applicable.
 - Certain chemicals may only be shipped through an appropriate courier. Most chemicals (based on their classification) must not be shipped through the domestic postal system – if in doubt, please check (or consult with our specialists for advice). We can provide you with a list of specialist hazardous materials shipping companies who could assist you with proper packaging and shipping of the samples to our laboratories, if required.
 - For non-hazardous samples, as a minimum, the consignor must ensure that the samples are appropriately packed to ensure the contents does not leak or rupture during transport or handling.
 - The package must clearly and accurately detail the address for DEKRA Process Safety as well as that of the consignor.
 - A contact name for the consignor along with a contact telephone number must also be included.
 - It is recommended that address details are marked on at least two sides of the package along with the DEKRA Process Safety quotation number for ease of reference on receipt. **For your convenience, an address label is supplied below which can be affixed to the outer sample packaging.**
- A copy of the Safety Data Sheet (SDS) must be included with the package for each material.
 - All samples should be clearly labelled inside the package.
 - For substances that are hazardous, it is necessary to determine whether they are, or could be, considered dangerous for transport. In addition to the requirements detailed for non-hazardous samples, the following basis of control must be identified.
 - Is the sample(s) to be sent known, or suspected to be -
 - Prohibited** - No movement allowed
 - Regulated** - Can be moved with care
 - Exempt** - Can be moved without restraint
 - Prohibited Substances: It may be possible to ship the sample by a certain mode of transport (i.e. Road), or in small quantities, but a qualified DGSA (Dangerous Goods Safety Adviser) should be consulted first. Few samples fall into this category but if they do then specialist advice must be sought.
 - For shipment of samples without SDS please contact the quote author or email don.churchwell@dekra.com or michael.carolan@dekra.com

Sample Label

- ✓ **Sample name:**
- ✓ **Batch/Lot number, if applicable:**
- ✓ **Date sample collected:**
- ✓ **Equipment/location where sample was collected (be specific):**
- ✓ **Weight of sample:**
- ✓ **Any other pertinent information or instruction** (Example “Open under Nitrogen” or “Keep refrigerated”):
.....
- ✓ **Transport/Hazard Label on the packaging: YES..... NO.....**
- ✓ **Hygroscopic: YES..... NO.....**

LABELS – Shipping, Sample

ADDRESS LABEL

Sample Receipt Coordinator DEKRA Process Safety 113 Campus Drive Princeton, New Jersey 08540 Quotation #:	Sample Receipt Coordinator DEKRA Process Safety 113 Campus Drive Princeton, New Jersey 08540 Quotation #:
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Sample Receipt Coordinator
DEKRA Process Safety
113 Campus Drive
Princeton, New Jersey 08540
Quotation #:



DEKRA Process Safety

DEKRA Process Safety
113 Campus Drive,
Princeton,
New Jersey 08540. USA

Tel: +1 609 799 4449
process-safety-usa@dekra.com

Website: www.dekra.us/process-safety