

1. Objective

The purpose of this procedure defines the requirements for developing and implementing a hazard communication program to provide information to employees concerning hazardous chemical to which they may be potentially exposed.

This procedure also describes managing and maintaining Safety data sheets (SDS) of chemicals / products utilized by PSS.

2. Scope

This procedure is applicable to all new and existing chemicals, PSS products and contractors' activities involving use of chemical substances in PSS.

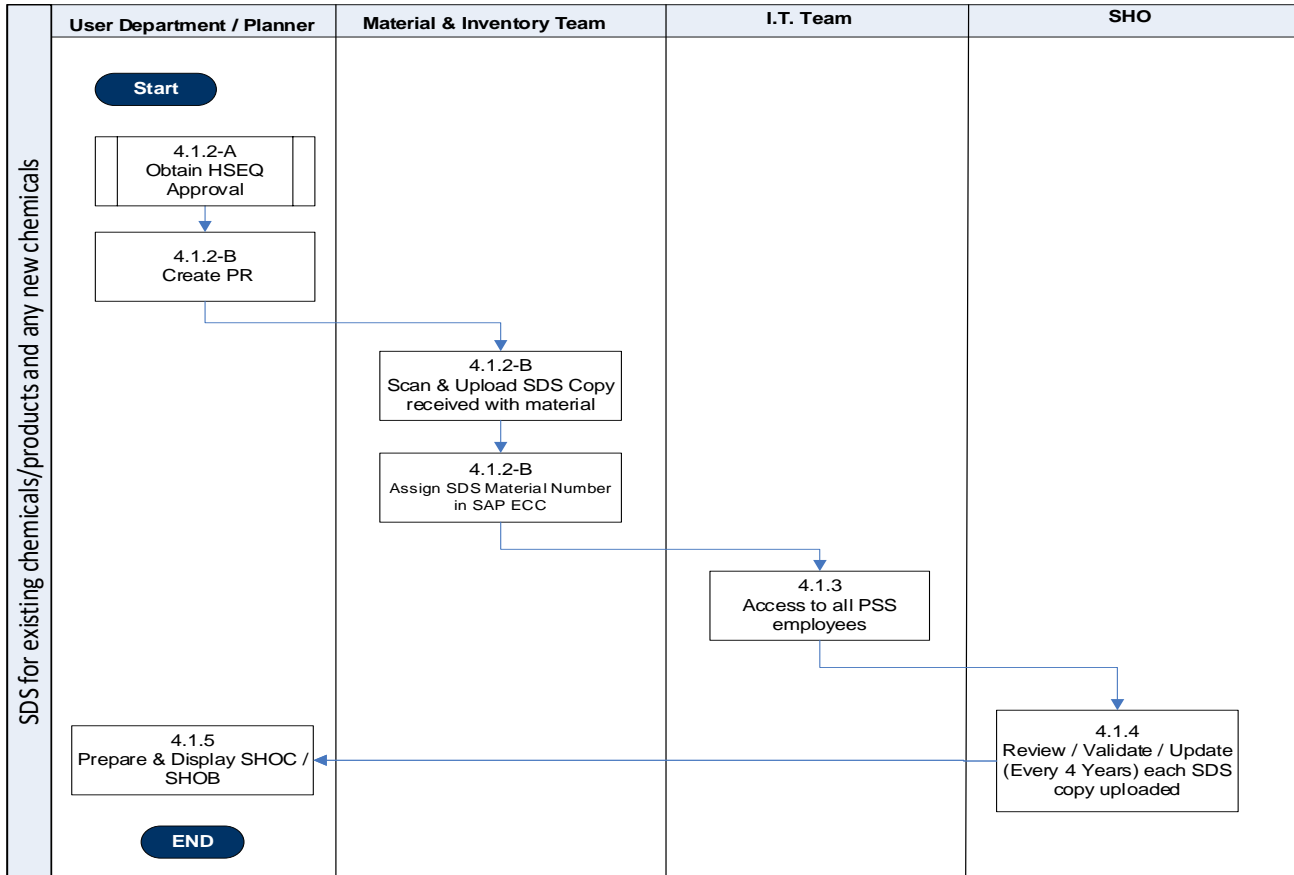
3. Procedure Summary

SDS Management procedure briefly summaries about obtaining, validating, maintaining, updating, storing & display of safety data sheets and safety hazard operational cards/boards for all applicable chemicals and products for the main purpose of chemical hazard communication as stated by international laws.

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4. SDS Management Process Workflow



4.1 Procedure Clarifications

Ref.	Clarifications details
4.1.1	<p><u>SDS Format (in-line with OSHA, GHS, ANSI, EU & other International Standards)</u></p> <p>The SDS includes information such as the properties of each chemical; the physical, health, and environmental health hazards; protective measures; and safety precautions for handling, storing, and transporting the chemical.</p> <p>The information contained in the SDS must be in English (although it may be in other languages as well). Hazard Communication Standard: Safety Data Sheets Sections 1 through 8 contain general information about the chemical, identification, hazards, composition, safe handling practices, and emergency control measures (e.g., firefighting).</p> <p>Sections 9 through 11 and 16 contain other technical and scientific information, such as physical and chemical properties, stability and reactivity information, toxicological information, exposure control information, and other information including the date of preparation or last revision.</p> <p>The SDS must also state that no applicable information was found when the preparer does not find relevant information for any required element. The SDS must also contain Sections 12 through 15, to be consistent with the UN Globally Harmonized System of Classification and Labeling of Chemicals (GHS), A description of all 16 sections of the SDS, along with their contents, is presented in Appendix- PR-SE-01-AP01 of this procedure.</p>
4.1.2	<p><u>SDS for existing chemicals/products and any new chemicals</u></p> <p>A. Prior to the introduction of a new chemical or hazardous material at QAPCO Operations, user department must obtain HSE approval from the HSEQ Division, as per chemical management procedure (PR-QSS-116).</p> <p>B. While creating purchase requisition (PR) for any hazardous material or chemical, planner must ensure to tick mark on mandatory requirement of SDS. While HSE Approved chemical/ material arrives at QAPCO warehouse, relevant team members from Inventory group shall scan and upload the pdf copy of SDS on SAP system. Once the data files have been uploaded on SAP, against each material numbers, the same information will be visible to all QAPCO users on intranet portal.</p> <p>See below Screenshots for each step:</p>

Image-1: HSE Approval Form

	PROCEDURE FOR CHEMICAL MANAGEMENT	Procedure No. PR-QSS-116 Revision 00 Date 16 Oct 2016
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Appendix- 10.1 HSE Approved Chemical Certificate

HSE APPROVED CHEMICAL CERTIFICATE

Chemical Name: _____ Vendor: _____

S.NO	Criteria Query	YES	NO	REMARKS
1	MSDS/SDS provided			
2	Risk assessment performed			
3	All residual risks (after including recommendations) are in acceptable range			
4	COA (Certificate of analysis) provided			


Chemical is technically approved according to HSE evaluation for purchase, delivery and use in QAPCO Mesaieed production site

Approval will be given if answer is YES to all of the above.

Date: _____

HSE Manager Sign: _____	SEM Sign: _____
HOM Sign: _____	HOP sign: _____
User Department Member Sign: _____	

Prepared by	Sr. HSE Officer	Reviewed by	CHSEO	CTO	CMO	CSO	EDO	Approved by	MD & CEO
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Image-2: SAP Entry of SDS file against each material number

The screenshot shows the SAP Material Master entry for material CATAEP1. The 'Quality management' tab is active, displaying various settings for inspection and documentation. A pop-up window titled 'Control Key for Quality Management in Procurement (1) 11 Entries found' is open, showing a list of control keys and their corresponding short texts.

Material: CATAEP1
Plant: 2000
Amortized Catalyst for CATAEP1

General data:

- Base Unit of Measure: **MT** (Metric Ton)
- Unit of issue: []
- QM material auth.: **LIMS**
- GR Processing Time: **0** days
- Catalog profile: []
- Plant-sp.matl status: []
- Inspection setup: [] (Insp. setup)
- Post to insp. stock: []
- Documentation reqd: []
- Inspection interval: **0** days
- Valid from: []

Procurement data:

- QM proc. active: []
- QM Control Key: []
- Certificate type: []
- Target QM system: []
- Tech. delivery terms: []

Control Key for Quality Management in Procurement (1) 11 Entries found

Ctrl Key	Short text
0000	No active functions, info message
0001	Delivery release
0002	Delivery release, tech. delivery terms
0003	Delivery release, QA agreement
0004	Del. release, tech.del terms, QA agreem.
0005	Delivery release, certificate
0006	Del. rel,TechDelT,QA agreement,certif.
0007	Del. release, invoice block
8888	Del. block inactive
9999	All functions active with error message
MSDS	Del. release, invoice block + MSDS Requi

11 Entries found

Image-3: SDS List on QAPCO Intranet portal.

Material	Material Description	MSDS Name or Product Name	Plant	Attachment Date	SHOC Link	Usage Description	Expiry Date	Toxicity	MSDS Item Link	Title	URLID
03020313	CATALYST OLEMAX 201 WITH PALLADIUM CONTE		3000	3/7/2022					Click here to open		20000050569F72BE1EEABAE9580A12848985
22453999	CYLINDER;CALIBRATION;1000PSI;1.6L;BUZWAIR		4000	3/7/2022					Click here to open		400000505698C0CA1EEBA4C2C7975C8439F5
22453999	CYLINDER;CALIBRATION;1000PSI;1.6L;BUZWAIR		3000	3/7/2022					Click here to open		200000505698C0CA1EEBA4C2C7975C8439F5
22450739	CYLINDER;GAS;O2+AR,DIN 1 OR RI-2,MESSER		4000	3/7/2022					Click here to open		40000050569F72BE1EEA0CE8615C0DFC4901A
22450739	CYLINDER;GAS;O2+AR,DIN 1 OR RI-2,MESSER		3000	3/7/2022					Click here to open		20000050569F72BE1EEA0CE8615C0DFC4901A
92060019	ABSORBENT GRANULES;30LBS;/BAG;CELL 30		3000	3/7/2022					Click here to open		20000050569F72BE1EE994EE6AE56D76E03F
92060019	ABSORBENT GRANULES;30LBS;/BAG;CELL 30		3000	3/7/2022					Click here to open		30000050569F72BE1EE994EE6AE56D76E03F
92060019	ABSORBENT GRANULES;30LBS;/BAG;CELL 30		4000	3/7/2022					Click here to open		40000050569F72BE1EE994EE6AE56D76E03F
08000237	MOLECULAR SIEVERMS/LLDPE;06-01 REV1		3000	3/7/2022					Click here to open		300000505698C0CA1EDB98EFB0264D968F6C
08000247	MOLECULAR SIEVERMS/LLDPE;06-02 REV1		3000	3/7/2022					Click here to open		300000505698C0CA1EDB98EF44C360CEFF5
08000247	MOLECULAR SIEVERMS/LLDPE;06-02 REV1		2000	3/7/2022					Click here to open		200000505698C0CA1EDB98EF44C360CEFF5
08000237	MOLECULAR SIEVERMS/LLDPE;06-01 REV1		2000	3/7/2022					Click here to open		200000505698C0CA1EDB98EFB0264D968F6C

4.1.3 Access to SDS
All SDS files should be uploaded & maintained in the electronic system and can be easily assessable to QAPCO users & other interested parties through QAPCO Website and Intranet Portal. QAPCO Employees, who do not have computer access; SHOCs are available on-site and a copy of the full SDS can be requested from concerned supervisor.


4.1.4 Updating SDS
All SDS shall be updated at-least every four years or earlier* (if required due to change in process or chemical properties.)

4.1.5 Safety Hazard Operational Cards & Boards (SHOC & SHOB)
Safety cards/boards to be issued and followed by the user (e.g. Chemical Warehouse, Concerned Plant / Department & Central Lab) must include the following:








- Chemical name and CAS Number,
- Hazard identification using NFPA Hazard Identification method,
- First aid measures,
- Fire Fighting measures
- Accidental release measures & PPEs.


Any additional information added to the SHOC/B will be left to the plant owner's discretion. All SHOC/B shall be available and accessible on site in any form decided by the concerned department, such as cards or signboards.

SAFETY HAZARD OPERATIONAL CARD (SHOC)



N-PROPANOL

<p>HAZARD IDENTIFICATION</p> <p>Name: N-Propanol CAS # 71-23-8</p> <ul style="list-style-type: none"> ➤ Very Hazardous in case of Eye Contact ➤ Slightly Hazardous in case of Skin Contact ➤ Highly Flammable 	 
<p>FIRST-AID MEASURES</p> <ul style="list-style-type: none"> ➤ EYE CONTACT: Immediately flush eyes with running water for at-least 15 minutes. ➤ SKIN CONTACT: Gently wash the skin with plenty of running water & Non-abrasive soap. ➤ INHALATION: Allow the victim to rest in well-ventilated area. Seek medical advice ➤ INGESTION: Do not induce Vomiting. Seek medical advice 	
<p>FIRE-FIGHTING MEASURES</p> <ul style="list-style-type: none"> ➤ Flammable Liquid, Soluble or dispersed in water ➤ SMALL FIRE: Use Dry Chemical Powder ➤ LARGE FIRE: Use Alcohol Foam, water spray or fog. <p>SPECIAL REMARKS: Explosive in the form of vapor when exposed to heat or flame. May Burn with near invisible Flame.</p>	
<p>SPILL CONTROL (Accidental Release)</p> <ul style="list-style-type: none"> ➤ SMALL SPILL: Dilute with water and mop up, or absorb with inert dry material. ➤ LARGE SPILL: Absorb with Dry Earth, sand or other Non-Combustible material. Prevent entry into sewers, basement or confined areas. 	
<p>PERSONAL PROTECTIVE EQUIPMENT</p> <div style="display: flex; justify-content: space-around; align-items: center;">      </div> <p>NOTE: Full chemical resistant suit & Gum Boots require for emergency handling</p> <p style="font-size: small; text-align: center;">- For more details Refer Full MSDS @ QAPCO Shared Folder.</p>	

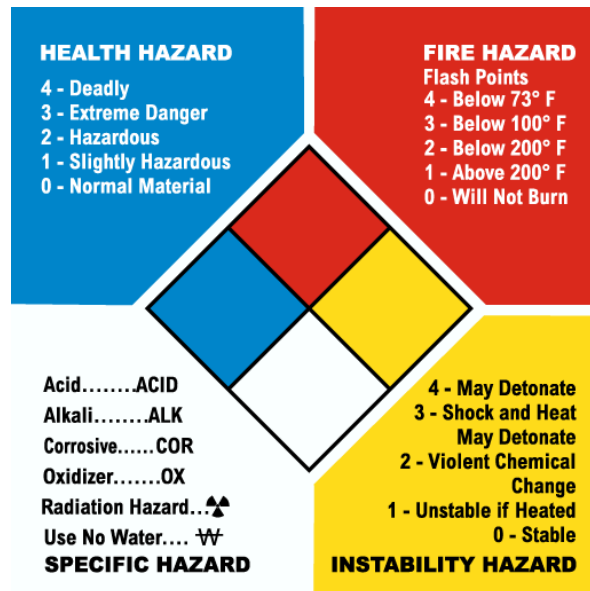


IN CASE OF ANY EMERGENCY, PLEASE CALL: 666

4.1.6 NFPA Hazard Identification

The four divisions of NFPA Hazard Identification are typically color-coded with red indicating Fire Hazard (flammability), blue indicating level of Health Hazard, yellow for Chemical Reactivity, and white containing codes for Special Hazards.

Note: All information required for NFPA Hazard Identification for each chemical can be found in the SDS



Preparing / Authoring SDS for QAPCO Product

4.1.7

SDS Creation Process is the task of preparing Safety Data Sheets for QAPCO products in line with the international standards and requirements stipulated under United Nations' Globally Harmonized System of Classification and Labelling of Chemicals (GHS).

SDS creation shall be devoted to a group staffed by multidisciplinary professionals. Group can be recognized as 'Product Stewardship Team' or 'Product Regulatory Support Team' and the Head of Team shall be designated as SDS Author. For the ease of QAPCO Operations & business integrity, QAPCO Management or Product Stewardship Team may decide to outsource SDS Creation process to competent and authorized third party agency/consultancy.

The workflow, expertise and information management systems behind SDS preparation are discussed further below.

A. Workflow:

- Creation of an SDS starts with a request from a business. The business submits basic information on the product or material to the product stewardship group (or the third-party agency assigned).
- The information the business submits to product stewardship includes the material identity, composition, and physical/chemical properties. (Product's Physical parameters shall be tested/validated at accredited laboratory)

- SDS authors begin to create the SDS with the information provided by the business, and then use available data to make hazard classifications. Often, authors use toxicology and other information for single chemicals to do an evaluation of the hazards of a mixture. Database used for obtaining the toxicological and other technical information, must be of authorized research & development institute or approved government agency.
- The primary goal of SDS authors is to produce up to date SDSs that thoroughly and accurately communicate the hazards of the subject material.
- After a draft SDS has been created, it goes through an established review process that may involve review by other product stewards and/or the requesting business or site. Product stewardship groups use a team approach to take advantage of the variety of expertise in the groups. Final SDSs are loaded into a database or other electronic repository (QAPCO intranet platform).
- The process for revising an SDS is basically the same as creating a new one. Revisions may be triggered by a formulation change, new information on hazards, or changes in regulations. QAPCO Product's SDSs must be revised at-least once in 4 years.

B. Expertise:

- Product stewardship and SDS authoring group usually comprise professionals and technical staff with a variety of expertise, i.e. Professionals in chemistry, toxicology, industrial hygiene, occupational health, environmental science, and other relevant sciences. Team also may include pharmacists, regulatory professionals, quality control, and technical staff. Significant scientific and other professional resources and expertise are behind the content of each SDS. Proposed constitution of Product stewardship and SDS authoring Team at QAPCO:

QAPCO Product Stewardship and SDS authoring Team Members may include:

- Representatives from Operations, Process, TCS, Product Development & HSEQ.

If QAPCO Product Stewardship Team cannot find In-house competencies, then they may hire competent third-party agency for the purpose of SDS Creation.

C. SDS Format, Distribution and Management:

- SDS must be written in English and follow the ANSI Z400.1-2004 and GHS Template which contains 16 separate sections each with clear information relating to the chemical being used, handled, stored, transported or disposed.
- Finalized SDSs must be published in hard copies and soft copies. Soft copies can be archived on QAPCO Intranet for access to all company users. Product SDS should also be pasted on company website for usage by worldwide clients.
- Management of SDS Creation, Publication and Revision lies with 'Product Stewardship Team'.

5. Records

The owner / executor shall maintain the following records / documents for reference:

#	Document / Record name	Retention period	Retention policy	Retention method	Classification
1	SDS MS Procedure – PR-SE-01	5 years	ISO Achiever Backup system by IT	Soft Copy	Internal
2	QAPCO Intranet- SDS List (QAPCO Product SDS)	5 Years	Backup system by IT	Soft Copy	Internal
3	QAPCO Intranet- SDS List (Chemicals/ Materials)	5 Years	Backup system by IT	Soft Copy	Internal
4	PR-SE-01-AP-02 - SHOC FORMAT	5 years	Qapco Intranet Portal	Soft Copy	Internal

6. Document References / Attachments

#	Document ID	Document name	Summary of dependency or use
7.1 DOCUMENT REFERENCES			
1	29 CFR 1910.1200	OSHA	Toxic and Hazardous Substances, Subpart Z
2	ANSI Z400.1/Z129.1	ANSI	American National Standard for Hazardous Workplace Chemicals – Hazard Evaluation and Safety Data Sheet and Precautionary Labeling Preparation.
4	INS-253-ENV-02	Environmental Protection in QAPCO	Instructions for Environmental Protection in QAPCO (Requestor responsibilities)
5	ST/SG/AC.10/30 / Rev-9	United Nations Globally Harmonized System of Classification and Labelling of Chemicals (GHS)- 9th Edition	Overall
6	REACH EC 1907/2006- Updates 27.04.2021	Regulation (EC) No 1907/2006 - Registration, Evaluation, Authorization and Restriction of Chemicals (REACH)	Section 4.1.1, Format of SDS
7	PR-QSS-116	Procedure for chemical management	Section-4.1.2, HSE Approvals for new chemicals
7.2 ATTACHMENTS			
1	PR-SE-01-AP-01	SDS FORMAT (GHS)	Procedure Implementation
2	PR-SE-01-AP-02	SHOC FORMAT	
3	PR-SE-01-AP-03	NFPA LABELING	

7. IT System Requirements

#	IT system module name	Summary of IT system module use
1	SharePoint, SAP	QAPCO Intranet, SharePoint & SAP ECC- MSDS

8. Abbreviations / Definitions

#	Abbreviation / Keyword	Definition summary
1	Chemical	Any substance, compound, or mixture, which potentially has physical or health hazards?
2	Chemical Inventory	A computerized inventory list of all chemicals at QAPCO by work location? The database can be accessed on the Public server/Intranet under the P//MSDS Link.
3	(Material) Safety Data Sheet- (M) SDS	A document that contains information on the potential health effects of exposure to chemicals, or other potentially dangerous substances, and on safe working procedures when handling chemical products
4	"New" Chemical	Any chemical not already listed on the chemical inventory at a specific work location or the index on the electronic database
5	Safety Hazard Operational Cards/Boards (SHOC/B):	A card and/or board that conveys a hazard of the chemical to employees.
6	NFPA 704	A standard System for the Identification of the Hazards of Materials for Emergency Response" is a standard maintained by the U.S.- based National Fire Protection Association (NFPA).
7	OSHA	Occupational Safety & Health Administration- United States
8	GHS, EU	Globally Harmonized System, European Union
9	ANSI	American National Standards Institute
10	SHO	Senior Hygiene Officer
11	SEM	Sustainability & Environment Department Manager
12	LWM	Logistics and Warehouse Manager
13	HSEQGM	Health, Safety, Environment & Quality Dept. Group Manager
14	CHSEQO	Chief HSEQ Officer
15	HoM	Head of Medical
16	HOP	Head of Process
17	PSS	Petrochemical shared services (Qapco, Qatofin, QVC)

9. Revision History

Rev #	Date	Section No.	Reason for revision / modification
00	20/06/2016	various	Change of procedure number (previous no. PR-320-MED-11)
01	06/03/2022	all	Changed Procedure number from PR-253-ENV-01 to PR-SE-01. Revised the procedure as per new template requirement.