

CONSUMER SURVEY ON
THE LABELLING AND
PACKAGING OF
HAZARDOUS CHEMICAL PRODUCTS
VOLUME I: DETAILED FINDINGS

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MARKETING AND OPINION RESEARCH

CONSUMER SURVEY ON THE LABELLING AND PACKAGING OF HAZARDOUS CHEMICAL PRODUCTS

VOLUME I: DETAILED FINDINGS

(An Executive Summary of this report is
available in both official languages)

June 7, 1989

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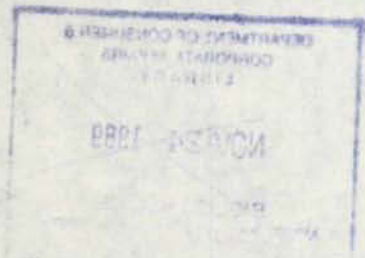
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MAIN



**CONSUMER SURVEY ON THE LABELLING ON
PACKAGING OF HAZARDOUS CHEMICAL PRODUCTS**

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I. INTRODUCTION

A. BACKGROUND AND OBJECTIVES OF THE STUDY

Several thousand Canadians are involved in hazardous incidents involving consumer chemical products each year. A conservative estimate places the number of hazardous incidents, both minor and serious, at 25,000 per year. Many of these incidents involve children.

The control of these accidents is part of the mandate of regulatory institutions. One important means of control involves the use of on-product warnings and safety information directed towards consumers. Warning labels have been developed to allow consumers to make informed purchasing decisions and to understand the dangers involved with the use and storage of hazardous products and the steps to take in case of an accident. Another important approach has involved the use of child-resistant packaging.

In Canada, the Hazardous Substances Regulations, now known as the Consumer Chemicals and Containers Regulations, were issued under the Hazardous Products Act in 1970. These regulations identified a number of hazardous substances and prescribed precautionary labelling for products containing these substances. Since that time, more substances have been added and child-resistant packaging has been mandated for some of the regulated products.

More recently, a review of regulations governing hazardous consumer chemical products was initiated. This included a review of the current system of symbols and precautionary information, as well as the requirements for child-resistant packaging.

A number of specific concerns have been raised in the context of this review. These include the following:

Hazard and Degree of Hazard Symbols

- ♦ To what extent do consumers understand the meaning of the current hazard symbols?
- ♦ Do the degree of hazard symbols hold any significance to the public?
- ♦ To what extent do consumers use this information in purchasing, storing, using and disposing of hazardous chemical products? That is, are symbols effective in modifying behaviour and ultimately in reducing injury?

Size and Placement of Symbols

- ♦ What elements of labels attract the attention of consumers?
- ♦ How can the size and placement of symbols enhance label effectiveness in terms of awareness and use of hazardous products?

Labelling

- ♦ Do consumers read the precautionary information on the side or back panels of products (i.e., first-aid information, manufacturer's instructions, precautionary information)?
- ♦ To what extent do consumers understand the meaning of the precautionary labels?

-
- ♦ How much information do consumers need?
 - ♦ Can the information provided be simplified?
 - ♦ To what extent do consumers use the information provided?

Child-Resistant Packaging

- ♦ Do consumers feel this packaging is useful or necessary?
- ♦ Do adults have difficulties opening or closing these containers?
- ♦ Would the elderly or the disabled, in particular, experience difficulties in using this packaging?
- ♦ Is there a risk that users will permanently remove the child-resistant closure or empty hazardous content into an unsuitable, unlabelled container?

In view of these concerns, the current study was undertaken to assist in the overall assessment and improvement of precautionary labelling and packaging for hazardous consumer chemical products. As a preliminary step, a set of alternative symbols and labels were developed for the study. Then, building on previous studies of the awareness and identification of hazard symbols (Canadian Inter-Mark Limited, 1972; Contemporary Research Centre, 1977) and public opinion research into child-resistant closures (Applied Consumer and Clinical Evaluations, Inc., 1986), a national consumer survey was conducted, addressing each of the following areas:

- ♦ awareness and identification of hazard and degree of hazard symbols;
- ♦ the salience of hazard symbols in purchasing hazardous products;

-
- ♦ the impact of hazard symbols, degree of hazard frames, and warning words on product use;
 - ♦ the effectiveness of current versus alternative label designs;
 - ♦ the use and effectiveness of written precautionary information;
 - ♦ awareness and perceived effectiveness of child-resistant packaging; and
 - ♦ difficulties in the use of child-resistant packaging.

Underlying these questions is a basic model of communication as it relates to consumer behaviour. The provision of warning and safety information to consumers is intended to ultimately change people's beliefs, attitudes and behaviour. Thus, in addition to the development and transmission of warning messages, the communications process involves psychological and behavioural dynamics. A basic model of the chain of events leading to successful communication, as outlined by the Office of the Comptroller General (April 1985), is as follows:

i) Awareness and Knowledge

- ♦ Individuals are exposed to given stimuli/information.
- ♦ They become aware of the stimuli.
- ♦ This awareness, if the information is comprehended and systematically stored, leads to a change in knowledge.

ii) Leads to Belief and Attitude Change

- ♦ This knowledge leads to a change in belief, if the arguments or conclusions of the message are accepted or yielded to.
- ♦ Changes in belief might lead to changes in attitude.

iii) Leads to Behaviour Change

- ♦ This change of belief and attitude most likely leads to some form of behaviour modification.

B. OVERVIEW OF METHODOLOGY

This section provides an overview of the methodological procedures followed in conducting the survey. The current study comprised a number of key research stages:

- ♦ the development of alternative symbols and label designs;
- ♦ design of the questionnaire instrument;
- ♦ sampling procedures;
- ♦ fieldwork; and
- ♦ database creation and analysis.

An overview of the survey methodology is provided below. More detailed technical information is provided in a companion report, along with detailed statistical tables of survey results (see Volume II: Detailed Statistical Tables).

The development of alternative symbols and labels was carried out by McKim Advertising and was based on a review of existing label designs as well as international symbols. The complete set of alternatives developed is displayed in Appendix I.

Development of the questionnaire was enhanced by an internal review of past studies conducted on similar topics, direction from the client team at the Product Safety Branch of Consumer and Corporate Affairs Canada, and a thorough review from Statistics Canada officials and the Office of the Coordinator for Public Opinion.

Research. The instrument was also pretested under field conditions before final revisions were made. The final instrument, in both English and French, along with the special visual exhibits developed for use with respondents are presented in Appendix I.

A pretest report was also produced and is available under separate cover (February 14, 1989).

A modified probability selection procedure was used to draw the sample in centres of 1,000 or more population. A quota sample was used in rural farm and non-farm centres. The sampling procedure is designed to produce an approximation of the adult population, 18 years and older, living in Canada except for those persons in institutions such as prisons or hospitals or those residing in far Northern regions. The design of the sample was based on the Census of Canada, population statistics 1986.

The sampling procedures also incorporate a quota selection process, based on age and sex, within surveyed households. This procedure does not strictly follow the theory of random sampling. Rather, it is based on research experience which indicates that respondents of different age and sex categories have different probabilities of being at home when surveyed. In order to draw a representative sample of the Canadian population, rather than one which is biased towards those who are most often at home, we believe the quota system is the most effective. We are confident that the sample selected for this study allows for the drawing of inferences to the population at large. In fact, it is based on the same procedures which Gallup uses for political polling purposes and with which Gallup has a highly accurate track record for predicting election results.

The fieldwork was conducted via Gallup's national omnibus which involved door-to-door personal interviews. This format allowed for the presentation of visual aids to

EXHIBIT B.1
FINAL SAMPLE CHARACTERISTICS

	<u>Unweighted Sample Size</u>		<u>Weighted Sample Size</u>	
	(n)	(%)	(n)	(%)
Region				
Atlantic	100	10	97	9
Quebec	275	26	273	26
Ontario	374	36	377	40
Prairies	180	17	180	17
British Columbia	121	12	122	12
Community size				
Under 10,000	334	32	330	31
10,000 - 100,000	154	15	152	14
100,000 - 500,000	115	11	116	11
500,000+	447	43	453	43
Age				
18-29	225	21	297	28
30-39	247	24	228	22
40-49	182	17	168	16
50-64	225	21	200	19
65+	161	15	146	14
Sex				
Male	525	50	511	49
Female	525	50	539	51
First Language				
English	663	63	670	64
French	273	26	270	26
Other	114	11	110	10

EXHIBIT B.1
FINAL SAMPLE CHARACTERISTICS (Continued)

	Unweighted Sample Size		Weighted Sample Size	
	(n)	(%)	(n)	(%)
Education				
Public School	143	14	133	13
High School	444	42	444	42
College	244	23	255	24
University	217	21	216	21
Income				
Under \$20,000	177	17	181	17
\$20,000-\$29,999	122	12	122	12
\$30,000-\$39,999	163	16	159	15
\$40,000-\$49,999	130	12	130	12
\$50,000-\$59,999	100	10	100	10
\$60,000 and up	141	13	143	14
Occupation				
Professional/executive	237	23	234	22
Sales/clerical	137	13	143	14
Skilled/unskilled labour	257	24	260	25
Homemaker	213	20	213	20
Student	49	5	60	6
Other/unemployed	147	14	131	12
Total	1,050	100	1,050	100

respondents, depicting current and alternative labelling designs. The interviews were carried out across Canada between April 5 to 8, 1989 yielding a total of 1,050 completed interviews.

All questionnaire data were edited, coded, verified, data entered and cleaned, providing a quality controlled database of results.

To test for sample representativeness, a weight test was conducted on the data, comparing age and sex distributions of the sample to census data. While these distributions were highly comparable, weights were nevertheless applied to correct for any slight discrepancies found. Socio-demographic characteristics of the final sample are presented in Exhibit B.1. This exhibit includes both unweighted and weighted sample sizes. However, all statistics discussed in this report are based on the weighted results.

Aggregate survey results are accurate to within plus or minus 3 percentage points, 19 times out of 20. Disaggregated results are somewhat less accurate than this. A table is provided in Volume II of this report to facilitate the estimation of accuracy for specific results.

It should be borne in mind that the survey findings represent information of a subjective nature. Awareness levels, evaluations of label designs, and behaviour related to the handling of hazardous consumer products are all based on self-reports, as gathered by the survey. To some extent, therefore, factors of memory and the social desirability of responses will influence the accuracy of results, as is the case for all survey-based studies.

C. ORGANIZATION OF THE REPORT

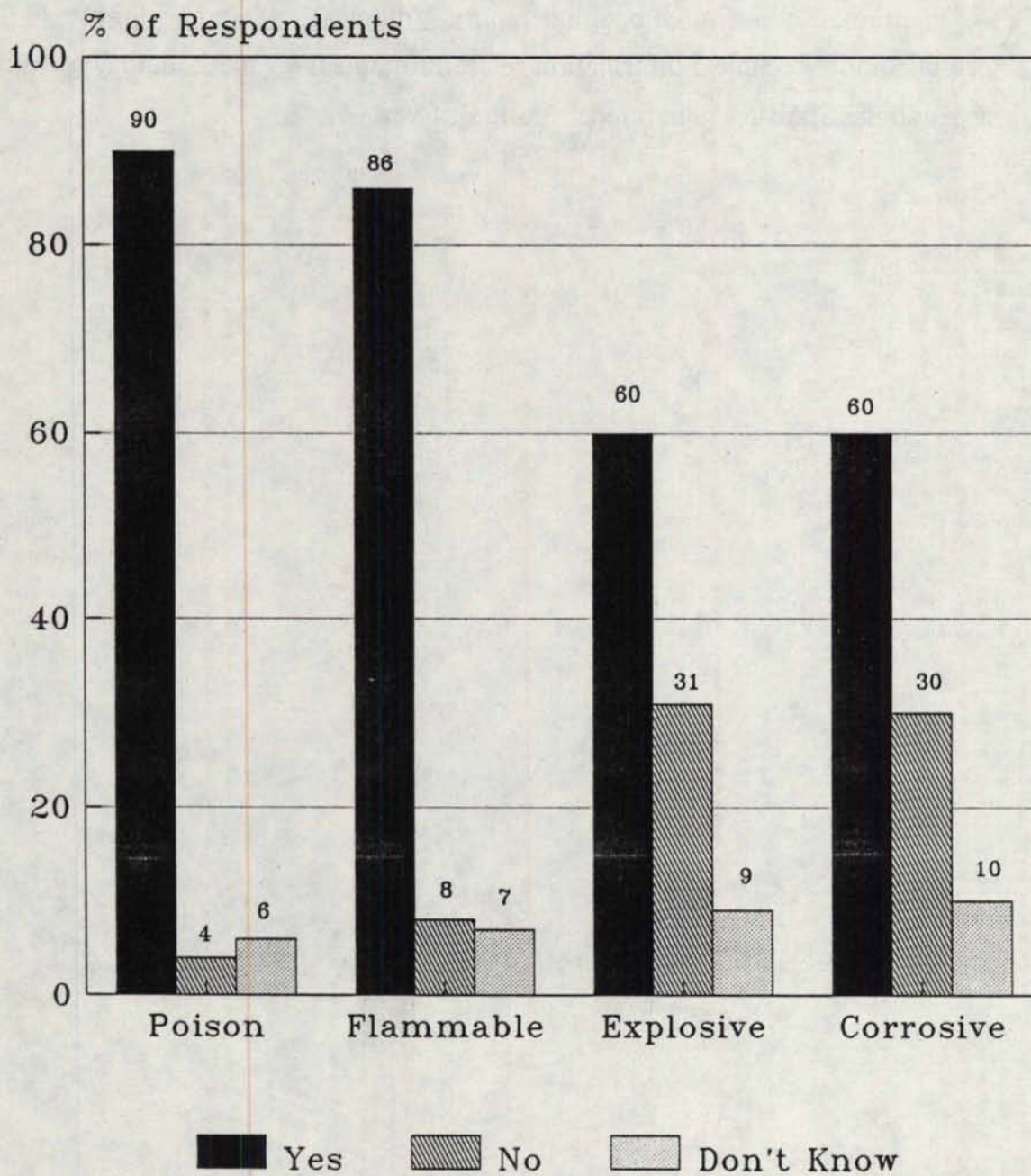
The following chapters provide a detailed discussion of the survey findings and their implications for improving precautionary labelling and packaging. More specifically:

- ♦ Chapter II.A discusses the level of awareness of hazard and degree of hazard symbols as well as consumers' understanding of what these symbols represent.
- ♦ Chapter II.B assesses the impact of current warning symbols and words on the purchase, storage, handling and disposal of hazardous chemical products.
- ♦ Chapter II.C provides a comparison of current symbols with alternative label designs in terms of their perceived designs in terms of their perceived effectiveness in warning consumers about hazardous products.
- ♦ Chapter II.D discusses the extent to which consumers use the written precautionary information on hazardous products (i.e., warning messages, first-aid information, manufacturer's instructions). It also assesses the clarity and usefulness of this information.
- ♦ Chapter II.E addresses public opinion with respect to child-resistant packaging, including the extent to which adult consumers experience difficulties with this packaging.
- ♦ Finally, Chapter III provides a summary of the key findings of the study and draws conclusions based on integrated results. Preliminary recommendations for improving precautionary labelling and packaging for hazardous consumer chemical products are also put forward.

Appendix I of this report presents the questionnaire instrument used for the survey, as well as all visual exhibits of symbols and label designs which were presented to respondents. A bibliography is provided in Appendix II.

As mentioned above, a companion report, Volume II: Detailed Statistical Tables, presents more technical information related to the survey methodology as well as all crosstabular statistics generated from the survey.

EXHIBIT A.1(a): AWARENESS OF HAZARD
SYMBOLS (HAVE SEEN BEFORE) (Q.1)



(n = 1050)

II. KEY FINDINGS

A. AWARENESS OF WARNING SYMBOLS

1. Awareness of Hazard Symbols

As an initial step in evaluating the symbols and labels designed for consumer use, respondents were asked whether or not they recalled having seen the various hazard symbols. Respondents were shown each hazard symbol one at a time in rotation and asked if they had seen the symbol before. In addition, each was asked to indicate to the best of their knowledge what each symbol stood for.

Exhibit A.1(a) presents the frequency distribution of respondents on the basis of individual symbol recall. As shown, a clear majority of respondents had seen each of the individual symbols. The symbol most frequently reported as having been seen was the poison symbol (90%), followed by the flammable symbol (86%) and then the explosive and corrosive symbols (60% each).

This compares favourably with the findings of an earlier study (1977) on the awareness and identification of hazardous symbols. This earlier study, conducted on behalf of Consumer and Corporate Affairs Canada, involved a consumer survey based on a comparable methodology and identical measures of symbol awareness and identification. Comparative results are presented in Exhibit A.1(b).

Individual symbol awareness of the poison and flammable symbols has not grown from the already high levels found in that survey -- in 1977, 91% of Canadians claimed to have seen the poison symbol and 83% to have seen the flammable symbol. For both the explosive and corrosive symbols, however, the change is a marked improvement over earlier findings. In 1977, less than one-half of

EXHIBIT A.1(b): CHANGES IN AWARENESS OF HAZARD SYMBOLS: 1977 TO 1989

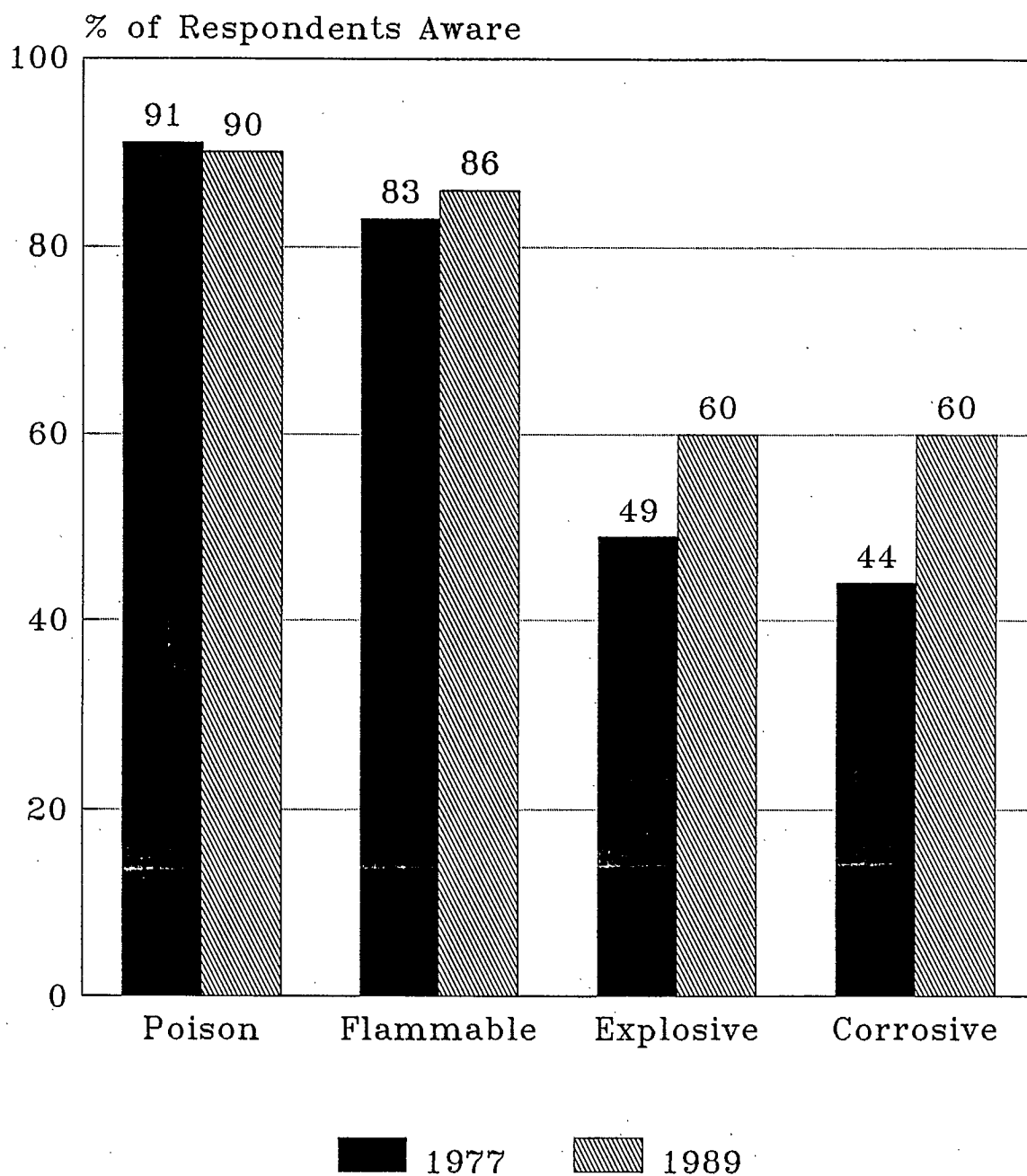


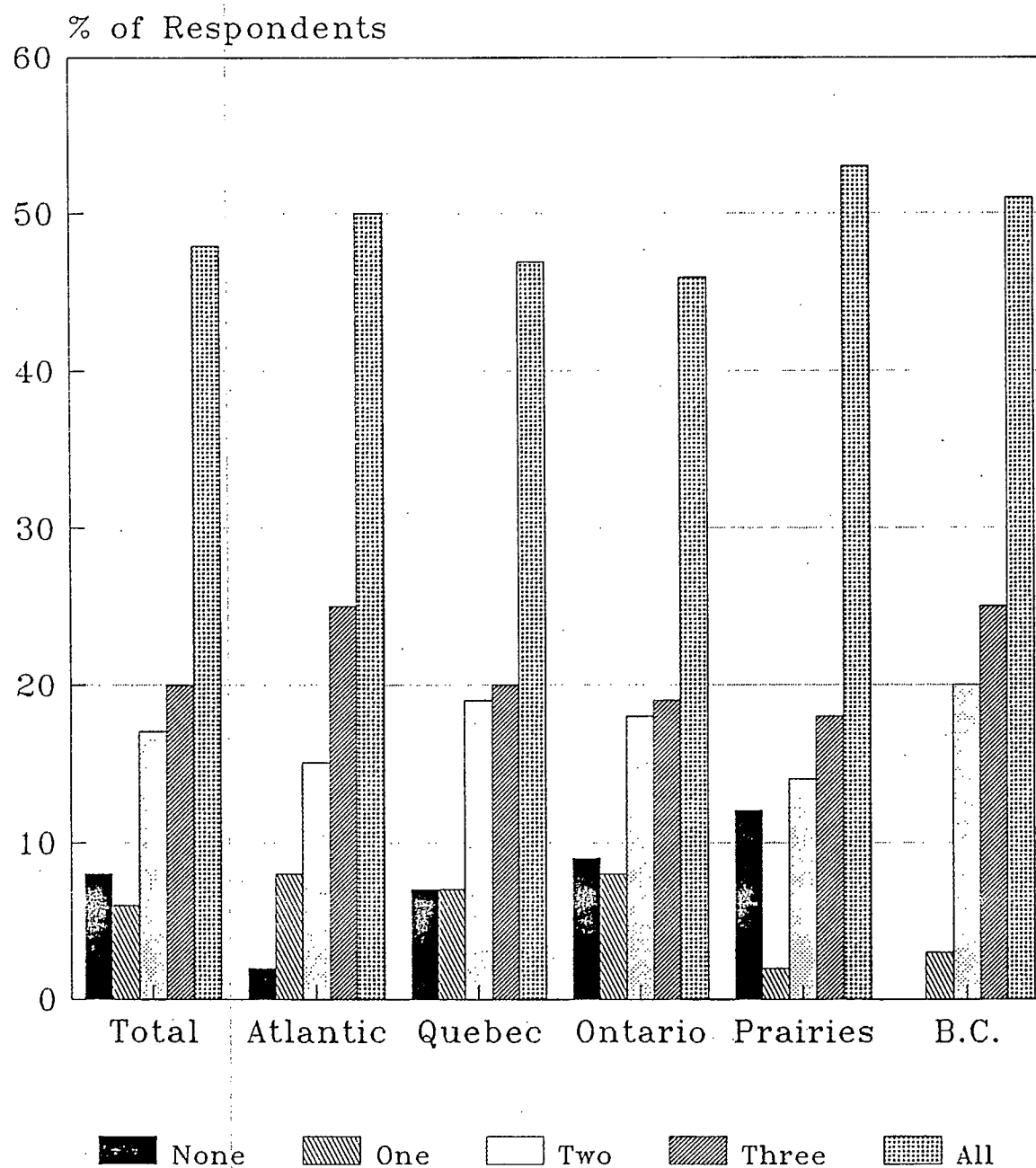
EXHIBIT A.1(c):
DEMOGRAPHIC GROUPS WHICH ARE MOST AWARE/
LEAST AWARE OF WARNING SYMBOLS

	Poison	Flammable
Most Aware	British Columbia respondents (98%) Atlantic respondents (96%) Income between \$50,000 - \$59,999 (94%) Community size under 10,000 (94%)	British Columbia respondents (96%) Age 30 - 39 (92%) Community size under 10,000 (91%) Income between \$50,000 - \$59,999 (91%) Community size between 10,000 and 100,000 (90%)
National Average	(90%)	(86%)
Least Aware	Age 65+ (82%) Public school education (81%) Mother tongue other than English or French (83%)	Age 65+ (72%) Public school education (74%) Mother tongue other than English or French (71%)

EXHIBIT A.1(c):
DEMOGRAPHIC GROUPS WHICH ARE MOST AWARE/
LEAST AWARE OF WARNING SYMBOLS (Continued)

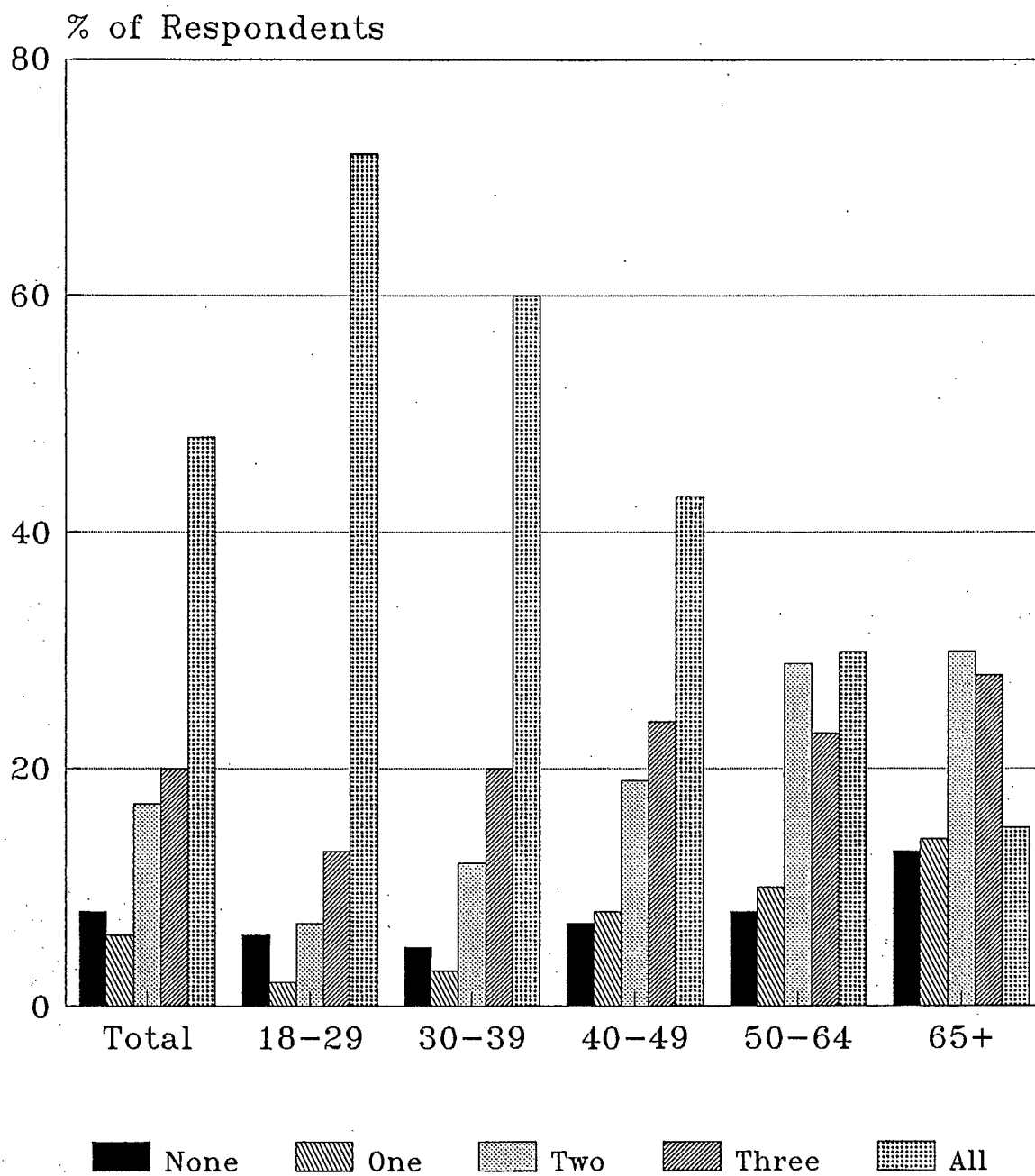
	Explosive	Corrosive
Most Aware	Age 18 - 29 (80%) Students (74%) Income of \$50,000 - \$59,999 (72%) Community college education (71%) British Columbia residents (70%)	Age 18 - 29 (80%) Age 30 - 39 (72%) Student (79%)
National Average	(60%)	(60%)
Least Aware	Age 65+ (28%) Public school education (35%) Age 50 - 64 (43%) Mother tongue other than English or French (45%)	Age 65+ (35%) Public school education (43%) Age 50 - 64 (44%) Mother tongue other than English or French (50%)

EXHIBIT A.2(a): HAZARD SYMBOL AWARENESS BY REGION (Q.1)



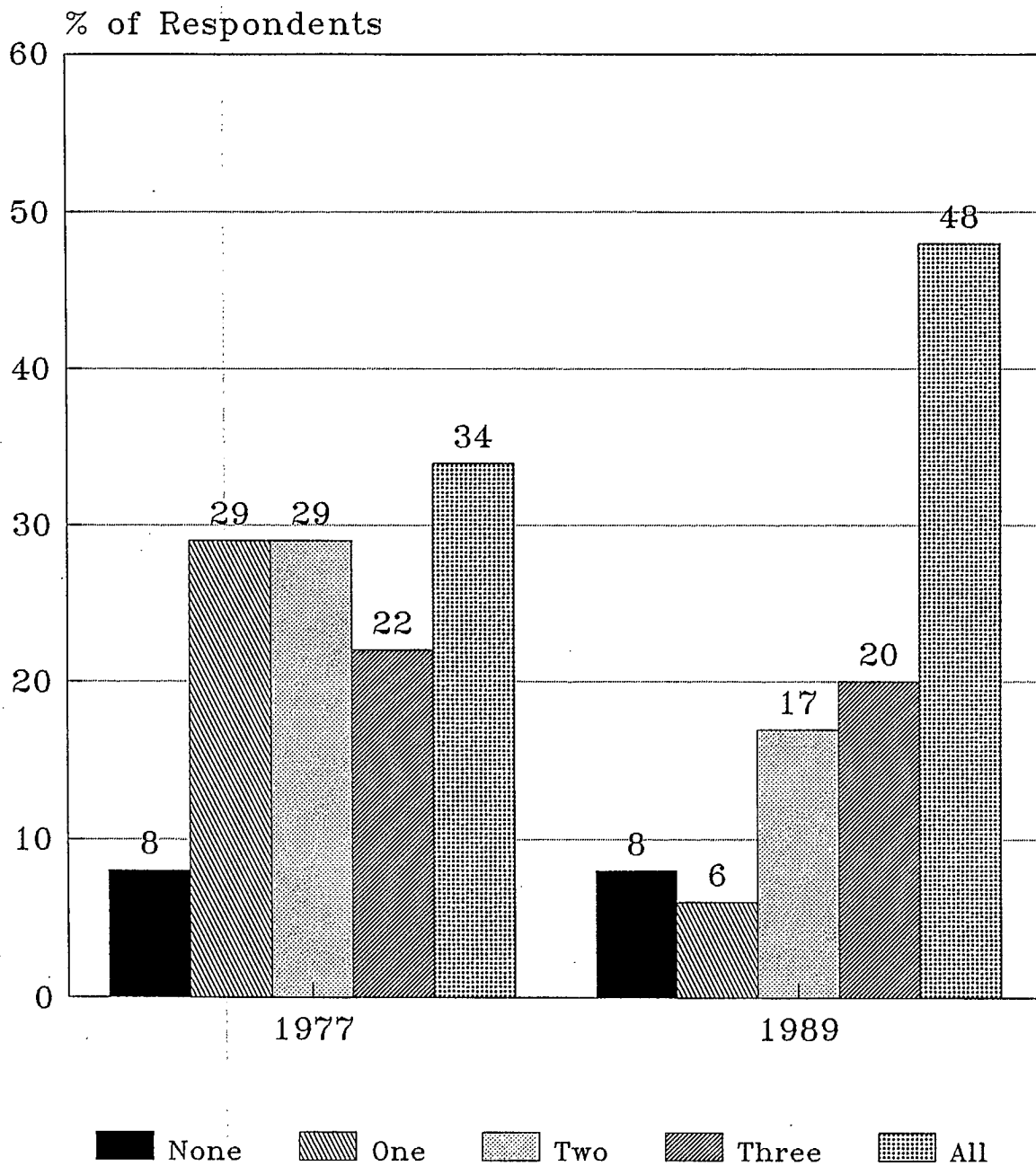
(n = 1050)

EXHIBIT A.2(b): HAZARD SYMBOL AWARENESS BY AGE (Q.1)



(n = 1050)

EXHIBIT A.2(c): CHANGES IN AWARENESS OF MULTIPLE HAZARD SYMBOLS: 1977 TO 1989



Canadians (49% for explosive and 44% for corrosive) claimed awareness of either of these latter two symbols.

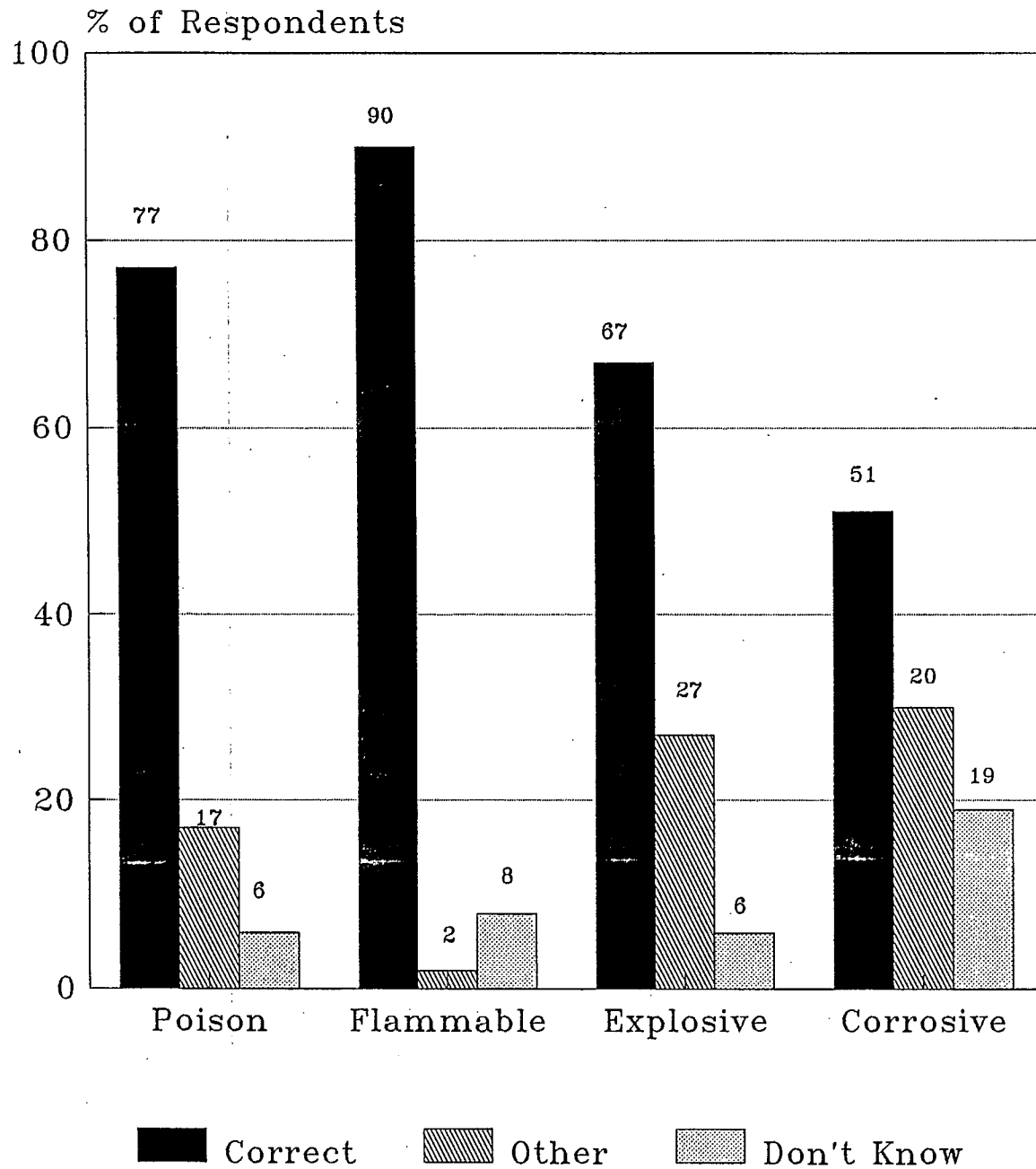
Exhibit A.1(c) sets out the pattern of variation for the different demographic groups based upon the highest awareness/lowest awareness of each individual hazard symbol. It is noteworthy that respondents from British Columbia and those with incomes of \$50,000 - \$59,999 are consistently among the most aware (with the sole exception of the corrosive symbol). In addition, those aged 65 plus, those with a public school education, and those whose mother tongue is neither official language are consistently among the least aware for all four symbols.

Exhibit A.2 sets out the frequency distribution on the basis of the total number of symbols respondents claim to have seen. The national distribution for this exhibit is further disaggregated by region and by age categories. Of the national sample, almost half (48%) have noticed all four symbols; a fifth (20%) had observed three; 17% had seen two; 6% had seen one; and 8% could not recall having encountered any of the four.

When compared to the 1977 study results (see Exhibit A.2(c)), these findings underscore that Canadian awareness has increased over the intervening 12 years. In 1977, only one-third (34%) claimed to have seen all four symbols; 22% had seen three of the four; 29% had seen two of the four; 29% had seen at least one and 8% claimed not to have seen any.

Results from the current survey show that regionally, 96% of respondents from British Columbia, 86% of Prairie respondents, 83% of respondents from Ontario, 86% from Quebec and 90% from Atlantic Canada had seen two or more of the symbols. All respondents from British Columbia had seen at least one symbol and only 2% of Atlantic respondents had seen none, while 12% of Prairie respondents

EXHIBIT A.3(a): CORRECT IDENTIFICATION
OF WHAT EACH HAZARD SYMBOL MEANS (Q.2)



(n = 1050)

had not seen any of the four. At the same time, 53% of Prairie respondents, 51% of respondents from British Columbia and 50% of Atlantic Canada respondents had seen all four.

Greater variation is evident among the different age groups. Of the two youngest categories (18 - 29 and 30 - 39), 92% respectively had seen two or more symbols; 86% of the next age group (40 - 49) showed similar results; 82% of those in the 50 - 64 age group and 73% of the eldest group recalled observing two or more symbols.

The older the respondent, the less likely they are to have seen all four symbols - 72% of 18 to 29 years as compared to 60% for 30 - 39 year olds, 43% for 40 - 49 year olds, 30% for 50 - 64 year olds and only 15% for 65 year olds and older. Conversely, the older the respondent, the more likely they would have been to have not seen any of the four -- while only 5% of those aged 30 - 39 and 6% of those aged 18 - 29 fell into this category, over double these percentages (13%) of those aged 65 and older did not recall having observed even one.

2. Identification of Hazard Symbols

Exhibit A.3(a) displays the frequency distribution for the identification of each hazard symbol. In each case, a majority of respondents properly specified what the symbol represented.

The most correctly identified hazard symbol was that denoting flammable --91% of respondents knew what it meant. The demographic groups with the highest correct identification were:

- ♦ respondents from British Columbia (98%);

-
- ♦ respondents from the Prairies (96%); and
 - ♦ those aged 30 to 39 (97%).

The categories which the lowest correct identification were:

- ♦ respondents who had only attended public school (80%); and
- ♦ those aged 65 and over (81%).

The next most correctly identified symbol was for poison -- over three-quarters (77%) of respondents were able to specify what it stood for. The highest correct identification occurred among:

- ♦ respondents from the Prairies (90%); and
- ♦ respondents from British Columbia (85%).

The lowest correct identification was found among:

- ♦ respondents from Quebec (66%);
- ♦ those with a public school education (66%); and
- ♦ those whose mother tongue is neither official language (65%).

The hazard symbol representing explosive was correctly identified by 67% of respondents. The highest proportion of correct mentions was by:

- ♦ respondents aged 18 - 29 (83%);
- ♦ respondents aged 30 - 39 (79%);
- ♦ those whose income was between \$50,000 - \$59,999 (79%); and
- ♦ professionals and executives (79%).

The lowest frequency of correct mentions was found among:

- ♦ respondents aged 65 and over (35%);
- ♦ those with a public school education only (42%); and
- ♦ those whose mother tongue is neither official language (41%).

Finally, the symbol representing corrosive was correctly identified by 51% of respondents. The highest proportions of correct mentions were among:

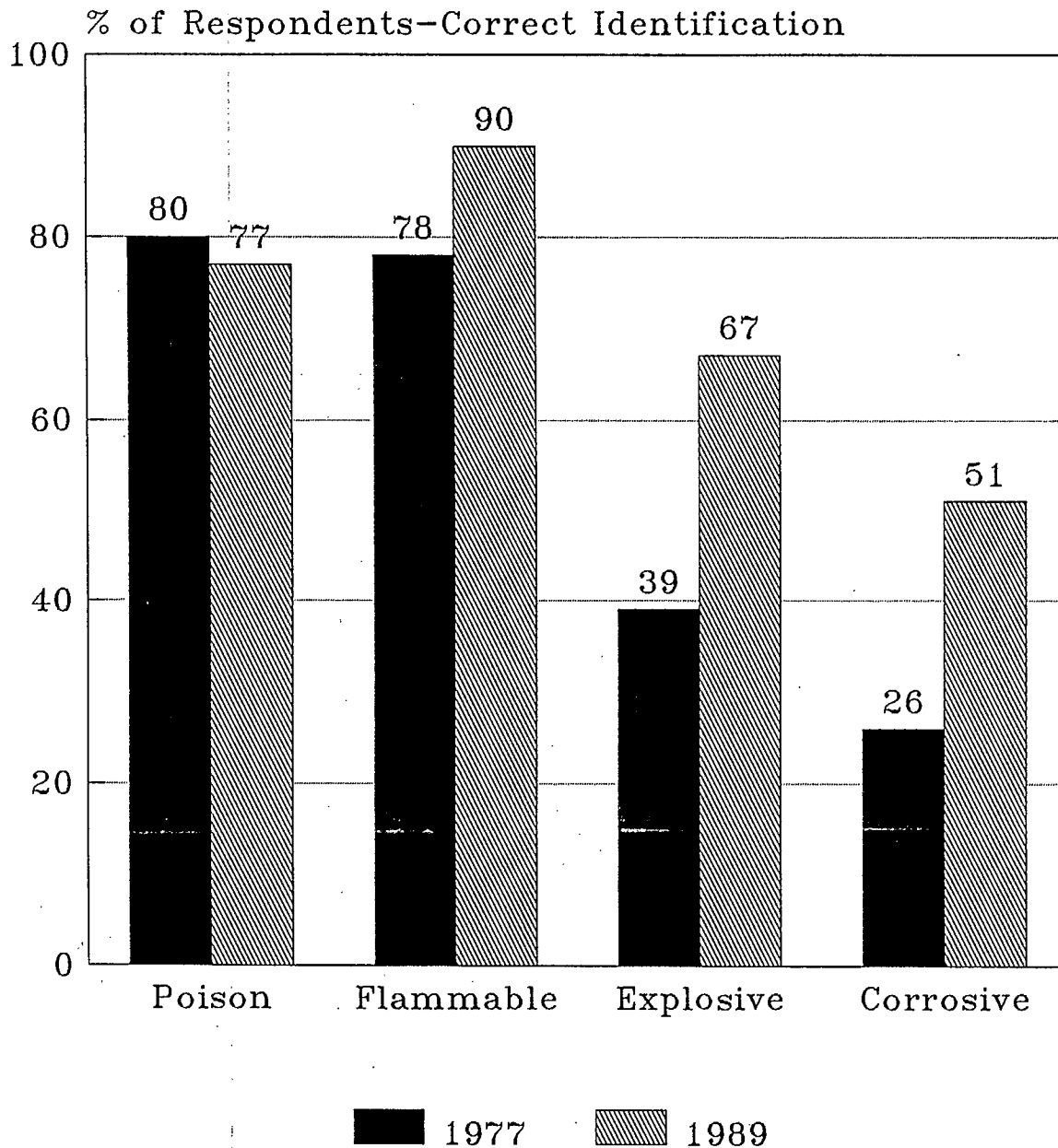
- ♦ students (79%);
- ♦ those aged 18 - 29 (66%);
- ♦ those aged 30 - 39 (65%); and
- ♦ those whose incomes were \$50,000 - \$59,999 (65%).

The lowest correct mentions were by:

- ♦ respondents from Quebec (41%);
- ♦ those aged 50 - 64 (42%);
- ♦ those aged 65 and over (23%);
- ♦ those with a public school education only (25%)
- ♦ those with incomes under \$20,000 (3%);
- ♦ housewives (40%);
- ♦ those whose mother tongue is French (40%); and
- ♦ those whose mother tongue is neither official language (43%).

A close correlation was evident between correct recall and identification of the symbol: 96% of those who had previously seen the flammable symbol correctly identified it; likewise 80% of those who reported having seen the poison symbol correctly identified it; 92% of those who had seen the explosive symbol correctly

EXHIBIT A.3(b): CHANGES IN CORRECT
IDENTIFICATION OF HAZARD SYMBOLS:
1977 TO 1989



identified it, and 70% of those who had seen the corrosive symbol knew what it stood for.

A comparison with the findings of 1977 study (see Exhibit A.3(b)) highlights an improvement in the ability of Canadians to correctly identify the hazard symbols. In 1977, 80% of respondents correctly identified the poison symbol, 78% the flammable symbol, only 39% the explosive, and 26% the corrosive.

Summary

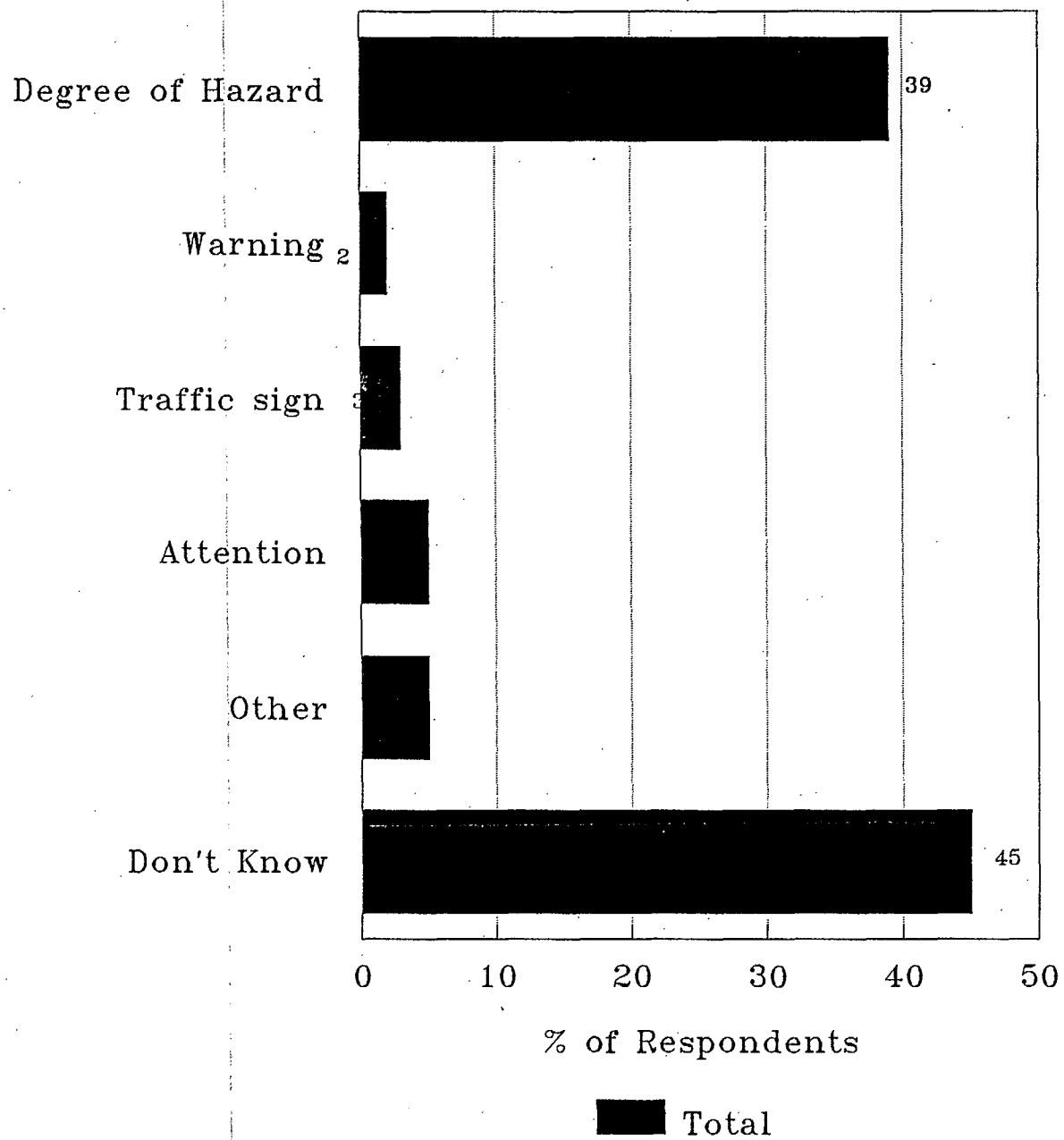
The flammable and poison symbols are the most easily recalled by respondents and also the most correctly identified, although the flammable symbol is the more correctly identified of the two. The explosive and corrosive symbols are the least easily recalled and the least correctly identified.

In terms of demographic characteristics, the older age groups, those with only public school education, and those whose mother tongue is neither official language consistently appear as the lowest groups in recalling that they have seen the hazard symbols and in correctly identifying their meanings. For the corrosive and explosive symbols, these findings are particularly noticeable -- respondents from the above groups who had seen or could correctly identify the symbols were in the minority.

3. Identification of the Degree of Hazard Frames

In addition to the hazard symbols, respondents were presented with information cards displaying the three frames in which the symbols appear. We then asked if they knew why these particular shapes were used and to indicate to the best of their knowledge what each symbol represented -- danger, warning or caution.

EXHIBIT A.4: AWARENESS OF PURPOSE OF HAZARD SYMBOL FRAMES (Q.7)



(n = 1050)

Exhibit A.4 displays the frequency distribution of responses for the national sample on what purpose is served by using particular frames. It is significant to note that nationally, just under half of the respondents (45%) did not know; 39% felt it was to show the degree of hazard; 5% felt it was a device to grab the consumer's attention; 3% believed that the frames correspond to and have the same function as traffic signs; 2% thought they were various means of warning consumers (unspecified); and 1% did not provide a response.

Looking at the category of "do not know", respondents giving this response tended most frequently to be among:

- ♦ those aged 65 and over (56%);
- ♦ those who attended public school (56%);
- ♦ those with incomes under \$20,000 (56%); and
- ♦ those respondents from Quebec (51%).

Considering the category of those who believed that each frame denoted a difference in the degree of hazard, those most frequently giving this response tended to be:

- ♦ those respondents from communities between 10,000 - 100,000 (51%);
- ♦ those respondents from Atlantic Canada (49%);
- ♦ those aged 30 - 39 (46%); and
- ♦ students (46%).

Conversely, among the demographic groups, the following groups tended least frequently to give the degree of hazard response:

- ♦ those respondents aged 65 and over (28%);

- ♦ those who attended public school (34%);
- ♦ those with incomes under \$20,000 (34%);
- ♦ those with incomes between \$20,000 - \$29,999 (33%);
- ♦ sales clerks (35%); and
- ♦ housewives (35%).

Exhibit A.5 below sets out the frequency distribution of responses given for the specific meaning of each frame.

EXHIBIT A.5
PERCEPTIONS OF WHAT EACH FRAME MEANS

Meaning	% of Respondents		
	Danger Frame	Warning Frame	Caution Frame
Danger	35	12	8
Warning	5	24	14
Caution	7	17	31
Stop	23	-	-
Yield	-	-	11
Other Mention	6	9	7
Don't Know	23	36	28
Base (n=)	1,050	1,050	1,050

For the danger and caution frames, approximately one-quarter of respondents (23% and 28% respectively) did not know what each represented. For the warning frame over one-third (36%) were in the same position.

Nationally, only 35% of respondents correctly identified the danger frame. Among the demographic groups, correct identification of the frame ranged from a high of 46% for respondents from the Prairies to a low of 24% for those whose incomes were under \$20,000.

Looking at the warning frame, 24% of respondents nationally made the correct identification, with a high of 34% for respondents from Atlantic Canada to a low of 18% for either those with only public school education or with incomes under \$20,000.

Finally, 31% of respondents overall correctly identified the caution frame, ranging from a high of 46% for respondents from Atlantic Canada to a low of 18% for respondents from Quebec.

Summary

Respondents generally are unsure as to the reasons that hazard frames are used. As with the hazard symbols those respondents with either a public school education, those with incomes below \$20,000, or those who are aged 65 and over tend most frequently not to know why the frames are used.

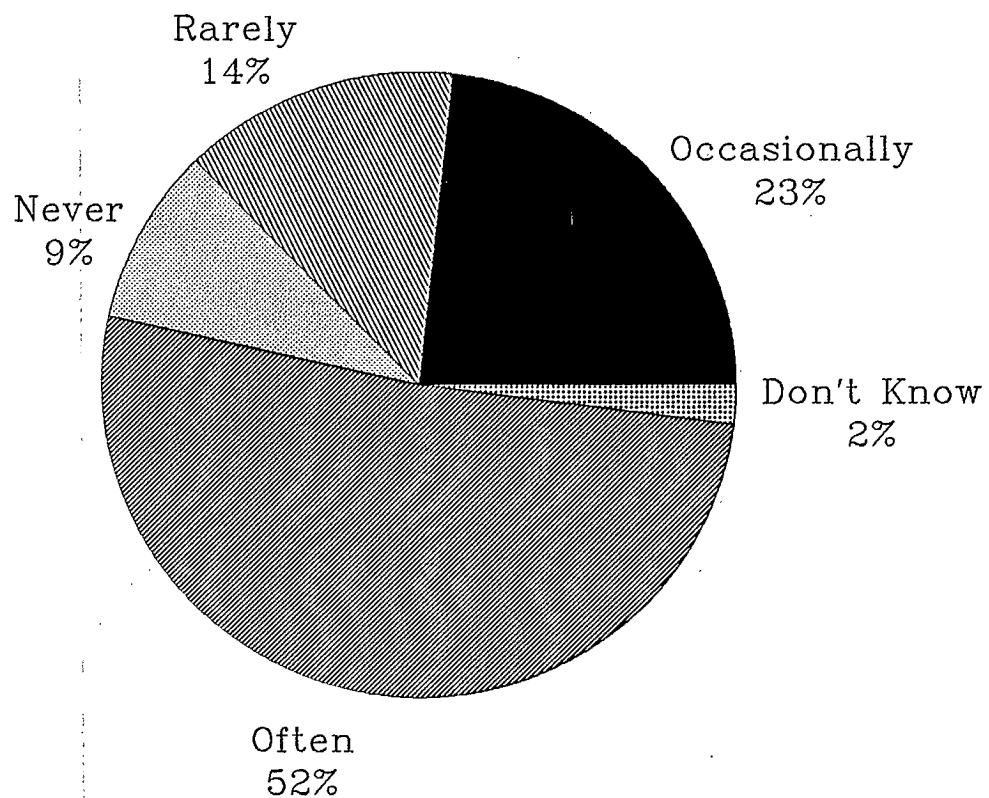
As for the meaning of the frames respondents overall are less sure of the meanings of the frames than they are of the symbols. At best, just over one-third could identify the frame used to designate danger. At worst, just under a quarter could identify the frame used to designate warning.

B. PURCHASE AND USE OF PRODUCTS WITH WARNING SYMBOLS

1. Salience of Warning in Purchasing Hazardous Products

Respondents were asked when purchasing household chemical products, how often they were aware of the warning labels on the container. They were also asked to indicate what feature of the warning label usually attracted their attention most.

EXHIBIT B.1: AWARENESS OF WARNING LABELS
WHEN PURCHASING PRODUCTS (Q.13)



(n = 1050)

Exhibit B.1 displays the overall frequency distribution for the notice of warning labels. Nationally, just under three-quarters (74%) of all respondents notice the warning label -- this is composed of 51% who observe the label often and 23% who perceive the label occasionally. This compares with just under one-quarter (23%) who disregard the warning label -- made up of 14% who rarely notice the label and 9% who report that they never see it.

Looking only at those who observe the label often, the highest frequency of notice is among residents of British Columbia (63%), income earners between \$50,000 - \$59,999 (63%) and those who have attended university (60%). The lowest frequency of awareness is among respondents who have attended public school only (37%) and students (40%).

For those who report that they never discern the warning, the highest frequency is among those who have only attended public school (19%), those 65 and over (14%), and income earners under \$20,000 (12%).

Exhibit B.2 highlights the features which solicit the most attention on the part of those who notice the warning label. As shown, the part of the warning label that attracts the most attention is the symbol (49%). In terms of socio-demographic characteristics, the highest frequency of mention of the symbol is among:

- ♦ income earners between \$40,000 - \$49,999 (61%); and
- ♦ those aged 30 - 39 (60%).

The lowest frequency is among:

- ♦ those aged 65 and over (38%); and
- ♦ residents of Atlantic Canada (41%).

EXHIBIT B.2: PART OF WARNING LABEL WHICH ATTRACTS MOST ATTENTION (Q.14)

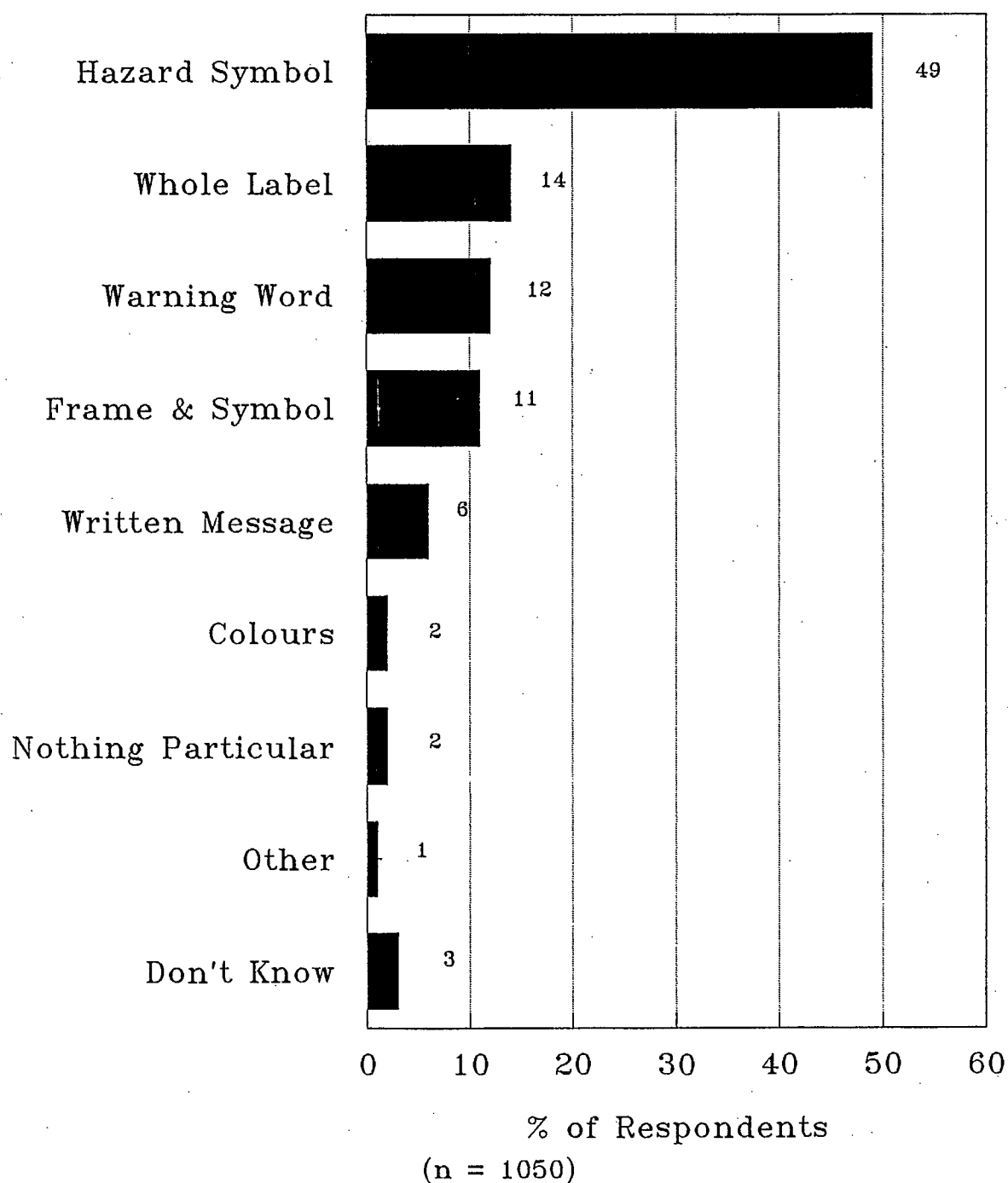
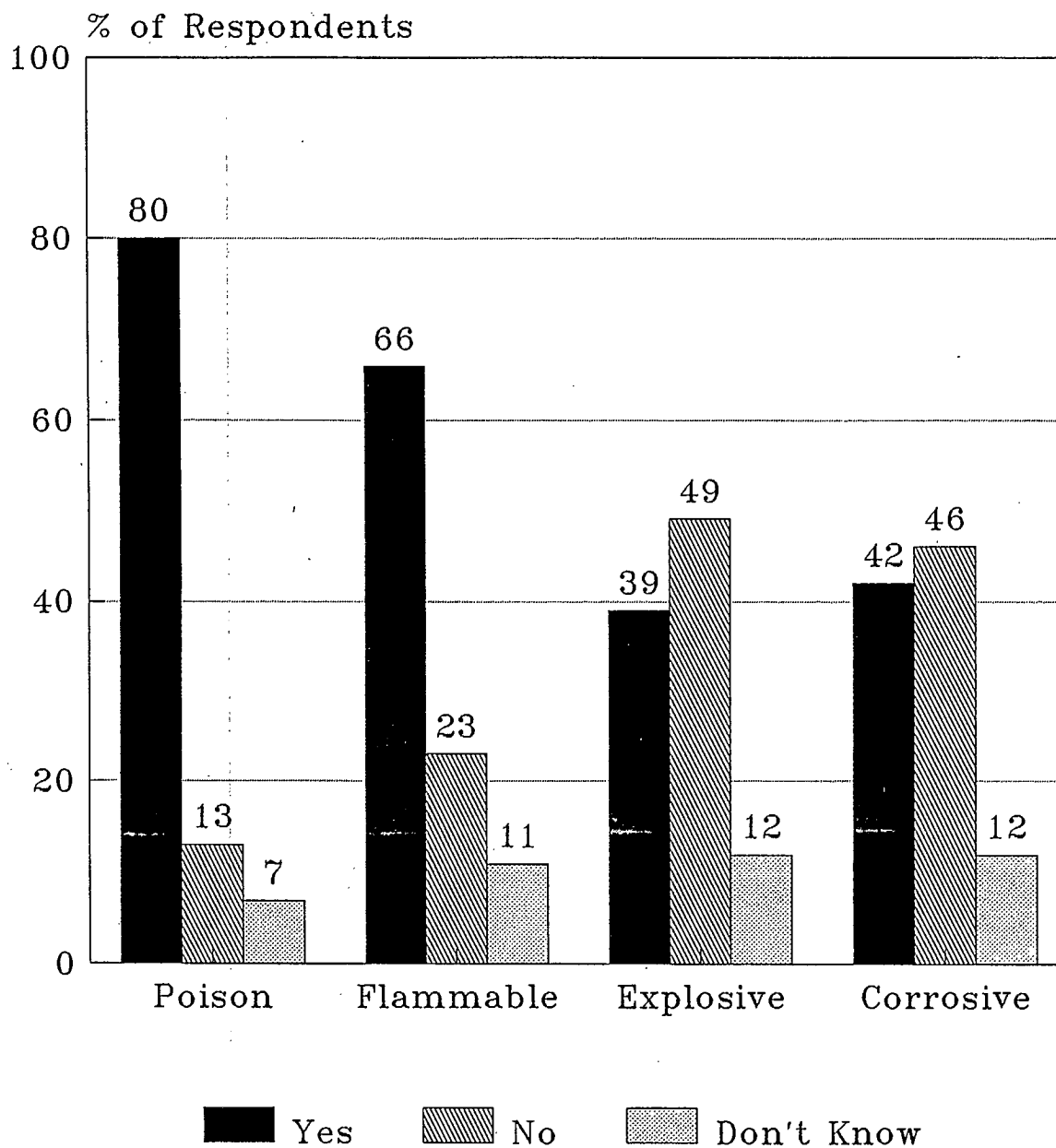


EXHIBIT B.3(a): RECALL OF PURCHASE OF
A HOUSEHOLD PRODUCT WITH A HAZARD
SYMBOL ON IT (Q.3A, 4A, 5A, 6A)



(n = 1050)

2. Impact of Hazard Symbols on Product Use

Respondents were asked whether or not they had purchased a product with any of the four symbols. If so, they were then asked what they did or would do regarding the storage, handling, use or disposal of the particular products.

Exhibit B.3(a) highlights the responses with regard to the purchase of household products including a hazardous label. As shown, 80% of respondents recalled having purchased household products that included a poison label; 66% recalled having purchased products with a flammable label; 42% recalled having purchased products with a corrosive label; and only 39% recalled having purchased products with an explosive label. In the cases of corrosive and explosive products, those who did not recall having purchased such products outnumbered those who had - 49% had not purchased products with an explosive symbol and 46% had not purchased products with a corrosive symbol.

This represents a slight increase from the 1977 study on consumer awareness in which 77% of respondents recalled buying a product with a poison symbol, 62% claimed to have bought a product with a flammable symbol, 35% said this about an explosive product and 25% recalled buying a product with a corrosive symbol (see Exhibit B.3(b)).

Concerning the storage of hazardous products, as shown in Exhibit B.4(a), 21% of respondents respectively would do nothing special for products labelled either explosive or corrosive; 13% would do nothing special for those labelled flammable and 12% would do nothing particular for those labelled poisonous. (For Exhibits B.4(a) and B.5, respondents were permitted multiple responses. Frequencies, however, have been calculated on the basis of the number of respondents.)

EXHIBIT B.3(b): CHANGES IN RECALL OF
PURCHASE OF PRODUCT WITH HAZARD
SYMBOL ON IT: 1977 TO 1989

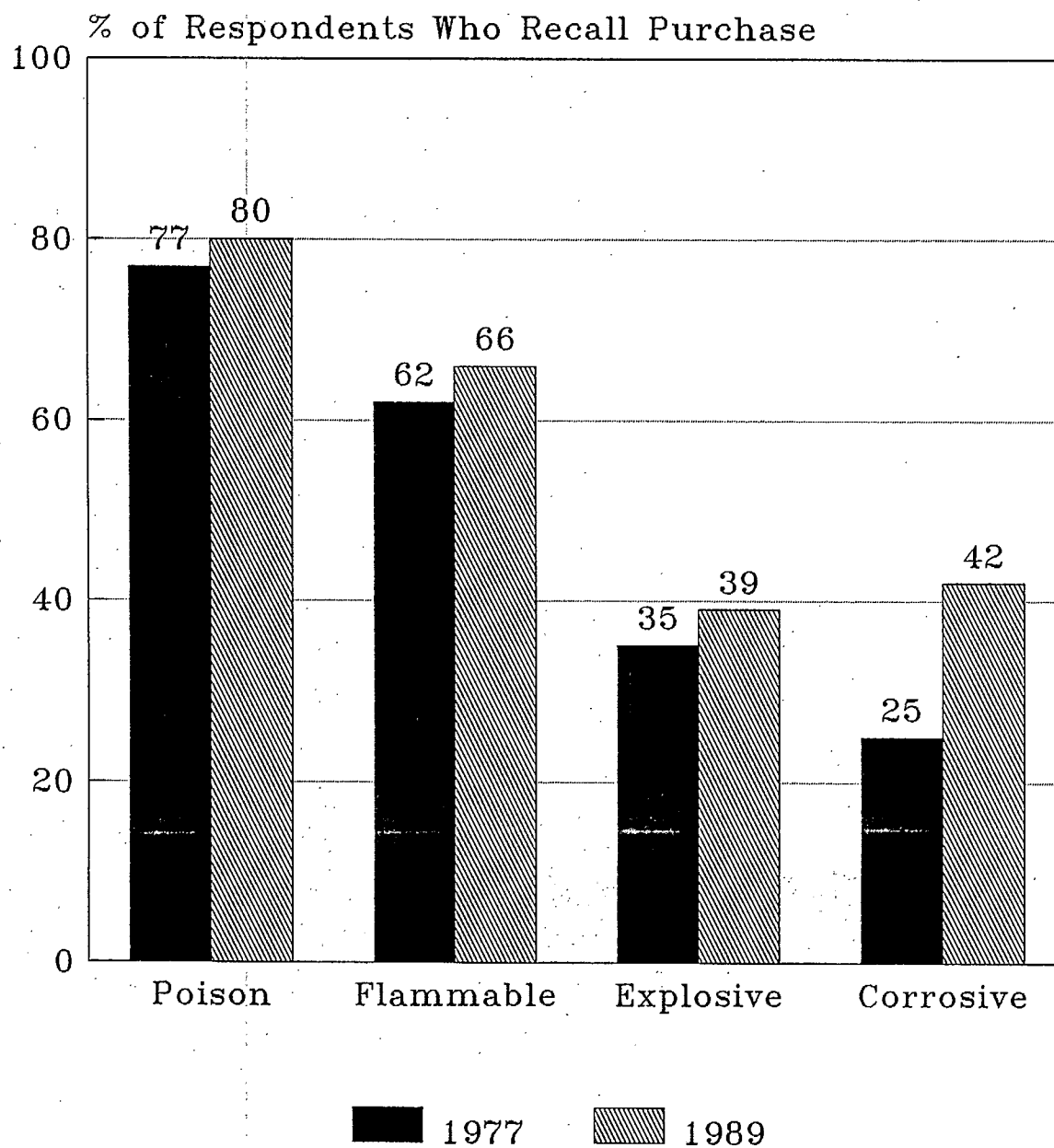
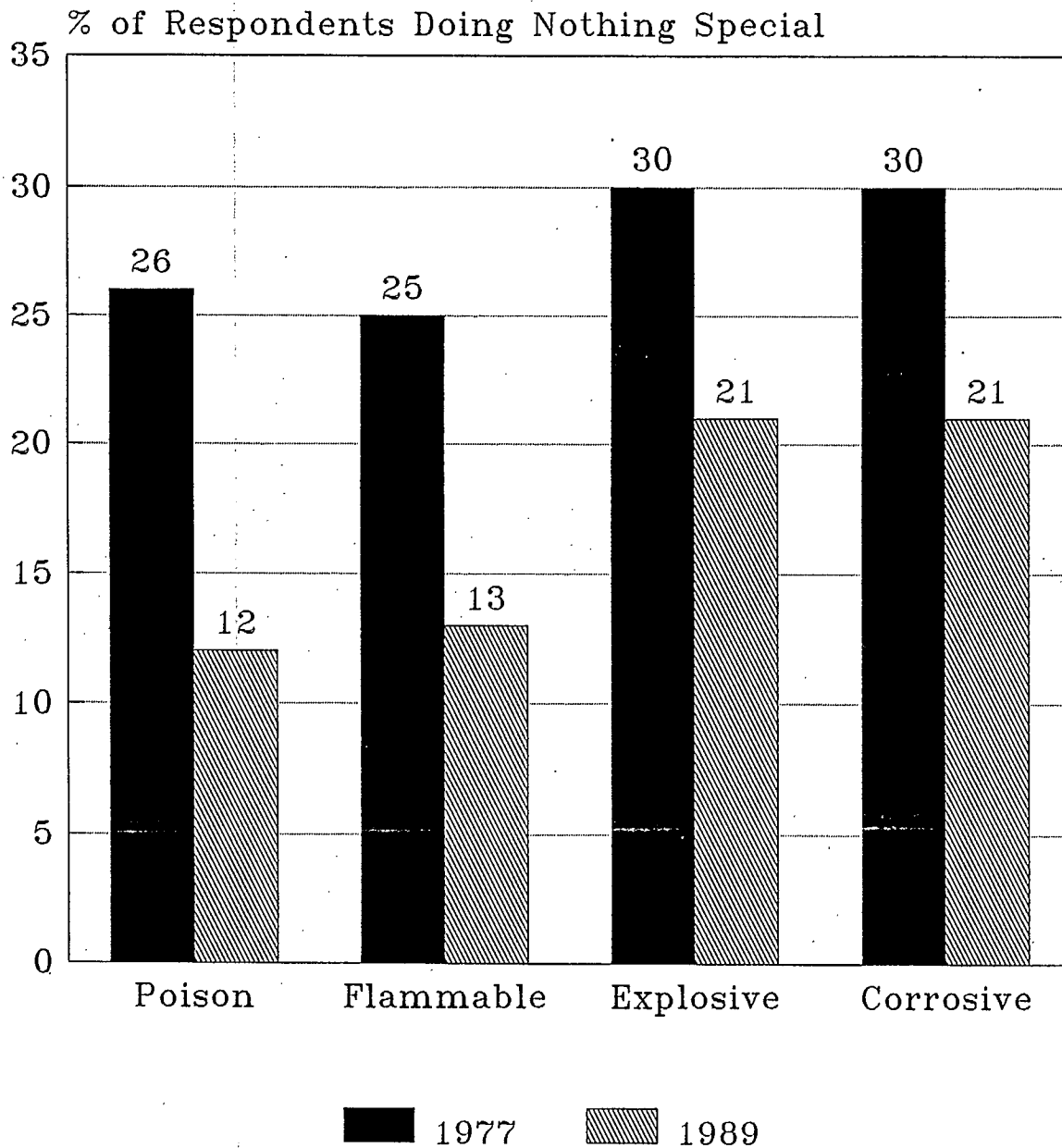


EXHIBIT B.4(a):
APPROACHES TO THE STORAGE OF HAZARDOUS
PRODUCTS (Q. 3b, 4b, 5b, 6b)

Action	% Respondents			
	Poison	Flammable	Explosive	Corrosive
Store away from children	45	18	14	25
Place in special, safe place	27	16	13	16
Store on top shelf	18	6	6	10
Put in cupboard	8	3	3	4
Store in cool place, away from heat	5	43	24	5
Other mentions	10	12	13	15
Nothing special	12	13	21	21
BASE (n =)	1050	1050	1050	1050

EXHIBIT B.4(b):
CHANGES IN STORAGE OF HAZARDOUS
PRODUCTS: 1977 TO 1989



When compared to the results of the 1977 study, respondents included in the current survey are more inclined to take measures regarding the storage of products labelled as hazardous. In 1977, 26% of respondents would do nothing particular or special for products labelled poisonous, 25% would do nothing special for products labelled flammable and 30% would do nothing special for either corrosive or explosive products (see Exhibit B.4(b)).

The clear majority of respondents, however, would take specific measures with each of these products. In the case of poisonous products, 45% stated that they would take measures to store them away from children; 27% would place them in a special, safe place; 18% would store them on a top or high shelf and 8% would place them in a cupboard.

For flammable products, 43% respondents would store them in a cool place away from heat; 18% would take measures to store them away from children; and 16% would place them in a special, safe place.

With respect to explosive products, 23% of respondents would store such products in a cool place away from heat; 14% would store them away from children; and 13% would place them in a special, safe place.

Finally, for corrosive products, 25% of respondents would store them away from children; 16% would place them in some special, safe place; and 10% would store them on a top or high shelf.

For each individual chemical product category, the frequency distribution for specific measures that had been or would be undertaken is higher for those respondents who recalled having purchased such products.

EXHIBIT B.5:
APPROACHES TO THE HANDLING, USE OR DISPOSAL
OF HAZARDOUS PRODUCTS (Q. 3c, 4c, 5c, 6c)

Action	% Respondents			
	Poison	Flammable	Explosive	Corrosive
Be careful/handle with care	23	18	15	13
Label/mark it	1	1	-	-
Throw in garbage after use	23	18	15	14
Wear gloves	4	-	1	9
Flush leftover	6	2	1	5
Call disposal co./unit/fire hall/city hall	5	4	5	4
Dispose by unspecified means	2	2	2	2
Would not burn it/ place near fire	-	9	5	-
Dispose in separate container/place in sealed container	3	1	1	1
Take to disposal/dump site	2	2	2	2
Other	9	8	6	5
Nothing special	27	28	30	28
BASE (n =)	1050	1050	1050	1050

Concerning the handling, use or disposal of hazardous products, as shown in Exhibit B.5, 30% of all respondents would not undertake special measures for explosive products, 28% respectively would do nothing special for either flammable or corrosive products and 27% gave the same response for poisonous products. This frequency distribution differs from that for respondents who recalled purchasing such products in that the percentage of respondents who would do nothing special is higher in each category.

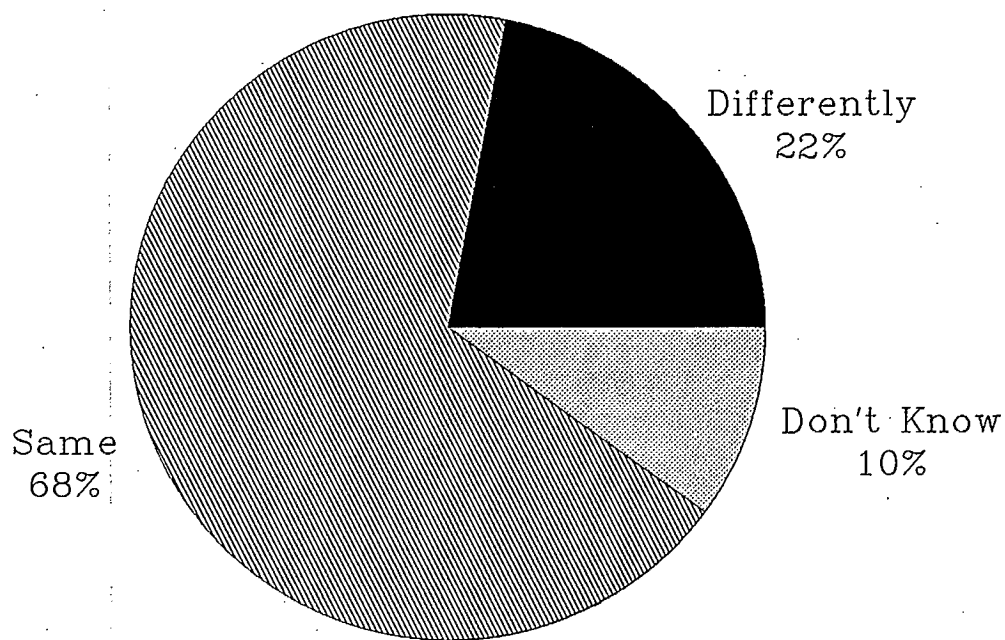
However, the majority of respondents would undertake specific measures. For each of the four hazardous product types, the highest frequencies of mention concern the careful handling of the products and their immediate disposal in the garbage following their use. The balance of responses have minor frequencies and are arrayed among the measures shown in Exhibit B.5. In the case of most special measures of actions, the frequency was higher for those who recalled having purchased such products than for all respondents.

3. Impact of Hazard Frames on Product Use

Respondents were asked to consider their behaviour in handling hazardous household products that were distinctively labelled with each warning differentiated on the basis of the hazard frame used to enclose the symbol. Specifically, they were asked whether they would handle each product in a different or similar manner. At the same time, respondents were presented information cards which showed the three frames:

- ♦ Frame A: Danger;
- ♦ Frame B: Warning; and
- ♦ Frame C: Caution.

EXHIBIT B.6: IMPACT OF DIFFERENT
HAZARD FRAMES ON PRODUCT HANDLING (Q.9)



(n = 1050)

Those respondents who indicated that they would handle each product differently were then asked to indicate what would be distinctive in the handling of each product.

As shown in Exhibit B.6, the majority (68%) of respondents would not differentiate the handling of the products, 10% do not know or would not state what they would do, and only 22% would handle each in a different manner.

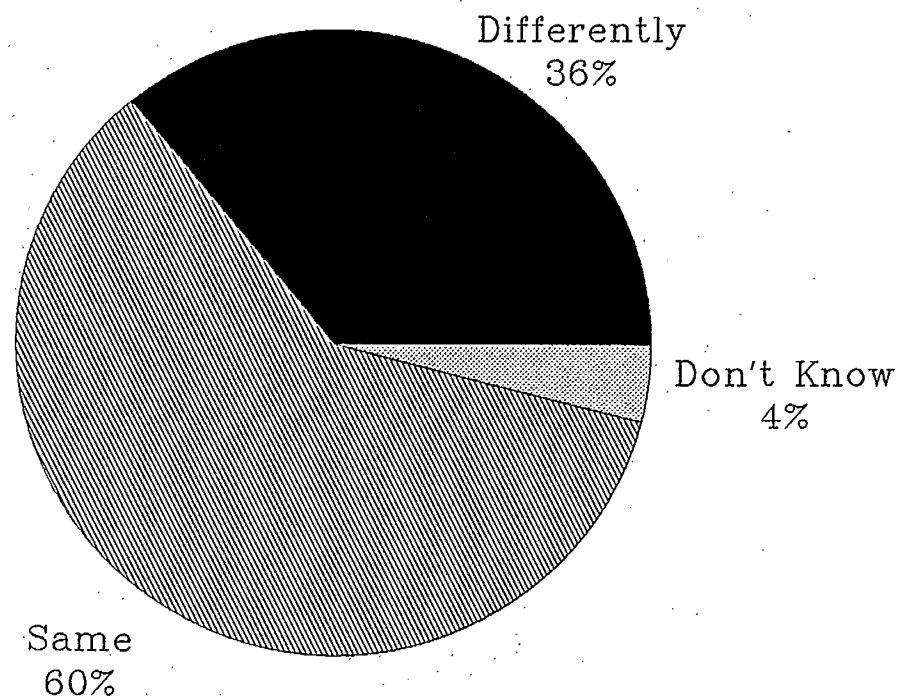
Of those respondents (22%) who indicated that they would handle products differently in response to each frame:

- ◆ 30% would handle those enclosed with a danger frame with the most caution;
- ◆ 7% would handle those enclosed with a caution frame with the most caution;
- ◆ 20% made general reference to different ways of handling such products based on the type of frame;
- ◆ 19% would differentiate their handling of the hazardous product on the basis of the symbol contained within the frame; and
- ◆ 11% made general reference to different ways of storing such products based on the type of frame used.

Summary

The majority of respondents do not differentiate among the frames around symbols on labels with respect to the handling of hazardous products. For the minority who do, only a small proportion stated specifically how the differences affect their handling of hazardous products. The balance reported that they need to differentiate on the basis of both the frame and symbol.

EXHIBIT B.7: IMPACT OF WARNING WORDS
ON PRODUCT HANDLING (Q.11))



(n = 1050)

4. Impact of Warning Words on Product Use

Respondents were also asked to consider their behaviour in handling hazardous products on the basis of the written warning contained in the precautionary labels. Respondents were provided with information cards that were variously marked 'danger', 'warning' and 'caution' and were asked to indicate if they would handle such products in different ways.

Respondents who would handle products differently were asked to indicate what the differences would be.

As shown in Exhibit B.7, the majority of respondents (60%) would not handle hazardous products differently, 36% would make a distinction based upon the warning words and 4% did not know or would not state how they would handle such products. When compared to the impact of hazard frames, warning words are more salient in differentiating product handling. Only 22% of respondents would vary product handling on the basis of a particular frame, while 36% would do so based upon a particular warning word.

For those respondents who would handle hazardous products differently based on the warning words, the majority (64%) would be most careful with products labelled 'dangerous'. On the other hand, 11% would take the warnings as an indication to treat all such labelled products more carefully than they do other products. A small group (6%) would interpret the warning words as a need to read the product labelling.

Again, when responses are compared with those provided for handling products based on the different hazard frames, the impact of warning words is stronger than the frames in determining product handling behaviour.

EXHIBIT C.1:
CURRENT AND ALTERNATIVE HAZARD SYMBOLS PRESENTED TO RESPONDENTS

POISON

A1



A2



FLAMMABLE

B1



B2

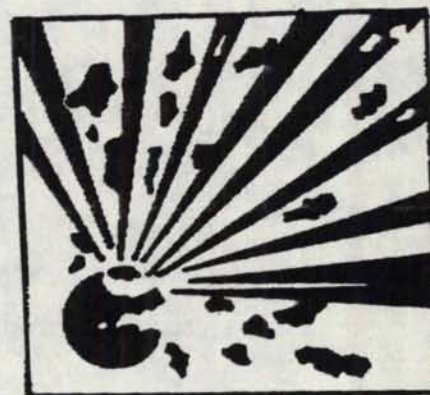


EXPLOSIVE

C1



C2



CORROSIVE

D1



D2



C. SUBJECTIVE ASSESSMENT OF WARNING SYMBOLS

An important component of this study involved the development of alternative labelling designs in order to determine potential areas of improvement to current designs for precautionary labelling. Both current and alternative designs were presented to respondents, typically in a paired comparison format. Respondents were then asked to provide their own assessment as to which design would be most effective for warning consumers about hazardous products.

This chapter presents these subjective results for current and alternative hazard symbols, degree of hazard frames, and warning words. It also details reported preferences for the relative size and placement of each of these warning label components.

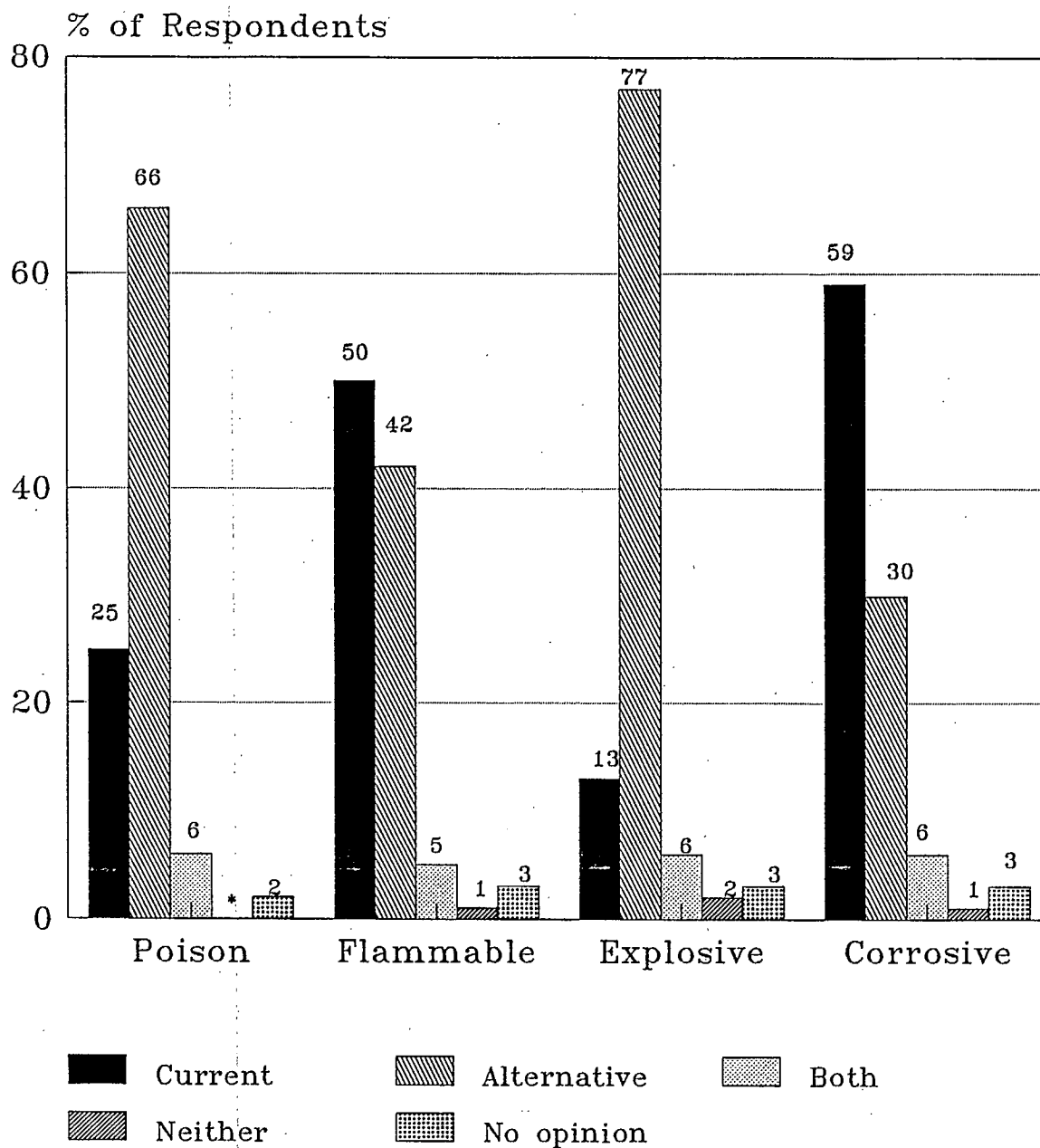
1. Current and Alternative Hazard Symbols

Exhibit C.1 displays the pairs of current and alternative hazard symbols presented to respondents. One pair of symbols was presented for each type of hazard. For each pair, respondents indicated which symbol they thought best identified the type of hazard involved -- poison, flammable, explosive and corrosive.

Responses varied considerably for each type of hazard. As shown in Exhibit C.2, alternative symbols were selected by a majority of respondents for both the poison hazard and the explosive hazard. However, for flammable and corrosive products, a majority of respondents selected the symbol currently in use as the most effective identifier.

It is important to note that the degree of consensus regarding design effectiveness also varied for each pair of hazard symbols. The clearest results emerged for the

EXHIBIT C.2: BEST SYMBOL FOR IDENTIFYING TYPE OF HAZARD (Q.16)



(n = 1050)

* indicates less than 1%

explosive hazard. In this case, a strong majority (77%) selected the alternative symbol, with only a small minority (13%) judging the current symbol to be the best. An additional 6% felt that both were equally effective. Finally, 2% of respondents felt that neither were effective and 3% felt they could not make an assessment between the two explosive symbols.

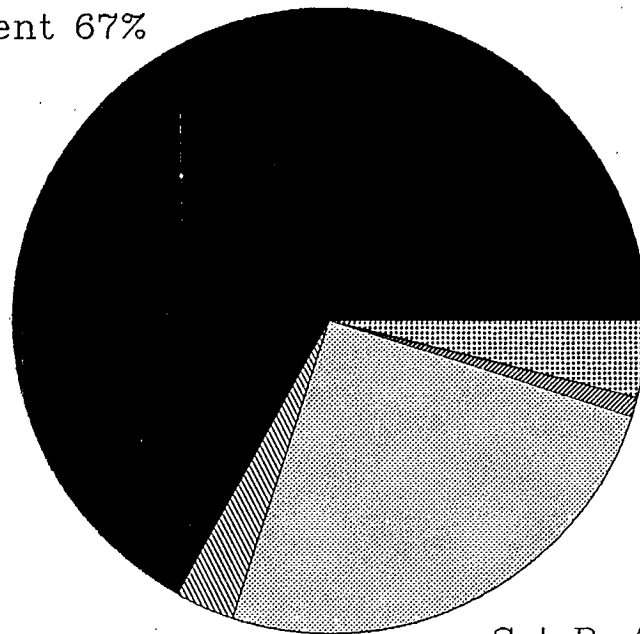
For the poison and corrosive hazards, a clear choice also emerged, although the consensus was less strong. For poison, 66% of respondents felt that the alternative symbol was its best identifier. However, an important minority (25%) selected the current symbol. Six percent (6%) thought both designs were good, less than 1% thought neither would do and 2% had no opinion. Similarly, a substantial majority (59%) thought that the current corrosive symbol was best for identifying that type of hazard, with an important minority (30%) choosing the alternative. Again, 6% said both symbols were effective, 1% chose neither, and 3% had no opinion.

The flammable symbols drew mixed reviews, showing the lowest degree of consensus for the best identifier of flammable products. While most (50%) selected the current symbol, a strong minority (42%) thought the alternative best identified flammable products.

In general, students and young Canadians under the age of 29 tended to be the strongest proponents of current symbols, while older respondents, housewives and residents of British Columbia were more likely than other groups to select alternative designs.

EXHIBIT C.3: MOST EFFECTIVE DEGREE OF
HAZARD FRAMES (Q.15)

Set A: Current 67%



Don't Know 4%
None 1%

Set C: No frame 3%

Set B: Alternative 25%

(n = 957)

2. Degree of Hazard Frames and Alternatives

Two alternatives to the current degree of hazard frames were developed for consumer assessment. Thus, respondents were shown a total of three sets of designs for evaluation. Each of these is described below (see Appendix I for full illustration). It should be noted that hazard symbols were included within the frame designs for assessment purposes. Since there are only three current types of degree of hazard frames, three of the four hazard symbols were randomly chosen for presentation. The selected symbols were held constant across the different sets of frames presented.

- ♦ Set A: Current degree of hazard frames, framing current symbols as follows:
 - * poison framed by danger frame
 - * corrosive framed by warning frame
 - * explosive framed by caution frame
- ♦ Set B: Alternative frame: one design (slashed diamond-shaped frame), with no distinction for degree of hazard; framing the current poison, corrosive and explosive symbols
- ♦ Set C: No frames at all; current poison, corrosive and explosive symbols without any frame

Exhibit C.3 presents the percentage of respondents who selected Set A, B or C as the most effective labelling for warning consumers about hazardous products. As shown, the set of current degree of hazard frames was clearly the most popular choice, with two-thirds of respondents (67%) selecting these as the most effective ones. The alternative frame was thought to be more effective by 25% of

respondents. The absence of frames was only judged to be the most effective by 3% of respondents. These findings were highly consistent across socio-demographic groups.

These results are somewhat surprising given the general lack of understanding found among consumers with regard to the meaning of current degree of hazard frames. It may be hypothesized that the use of more widely recognized frames such as the stop sign are preferable to other frame designs, although there may not be a need to vary these frames by degree of hazard. That is, one common frame, selected from among those currently in use, may be the most effective. This interpretation is supported by the findings related to the use of degree of hazard warning words, as discussed below.

3. Warning Words

A majority of respondents (57%) felt that it was most effective to use one common warning word on all hazardous products, regardless of the degree of hazard involved. However, a substantial minority (37%) felt that it was better to use different warning words for different products, depending on the degree of hazard involved. The remaining 6% had no opinion in this regard.

Some differences of opinion about warning words were evident across socio-demographic groups. Four groups in particular differed from the national average in that they tended to be more equally split among the two options for using common or distinct words. These included residents of the Atlantic region, Canadians aged 18 - 29, students and Canadians whose mother tongue is neither English or French. That is, these groups were more likely than others to prefer the use of distinct warning words (45% - 48% compared to the national average

of 37%) and less likely than others to select the common word option (46% - 50% compared to the national average of 57%).

4. Preferred Size and Placement of Warning Symbols

Six complete design labels were developed for respondents to evaluate in their entirety. Each design reflected a systematic variation in the layout of three warning components:

- ◆ the warning word (caution);
- ◆ the framed hazard symbol (explosive symbol in caution frame); and
- ◆ the written message (container may explode if heated).

The exact words used and the symbol itself were kept constant across designs.

Illustrations for each of these designs are presented within this section in order for the reader to better understand the discussion of results. A summary of design distinctions is provided below:

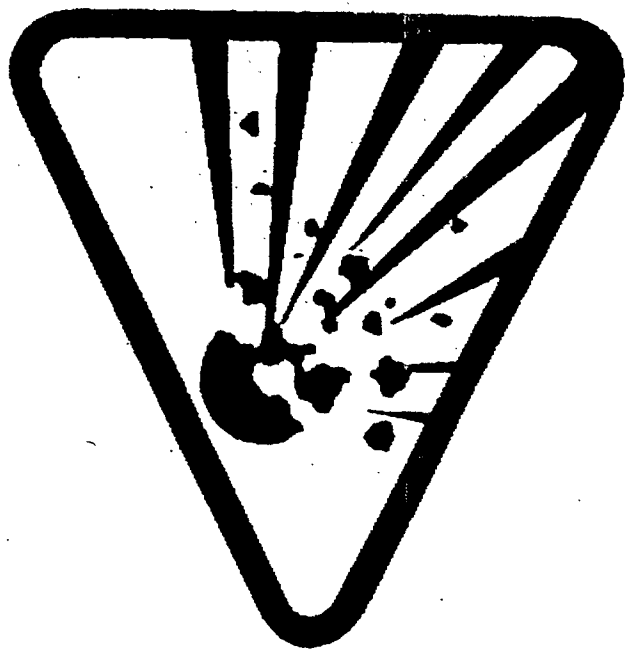
Labels A and B

Similarities: ◆ horizontal layout
◆ more space allocated to warning word
◆ warning word centered above other components

Differences: ◆ A - symbol to left of message
◆ B - symbol to right of message

LABEL A

CAUTION

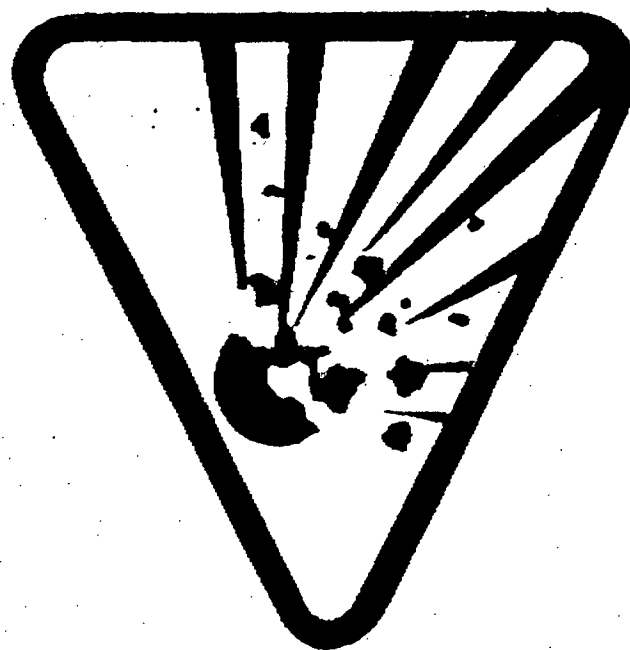


**CONTAINER
MAY EXPLODE
IF HEATED.**

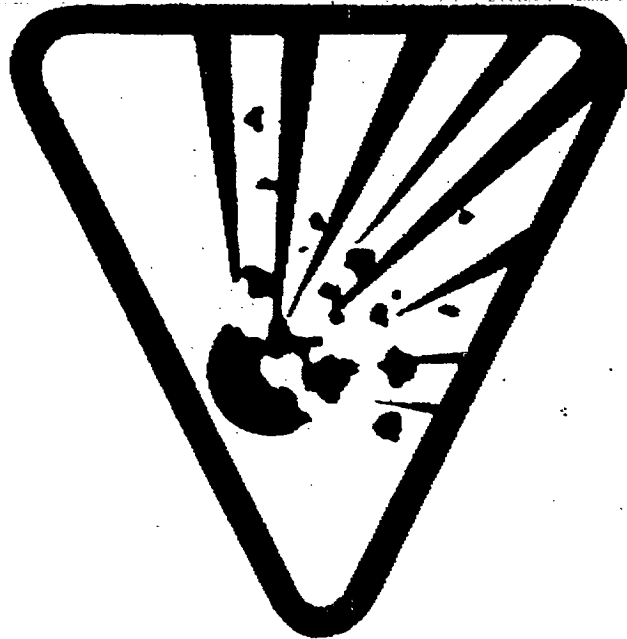
LABEL B

CAUTION

**CONTAINER
MAY EXPLODE
IF HEATED.**



LABEL C



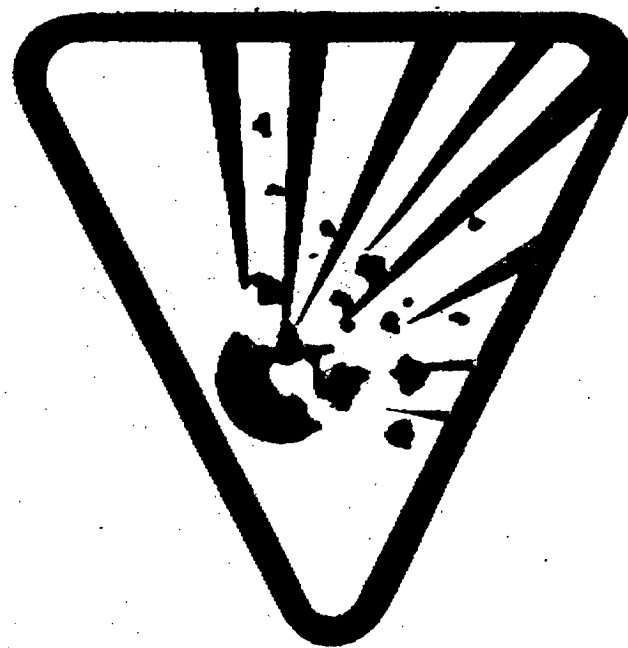
CAUTION

**CONTAINER
MAY EXPLODE
IF HEATED.**

LABEL D

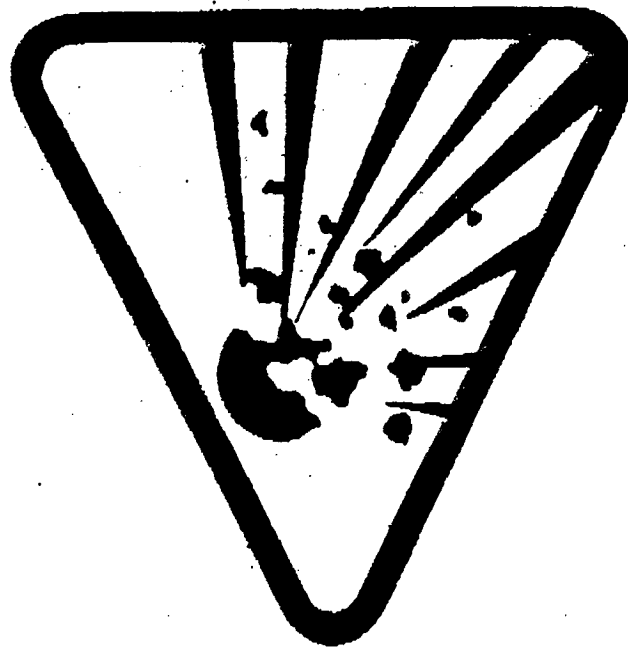
CAUTION

**CONTAINER
MAY EXPLODE
IF HEATED.**



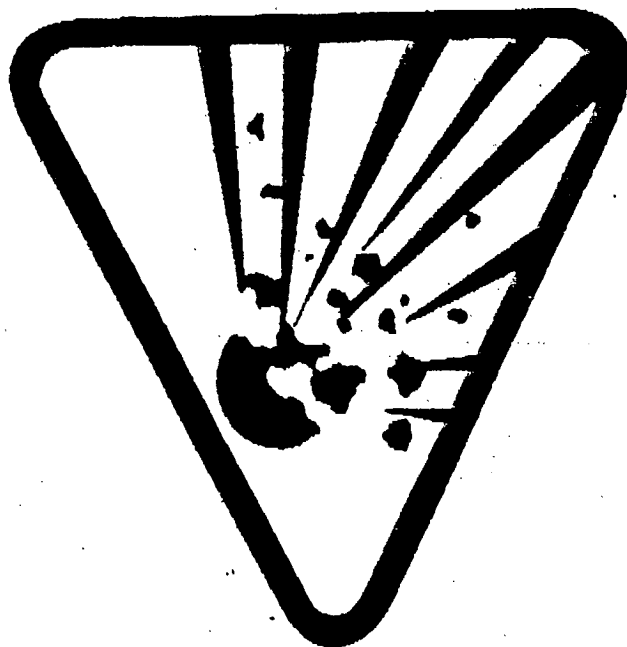
LABEL E

CAUTION



**CONTAINER MAY EXPLODE
IF HEATED.**

LABEL F



CAUTION

**CONTAINER MAY EXPLODE
IF HEATED.**

EXHIBIT C.4(a)

PAIRED COMPARISONS OF OVERALL LABEL DESIGNS

% of Respondents Who Preferred Design:

	A over...	B over...	C over...	D over...	E over...	F over...
...A	-	20	31	26	55	44
...B	47	-	40	32	56	49
...C	43	36	-	24	54	49
...D	49	42	46	-	57	53
...E	25	23	27	23	-	32
...F	36	31	29	26	44	-

BASE (n = 1050)

Labels C and D

- Similarities: ♦ horizontal layout
♦ more space allocated to symbol
♦ symbol centered beside other components

- Differences: ♦ C: symbol to left of words
♦ D: symbol to right of words

Labels E and F

- Similarities: ♦ vertical layout
♦ more space allocated to symbol
♦ message at bottom of label

- Differences: ♦ E: warning word above symbol
♦ F: symbol above warning word

Similarities and differences across these main groups of designs are also distinguishable. For instances, A and C are similar in their placement of symbols on the left compared to B and D which place symbols on the right. All important distinctions will become evident in the discussion of the findings.

Each design was paired with every other design for presentation to the respondents. Thus, 15 paired comparisons were made with respondents choosing one design out of each pair which they felt was the most effective for warning consumers about hazardous products.

Exhibit C.4(a) provides the overall results for all paired comparisons. Results should be read down the columns of this exhibit. For example, to determine the

EXHIBIT C.4(b)

NET PREFERENCE FOR OVERALL LABEL DESIGNS

Net % of Respondents Who Preferred Design:

	A over...	B over...	C over...	D over...	E over...	F over...
...A	-	-	-	-	30	8
...B	27	-	4	-	33	18
...C	12	-	-	-	27	20
...D	23	10	22	-	34	27
...E	-	-	-	-	-	-
...F	-	-	-	-	12	-

BASE (n = 1050)

percentage of respondents who preferred Design E over Design B, go to Column E and move down to Row B. As shown in this cell, 56% of respondents preferred Design E over Design B. The inverse is found in Column B, Row E, where it indicates that 23% of respondents preferred B over E. It should be noted that the percentage of respondents who felt there were no differences between a given pair of designs is not indicated on this exhibit.

Net preferences for a given design over its alternatives are presented in Exhibit C.4(b). This table highlights the "winners" for each paired comparison and the degree to which they were considered superior to other designs. The percentages displayed in this exhibit represent the difference between the percent of respondents who preferred the winning design of the pair and the percent of respondents who preferred the losing design.

These results show that Design E is the most likely to be favoured over all other designs. Net preferences for Design E were significantly large, averaging approximately 30%. Designs F and A were also generally seen as effective designs. They tended to be preferred over B, C and D (by a significant 20%, on average) but were generally not seen to be as effective as E. Also, F was selected over A somewhat more often than A was selected over F. Designs C and B generated similar ratings: both were generally seen as less effective than A, E and F but more effective than D.

Overall, design preferences can be summarized as follows:

- ♦ Most effective overall: E
- ♦ Ranking 2nd overall: F, A
- ♦ Ranking 4th overall: C, B
- ♦ Least effective overall: D

It should be noted that the overall label designs developed for this study do not represent an exhaustive set of possibilities. However, several conclusions can be drawn from these findings. First, there appears to be a strong preference overall for a vertical layout as exemplified by Designs E and F. That is, respondents tended to prefer having components placed one above the other than having some components placed side by side.

Among the two vertical styles, the placement of the warning word on top with the symbol in the centre is generally preferred. This is reflected to some extent in the relatively high ranking of Design A which gives prominence to the warning word. These findings might also suggest that it is generally preferable to spatially separate the warning word from the written message. This would help to explain the relatively low ranking of C and D overall, which block the two written components together.

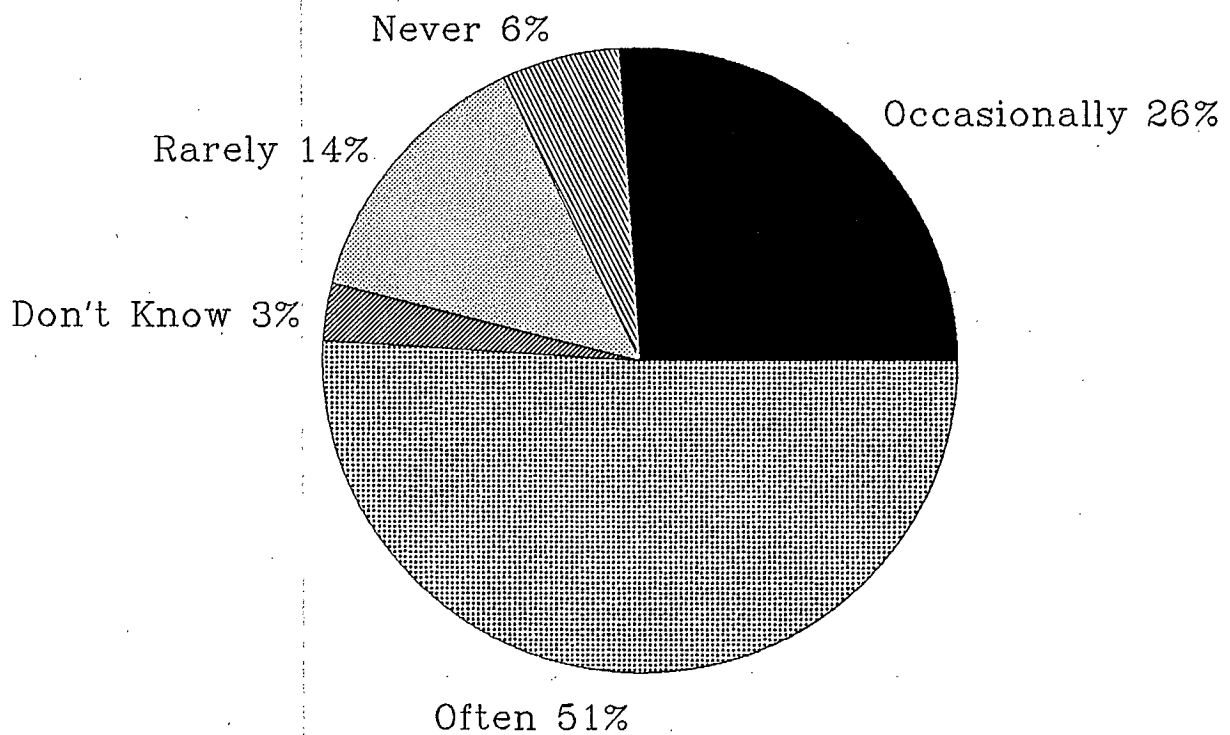
Given the choice of placing the hazard symbol on the right or left of horizontal designs, there appears to be a clear preference for placement of the symbol on the left, with words to the right.

D. USE AND EFFECTIVENESS OF WRITTEN PRECAUTIONARY INFORMATION

1. Warning Messages

Respondents were asked how often they read the short written warning message that often accompanies hazard symbols on product labels.

EXHIBIT D.1: FREQUENCY OF READING
WARNING MESSAGES (Q.18)



(n = 1050)

As shown in Exhibit D.1, just over one-half of respondents (51%) claim to often read the written warning message; a further 26% occasionally read the message; 14% rarely read and 6% never look at the message.

Among respondents who said they often read such messages, the highest frequencies were among residents of British Columbia (62%), those who attended university (61%) and those with incomes of \$60,000 and over (60%). The lowest frequencies were among those who attended public school only (36%), residents of Atlantic Canada (39%) and residents of communities between 10,000 and 100,000 (41%).

Among those who reported that they rarely or never read the message, the highest frequencies were among:

- ♦ residents of Atlantic Canada (20% and 11% respectively);
- ♦ those who attended public school only (21% and 15% respectively); and
- ♦ students (23% and 12% respectively).

In addition, those who read the messages were asked to rate the information contained in the warning message on the following characteristics:

- ♦ complicated or hard to understand;
- ♦ easy to read the print; and
- ♦ useful.

Respondents rated the above on the basis of a 4-point scale where 4 indicated "very", 3 indicated "somewhat", 2 "not very" and 1 "not at all".

EXHIBIT D.2: RATING OF MESSAGE CHARACTERISTICS (Q.19)

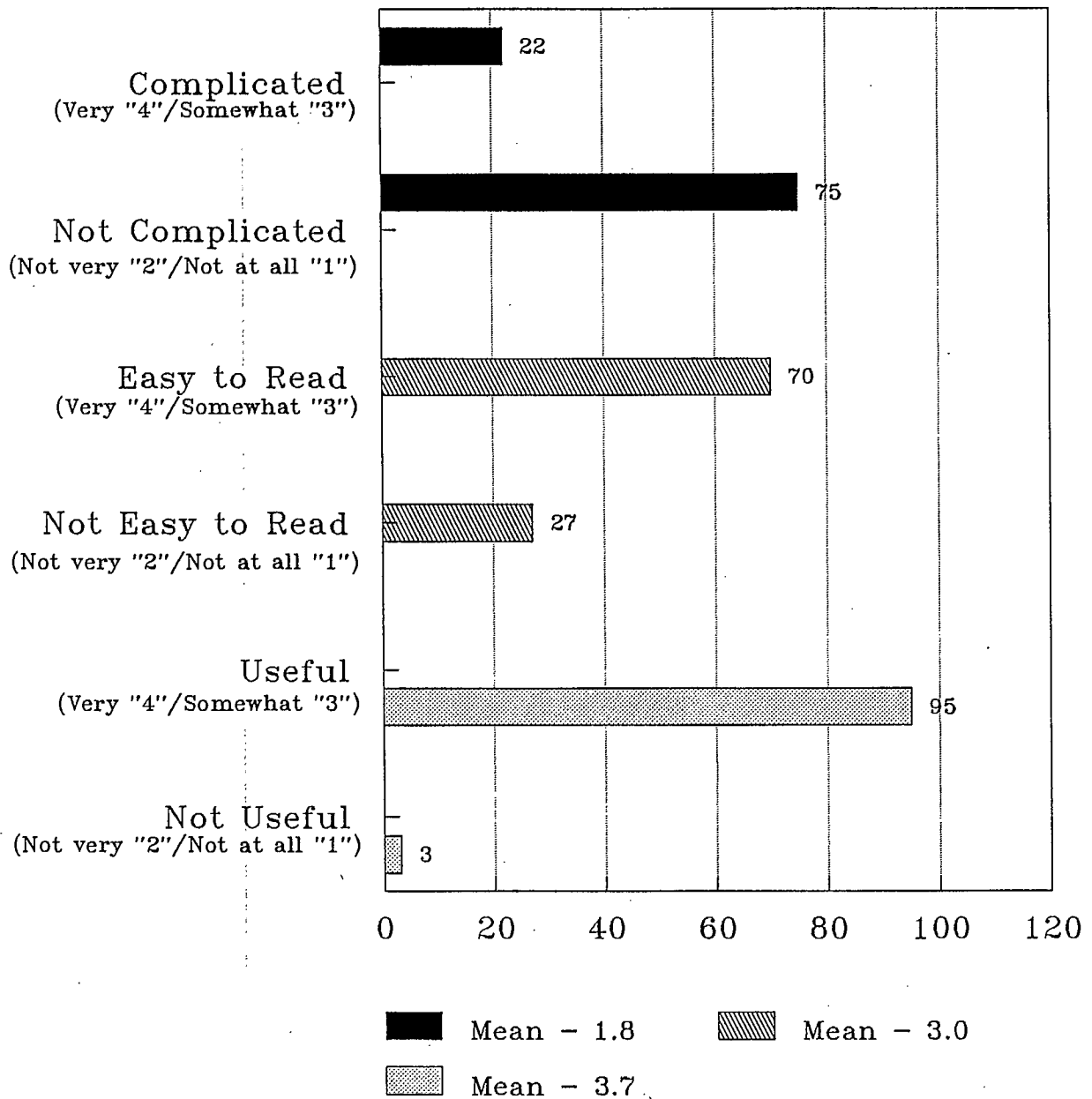


Exhibit D.2 displays the results for each characteristic on the basis of total positive responses (very or somewhat useful; very or somewhat easy to read; not very or not at all complicated) and total negative responses (not very or not at all useful; not very or not at all easy to read; very or somewhat complicated). The mean score for each characteristic based on the 4-point scale is also shown.

In terms of the utility of the message, respondents' scaling resulted in a mean score of 3.7 (very useful); in terms of legibility, the mean score of 3.0 was calculated (somewhat easy to read the print); and for complexity, the resultant mean score is 1.8 (not very hard to understand).

For each characteristic, the majority of respondents found such warning messages to be useful (95%), uncomplicated (75%) and easy to read (70%).

However, approximately one-quarter of respondents found the messages to be complicated (22%) and the print not easy to read (27%). Exhibit D.3 sets out the socio-demographic traits associated with the ratings. (Since only 3% of respondents did not find such messages useful, this characteristic is not included in Exhibit D.3.)

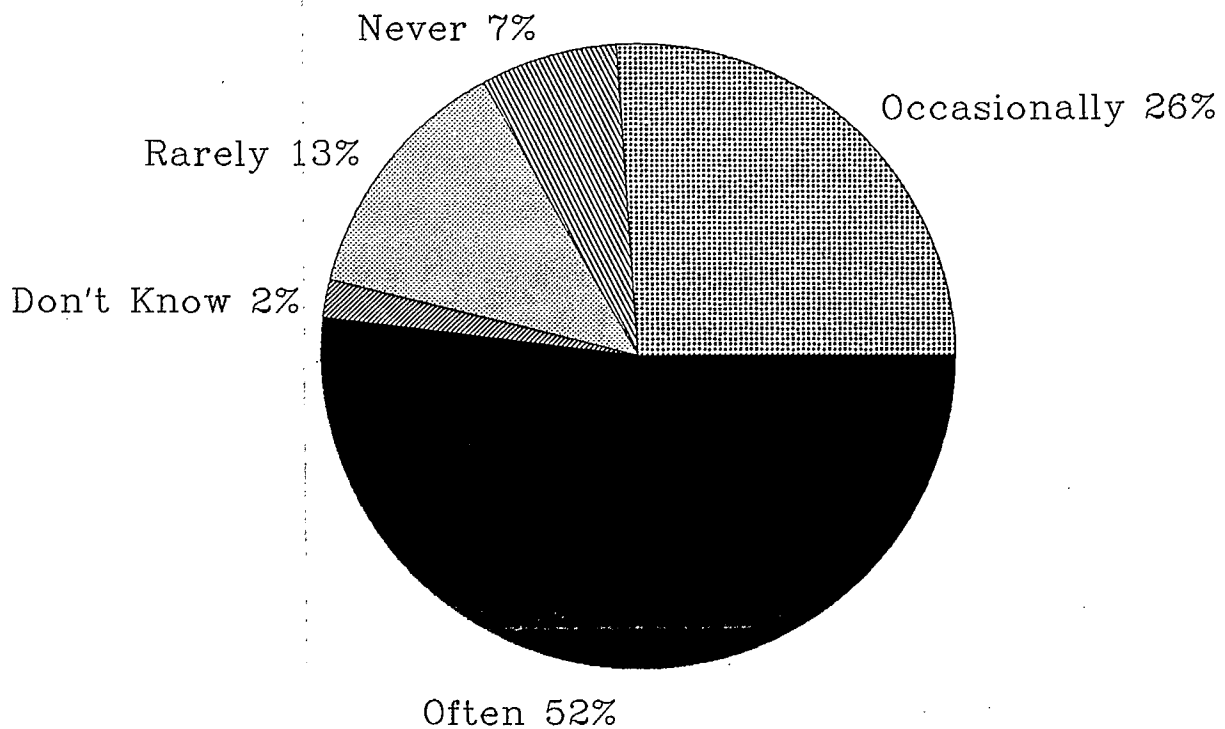
EXHIBIT D.3:
RATING OF MESSAGE CHARACTERISTICS: DEMOGRAPHIC
GROUPS WHICH FIND MESSAGES TO BE MOST COMPLICATED
OR NOT EASY TO READ

	Print not easy to read	Complicated
National Average	27%	22%
	<ul style="list-style-type: none"> ♦ those aged 50-64 (38%) ♦ those aged 65 and over (36%) ♦ housewives (32%) 	<ul style="list-style-type: none"> ♦ those aged 65 and over (35%) ♦ those aged 50 to 64 (29%) ♦ those whose mother tongue is neither official language (29%) ♦ income earners between \$20,000 - \$29,999 (28%) ♦ those whose mother tongue is French (28%) ♦ those resident in communities with populations between 10,000 and 100,000 (28%) ♦ residents of Quebec (27%)

2. First Aid Information

Respondents were asked to indicate how often they read the precautionary information about first aid treatment that appears on the back or the side of a hazardous product label.

EXHIBIT D.4: FREQUENCY OF READING
PRECAUTIONARY INFORMATION (FIRST AID)
(Q.20)



(n = 1050)

As shown in Exhibit D.4, just over one-half of respondents (52%) claim to often read the precautionary information on first aid; a further 26% occasionally read the information; 13% rarely read and 7% never look at the information.

Among respondents who reported that they often read first aid information, the highest frequencies were among residents of British Columbia (64%), those who attended university (58%), income earners between \$50,000 - \$59,999 (58%) and income earners of \$60,000 or more (57%). The lowest frequencies were among those who attended public school only (34%) and residents of Atlantic Canada (44%).

For those respondents who rarely or never read such information, the highest frequencies were among those who attended only public school only (18% and 16% respectively) and students (18% and 11% respectively).

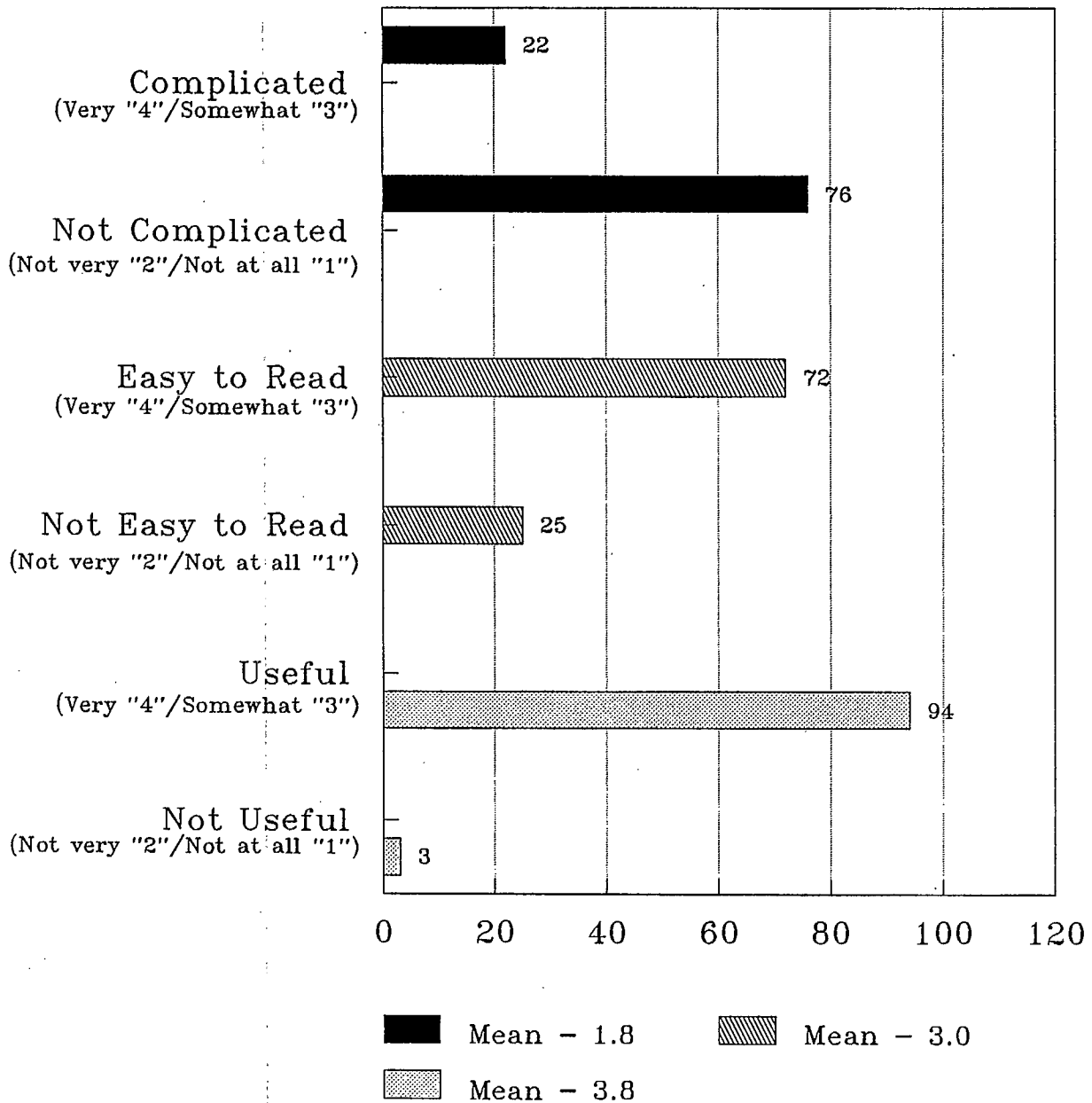
As with the warning message, respondents were asked to rate such first aid information on the following characteristics:

- ♦ complicated or hard to understand;
- ♦ easy to read the print; and
- ♦ useful.

Again, respondents used a 4-point scale where 4 indicated "very", 3 indicated "somewhat", 2 "not very" and 1 "not at all".

For the ratings of precautionary first aid information on the basis of the three identified characteristics, Exhibit D.5 presents the mean score for each based upon the four point scale presented above.

EXHIBIT D.5: RATING OF FIRST AID INFORMATION (Q.21)



(n = 979)

In terms of the utility of the first aid information, respondents' scaling resulted in a mean score of 3.8 (very useful); in terms of legibility, the mean score was 3.0 (somewhat easy to read the print); and for complexity, the mean score was 1.8 (not very hard to understand).

Overall, the majority of respondents found the first aid messages to be useful (94%), uncomplicated (76%) and easy to read (72%). However, just over one-fifth (22%) found the information to be complicated and one-quarter (25%) found the print not easy to read. Those who attended public school only (36%) and those aged 65 and over (32%) found the information to be most complicated. Older respondents, those 50 and over (36%), housewives (31%) and residents of the Prairie provinces (31%) had the greatest difficulty with the readability of the print.

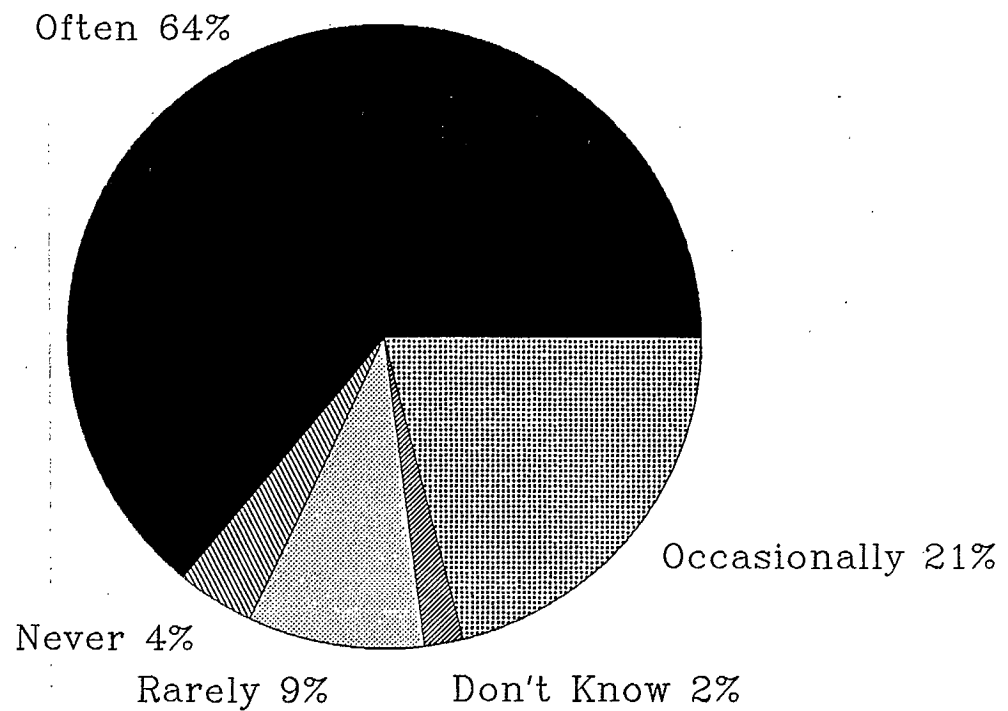
Respondents were also asked about the first aid information that should be included with hazardous product labels. The results are shown below:

- ♦ instructions for first aid treatment (19%);
- ♦ standardized emergency telephone number of poison control centre (10%);
- ♦ both of the above (68%);
- ♦ neither of the above (1%); and
- ♦ don't know/not stated (2%).

3. Manufacturer's Information

Respondents were asked to indicate how often they use the manufacturer's instructions on how to use the hazardous household product involved. As shown in Exhibit D.6, just under two-thirds of respondents (64%) claim that they

EXHIBIT D.6: FREQUENCY OF USING
MANUFACTURER'S INFORMATION ON PRODUCT
USE (Q.23)



(n = 1050)

frequently use the manufacturer's instructions; a further 21% occasionally use this information; 9% rarely and 4% never use such instructions.

Looking at respondents who reported that they often use such information, the highest frequencies were among:

- ♦ residents of British Columbia (76%);
- ♦ income earners between \$50,000 - \$59,999 (76%); and
- ♦ those who attended university (73%).

The lowest frequencies were among:

- ♦ those who attended public school only (43%); and
- ♦ residents of Atlantic Canada (57%).

Among those who said that they rarely or never use the instructions, the highest frequencies were among those aged 65 and over (12% and 7% respectively) and those who attended public school only (14% respectively).

Summary

Just over half of respondents claimed that they often referred to warning messages on product labels, and often read the precautionary information on first aid. Just under two-thirds claimed to frequently read manufacturers instructions on the use of hazardous products.

Overwhelmingly, the warning messages and precautionary information were found to be useful, uncomplicated and the print easy to read. Those who found the

messages and precautionary information to be most complicated and the print difficult to read were older and had only attended public school.

In addition, the majority of respondents would like the precautionary information to contain both instructions on first aid treatment and a standardized emergency telephone number for a poison control centre.

E. CHILD RESISTANT PACKAGING

1. Awareness of Child-Resistant Packaging

When asked if they were familiar with child-resistant closure packaging for such items as hazardous household products, non-prescription drugs and prescription packaging, 94% of respondents knew of such packaging. Those few respondents who tended to be unfamiliar with the packaging included:

- ♦ those whose mother tongue was neither English nor French (9%);
- ♦ students (9%);
- ♦ those who attended only public school (8%); and
- ♦ those aged 65 and over (7%).

2. Perceived Effectiveness of Child-Resistant Packaging

Based upon their experience with child-resistant closures, respondents were asked how effective they thought it was in preventing children from opening the cap. The perceived effectiveness was rated on the basis of a 4-point scale where 4 indicated "very effective", 3 indicated "somewhat effective", 2 indicated "not very effective" and 1 indicated "not at all effective".

The mean score for the general sample was calculated at 3.4 (between somewhat and very effective).

A majority of respondents (86%) found the packaging to be effective (very or somewhat effective) as compared to only 11% who found it to be ineffective (not very or not at all effective).

3. Difficulties of Child-Resistant Packaging for Adults

Again, based upon their experience with child-resistant closures, respondents were asked how easy it was for them to open and close child-resistant packaging. Respondents rated their answers on the basis of a 4-point scale where 4 indicated "very easy", 3 indicated "easy", 2 indicated "difficult" and 1 indicated "very difficult".

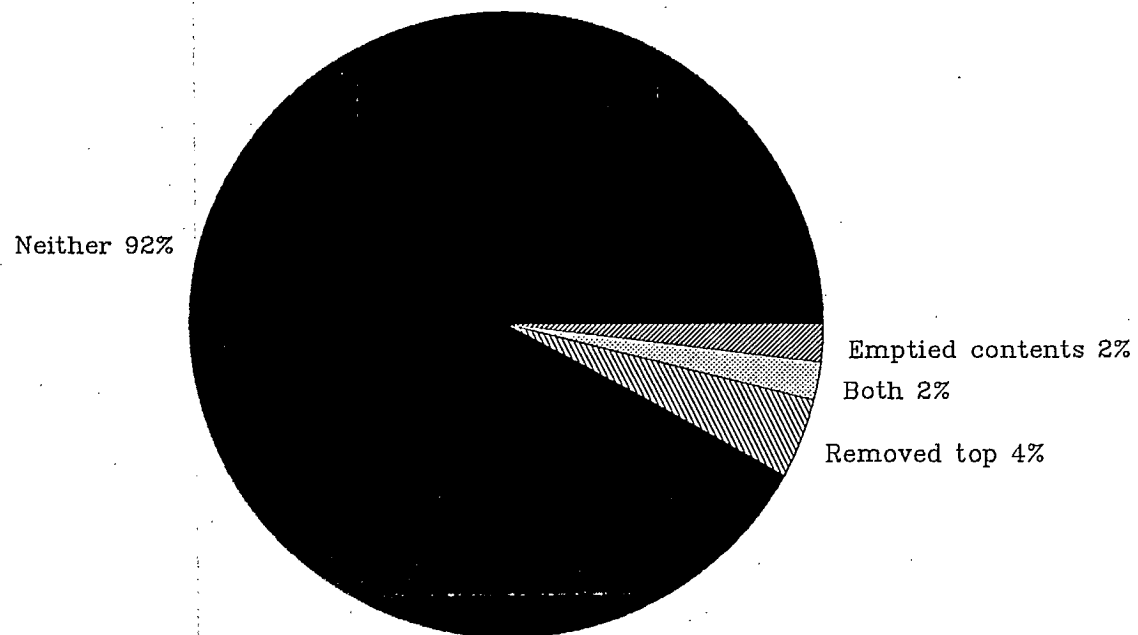
The mean score for the general sample was calculated at 2.4 (a little closer to difficult than easy).

A majority of respondents (55%) found the packaging to be difficult to open or close as compared to 45% who expressed ease in handling the child-resistant caps.

Among the various demographic groups, respondents who most frequently reported difficulty tended to be among:

- ♦ those aged 50 and over (67%);
- ♦ housewives (63%); and
- ♦ residents of Atlantic Canada (61%).

EXHIBIT E.1: MEASURES TAKEN TO COUNTER
DIFFICULTY IN OPENING CHILD-RESISTANT
CLOSURES (Q.27)



(n = 984)

Respondents who least frequently found child-resistant packaging difficult included:

- ♦ males (48%);
- ♦ those aged 18 - 29 (43%); and
- ♦ students (38%).

In addition, respondents were asked if they had ever taken the top off or emptied the contents of a child-resistant container into a regular container in order to avoid difficulties they may have had in opening or closing child-resistant packaging.

Exhibit E.1 displays the responses given. The majority of respondents (91%) have neither taken the top off nor emptied the contents of a child-resistant container; 4% have only left off the top; 2% have emptied the contents into a regular container; and 2% have done both.

While only 8% of the general sample had undertaken measures to overcome any difficulties they had with opening or closing child-resistant packaging, 23% of those 65 and over; 14% of income earners of \$20,000 and under and 13% of those who attended public school only claimed to have taken such measures.

4. Support for Child-Resistant Packaging

Again, based upon their experience with child-resistant closures, respondents were asked whether or not they supported mandatory child-resistant packaging for hazardous household chemical products.

The overwhelming majority of respondents (97%) did support mandatory child-resistant packaging for hazardous products; only 2% were against such mandatory measures and 1% expressed no opinion.

Summary

The majority of respondents were familiar with child-resistant packaging and found this packaging to be effective in meeting its objective.

In terms of their own ability to deal with such packaging, a majority found it difficult to open or close such caps. However, only a small minority have attempted to circumvent this form of packaging by transferring the contents to regular containers or the top from child-resistant containers.

It is noteworthy that older Canadians (50 plus) reported difficulty with child-resistant packaging most frequently.

III. CONCLUSIONS AND RECOMMENDATIONS

A. SUMMARY AND CONCLUSIONS

1. Awareness of Hazard Symbols

Awareness of the hazard symbols for poison and flammable products is quite high at 90% and 86% respectively, and seems to have reached a saturation point across the Canadian population in general. Awareness of the explosive and corrosive symbols has improved considerably over the last decade but remains at a relatively low level (60%).

The flammable symbol is the most universally understood symbol (91% identification), followed by poison (77%). Again, explosive and corrosive symbols are the least understood (67% and 51%, respectively), although significantly more Canadians correctly identify the meaning of these symbols today than was the case in 1977.

The lowest levels of awareness and understanding of the current hazard symbols were generally found among elderly Canadians, those with less formal education and those whose first language is neither French nor English.

2. Awareness of Degree of Hazard Frames

Compared to the hazard symbols, the degree of hazard symbols or frames are much less understood by the Canadian public. Almost half (45%) of respondents said that they did not know why the current frames were used. Only 39% realized that they were meant to indicate the degree of hazard involved. Similarly, only 25% - 35% of Canadians had accurate perceptions of the degree of hazard

represented by each individual frame. Many respondents associated the frames with traffic signals with their implied "stop" and "yield" message.

3. Salience of Hazard Symbols in Purchasing Hazardous Products

When purchasing hazardous chemical products, a majority (74%) of Canadians notice the warning labels. The hazard symbol itself was the most likely component of warning labels to attract the attention of consumers. Overall, 80% of respondents recalled having purchased a product with the poison symbol on it. Fewer (66%) recalled purchasing a product labelled as flammable. Substantially fewer consumers reported having purchased a corrosive labelled product (42%) or an explosive labelled product (39%).

4. Impact of Labelling on Use of Hazardous Products

The general lack of understanding reported above regarding degree of hazard symbols was reflected in the finding that most respondents (68%) would handle products with different degree of hazard symbols in the same way. Only 22% said that they would handle these products differently. Among the latter, only 30% said that they would handle products with the danger symbol with the most care.

Similarly, most consumers (60%) also reported that the use of different warning words (DANGER, WARNING, CAUTION) would not affect their handling of products. Only 36% stated that they would handle products with different warning words differently. The majority of these (64%) specified that those labelled "DANGER" would generate their most careful behaviour.

Hazard symbols appear to have more impact on how consumers store hazardous products than on their general handling or disposal of such products.

Approximately 75% - 85% of respondents tended to take special care in the storage of labelled hazardous products, compared to 60% - 65% who took special measures in their handling or disposal. A variety of special measures were identified by respondents for the storage and handling of hazardous products. The most typical response for poisonous products was to store them away from the reach of children. For flammable and explosive products, almost half of the respondents recognized that they should keep them away from heat. Only 14% of respondents specifically mentioned that they would wear gloves as protection from corrosive products.

5. Comparison of Current and Alternative Label Designs

In assessing current and alternative labelling designs, a number of important findings emerged. With respect to hazard symbols, the clearest results emerged for explosive symbols. A strong majority (77%) thought that the alternative symbol was the most effective. Given the relatively low degree of awareness and understanding of the current explosive symbol, this finding suggests a need to improve upon the current design.

A majority of respondents (66%) also selected the poison symbol alternative as the most effective, again indicating a potential to improve the current symbol. Both symbols involved a skull and crossbone design, however, which appears to generate high recognition levels and a relatively high degree of understanding.

Respondents were fairly evenly divided over the most effective flammable symbol. Given that 91% of Canadians can correctly identify the current symbol, there may be little need to improve this symbol.

With respect to the corrosive symbol, a small majority (59%) favoured the current symbol over the alternative. Given the relatively low recognition and understanding of this symbol, however, it may be important to assess other alternatives.

Despite a general lack of understanding with regard to degree of hazard frames, the current frames were largely seen as more effective than the alternative frame or no frame at all (i.e., by 67% of respondents). Based on these findings, it may be concluded that more commonly used symbols like the stop sign are perhaps the most effective, although there may not be a need to vary these frames by degree of hazard. This interpretation is supported by the finding that most respondents (57%) advocated the use of one common warning word, regardless of the degree of hazard involved.

The preferred overall label design involved a vertical layout of warning components with a warning word on top, a prominent framed symbol in the middle and the written message at the bottom.

6. Use of Precautionary and First Aid Information

A majority of consumers tend to read the written precautionary information on product labels and the first aid information provided (77% and 78% respectively). However, only approximately 50% overall indicated that they read these messages often. Consumers are more likely to read the manufacturer's instructions (85%), with 64% reading these instructions often.

Both the precautionary and the first aid information are widely viewed as useful (94% - 95%). A smaller majority of respondents (75% - 76%) felt that this

information was easy to understand and that the print was easy to read (70% - 72%).

A majority of respondents (68%) also felt that it was important to include both information on first aid treatment or antidotes and an emergency telephone number for a poison control centre. 19% felt that treatment information was sufficient and 10% felt that a telephone number was sufficient.

7. Awareness and Perceived Effectiveness of Child-Resistant Packaging

Canadians overall showed high awareness levels (94%) for child resistant packaging and showed high consensus (86%) with regard to its effectiveness. Over half (55%), however, found it difficult to open and close the containers themselves. This was especially a problem for senior citizens and housewives. However, only 8% actually left the tops off hazardous products or emptied their contents into a non-child-resistant container to overcome these difficulties. Incidence of these activities was higher among seniors, however (23%). Overall, 97% of Canadians support mandatory child-resistant packaging for hazardous household chemical products.

B. RECOMMENDATIONS

- ♦ Efforts to improve the understanding of hazard symbols should focus on the explosive and corrosive symbols which are the least recognized and understood.
- ♦ Awareness-building should be targetted particularly toward senior citizens, the less educated and those whose first language is neither English nor French.

-
- ♦ The use of degree of hazard distinctions via hazard frames and warning words should be reconsidered. Overall, the concept of degree of hazard is not well understood and distinctive symbols do not have an effective impact on the use of hazardous products. While frames and warning words appear to be important components of warning labels, findings suggest that the use of one common frame or word, regardless of degree of hazard, may be a more effective approach. The common frame or word could be selected from among those currently in use.
 - ♦ Hazard symbols should continue to have prominence on warning labels as they seem to play an important role in attracting consumer attention. A vertical label layout is recommended with a warning word on top, followed by a framed symbol beneath it, and a warning message below.
 - ♦ Continued investigation into symbol alternatives is recommended, especially with respect to explosive and corrosive symbols.
 - ♦ It may be important to draw clearer links between each type of hazard and corresponding precautions for storage and handling in particular. More prominence, clarity and simplification for written precautionary messages may be required in this regard. That is, while current information is almost universally seen as useful, there is clearly room for improvement with respect to encouraging users to read the information more often and for making messages easier to read and easier to understand. Most consumers also advocate the inclusion of an emergency telephone number as well as antidotes for first aid treatment.
 - ♦ A large proportion of adults experience difficulties with child-resistant packaging. However, given the overwhelming support for this type of packaging and the relatively low incidence of transferring hazardous products to non-child-resistant

containers, these difficulties are perhaps best addressed through improved designs of closures themselves.

APPENDIX I
QUESTIONNAIRE AND
LABEL DESIGNS

SECTION XII - ASK EVERYONE

(Registration No: CCA/BCA-070-03528)

This section is part of a study being conducted on behalf of Consumer and Corporate Affairs Canada. The purpose is to evaluate a variety of symbols and labels designed for consumer use. Again, we would like to remind you that all information received will be treated as strictly confidential. Your participation is voluntary.

1. Have you seen this symbol before? **HAND SYMBOL CARDS ONE AT A TIME- ROTATE ORDER STARTING WITH (✓). ASK QUESTIONS 1 & 2 FOR FIRST CARD THEN REPEAT FOR EACH SUBSEQUENT CARD - RECORD BELOW**
2. To the best of your knowledge, what does that symbol stand for? **PROBE: IF RESPONDENT SAYS 'DANGER', ASK WHAT KIND OF DANGER. BE SPECIFIC- RECORD BELOW**

	0.1			0.2	
	YES	NO	DK	SYMBOL STANDS FOR	DK
(✓) SYMBOL A-1	1	2	X-20	<u>24</u> <u>25</u>	X
() SYMBOL B-1	1	2	X-21	<u>26</u> <u>27</u>	X
() SYMBOL C-1	1	2	X-22	<u>28</u> <u>29</u>	X
() SYMBOL D-1	1	2	X-23	<u>30</u> <u>31</u>	X

CONTINUED ON BACK

HAND SYMBOL CARDS AGAIN ONE AT A TIME. ROTATE ORDER STARTING WITH (✓). ASK QUESTION 3a, AND IF APPLICABLE, Q.3b & Q.3c FOR FIRST CARD. REPEAT FOR EACH SUBSEQUENT CARD

(✓) SYMBOL A-1

3a. Have you ever purchased a product with this symbol on it?

YES-----1-32
NO-----2
DON'T KNOW-----X

3b. What, if anything, did you or would you do regarding the storage of the product with that symbol on it?

NOTHING SPECIAL----- 99
DON'T REMEMBER----- 0X

3c. And what, if anything, did you or would you do regarding the handling, use or disposal of the product with that symbol on it?

NOTHING SPECIAL----- 99
DON'T REMEMBER----- 0X

() SYMBOL B-1

4a. Have you ever purchased a product with this symbol on it?

YES-----1-45
NO-----2
DON'T KNOW-----X

4b. What, if anything, did you or would you do regarding the storage of the product with that symbol on it?

NOTHING SPECIAL----- 99
DON'T REMEMBER----- 0X

4c. And what, if anything, did you or would you do regarding the handling, use or disposal of the product with that symbol on it?

NOTHING SPECIAL----- 99
DON'T REMEMBER----- 0X

() SYMBOL C-1

5a. Have you ever purchased a product with this symbol on it?

YES-----1-58
NO-----2
DON'T KNOW-----X

CONTINUED

5b. What, if anything, did you or would you do regarding the storage of the product with that symbol on it?

59
60

61
62

NOTHING SPECIAL----- 99
DON'T REMEMBER----- OX

63
64

5c. And what, if anything, did you or would you do regarding the handling, use or disposal of the product with that symbol on it?

65
66

67
68

NOTHING SPECIAL----- 99
DON'T REMEMBER----- OX

69
70

() SYMBOL D-1

6a. Have you ever purchased a product with this symbol on it?

YES----- 1-71
NO----- 2
DON'T KNOW----- X

6b. What, if anything, did you or would you do regarding the storage of the product with that symbol on it?

72
73

74
75

NOTHING SPECIAL----- 99
DON'T REMEMBER----- OX

76
77

6c. And what, if anything, did you or would you do regarding the handling, use or disposal of the product with that symbol on it?

78
79

80
81

NOTHING SPECIAL----- 99
DON'T REMEMBER----- OX

ASK EVERYONE:

7. When the symbols that I have been showing you are displayed on a consumer product, they appear inside one of the following frames. SHUFFLE FRAME CARDS AND DISPLAY ALL THREE TO RESPONDENT. These are some examples. HAND EXAMPLES CARD

Do you know why these frames or shapes are used? PROBE FOR SPECIFIC ANSWER

YES, TO SHOW DEGREE OF HAZARD/
HOW MUCH DANGER----- 1 -13

YES, OTHER REASON (SPECIFY)

2

NO/DON'T KNOW----- X

CONTINUED ON BACK

8. To the best of your knowledge, what does that frame mean? INDICATE ONE FRAME CARD AT A TIME IN THE ORDER DISPLAYED

	FRAME 'A'	FRAME 'B'	FRAME 'C'
DANGER-----	1-15	1-17	1-19
WARNING-----	2	2	2
CAUTION-----	3	3	3
OTHER (SPECIFY)			
_____	4		
_____		4	
_____			4
DON'T KNOW-----	X	X	X

9. If you had three products, one with Frame A on the label, one with Frame B and one with Frame C, do you think you would handle each of these products in a different way or would you handle them all about the same?

DIFFERENTLY----- 1-21

THE SAME----- 2 → SKIP TO Q.11

DON'T KNOW----- X

10. In what ways would you handle these products differently? PROBE.
Anything else?

_____ 22

_____ 23

_____ 24

_____ 25

_____ 26

_____ 27

11. Precautionary labels on hazardous products also contain a written warning like the following. DISPLAY WARNING WORDS CARD

If you had three products, one marked 'danger', one marked 'warning' and one marked 'caution', do you think you would handle each of these products in a different way or would you handle them all about the same?

DIFFERENTLY----- 1-28

THE SAME----- 2 → SKIP TO Q.12

DON'T KNOW----- X

- 11a. In what ways would you handle these products differently? PROBE.
Anything else?

_____ 29

_____ 30

_____ 31

_____ 32

_____ 33

_____ 34

12. In addition to the symbol, which do you think is the most effective way to label hazardous products? READ LIST. CIRCLE ONE ONLY

Use different warning words
for different products, depending
on the degree of hazard involved- 1-35

Use one common warning word----- 2

DON'T KNOW----- X

CONTINUED

13. When you are purchasing a household chemical product, how often do you notice the warning labels on their containers? Would you say you notice them...READ LIST

Often----- 1-36
Occasionally----- 2
Rarely----- 3
Never----- 4 → SKIP TO Q.16
DON'T KNOW----- X

14. What part of the warning label, if any, usually attracts your attention the most? DO NOT READ LIST - CIRCLE ONE ONLY

HAZARD SYMBOL----- 1-37
FRAME AND SYMBOL----- 2
WARNING WORD----- 3
WRITTEN MESSAGE----- 4
THE LABEL AS A WHOLE----- 5

OTHER (SPECIFY)

----- 6
NOTHING IN PARTICULAR----- 7
DON'T KNOW----- X

SHUFFLE SET CARDS AND DISPLAY ALL THREE TO RESPONDENT

15. Here are three sets of warning labels. In your opinion, which set of labels is the most effective for warning consumers about hazardous products? CIRCLE ONE ONLY

SET A----- 1-39
SET B----- 2
SET C----- 3
NONE----- 4
DON'T KNOW----- X

ASK EVERYONE:

16. Now I would like to show you a series of symbols which have been designed to identify specific types of hazards that a product contains. I will show you two symbols at a time. Please tell me which of the two symbols you think would best identify the hazard specified? Which of these two symbols would best identify...SHOW PAIRS ONE AT A TIME STARTING WITH (✓) READ HAZARD

PAIRS	HAZARD	SYMBOL 1	SYMBOL 2	BOTH	NEITHER	DK
(✓) A1/A2	Poisonous products	1	2	3	4	X-4
() B1/B2	Flammable products	1	2	3	4	X
() C1/C2	Explosive products	1	2	3	4	X
() D1/D2	Corrosive products/ products harmful to skin	1	2	3	4	X-4

CONTINUED ON BACK

17. Now I will show you a series of complete warning label designs. For each pair, please indicate which design you think is the most effective in warning consumers about hazardous products. SHOW PAIRS OF LABEL DESIGNS AS INDICATED BELOW. ND SIGNIFIES "NO DIFFERENCE".

PAIRS

a.	A/B	A-----1	B-----2	ND----3	DK----X ⁴
b.	A/C	A-----1	C-----2	ND----3	DK----X
c.	A/D	A-----1	D-----2	ND----3	DK----X
d.	A/E	A-----1	E-----2	ND----3	DK----X ⁴
e.	A/F	A-----1	F-----2	ND----3	DK----X
f.	B/C	B-----1	C-----2	ND----3	DK----X
g.	B/D	B-----1	D-----2	ND----3	DK----X ⁵
h.	B/E	B-----1	E-----2	ND----3	DK----X
i.	B/F	B-----1	F-----2	ND----3	DK----X
j.	C/D	C-----1	D-----2	ND----3	DK----X ⁵
k.	C/E	C-----1	E-----2	ND----3	DK----X
l.	C/F	C-----1	F-----2	ND----3	DK----X
m.	D/E	D-----1	E-----2	ND----3	DK----X ⁵
n.	D/F	D-----1	F-----2	ND----3	DK----X
o.	E/F	E-----1	F-----2	ND----3	DK----X ²

18. How often do you read the short written warning message which accompanies hazard symbols on product labels? Do you read this information...READ LIST

Often-----1-59
Occasionally-----2
Rarely-----3
Never-----4 → SKIP TO Q.20
DON'T KNOW-----X

19. How would you rate this information on the following characteristics? First, would you say it is usually...READ SCALE WITH FIRST ITEM FROM LIST. REPEAT FOR OTHER ITEMS

	<u>Very</u>	<u>Somewhat</u>	<u>Not very</u>	<u>Not at all</u>	<u>DK</u>
Complicated or hard to understand-----	1	2	3	4	X
Easy to read the print--	1	2	3	4	X
Useful-----	1	2	3	4	X

CONTINUED

ASK EVERYONE:

20. How often do you read the precautionary information on first aid treatment appearing on the back or side of a hazardous product label? Do you read this information...READ LIST

Often----- 1-65
Occasionally----- 2
Rarely----- 3
Never----- 4 → SKIP TO Q.22
DON'T KNOW----- X

21. How would you rate this first aid information on the following dimensions? First, would you say it is usually...READ SCALE WITH FIRST ITEM ON LIST. REPEAT FOR OTHER ITEMS

	Very	Somewhat	Not Very	Not at all	DK
Complicated or hard to understand-----	1	2	3	4	X-6
Easy to read the print--	1	2	3	4	X
Useful-----	1	2	3	4	X-6

22. Which of the following statements do you agree with the most? HAND CARD 14. CIRCLE ONE ONLY

LABELS FOR HAZARDOUS PRODUCTS SHOULD CONTAIN INSTRUCTIONS FOR FIRST-AID TREATMENT----- 1-67
LABELS FOR HAZARDOUS PRODUCTS SHOULD CONTAIN A STANDARDIZED EMERGENCY TELEPHONE NUMBER FOR THE POISON CONTROL CENTRE----- 2
LABELS FOR HAZARDOUS PRODUCTS SHOULD CONTAIN BOTH OF THESE PIECES OF INFORMATION----- 3
LABELS FOR HAZARDOUS PRODUCTS DO NOT NEED TO CONTAIN EITHER OF THESE PIECES OF INFORMATION----- 4
DON'T KNOW----- X

23. How often do you use the manufacturer's instructions on how to use the hazardous household product involved? Would you say you use them...READ LIST

Often----- 1-68
Occasionally----- 2
Rarely----- 3
Never----- 4
DON'T KNOW----- X

ASK EVERYONE:

24. Are you familiar with child resistant closure packaging for such items as hazardous household products, non-prescription drugs and prescription drugs?

YES----- 1-69
NO----- 2 → SKIP TO NEXT SECTION
DON'T KNOW----- X

CONTINUED ON BACK

25. Based on your experience with child-resistant closures, how effective are they in preventing children from opening the cap? Would you say they are...READ LIST

Very effective-----	1-70
Somewhat effective-----	2
Not very effective-----	3
Not at all effective-----	4
DON'T KNOW-----	X

26. In general, how easy or difficult do you find child-resistant packaging to open or close yourself? Would you say they are...READ LIST

Very difficult-----	1-71
Difficult-----	2
Easy-----	3
Very easy-----	4
DON'T KNOW-----	X

27. Have you ever taken the top off or emptied the contents of a child-resistant container into a regular container in order to avoid difficulties?

YES, HAVE TAKEN TOP OFF-----	1-72
YES, HAVE EMPTIED CONTENTS-----	2
YES, HAVE DONE BOTH-----	3
NO, HAVE NOT DONE EITHER-----	4
DON'T KNOW-----	X

28. Overall, would you say that you are for or against mandatory child-resistant packaging for hazardous household chemical products?

FOR-----	1-73
AGAINST-----	2
NO OPINION-----	X

CONTINUED

BASIC DATA SECTION - INTRODUCE THIS SECTION AS FOLLOWS: 'Now may I ask you a few questions so that we can classify our data?'

1. MEN: Are you the male head of the household?	YES-----1	NO-----2	-63
WOMEN: Are you the female head of the household?			
ASK EVERYONE:			
2. Are you employed outside the home full-time, part-time or not at all?	FULL-TIME---1	PART-TIME---2	NOT AT ALL---3 -64
3. What is your marital status?	SINGLE-----1	WID/DIV/SEP-----3	-65
	MARRIED-----2	LIVING AS MARRIED-----4	
4. What was the language you first spoke in childhood and still understand?	ENGLISH-----1	OTHER (SPECIFY)	3 -66
	FRENCH-----2		
5. What is your religious preference?	PROTESTANT--1	OTHER (SPECIFY)	
	JEWISH-----2		
	ROMAN		4 -67
	CATHOLIC----3		
	NO RELIGIOUS PREFERENCE-----5		
6. Which of these was the last school that you attended? HAND CARD 'Q'			
Did you graduate from...(LEVEL OF SCHOOLING ATTENDED)?			
	PUBLIC/GRADE SCHOOL	SOME 1 -68	GRADUATED 2
	SECONDARY SCHOOL---	3	4
	UNIVERSITY-----	7	8
	POST SECONDARY & NON UNIVERSITY		
	COMMUNITY COLLEGE---	5	6
	C.E.G.E.P.-----	5	6
	OTHER (SPECIFY)		
		5	6
	NO FORMAL SCHOOLING	9	
	REFUSED-----	0	
7. What is your occupation?	SPECIFIC JOB: _____		
	TYPE OF COMPANY: _____ -69		
	CHECK IF: () STUDENT () HOUSEWIFE		
8. OCCUPATION OF HEAD OF FAMILY	SPECIFIC JOB: _____		
	TYPE OF COMPANY: _____ -70		
9. How many people, including yourself, are there in this household?	1	2	3 4 5 6 OR MORE -71
10. How many would be under 10 years?	0	1	2 3 4 OR MORE -72
11. How many would be between 10 & 17 years?	0	1	2 3 4 OR MDRE -73
12. Are you, yourself a member of a labour union, or is your husband/wife a labour union member?	YES, MYSELF-----1 -74		
	YES, MY SPOUSE-----2		
	YES, BOTH-----3		
	NO-----4		
13. What was your year of birth?	YEAR: _____ 75/76		
14. RECORD IF:	MALE-----1	FEMALE-----2	-77
15. HAND CARD 'R': Which number on this card corresponds to your total annual family income from all sources before tax deductions?	UNDER \$10,000-----1	\$40,000-\$49,999---6	-78
	\$10,000-\$14,999---2	\$50,000-\$59,999---7	
	\$15,000-\$19,999---3	\$60,000-\$69,999---8	
	\$20,000-\$29,999---4	\$70,000 & OVER---9	
	\$30,000-\$39,999---5	REFUSED-----0	
16. RECORD IF:	FARM----1	RURAL, NON-FARM----2	URBAN---3 -79
TIME INTERVIEWED ENDED: _____			
(PLEASE PRINT)			
NAME OF RESPONDENT: _____			
ADDRESS: _____ CITY: _____ PROV: _____			
DATE OF INTERVIEW: _____ POSTAL CODE: _____			
I hereby attest that this is a true and honest interview -- INTERVIEWER'S SIGNATURE: _____			

A VALIDATION CHECK WILL BE MADE ON ALL INTERVIEWERS' WORK

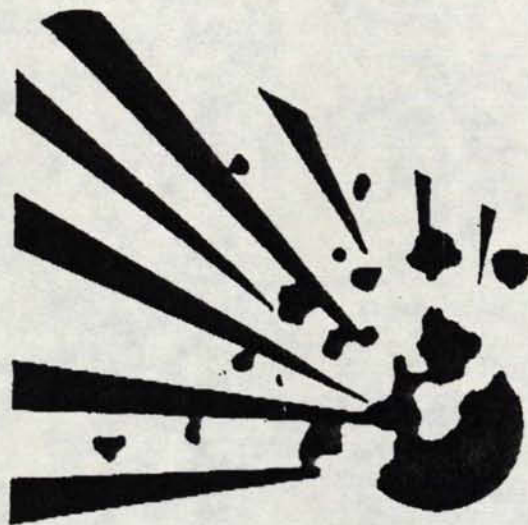
SYMBOL A-1



SYMBOL B-1



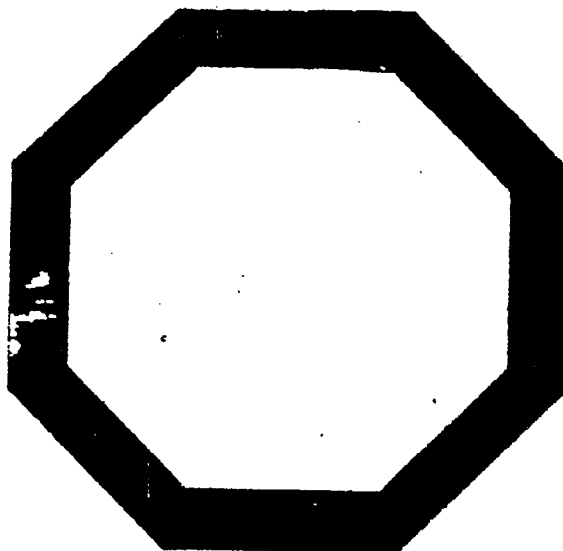
SYMBOL C-1



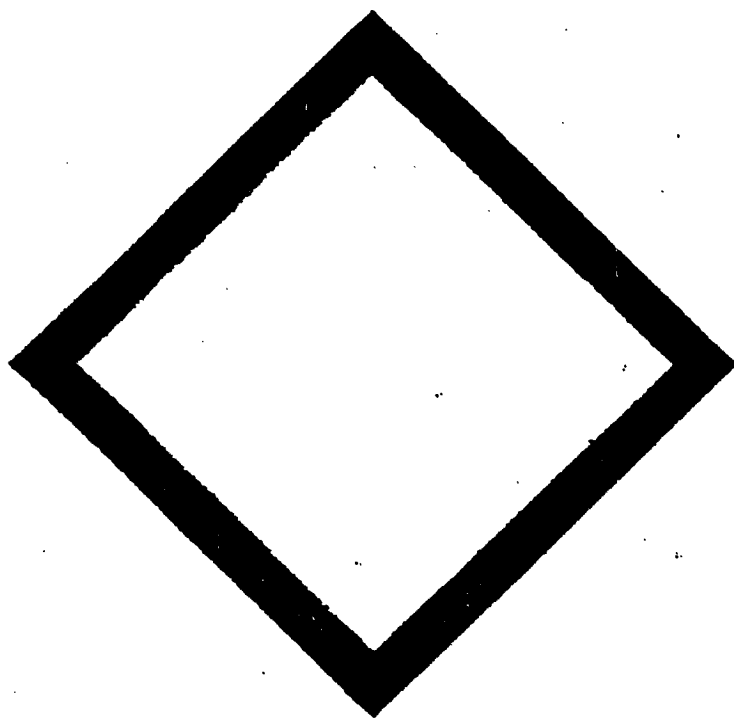
SYMBOL D-1



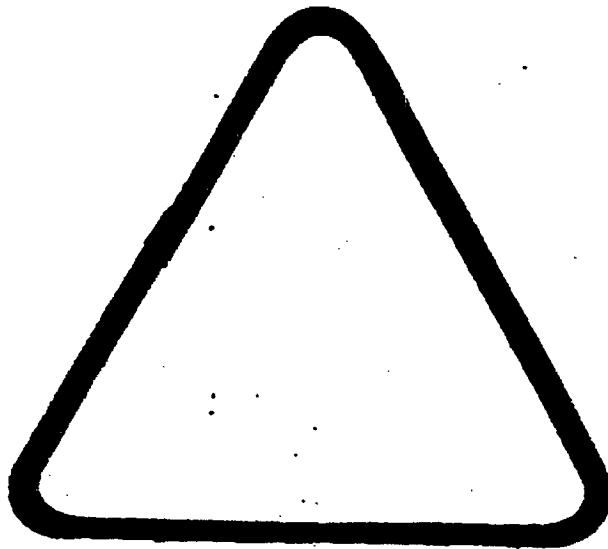
FRAME A



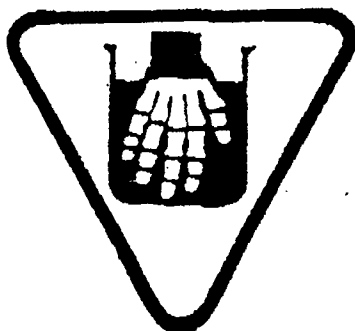
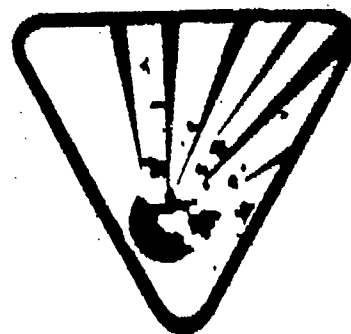
FRAME B



FRAME C



EXAMPLES CARD



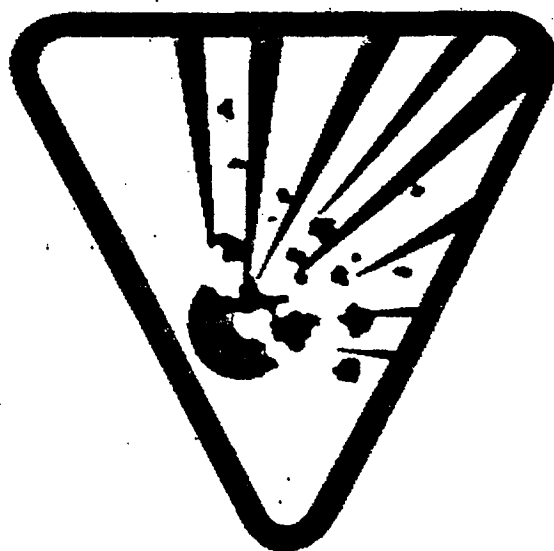
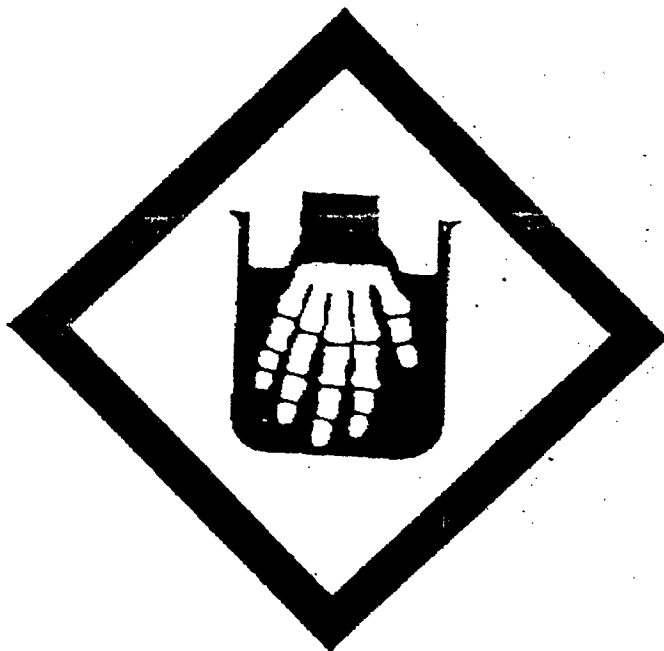
WARNING WORDS

D A N G E R

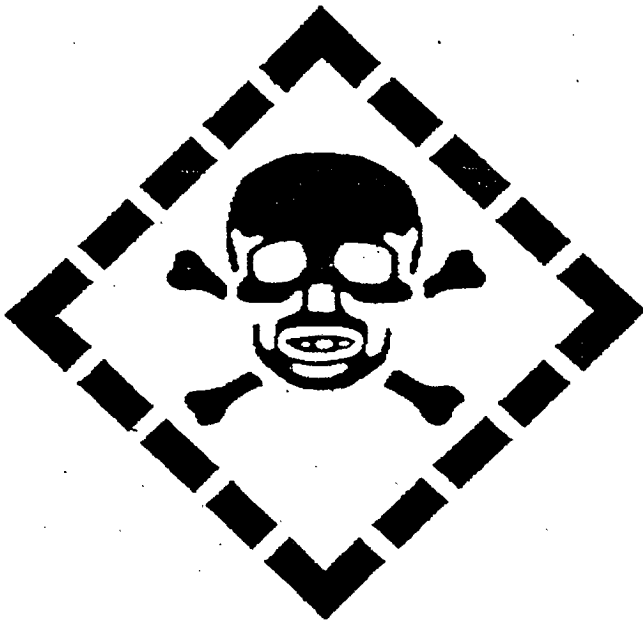
W A R N I N G

C A U T I O N

SET A



SET B



SET C



PAIRS A1/A2

A1



A2



PAIRS B1/B2

B1



B2

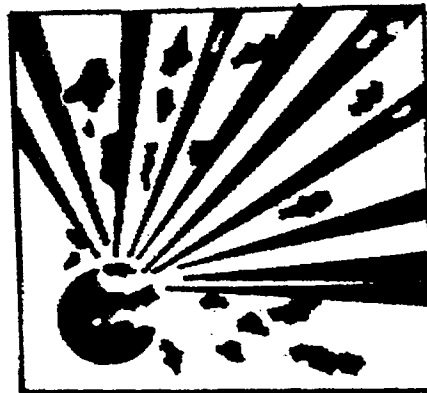


PAIRS C1/C2

C1



C2



PAIRS D1/D2

D1

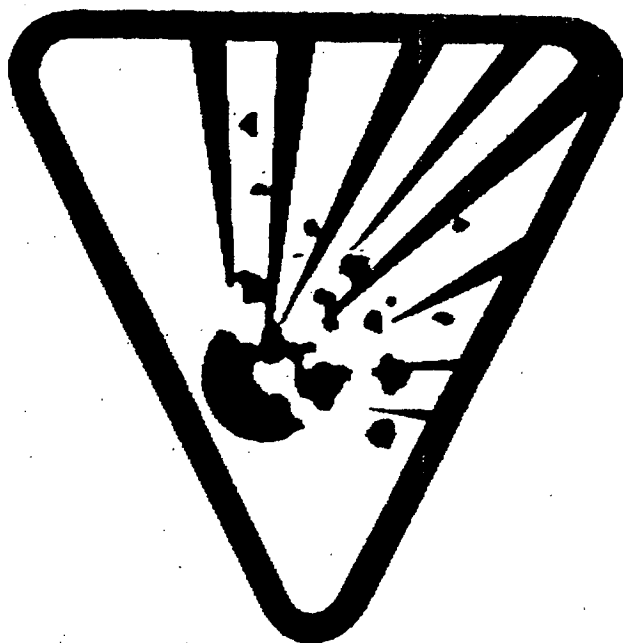


D2



LABEL A

CAUTION

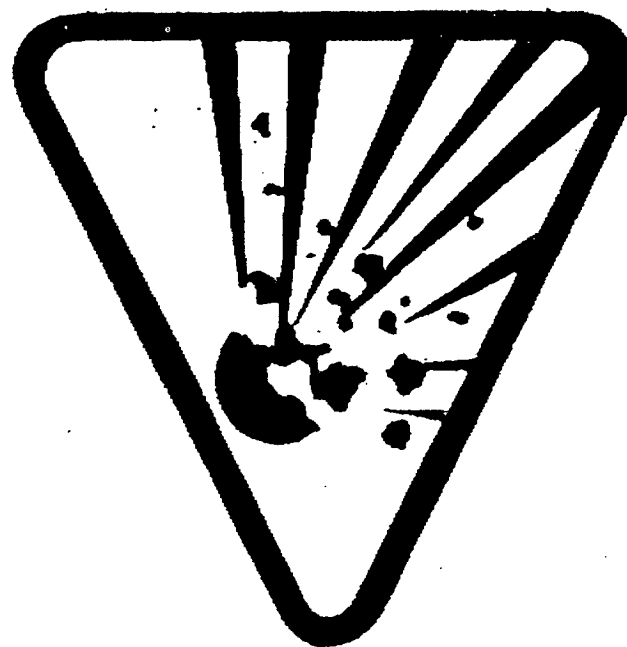


**CONTAINER
MAY EXPLODE
IF HEATED.**

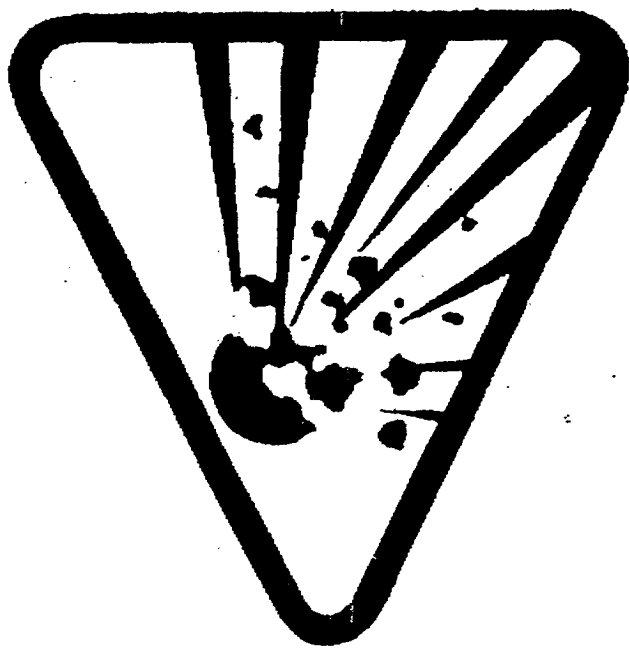
LABEL B

CAUTION

**CONTAINER
MAY EXPLODE
IF HEATED.**



LABEL C



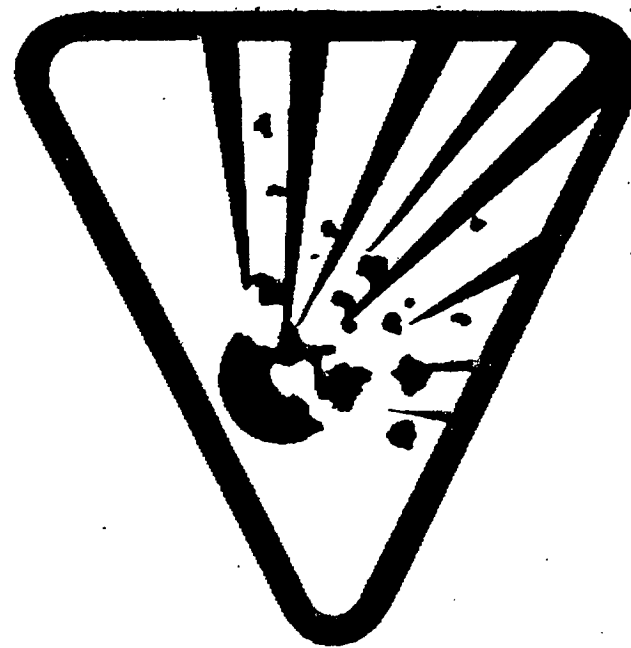
CAUTION

**CONTAINER
MAY EXPLODE
IF HEATED.**

LABEL D

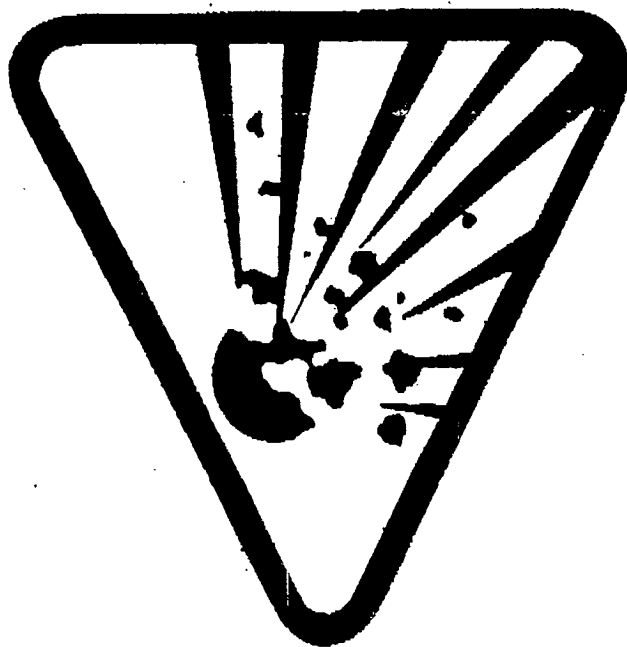
CAUTION

**CONTAINER
MAY EXPLODE
IF HEATED.**



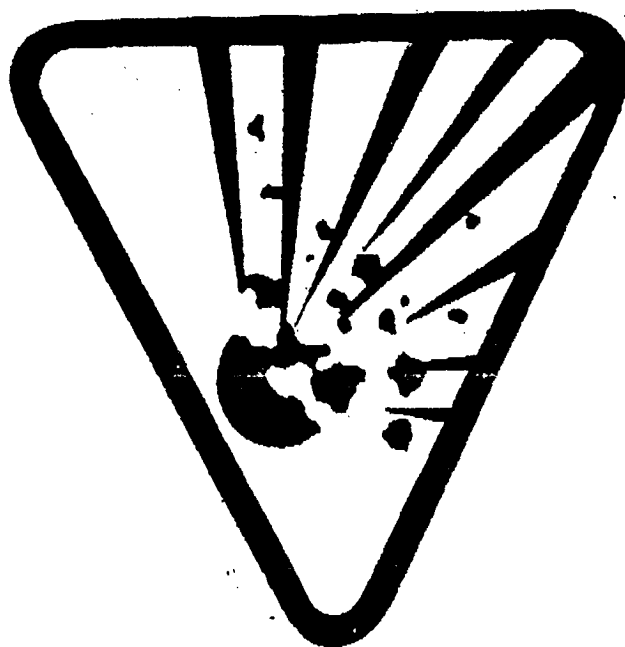
LABEL E

CAUTION



**CONTAINER MAY EXPLODE
IF HEATED.**

LABEL F



CAUTION

**CONTAINER MAY EXPLODE
IF HEATED.**

CONTINUE

4a. Avez-vous déjà acheté un produit sur lequel il y avait ce symbole?

OUI-----1-45
NON-----2
NE SAIT PAS-----8

4b. Qu'avez-vous fait, ou que feriez-vous, pour le rangement du produit qui avait ce symbole?

RIEN DE SPECIAL----- 99
NE S'EN SOUVIENT PAS----- 0X

4c. Et qu'avez-vous fait, ou que feriez-vous, en ce qui concerne le
manement, l'utilisation ou l'enlèvement/la destruction du produit qui
avait ce symbole?

RIEN DE SPECIAL----- 99
NE S'EN SOUVIENT PAS----- 0X

() SYMBOLE C-1

5a. Avez-vous déjà acheté un produit sur lequel il y avait ce symbole?

OUI	1	-58
NON	2	
NE SAIT PAS	X	

5b. Qu'avez-vous fait, ou que feriez-vous, pour le rangement du produit qui avait ce symbole?

RIEN DE SPECIAL----- 99
NE S'EN SOUVIENT PAS----- 0X

5c. Et qu'avez-vous fait, ou que feriez-vous, en ce qui concerne le
manipement, l'utilisation ou l'enlèvement/la destruction du produit qui
avait ce symbole?

RIEN DE SPECIAL----- 99
NE S'EN SOUVIENT PAS----- 0X

CONTINUE AU VERSO

() SYMBOLE D-1

6a. Avez-vous déjà acheté un produit sur lequel il y avait ce symbole?

DUI	1
NON	2
NE SAIT PAS	X

6b. Qu'avez-vous fait, ou que feriez-vous, pour le rangement du produit qui avait ce symbole?

_____ 72
_____ 73
_____ 74
_____ 75
_____ 76
_____ 77

RIEN DE SPECIAL----- 99
NE S'EN SDUVIENT PAS----- DX

6c. Et qu'avez-vous fait, ou que feriez-vous, en ce qui concerne le
manipement, l'utilisation ou l'enlèvement/la destruction du produit qui
avait ce symbole? 12

avait ce symbole? 07

8

9

10

11

12

RIEN DE SPECIAL----- 99
NE S'EN SDUVIENT PAS----- DX

DEMANDEZ A TOUS:

7. Lorsque les symboles que je vous ai montrés figurent sur un produit, ils sont à l'intérieur de l'un des cadres suivants. BRASSEZ LES CARTES DE CADRES ET MONTREZ-LES TOUTES TROIS AU REPDNDANT. En voici quelques exemples. REMETTEZ LES CARTES D'EXEMPLES AU REPDNDANT

Savez-vous pourquoi on utilise ces cadres ou formes? SONDEZ POUR
OBTENIR UNE REPONSE PRECISE

DUI, POUR INDIQUER LE DEGRE
DE RISQUE, DE DANGER----- 1-13

OUI, AUTRE RAISON (PRECISEZ)

NDN/NE SAIT PAS----- X

8. A votre connaissance, que veut dire ce cadre? MONTREZ UNE CARTE DE CADRE APRES L'AUTRE DANS L'ORDRE DEPOSE

	<u>CADRE 'A'</u>	<u>CADRE 'B'</u>	<u>CADRE 'C'</u>
DANGER-----	1-15	1-17	1-19
AVERTISSEMENT-----	2	2	2
ATTENTION-----	3	3	3
AUTRE (PRECISEZ)			

AUTRE (PRECISEZ)

NE SAIT PAS----- X X X

NE SAIT PAS----- X X X

CONTINUE

9. Si vous aviez trois produits: l'un avec le cadre A sur l'étiquette, un autre avec le cadre B et l'autre avec le cadre C, pensez-vous que vous manieriez différemment chacun de ces produits, ou les traiteriez-vous tous de la même façon?

DIFFEREMMENT----- 1 -21
 DE LA MEME FACON----- 2
 NE SAIT PAS----- X

PASSEZ A Q.11

10. De quelles façons manieriez-vous ces produits différemment? SONDEZ:
 Autre chose?

22
 23
 24
 25
 26
 27

11. Il y a aussi, sur les étiquettes de précaution des produits dangereux des most avertisseurs tels que ceux-ci. DEPLOYEZ LES CARTES DE MOTS AVERTISSEURS

Si vous aviez trois produits: l'un marqué 'danger', le deuxième marqué 'avertissement' et le troisième marqué 'attention', pensez-vous que vous manieriez différemment chacun de ces produits, ou les traiteriez-vous tous de la même façon?

DIFFEREMMENT----- 1 -28
 DE LA FEME FACON----- 2
 NE SAIT PAS----- X

PASSEZ A Q.12

- 11a. De quelles façons manieriez-vous ces produits différemment? SONDEZ:
 Autre chose?

29
 30
 31
 32
 33
 34

12. A votre avis, quel est le moyen le plus efficace de marquer les produits dangereux? LISEZ LA LISTE. ENCERCLEZ UN SEUL CODE

Utiliser différents mots
 avertisseurs pour différents
 produits selon le degré de
 danger qu'il y a----- 1-35

Utiliser un mot avertisseur commun 2

NE SAIT PAS----- X

13. Lorsque vous achetez des produits chimiques dangereux, avec quelle fréquence remarquez-vous les étiquettes d'avertissement de leurs contenants? Diriez-vous que vous les remarquez... LISEZ LA LISTE

Souvent----- 1 -36
 A l'occasion----- 2
 Rarement----- 3
 Jamais----- 4
 NE SAIT PAS----- X

PASSEZ A LA Q.16

CONTINUE AU VERSO

14. S'il y a lieu, quelle partie de l'étiquette d'avertissement attire le plus votre attention? NE LISEZ PAS LA LISTE - ENCERCLEZ UN SEUL CODE

SYMBOLE DE DANGER----- 1-37
 CADRE ET SYMBOLE----- 2
 MOT AVERTISSEUR----- 3
 MESSAGE ECRIT----- 4
 L'ENSEMBLE DE L'ETIQUETTE----- 5

AUTRE (PRECISEZ)

6

RIEN DE PARTICULIER----- 7
 NE SAIT PAS----- X

BRASSEZ LES CARTES DE JEUX D'ETIQUETTES ET MONTREZ-LES TOUTES TROIS AU REpondANT

15. Voici trois jeux d'étiquettes d'avertissement. A votre avis, quel jeu d'étiquettes réussit le mieux à avertir les consommateurs sur les produits dangereux? ENCERCLEZ UN SEUL CODE

JEU A----- 1-39
 JEU B----- 2
 JEU C----- 3

AUCUN----- 4
 NE SAIT PAS----- X

DEMANDEZ A TOUS:

16. Je vais maintenant vous montrer une série de symboles conçus pour identifier des types de danger précis que peut contenir un produit. Je vais vous montrer deux symboles à la fois. Veuillez me dire lequel des deux symboles, à votre avis, identifie le mieux le danger en question. Lequel de ces deux symboles identifierait le mieux les...MONTREZ LES PAIRES UNE A LA FOIS A PARTIR DE (✓); LISEZ LE DANGER

PAIRES	DANGER	SYMBOLE 1	SYMBOLE 2	LES DEUX	NI L'UN NI L'AUTRE	NSP
() A1/A2	Poisons-----	1	2	3	4	X-4
(✓) B1/B2	Produits inflammables	1	2	3	4	X-
() C1/C2	Produits explosibles	1	2	3	4	X-2
() D1/D2	Produits corrosifs/ produits nuisibles à la peau/l'épiderme	1	2	3	4	X-

CONTINUE

17. Je vais maintenant vous montrer une série de modèles finis d'étiquettes d'avertissement. A chaque paire, veuillez indiquer le modèle qui, d'après vous, réussit le mieux à avertir les consommateurs sur les produits dangereux. **MONTREZ LES PAIRES UNE A LA FOIS TEL QU'INDIQUE CI-DESSOUS. ND SIGNIFIE 'PAS DE DIFFERENCE'**

PAIRES

a.	A/B	A-----1	B-----2	ND----3	NSP---X-4
b.	A/C	A-----1	C-----2	ND----3	NSP---X
c.	A/D	A-----1	D-----2	ND----3	NSP---X
d.	A/E	A-----1	E-----2	ND----3	NSP---X-4
e.	A/F	A-----1	F-----2	ND----3	NSP---X
f.	B/C	B-----1	C-----2	ND----3	NSP---X
g.	B/D	B-----1	D-----2	ND----3	NSP---X-5
h.	B/E	B-----1	E-----2	ND----3	NSP---X
i.	B/F	B-----1	F-----2	ND----3	NSP---X
j.	C/D	C-----1	D-----2	ND----3	NSP---X-5
k.	C/E	C-----1	E-----2	ND----3	NSP---X
l.	C/F	C-----1	F-----2	ND----3	NSP---X
m.	D/E	D-----1	E-----2	ND----3	NSP---X-5
n.	D/F	D-----1	F-----2	ND----3	NSP---X
o.	E/F	E-----1	F-----2	ND----3	NSP---X

18. Avec quelle fréquence lisez-vous les renseignements sur les précautions à prendre ou le message qui accompagne les symboles de danger sur l'étiquette des produits? Lisez-vous ces renseignements...LISEZ LA LISTE

Souvent----- 1-59
 A l'occasion----- 2
 Rarement----- 3
 Jamais----- 4 → PASSEZ A LA Q.20

NE SAIT PAS----- X

19. Quelle serait votre évaluation de ces renseignements en ce qui concerne les caractéristiques suivantes? Pour commencer, diriez-vous que c'est habituellement...LISEZ L'ECHELLE AVEC LA PREMIERE CARACTERISTIQUE DE LA LISTE. REPETEZ POUR LE RESTE DES CARACTERISTIQUES

	<u>Très</u>	<u>Assez</u>	<u>Pas</u> <u>très</u>	<u>Pas</u> <u>du tout</u>	<u>NSP</u>
Complicé ou difficile à comprendre	1	2	3	4	X-
Facile à lire le texte-----	1	2	3	4	X-
Utile-----	1	2	3	4	X-

CONTINUE AU VERSO

DEMANDEZ A TOUS:

20. Avec quelle fréquence lisez-vous les renseignements sur les précautions à prendre et les premiers soins à donner qui figurent au dos ou sur le côté d'une étiquette de produit dangereux? Lisez-vous ces renseignements...LISEZ LA LISTE

Souvent----- 1-63
A l'occasion----- 2
Rarement----- 3
Jamais----- 4 → PASSEZ A LA Q.22

NE SAIT PAS----- X

21. Quelle serait votre évaluation de ces renseignements en ce qui concerne les dimensions suivantes? Pour commencer, diriez-vous que c'est habituellement...LISEZ L'ECHELLE AVEC LA PREMIERE CARACTERISTIQUE DE LA LISTE. REPETEZ POUR LE RESTE DES CARACTERISTIQUES

	Très	Assez	Pas très	Pas du tout	NSP
Compliqué ou difficile à comprendre	1	2	3	4	X-64
Facile à lire le texte-----	1	2	3	4	X-65
Utile-----	1	2	3	4	X-66

22. Avec lequel des énoncés suivants êtes-vous le plus d'accord? REMETTEZ LA CARTE 14 - ENCERCLEZ UN SEUL CDDE

LES ETIQUETTES DES PRODUITS DANGEREUX DEVRAIENT AVOIR DES INSTRUCTIONS SUR LES PREMIERS SOINS A DONNER----- 1-67

LES ETIQUETTES DES PRODUITS DANGEREUX DEVRAIENT AVOIR UN NUMERO DE TELEPHONE D'URGENCE STANDARDISE POUR LE CENTRE ANTI-POISON----- 2

LES ETIQUETTES DES PRODUITS DANGEREUX DEVRAIENT AVOIR CES DEUX RENSEIGNEMENTS----- 3

LES ETIQUETTES DES PRODUITS DANGEREUX N'ONT BESOIN D'AUCUN DE CES DEUX RENSEIGNEMENTS----- 4

NE SAIT PAS----- X

23. Avec quelle fréquence suivez-vous les instructions du fabricant quant à la façon d'utiliser le produit dangereux en question? Diriez-vous que vous les suivez...LISEZ LA LISTE

Souvent----- 1-68
A l'occasion----- 2
Rarement----- 3
Jamais----- 4

NE SAIT PAS----- X

DEMANDEZ A TOUS:

24. Etes-vous au courant des fermetures de contenants d'articles tels que les produits ménagers dangereux, les médicaments avec ou sans ordonnance, qui résistent aux enfants?

OUI----- 1-69

NDN----- 2
NE SAIT PAS----- X → PASSEZ A LA SECTION SUIVANTE

CONTINUE

25. D'après votre expérience des fermetures qui résistent aux enfants, dites-moi avec quelle efficacité elles réussissent à empêcher les enfants d'ouvrir la capsule. Diriez-vous qu'elles sont...LISEZ LA LISTE

Très efficaces----- 1-70
Assez efficaces----- 2
Pas très efficaces----- 3
Pas du tout efficaces----- 4

NE SAIT PAS----- X

26. Vous-même d'une manière générale, dans quelle mesure avez-vous trouvé facile ou difficile d'ouvrir les contenants à fermeture qui résiste aux enfants? Les avez-vous trouvés...LISEZ LA LISTE

Très difficiles----- 1-71
Difficiles----- 2
Faciles----- 3
Très faciles----- 4

NE SAIT PAS----- X

27. Vous est-il déjà arrivé d'enlever le couvercle ou de vider le contenu d'un contenant à fermeture qui résiste aux enfants dans un contenant ordinaire pour éviter des difficultés?

OUI, A ENLEVE LE COUVERCLE----- 1-72
OUI, A VIDER LE CONTENU----- 2
OUI, A FAIT LES DEUX----- 3
NON, N'A FAIT AUCUN----- 4

NE SAIT PAS----- X

28. D'une manière générale, seriez-vous pour ou contre des mesures qui rendraient obligatoires les fermetures qui résistent aux enfants, sur les contenants de produits chimiques ménagers dangereux?

POUR----- 1-73
CONTRE----- 2

PAS D'OPINION----- X

CONTINUE AU VERSO

PRESENTEZ CETTE SECTION DE LA FACON SUIVANTE: 'Maintenant, puis-je vous poser quelques questions afin de nous permettre de classifier nos données?

1. HOMMES: Êtes-vous l'homme chef du foyer?		OUI-----1		NON-----2		-63	
FEMMES: Êtes-vous la femme chef du foyer?							
DEMANDEZ A TOUS:							
2. Actuellement, travaillez-vous à l'extérieur du foyer à plein temps, à temps partiel, ou pas du tout?		PLEIN TEMPS--1		PARTIEL--2		PAS DU TOUT--3 -64	
3. Quel est votre état civil?		CELIBATAIRE--1		VEUF/OIVORCE/SEPARÉ-----3		-65	
		MARIE-----2		CONCUBINAGE/VIE COMMUNE--4			
4. Langue maternelle - quelle est la première langue que vous avez parlée dans votre enfance et qui vous est encore familière?		ANGLAISE-----1		AUTRE (PRECISEZ)			
		FRANCAISE-----2				3 -66	
5. Quelle religion préférez-vous?		PROTESTANTE--1		AUTRE (PRECISEZ)			
		JUIVE-----2					
		CATHOLIQUE				4 -67	
		ROMAINE-----3		PREFERE AUCUNE RELIGION--5			
6. Quelle est la dernière école que vous avez fréquentée? PASSEZ LA CARTE 'Q' Avez-vous gradué de...(NIVEAU DE SCOLARITE ATTEINT)?		ECOLE PRIMAIRE-----		EN PARTIE		GRADUE	
				1 -68		2	
		ECOLE SECONDAIRE-----		3		4	
		UNIVERSITE-----		7		8	
		POST SECONDAIRE & AUCUNE UNIVERSITE					
		C.E.G.E.P-----		5		6	
		AUTRE (PRECISEZ)					
				5		6	
		AUCUNE INSTRUCTION SCOLAIRE---		9			
		REFUS-----		0			
7. Quelle est votre occupation?		TYPE DE TRAVAIL PRECIS? _____					
		TYPE DE COMPAGNIE? _____				-69	
		COCHER SI: () ETUDIANT () MENAGERE					
8. OCCUPATION DU CHEF DE FAMILLE		PRECISEZ LE TRAVAIL? _____					
		GENRE DE COMPAGNIE? _____				-70	
9. Tout en vous incluant combien y a-t-il de personnes qui vivent dans cette maison?		1		2		3	
		4		5		6	
		OU PLUS				-71	
10. Parmi ces personnes combien y en a-t-il qui sont âgées de moins de 10 ans?		0		1		2	
		3		4		OU PLUS	
						-72	
11. Combien sont âgées entre 10 et 17 ans?		0		1		2	
		3		4		OU PLUS	
						-73	
12. Êtes-vous syndiqué, ou votre conjoint est-il/elle syndiqué?		OUI, MOI MEME-----1		OUI, LES DEUX---3		-74	
		OUI, MON EPOUX(SE)--2		NON-----4			
13. En quelle année êtes-vous né?		ANNEE: _____				75/76	
14. INSCRIVEZ SEXE:		HOMME-----1		FEMME-----2		-77	
15. PASSEZ LA CARTE 'R': Quel chiffre sur cette carte représente le revenu total annuel de votre famille tous revenus inclus avant déduction des taxes?		MOINS DE \$10,000---1		\$40,000-\$49,999--6		-78	
		\$10,000-\$14,999---2		\$50,000-\$59,999--7			
		\$15,000-\$19,999---3		\$60,000-\$69,999--8			
		\$20,000-\$29,999---4		\$70,000 ET PLUS--9			
		\$30,000-\$39,999---5		REFUS-----0			
16. INDIQUEZ SI:		FERME---1		RURAL MAIS NON FERME---2		URBAIN---3 -79	
L'INTERVIEW A PRIS FIN A: _____		LANGUE		2 -16			
(VEUILLEZ INSCRIRE EN LETTRES MOULEES)							
NOM OU REpondant: _____		TELEPHONE: () _____					
ADRESSE: _____		VILLE: _____ PROV: _____					
DATE DE L'INTERVIEW: _____		CODE POSTAL: _____					
J'atteste ci-contre l'authenticité et l'honnêteté de cette interview --		SIGNATURE DE L'INTERVIEWEUR: _____					

UN RAPPEL DE VERIFICATION SERA FAIT SUR LE TRAVAIL DE TOUS LES INTERVIEWEURS

SYMBOLE A-1



SYMBOLE B-1



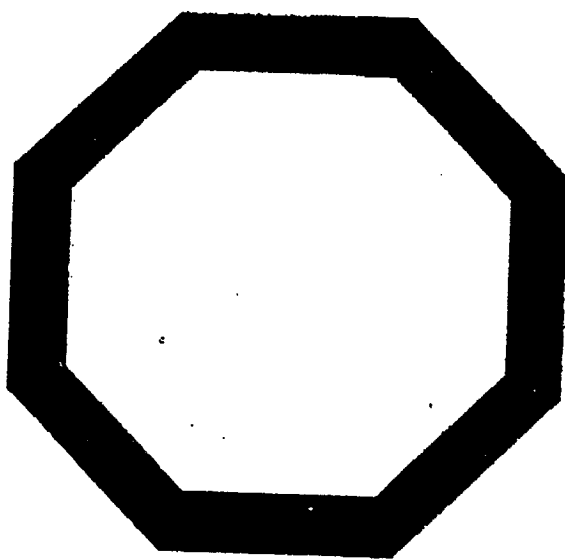
SYMBOLE C-1



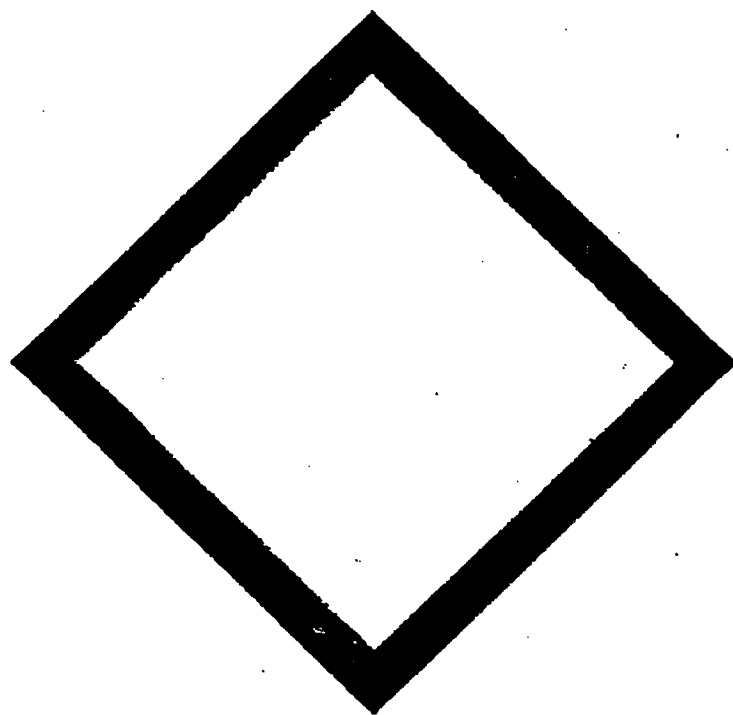
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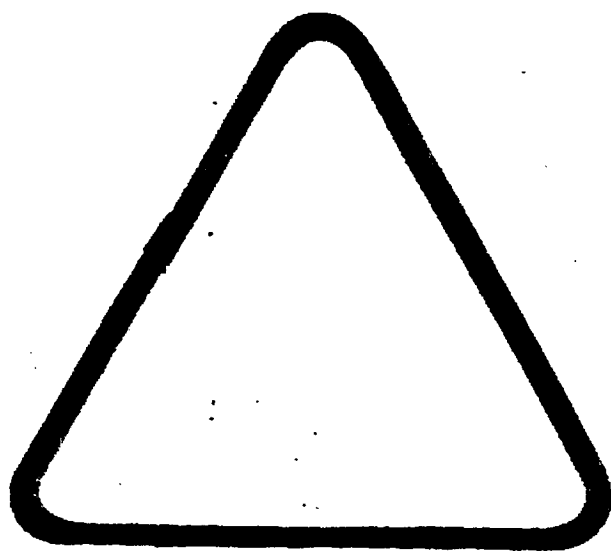
CADRE A



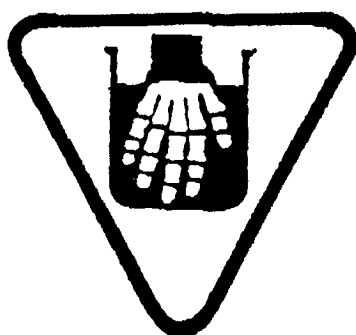
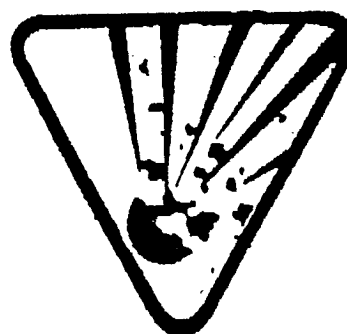
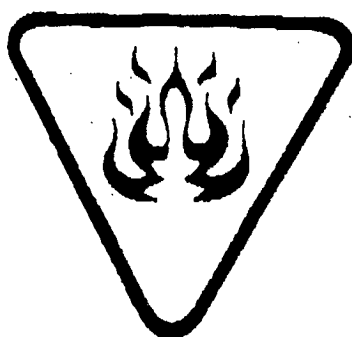
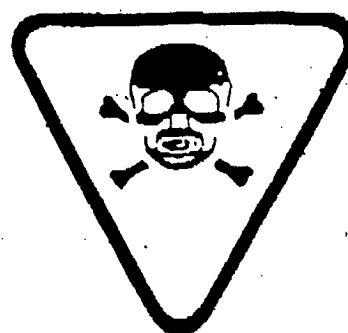
CADRE B



CADRE C



CARTE D'EXEMPLES



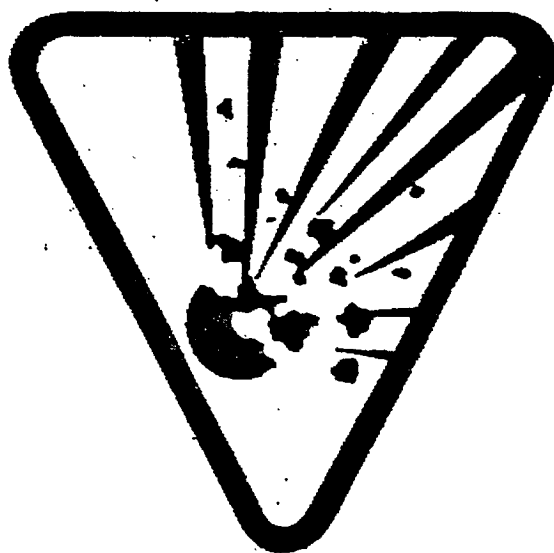
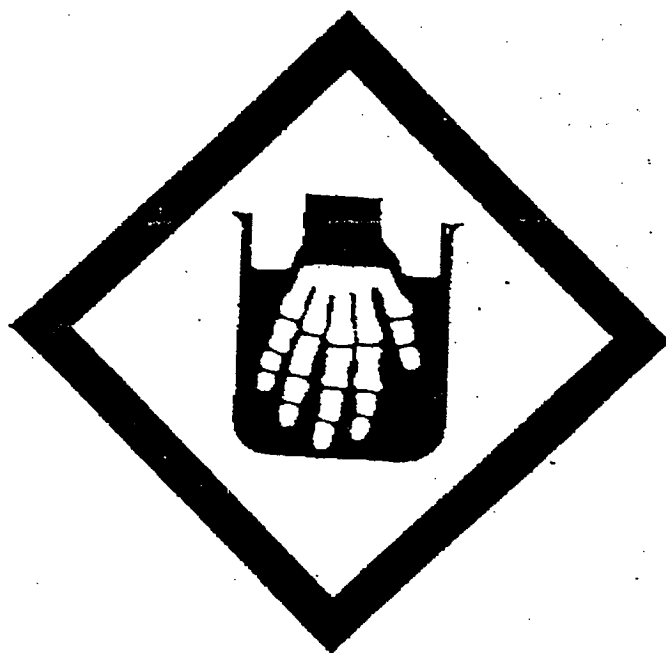
MOTS D'AVERTISSEMENT

D A N G E R

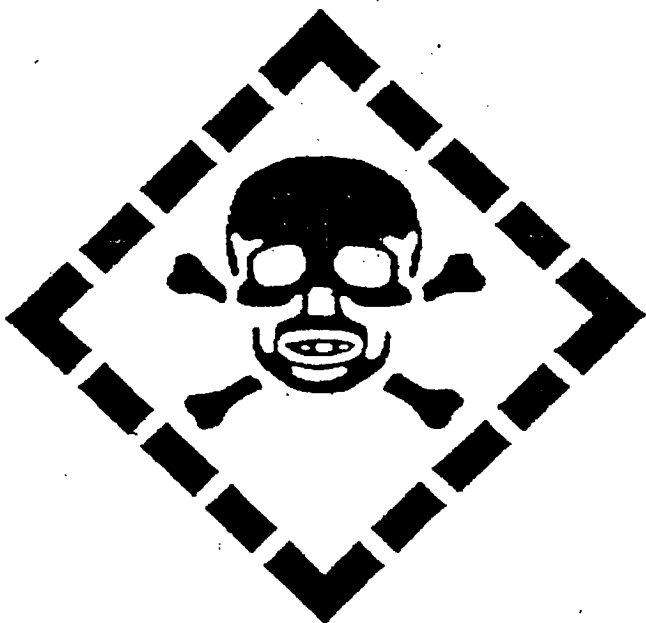
A V E R T I S S E M E N T

A T T E N T I O N

GROUPE A



GROUPE B



GROUPE C



PAIRES A1/A2

A1



A2



PAIRES B1/B2

B1



B2



PAIRES C1/C2

C1



C2



PAIRES D1/D2

D1

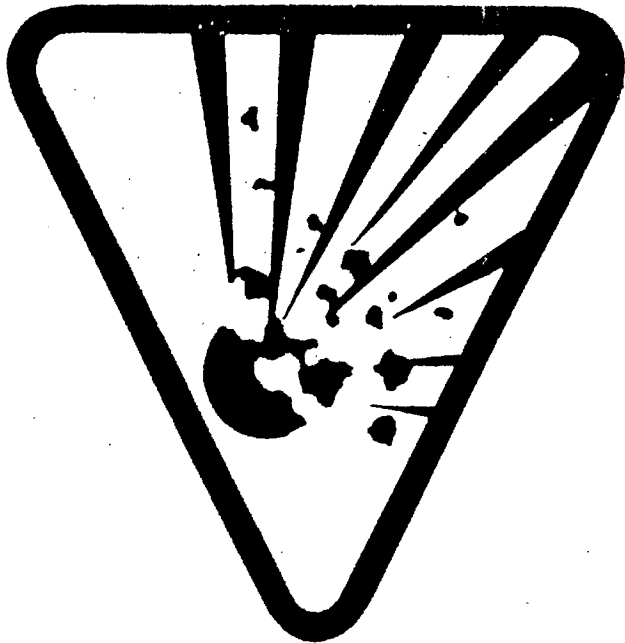


D2



ÉTIQUETTE A

ATTENTION

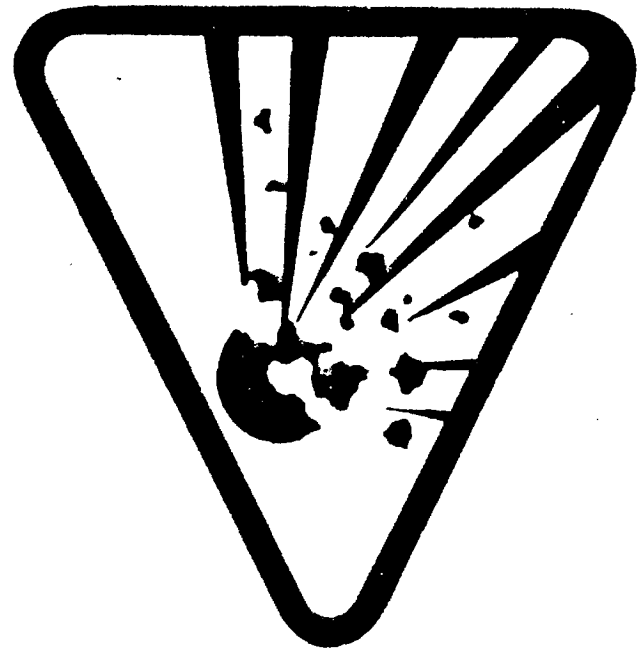


**CE CONTENANT PEUT
EXPLOSER
S'IL EST CHAUFFÉ**

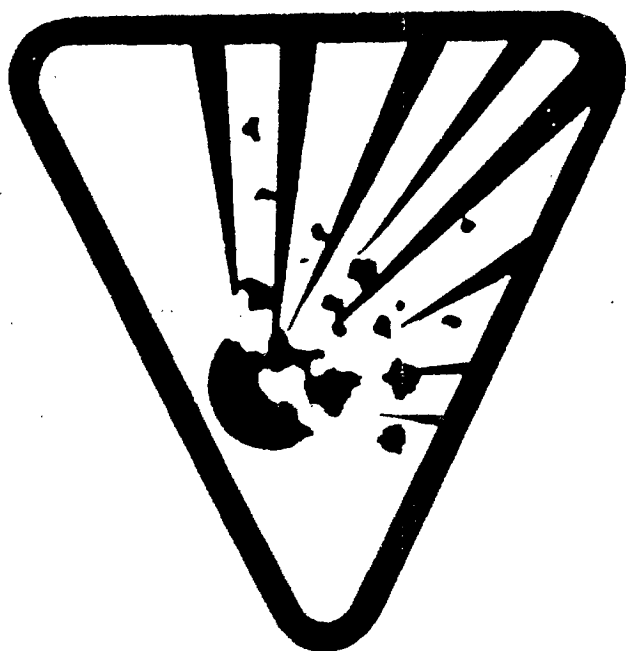
ÉTIQUETTE B

ATTENTION

**CE CONTENANT PEUT
EXPLOSER
S'IL EST CHAUFFÉ**



ÉTIQUETTE C



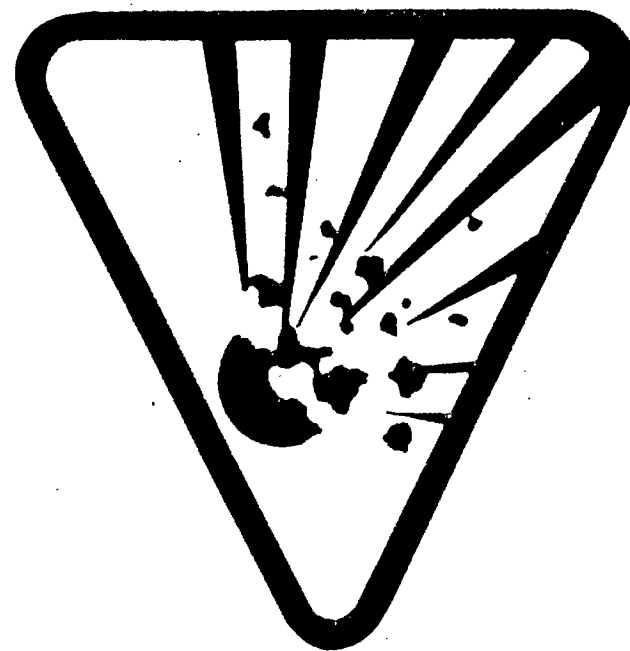
ATTENTION

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EXPLOSER
S'IL EST CHAUFFÉ**

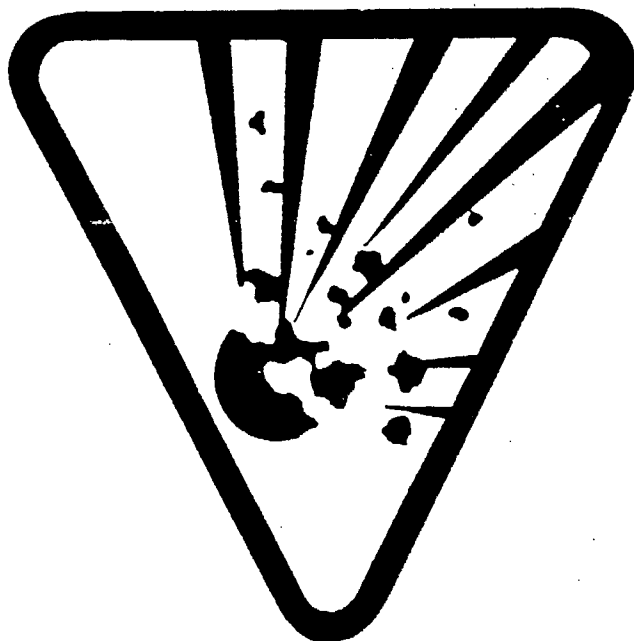
ÉTIQUETTE D

ATTENTION

**CE CONTENANT PEUT
EXPLOSER
S'IL EST CHAUFFÉ**

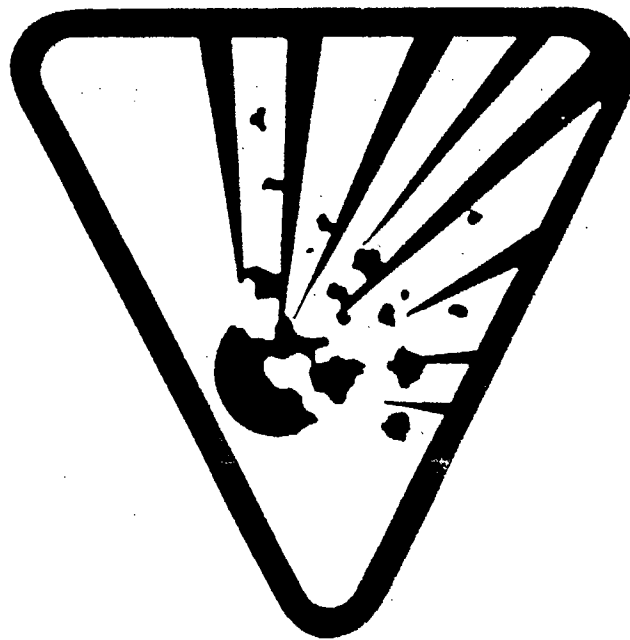


ATTENTION



**CE CONTENANT PEUT EXPLOSER
S'IL EST CHAUFFÉ**

ÉTIQUETTE E



ATTENTION

**CE CONTENANT PEUT EXPLOSER
S'IL EST CHAUFFÉ**

ÉTIQUETTE F

APPENDIX II
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BIBLIOGRAPHY

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