

SDS 8.1

BAYETONE

MSDS Number: A0446 --- Effective Date: 04/09/98

1. Product Identification

Contains Acetone.
Synonyms: Dimethylketone; 2-propanone; dimethylketal
CAS No.: 67-64-1
Molecular Weight: 58.08
Chemical Formula: (CH₃)₂CO
Product Codes:
5356, 5580, 5805, 9001, 9002, 9003, 9004, 9005, 9006, 9007, 9008, 9009,
9010, 9015, 9036, 9125, 9254, 9271, A134
Mallinckrodt: 0018, 2432, 2435, 2437, 2438, 2440, 2443, 2445, 2850, H451,
H580, H981

2. Composition/Information on Ingredients

Ingredient	CAS No	Percent	Hazardous
Acetone	67-64-1	99 - 100%	Yes

3. Hazards Identification

Emergency Overview

HIGHLY HAZARDOUS. DANGER! EXTREMELY FLAMMABLE
LIQUID AND VAPOR. VAPOR MAY CAUSE FLASH FIRE.
HARMFUL IF SWALLOWED OR INHALED. CORROSIVE. CAUSES
IRRITATION TO SKIN, EYES AND RESPIRATORY TRACT.
AFFECTS CENTRAL NERVOUS SYSTEM.

Health Rating: 1 - Slight
Flammability Rating: 4 - Extreme (Flammable)
Reactivity Rating: 2 - Moderate
Contact Rating: 1 - Slight
Lab Protective Equip: GOGGLES; LAB COAT; VENT HOOD; PROPER
GLOVES; CLASS B EXTINGUISHER
Storage Color Code: Red (Flammable)

Potential Health Effects

Inhalation:

Inhalation of vapors irritates the respiratory tract. May cause coughing, dizziness,
dullness, and headache. Higher concentrations can produce central nervous

system depression, narcosis, and unconsciousness.

Ingestion:

Swallowing small amounts is not likely to produce harmful effects. Ingestion of larger amounts may produce abdominal pain, nausea and vomiting. Aspiration into lungs can produce severe lung damage and is a medical emergency. Other symptoms are expected to parallel inhalation.

Skin Contact:

Irritating due to defatting action on skin. Causes redness, pain, drying and cracking of the skin.

Eye Contact:

Vapors are irritating to the eyes. Splashes may cause severe irritation, with stinging, tearing, redness and pain.

Chronic Exposure:

Prolonged or repeated skin contact may produce severe irritation or dermatitis. Neurological and reproductive effects. Mutagenic.

Aggravation of Pre-existing Conditions:

Use of alcoholic beverages enhances toxic effects. Exposure may increase the toxic potential of chlorinated hydrocarbons, such as chloroform, trichloroethane.

4. First Aid Measures

Inhalation:

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Ingestion:

If swallowed, DO NOT INDUCE. If conscious, give large amounts of water.

Skin Contact:

Immediately flush skin with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.

Eye Contact:

Immediately flush eyes with plenty of water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get medical attention.

5. Fire Fighting Measures

Fire:

Boiling Range: 116-192 °C

Flash point: 23°C (-4°F) CC

Autoignition temperature: 465°C (869°F)

Flammable limits in air % by volume:

l: 2.5; u: 12.8

Volatile: 70 – 80% by volume

Combustible. Extremely Flammable Liquid and Vapor! Vapor may cause flash fire.

Explosion:

Above flash point, vapor-air mixtures are explosive within flammable limits noted above. Vapors can flow along surfaces to distant ignition source and flash back.

Contact with strong oxidizers may cause fire. Sealed containers may rupture when heated. This material may produce a floating fire hazard. Sensitive to static discharge.

Fire Extinguishing Media:

Dry chemical, alcohol foam or carbon dioxide. Water may be ineffective. Water spray may be used to keep fire exposed containers cool, dilute spills to

nonflammable mixtures, protect personnel attempting to stop leak and disperse vapors.

Special Information:

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

6. Accidental Release Measures

Ventilate area of leak or spill. Remove all sources of ignition. Wear appropriate personal protective equipment as specified in Section 8. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Contain and recover liquid when possible. Use non-sparking tools and equipment. Collect liquid in an appropriate container or absorb with an inert material (e. g., vermiculite, dry sand, earth), and place in a chemical waste container. Do not use combustible materials, such as saw dust. Do not flush to sewer! If a leak or spill has not ignited, use water spray to disperse the vapors, to protect personnel attempting to stop leak, and to flush spills away from exposures. SA Regulations require reporting spills and releases to soil, water and air in excess of reportable quantities. The toll free number for the SA National Response Center is 800424-8802.

Solvent adsorbent is recommended for spills of this product.

7. Handling and Storage

Protect against physical damage. Store in a cool, dry well-ventilated location, away from any area where the fire hazard may be acute. Outside or detached storage is preferred. Separate from incompatibles. Containers should be bonded and grounded for transfers to avoid static sparks. Storage and use areas should be No Smoking areas. Use non-sparking type tools and equipment, including explosion proof ventilation. Containers of this material may be hazardous when empty since they retain product residues (vapors, liquid); observe all warnings and precautions listed for the product.

8. Exposure Controls/Personal Protection

Airborne Exposure Limits: Acetone:

- Permissible Exposure Limit (PEL): 1000 ppm (TWA)
 - Threshold Limit Value (TLV): 500 ppm (TWA), 750 ppm (STEL)
- A4 - not classifiable as a human carcinogen

Ventilation System:

A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, Industrial Ventilation, A Manual of Recommended Practices, most recent edition, for details.

Personal Respirators :

If the exposure limit is exceeded, a half-face organic vapor respirator may be worn for up to ten times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is low est. A full-face piece organic vapor respirator may be worn up to 50 times the exposure limit or the maximum use concentration specified by the appropriate

regulatory agency or respirator supplier, whichever is low est. For emergencies or instances where the exposure levels are not known, use a full-face piece positive-pressure, air-supplied respirator. WARNING: Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

Skin Protection:

Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.
Use barrier cream.

Eye Protection:

Use chemical safety goggles and/or a full face shield where splashing is possible.
Maintain eye wash fountain and quick-drench facilities in work area.

9. Physical and Chemical Properties

Appearance: Clear, colorless, volatile liquid.

Odor: Aromatic gasoline like odor

Solubility: Miscible in all proportions in water.

Specific Gravity: 0.79 @ 20C/4C

pH: 2-9

% Volatiles by volume @ 21C (70F): 100

Boiling Range: 116-192 @ 760 mm Hg

Melting Point: -95C (-139F)

Vapor Density (Air=1): 2.0

Vapor Pressure (mm Hg): 400 @ 39.5C (104F)

Evaporation Rate (BuAc=1): ca. 7.7

10. Stability and Reactivity

Stability:

Stable under ordinary conditions of use and storage.

Hazardous Decomposition Products:

Carbon dioxide and carbon monoxide may form when heated to decomposition.

Hazardous Polymerization:

Will not occur.

Incompatibilities:

Concentrated nitric and sulfuric acid mixtures, oxidizing materials, chloroform, alkalis, chlorine compounds, acids, potassium t-butoxide.

Conditions to Avoid:

Heat, flames, ignition sources and incompatibles.

11. Toxicological Information

Oral rat LD50: 5800 mg/kg; Inhalation rat LC50: 50,100mg/m3; Irritation eye rabbit, Standard Draize, 20 mg severe; investigated as a tumorigen, mutagen, reproductive effector.

-----\Cancer Lists\-----

---NTP Carcinogen---

Ingredient	Known	Anticipated	IARC Category
Acetone (67-64-1)	No	No	None

12. Ecological Information

Environmental Fate:

When released into the soil, this material is expected to readily biodegrade. When released into the soil, this material is expected to leach into groundwater. When released into the soil, this material is expected to quickly evaporate. When released into water, this material is expected to readily biodegrade. When released to water, this material is expected to quickly evaporate. This material has a log octanol-water partition coefficient of less than 3.0. This material is not expected to significantly bioaccumulate. When released into the air, this material may be moderately degraded by reaction with photochemically produced hydroxyl radicals. When released into the air, this material may be moderately degraded by photolysis. When released into the air, this material is expected to be readily removed from the atmosphere by wet deposition.

Environmental Toxicity:

This material is not expected to be toxic to aquatic life. The LC50/96-hour values for fish are over 100 mg/l.

13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and sent to a RCRA approved incinerator or disposed in a RCRA approved waste facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

14. Transport Information

Domestic (Land, D.O.T.)

Proper Shipping Name: ACETONE
Hazard Class: 3
UN/NA: UN1090
Packing Group: II
Information reported for product/size: 350LB

International (Water, I.M.O.)

Proper Shipping Name: ACETONE
Hazard Class: 3.1
UN/NA: UN1090
Packing Group: II
Information reported for product/size: 350LB

15. Regulatory Information

-----\Chemical Inventory Status - Part 1\-----

Ingredient	TSCA	EC	Japan	Australia
Acetone (67-64-1)	Yes	Yes	Yes	Yes

-----\Chemical Inventory Status - Part 2\-----

--Canada--
 Ingredient Korea DSL NDSL Phil.

 Acetone (67-64-1) Yes Yes No Yes

-----\Federal, State & International Regulations - Part 1\-----

-SARA 302- -----SARA 313-----
 Ingredient RQ TPQ List Chemical Catg.

 Acetone (67-64-1) No No Yes No

-----\Federal, State & International Regulations - Part 2\-----

-RCRA- -TSCA-
 Ingredient CERCLA 261.33 8(d)

 Acetone (67-64-1) 5000 U002 No

Chemical Weapons Convention: No TSCA 12(b): Yes CDTA: Yes
 SARA 311/312: Acute: Yes Chronic: No Fire: Yes Pressure: No
 Reactivity: No (Pure / Liquid)

Australian Hazchem Code: 2[Y]E

Poison Schedule: No information found.

WHMIS:

This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

16. Other Information

NFPA Ratings: Health: 1 Flammability: 3 Reactivity: 0

Label Hazard Warning:

HAZARDOUS

EXTREMELY FLAMMABLE VAPOUR HARMFUL OR FATAL IF SWALLOWED CAUSES SKIN AND

EYE IRRITATION

READ INSTRUCTIONS CAREFULLY BEFORE USE

Label Precautions: Keep away from heat and flame.

Work in conditions of adequate ventilation.

Avoid prolonged or repeated breathing of vapour.

Use barrier cream and gloves.

Protect from freezing

Label First Aid:

Eyes: In case of contact, immediately flush eyes or skin with copious amounts of water for at least 15 minutes while removing contaminated clothing and shoes.

Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Ingestion: If swallowed, do not induce vomiting. If conscious, give large amounts of water.

Product Use:

Laboratory Reagent.

Revision Information:

MSDS Section(s) changed since last revision of document include: 8.

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Annexure 5: Modules

CONTENTS

Testing Module Consumer No Training

Testing Module Consumer With Training

**GHS testing Module
CONSUMER No
Training**

MODULE 2: GENERAL INTERVIEW (Consumer)

Sector: Industry =1 Interviewer Code:
 Transport =2
 Agriculture =3
 Consumer =4

Date: (dd/mm/yy)

Study Number:

1. Place of Interview : Western Cape =1
 Gauteng =2

2. Place of Interview: (City/Town)

3. Place of Interview: (Name of Industry/Shop, Farm etc):

2.1 CONSENT PROCEDURE

CONSENT: Consent for participating is sought individually with each participant.

- *Good morning/afternoon.*
- *My name is interviewers name I work for the University of Cape Town*
- *Thank you for agreeing to speak to me. I would like you to help us with a safety project.*
- *I will be asking you some questions, as well as showing you some papers. Your answers will be very helpful for us to advise how workplaces and homes can be made safer.*
- *Even though we will be asking you a lot of questions, **this is not a test of your ability or knowledge. You will not be judged by how well or poorly you answer any questions.** We are testing the information we will be showing you and not your ability. All we ask is that you try to answer the questions as truthfully and as best as you can.*

- *There is no need to rush and you must not feel you have to impress us when you answer. Please remember that any information we collect will be kept anonymous and confidential. Nobody, other than the researchers (myself and my colleagues) will know how you answered any of the questions.*

➤ **READ TO WORKERS ONLY:**
 ➤ *Your participation will not affect your job and your supervisor/manager has agreed that you can participate. Helshe knows that your answers will remain anonymous.*

- *It will take about 1 hour to conduct these interviews.*
- **After you are finished we will give you R50 for your time spent with us.**
- *Do you have any questions? We would be happy to answer them.*
- *Do you feel you understand why you are participating in this project? Are you happy to participate in this project?*
- *Thank you, we will now go ahead. **Remember**, even though you have said you are happy to participate, you do have the right to stop at any time if you so wish.*

Tick if respondent has verbally consented to participating in this study.

2.2 RESPONDENTS' BIOGRAPHICAL INFORMATION

2.2.1 Gender **Male = 1** **Female = 2**

Date of Birth: (dd/mm/yy)

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2.2.3 Are you married (or do you have a partner?) **Yes =1** **No =2**

2.2.10 Do you have children? Yes =1 No =2

LANGUAGE

INTERVIEWER FILLS IN:

2.3.1 Language interview is conducted in: _____

2.3.2 What languages do you speak at home? : _____

--	--

- | | |
|----------------|-----------|
| 1= English | 4= Zulu |
| 2= Xhosa | 5= Tswana |
| 3= Afrikaans | 6= Sotho |
| 7= Other _____ | |

2.9.4 Language proficiency

INSTRUCTION:

Code: Proficient = 1; Partly Proficient = 2; Unable to speak/ read/write = 3

<i>Please tell me if you can ...</i>	<i>Read</i>	<i>Write</i>	<i>Speak</i>
Language of the interview			
Afrikaans			
English			

2.10 EDUCATIONAL STATUS

2.4.1 Have you attended school? Yes =1 No =2

2.4.2 How much schooling have you completed? (Fill in appropriate number)

- no formal schooling = 1
- formal schooling but never completed primary school = 2
- formal schooling, completed primary school but never completed secondary/high school = 3
- completed secondary/high school = 4

2.4.3 Did you receive any training, skills or further education after school? Yes =1 No =2

2.10.3.1 **If yes, specify:** (Tick the appropriate box)

Have a diploma in a trained skill/vocation Yes =1 No =2

Completed university, college of technical degree Yes =1 No =2

Other (Specify): _____

2.10.3.2 What is your occupation?

2.11 EMPLOYMENT DETAILS

2.5.1 *Are you employed?*

Yes =1 No =2

If **YES** go to 2.5.3

2.5.2 *What do you do for a living?*

2.5.3 *What is your current job title or occupation?*

2.5.16 *Please describe what you do in your current job?*

2.5.17 *What type of industry do you work in?*

2.6 WORK EXPERIENCE

2.6.1 Have you ever used or worked with the following? Yes =1 No =2

Vibrating tools (eg. Drill, jackhammer)	<input type="checkbox"/>
Hot water	<input type="checkbox"/>
Electrical Equipment	<input type="checkbox"/>
Chemicals	<input type="checkbox"/>
Heavy vehicles (e.g. trucks, tractor, forklift, crane)	<input type="checkbox"/>

2.6.2 How would you find out about the hazards of a chemical you were working with? (Tick the appropriate box – first unprompted, then prompted)

FILL IN Yes =1, No =2, DK =3

Key: DK = don't know

Unprompted	Code	Prompted	Code
Label		Label	
SDS		SDS	
Co-workers		Co-workers	
Supervisors		Supervisors	
Training		Go for Training	
Occupational Health personnel		Occupational Health Personnel	
Other specialist personnel		Other specialist Personnel	
Trade Union office		Trade Union office	
Public information service (e.g. Poison Centre)		Public information service (e.g. Poison Centre)	
Other: (Specify)_____		Other: (Specify)_____	

2.6.3 If you use a chemical at work, what kind of information do you feel there should be on the chemical containers to protect your own health and safety?

2.13 ACUITY AND COLOUR BLINDNESS

INTERVIEWER: ➤ For colour blindness tests: use Ishihara plates (Question 2.7.1) ➤ For visual acuity tests: use Snellem's E (Question 2.7.2)..
--

2.7.1 Test for Colour Blindness

Some people have difficulty seeing certain colours, although this does not cause problems for the person, this may be a problem when colour is used on products. We would now like to test you for colour blindness.

Respondent sees 8 + 29 = not colour blind	Tick NO
Respondent sees 3 + 70 = colour blind)	Tick YES

2.7.1.1. Is the respondent colour blind? Yes =1 No =2

2.13.2 Test for Visual Acuity

3.7.2.1 Is the respondent wearing glasses Yes =1 No =2

2.7.2.2 Do you usually wear spectacles/glasses? Yes =1 No =2

<i>We would also like to see how well you see from a distance</i>	
Can see at distance 6/12	Tick YES
Cannot see at distance 6/12	Tick NO

2.7.2.3 Does the respondent have adequate visual acuity (i.e., 6/12)? Yes =1 No =2

- Thank you very much for your effort.
- We will now proceed with the next set of questions.

End of Module 2

MODULE 3: RECALL, READING AND COMPREHENSIBILITY OF LABELS

(For Consumer Sector)

BE SURE TO HAVE THE FOLLOWING BEFORE STARTING:

- ⇒ Stopwatch
- ⇒ Label SALOC (danger) =1 BAYETONE (Warning) = 2
- ⇒ Container

- **INSTRUCTION:**
- Randomly select a label
- Time for 60s and take label back

9.0 LABEL USED:

Label 3.1	SALOC	Danger	= 1	<input type="checkbox"/>
Label 3.2	BAYETONE	Warning	= 2	

3.1 ATTENTION TO LABEL

- *I am going to ask you some questions.*
- *If you do not understand some of the words I use, I will explain them to you.*
- *Please do not be shy to ask me to explain the question to you.*
- *Please have a look at this. I am going to give you some time to look at this and I will ask you some questions about this*

INTERVIEWER FILLS IN: Time subject:

The respondent is allowed to look at the label for 60 seconds.

- | | | | |
|-------|--|----|--------------------------|
| 3.1.1 | If subject looks at the label for 60s | =1 | <input type="checkbox"/> |
| 3.1.2 | If subject stops looking at the label before 60s | =2 | |

3.2 FAMILIARITY WITH THE LABEL

3.2.1 Have you ever seen this before?

(Point to the label) Tick the correct box

Yes =1	No =2	Not sure =3
--------	-------	-------------

➤ NB: If "YES", GO TO 3.2.2

➤ NB: If "NO" ... EXPLAIN THAT THIS IS A LABEL
(Do not ask 3.2.2)

3.20.2 What do you call this? (Point to the label)

Label =1	Other name =2	Don't know =3
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▪ NB: TAKE BACK THE LABEL

3.21 RECALL

INSTRUCTION:




- Ask respondent what they can remember on the label - DO NOT PROMPT
- After you mark what they remember under "without prompts" then proceed to ask if they remembered the items not mentioned under "prompted".
- Put answers on Table 3.3.

3.3.1 What do you remember was on the label? [Tick appropriate box in Table 3.3 under "Unprompted" – 3.3.1]

3.21.2 Do you remember any of the following on the label? [Tick appropriate box in Table 3.3 under "Prompted" – 3.3.2]

Table 3.3

3.3.1 3.3.2

		Without prompts Code=1	Prompted Yes =1 No =2
Identifier	1. BAYETONE/SALOC		
	2. Other (specify)		
Symbols	3. 		
	4. 		
	5. 		
	6. Other (specify)		
Signal Word	7. DANGEROUS/ WARNING		
	8. Other (specify)		

Statement	9 Hazard Information		
	10. Active Ingredient Acetone		
	11. Quart: 32 Fl.Oz		
	12. Harmful or fatal if sw allowed		
	13. Work in adequate ventilation		
	14. Avoid prolonged or repeated breathing of vapour		
	15. Causes skin and eye irritation		
	16. May cause reproductive effects		
	17. In case of emergency call 021-93346887		

	18. Wear eye protection, suitable gloves and apron when handling this chemical		
	19. Protect from freezing		
First Aid & Treatment	20. In case of contact, immediately flush eyes or skin with water		
	21. Remove contaminated clothing and shoes		
	22. Remove to fresh air		
	23. If not breathing, give artificial respiration		
	24. If swallowed, do not induce vomiting		
	25. If conscious, give large amounts of water		
	26. Causes skin and eye irritation		
	27. If breathing is difficult, give oxygen		
	28. If not breathing, give artificial respiration		
	29. Empty, uncleaned drums can still be DANGEROUS		
	30. Keep labeled until decontaminated, only then remove label		
	31. IN CASE OF EMERGENCY		
	32. Call appropriate Emergency Services		
	33. Other (specify)		

INSTRUCTION: Return the label to the subject




➤ *Thank you. Here is the label again.*

3.22 SEQUENCE OF READING

3.4.1 Can you remember what you looked at first when I first gave you the label? [Write answer In Table 3.4 below]

➤ What did you look at next? (Keep asking until they can't remember any more)

Table 3.4

		Code
Identifier	1. BAYETONE/SALOC	
Symbols	3. 	
	4. 	
	5. 	
Signal Word	7. DANGEROUS/ WARNING	
Statement	9 Hazard Information	
	10. Active Ingredient Acetone	
	11. Quart: 32 Fl.Oz	
	12. Harmful or fatal if swallowed	
	13. Work in adequate ventilation	
	14. Avoid prolonged or repeated breathing of vapour	
	15. Causes skin and eye irritation	
	16. May cause reproductive effects	
	17. In case of emergency call 021-93346887	

	18. Wear eye protection, suitable gloves and apron when handling this chemical	
	19. Protect from freezing	
First Aid & Treatment	20. In case of contact, immediately flush eyes or skin with water	
	21. Remove contaminated clothing and shoes	
	22. Remove to fresh air	
	23. If not breathing, give artificial respiration	
	24. If swallowed, do not induce vomiting	
	25. If conscious, give large amounts of water	
	26. Causes skin and eye irritation	
	27. If breathing is difficult, give oxygen	
	28. If not breathing, give artificial respiration	
	29. Empty, uncleaned drums can still be DANGEROUS	
	30. Keep labeled until decontaminated, only then remove label	
	31. IN CASE OF EMERGENCY	
32. Call appropriate Emergency Services		

3.23 PERCEPTION OF DANGER

INSTRUCTION:

- *Explain to subject : "I would like you to answer the next question on a scale from 1 to 3"*
- *Explain or write on a piece of paper the following rating scale for the respondent to use:*

1 = not dangerous at all
2 = dangerous
3 = very dangerous



3.5.19 On a scale of 1 (not dangerous at all) to 3 (very dangerous), how dangerous do you feel this product is?

Ring the appropriate number

1	2	3
---	---	---

3.5.20 Why do you say so?

--	--

3.5.21 On a scale of 1 (not dangerous at all) to 3 (most dangerous), how dangerous do you feel this product/chemical is for a child?

Ring the appropriate number

1	2	3
---	---	---




3.6 COMPREHENSION OF LABEL ELEMENT

3.6.1 I am now going to point out different elements on this label.

- I will need you to please tell me what you think these elements mean to you and
- Then I would like you to tell me whether you think other consumers will understand this symbol.

INSTRUCTION:
 ⇒ Point to the element in the label, as indicated on chart below
 ⇒ Fill in the meaning of the symbol exactly as the subject describes it.
 ⇒ Then fill in how the subject believes consumers will understand the hazard statement

FOR OFFICE USE ONLY
Correct =1 Partially Correct =2
Incorrect =3 Critical Confusion =4
Don't know =5

Point to Element	Meaning <i>What does this symbol mean to you?</i>	<i>Do you think other consumers will understand this symbol?</i> Yes =1 No =2 DK= 3
	<input type="checkbox"/>	
	<input type="checkbox"/>	
	<input type="checkbox"/>	
Signal word: DANGER / WARNING	<input type="checkbox"/>	

3.7 DANGER / WARNING STATEMENTS

- Please look at the section of label that says "Hazard Information."

➤ Please read (or I will read to you) the information listed under "Hazard Information."

➤

3.7.1 Are there any words in these sentences that you don't understand?

Yes=1 No=2

If **NO** go to Question 3.7.2

3.7.1.1 If "YES", please tick the words you don't understand.

Word	Don't understand Code=1
Adequate	
Artificial respiration	
Barrier cream	
Contaminated	
Conscious	
Copious	
Flammable	
Flush	
Fl Oz	
Induce	
Ingestion	

Word	Don't understand Code=1
Immediately	
Inhalation	
Oxygen	
Protect	
Quart	
Treatment	
Inhalation	
Vapour	
Ventilation	

Look at the phrase "**Work in conditions of adequate ventilation.**"

3.7.8 What are conditions of adequate ventilation?

INSTRUCTION: If subject struggles to understand what you mean, explain that you want to know what would be a good working environment to make sure the person doesn't breathe in too much of the chemical.
--

Look at the phrase "**Avoid prolonged or repeated breathing of vapour.**"

3.7.9 How long is "prolonged"? (Ask subject to give a time period)



1. minutes	
2. hours	
3. days	
4. weeks	
5. months	

3.7.3.7 How many times is 'repeated' breathing of the vapour?

INSTRUCTION: If respondent is having difficulty in answering the above question. Ask "How many times is it dangerous to breathe the vapour?"

Length of Time	Code = 1
1. 1 time	
2. 2-5 times	
3. 6-10 times	
4. 11-20 times	
5. 20-50 times	
6. Indefinite	
13. Other – specify	



- I am now going to read out different hazard statements found on this label.
 - I will need you to please tell me what you think these phrases mean and
 - then I would like you to tell me whether you think others/other workers will understand this phrase.

INSTRUCTION:

- ⇒ Read out to the subject the hazard statement from the label, as indicated on chart below
- ⇒ Fill in the meaning of the hazard statement as the subject describes it
- ⇒ Fill in how the subject believes other consumer will understand the hazard statement

OFFICE USE ONLY

Correct = 1
Partially Correct = 2
Incorrect = 3
Critical Confusion = 4
Don't know = 5

3.7.4 Meaning of hazard statement

Hazard Statement	Meaning <i>What does this phrase mean to you?</i>	<i>Will other consumers understand this phrase?</i> Yes =1 No =2 DK = 3
Work in conditions of adequate ventilation	<input type="checkbox"/>	
Do not induce vomiting	<input type="checkbox"/>	
In case of contact, immediately flush eyes or skin with copious amounts of water	<input type="checkbox"/>	
If not breathing give artificial respiration	<input type="checkbox"/>	
If breathing is difficult, give oxygen	<input type="checkbox"/>	

3.8 FAMILIARITY WITH THE LABEL (II)

Tick the correct box

3.8.1 How many times have you read any label in the last year?

Never	=1
A few times (<10)	=2
Many times/ regularly (>10)	=3

IF "NEVER" end the Module here.

3.8.7 How many times in the last year have you used any information on a label ?

Tick the correct box

Never=1
A few times (<10) =2
Many times/ regularly (>10) =3

3.8.3 Can you remember the last time you used the information on a label?

3.8.4 If YES, what did you used it for?

Thank you very much for your effort.

- *Please pass me the label back*
- *Thank you very much for your effort*

This is the end of Module 3

**MODULE 4: RATING AND UNDERSTANDING OF HAZARDS:
COLOURS AND SYMBOLS**

(ALL SECTORS)

INSTRUCTION: This is the section on COLOURS.
Show labels 4.1 to 4.4. The subject has up to 60s to look at the 4 labels

INTERVIEWER FILLS IN:
The respondent is allowed to look at the labels for 60 seconds - TIME
➤ Subject looks at the labels for 60s =1
➤ Subject stops looking at the labels before 60s =2

4.1 HAZARD RANKING – COLOUR

➤ Please have a look at these labels.

**4.1.1 Which label do you think is for the most dangerous chemical?
Which label do you think is for the least dangerous chemical?
Please place all labels in order of hazard.**

INSTRUCTION: Enter the rank order for all 4 labels. (4.1= most dangerous
4.4 = least dangerous)

Label with Colour:	Rank Order (1=most dangerous; 4 = least dangerous)
Red	
Yellow	
Blue	
Green	



Unable to rank code=1

INSTRUCTION: Do not take back the label. Point to the specific label identified as being most dangerous. Ask questions below.

4.8 HAZARD COMPREHENSION AND INTENTION TO BEHAVE

Colours

4.2.1. Will the colour on the label influence the way you would use this product/chemical?

Yes=1 No=2

Explain

INSTRUCTION: Take back the labels. Move on to the next section

➤ *Please return the label to me.*







INSTRUCTION: This is the section on SYMBOLS. Use the labels 4.5 to 4.8. Give the labels to the respondent

Symbols



4.8.2 (Point to the symbols on the label) What do you think symbol on the label means?

OFFICE USE ONLY
1=Correct
2=Partly Confused

Table 4.3a for General Usage

Symbol	Explanation
1 	
2 	
3 	
4 	
5.  Skin Irritant	
6.  Reproductive	



<p>7.</p>  <p>Carcinogenic</p>	
<p>8.</p> 	



INSTRUCTION: This is the section on SIGNAL WORDS.
Show labels 4.9 and 4.10. The subject has up to 60s to look at the 2 labels

INTERVIEWER FILLS IN:
The respondent is allowed to look at the labels for 60 seconds - TIME
➤ Subject looks at the labels for 60s =1
➤ Subject stops looking at the labels before 60s =2



4.9 HAZARD RANKING “Signal word”

➤ *Please have a look at these labels.*

4.9.1 Which label do you think is for the more dangerous chemical?

Label	Enter the rank order 1= More dangerous 2= Less dangerous
Danger	
Warning	

4.9.2 *Unable to rank (code =1)*

4.10 HAZARD COMPREHENSION AND INTENTION TO BEHAVE

Signal words

4.4.1. *Will the Words DANGER or WARNING influence the way you would use this product/chemical?*

Yes=1 No=2

Explain:

4.4.2 Danger

4.4.3 Warning

End of Module 4.

MODULE 5: COMPREHENSION OF HAZARD SYMBOLS
(ALL SECTORS)

5.1 ASSOCIATING SYMBOLS WITH HAZARD CLASS

INSTRUCTION: Give the subject labels 5.1 to 5.5

- *Here is a set of labels.*
- *I am going to ask you some questions. If you do not understand some of the words I use, I will explain them to you. Please do not be shy to ask me to explain the question to you.*

INSTRUCTION:
Allow the subject up to 90s to decide on each choice or choices of labels and mark the answers on the table below.

- *I am going to ask you to identify a hazard from a label.*
- *You can use one or more labels if you wish.*

INSTRUCTION:

1. Tick the blocks for the labels 5.1 to 5.5 chosen by the respondent as representing the hazard.

2. If more than one label is chosen per answer, mark all the labels chosen.

3. If subject doesn't know how to answer, irrespective of whether they asked for an explanation, Code 1 in the column DK - "don't know"

Question	DK	Description	5.1	5.2	5.3	5.4
	Code =1	Tick in the boxes below if you explain Code = 1				
5.1.1 Which label or labels do you think identifies a chemical that is oxidizing?		An oxidising chemical is one that reacts with oxygen to form a different chemical <input type="checkbox"/>				
5.1.2 Which label or labels do you think identifies a chemical that is flammable?		A flammable chemical is one that can burn <input type="checkbox"/>				
5.1.3 Which label or labels do you think identifies a chemical that is corrosive to metal?		A corrosive chemical is one that can cause damage to metal <input type="checkbox"/>				
5.1.4 Which label or labels do you think identifies a chemical that is an environmental hazard?		An environmental hazard is a chemical that can damage plants, animal and insect life <input type="checkbox"/>				
5.1.5 Which label or labels do you think identifies a chemical that is explosive?		An explosive chemical is one that cause an explosion <input type="checkbox"/>				
5.1.6 Which label or labels do you think identifies a chemical that is a carcinogen?		A carcinogen is a chemical that can cause cancer <input type="checkbox"/>				

5.1.7 Which label or labels do you think identifies a chemical that is skin irritant?		A skin irritant is a chemical that can cause skin rashes and irritation <input type="checkbox"/>				
5.1.9 Which label or labels do you think identifies a chemical with reproductive effect?		A reproductive hazard is a chemical that can cause problems for people's <input type="checkbox"/> to have children				
5.1.10 Which label or labels do you think identifies a compressed gas?		A chemical that is packaged under pressure and is <input type="checkbox"/> entirely gaseous at -50°C				

5.2 HAZARD SYMBOLS PLUS TEXT

INSTRUCTION: Ask the following question pointing to the flammable icon

If you see a label with this symbol

5.2.1 What should you do if you see this symbol?

--	--

5.2.2 What should you not do if you see this symbol?

--	--

➤ Thank you for your effort.

➤ Please pass the labels back to me.

End of Module 5.

MODULE 7: PICTOGRAM COMPREHENSION - ADDITIONAL TESTING

(CONSUMER AND AGRICULTURE SECTORS)

INSTRUCTION: Use the labels alabel 7.1 and alabel 7.2. Give both labels to the subject and administer all the questions in this module.

- *I am going to ask you some questions about these labels.*
- *If you do not understand some of the words I use, I will explain them to you. Please do not be shy to ask me to explain the question to you.*
- *Please have a look at these labels.*

7.1 IDENTIFICATION OF INFORMATION












7.1.1 *What is the name of this chemical on alabel 7.1?*





7.1.2 *What is the name of this chemical on alabel 7.2?*

7.2 UNDERSTANDING OF ADVISORY PICTOGRAMS (PESTICIDES)

INSTRUCTION: Point to each pictogram on the label in turn and ask the following question:

7.2.7 What does this picture on the label mean to you?

Pictogram	Explanation	Does not know
		
		
		
		
		
		
		
		
		
		
		

		
		
		
 30/12/2005		

Thank you very much for your effort.

➤ *Please pass me back the labels*

End of Module 7.

Module 10 - Post Interview With Out Training (Consumer)

10.2 Exposure to chemicals

INSTRUCTION:
The rating scale used in the next question is:

1 = not at all/never
2 = sometimes
3 = a great deal/always/often

	1	2	3
10.2.1 <i>How often do you use household chemicals at home?</i>			
10.2.1 <i>How often does someone else at home use household chemicals?</i>			
10.2.3 <i>In your current job, how often do you use chemicals?</i>			
10.2.4 <i>Sometimes you might be exposed to a chemical that someone else is using. In your current job, how often are you exposed to chemicals that someone else is using?</i>			

INSTRUCTION: Use the prompts below to construct a work history for the subject. The questions will enable you and the subject to construct a timeline of all the subjects' past jobs, the years worked in each job and the number of years being exposed to chemicals.

10.2.5 *Work experience*

10.2.5.1 Can you remember your very first job?

➤ *Try to remember the very first work that you did?*

- *What was that job? What did you do in that job? What was the next job you did?*
- *Please carry on to name all the jobs you have ever had before.*
- *Now for all the jobs, tell me what you did in that job and how long you worked in these jobs.*

10.2.5.2 Now I am going to go back to each job you did before.

- **Tell me about your first job.**
- **Did you work with, or were you exposed to chemicals in that job?**
- **In your second job, did you work with, or were you exposed to chemicals in that job?**
- **Please carry and tell me about whether you worked with, or were exposed to chemicals in each job?**

➤ **Timeline:**

Job	Question 10.2.5.1			Question 10.2.5.2		
	10.2.5.1 Type of job	What did you do in this job?	Number of years at the job	Where you exposed to Chemicals. Yes=1 No=2		If yes Number of years exposed to chemicals at each job. Code = 1
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						

INSTRUCTION:

- Confirm that the last job entered in the table is their current job. If so, circle the last job. If it is not their current job, continue questions about their work history till you have their current job, which you then circle.
- Transfer the number of years worked in a job ONLY for those jobs in which the subject reports working with, or being exposed to chemicals.
- 10.2.6 Fill in Total Number of Years with exposure to chemicals: _____

10.3 Training

10.3.1 In this job, have you received the following training?

Type of training	Yes=1 no =2	Induction Code = 1	In service Code = 1	Explanation	Post code
<i>Training in health and safety of chemicals</i>					
<i>Training about reading and using labels?</i>					
<i>Training about reading and using SDS?</i>					

10.3.2 If no to any of the above, ask “Have you ever received...”:

Type of training	Yes=1 no =2
<i>Training in health and safety of chemicals</i>	
<i>Training about reading and using labels?</i>	
<i>Training about reading and using SDS?</i>	

10.4 Health and Safety Experience

Put Yes=1 or No=2 in the boxes below:

10.4.1 Have you ever been a health and safety representative at work?

10.4.2 Have you ever served as a shop steward at work?

10.4.3 Are you currently a health and safety rep at work?

10.4.4 re you currently as a shop steward at work?

10.5 Chemical Information Needs

10.5.1: If you were to use a chemical in the future, would you use the label on the container to get information about this chemical?

Yes =1
No =2
Don't know =3

If NO, GO TO 10.5.2

10.5.1.1 If YES, What information would you use?

10.5.2 Do you have any problems/difficulties when you use a chemical label? Yes=1 no=2

10.5.2.1 If YES, What are these problems?

10.6 Hazard Communication - Risk and understandability

INSTRUCTION:

10.6.4 (point to the Hazard statement: " Corrosive to metal and skin ") What does this Hazard statement on the label mean to you? Correct=1 Incorrect=2 Dk=3

10.7 Exercise Evaluation

10.7.1: Do you think this was a valuable exercise? YES=1 NO=2 if YES Please explain.

10.7.2 What do you think will help you and co-workers understand labels and Safety Data Sheets better?

10.7.3: Do you have any questions or suggestions ?

--	--

End Module 10

DEBRIEFING:

*This is the end of our testing exercise.
Thank you very much for your effort.*

This has been part of a project to see how labels and Safety Data Sheets can best communicate hazards to people. Your answers will help us to see whether the system we have in place is able to communicate hazard information to workers and other people. We are going to compare how different workers handle the chemicals safely to see whether the labels and Safety Data Sheets are helpful.

Your help has been much appreciated. Thank you. We are now finished.

Here is your R50.00 for participating. Please kindly sign the form that you have received the money.

[Have participant sign the form on the next page. Interviewer must also sign it and date it.]



Department of Public Health & Primary Health Care

Faculty of Health Sciences
Anzio Road
Observatory 7925
SOUTH AFRICA
Telephone: (27 21) 4066306
Fax: (27 21) 4066163
Date: February

2003

Head of Department: Professor . R. Erlich

DATE:

Dear Sir/Madam

I acknowledge that I have received R 50,00 for my time in the Hazard Communication research project.

SUBJECT

INTERVIEWER

WITNESS 1

**GSH Testing
Module
CONSUMER With
Training**

**MODULE 2: GENERAL INTERVIEW
(Consumer)**

Sector: Industry =1 **Interviewer Code:**
Transport =2
Agriculture =3
Consumer =4

Date: (dd/mm/yy)

Study Number:
1. Place of Interview : Western Cape =1
Gauteng =2

2. Place of Interview: (City/Town)

3. Place of Interview: (Name of Industry/Shop, Farm etc):

2.1 CONSENT PROCEDURE

CONSENT: Consent for participating is sought individually with each participant.

- *Good morning/afternoon.*
- *My name is interviewers name I work for the University of Cape Town*
- *Thank you for agreeing to speak to me. I would like you to help us with a safety project.*
- *I will be asking you some questions, as well as showing you some papers. Your answers will be very helpful for us to advise how workplaces and homes can be made safer.*
- *Even though we will be asking you a lot of questions, **this is not a test of your ability or knowledge. You will not be judged by how well or poorly you answer any questions.** We are testing the information we will be showing you and not your ability. All we ask is that you try to answer the questions as truthfully and as best as you can.*

