TRANSLATION OF OFFICIAL MEXICAN STANDARD

NOM-018-STPS-2000

APPENDIX C
SAFETY DATA SHEETS

C.1 General

C.1.1 All work places must have SDS's of each of the dangerous chemical substances handled in it and must be permanently available for all workers involved in their use, so that they can have immediate information in order for them to establish preventive or corrective measures within their work place.

C.1.2 SDS's must be in Spanish language. Its format is free and must contain, in an orderly manner, as a minimum, all information that is established in this appendix.

C.1.3. Information must be reliable, so that its normal use produces an adequate attention for human life and health care or in order to control an emergency.

C.1.4 There should not be blank spaces. If the required information is not applicable or is not available, NA or ND contractions should be used depending on the case, and at the bottom of the SDS, reference must be made on the source of the information contained on them.

C.1.5 SDS's must be actualized in those cases where new data is obtained on the dangerous chemical substance.

C.2 Contents of the SDS's.

C.2.1 Title: Safety Date Sheet. SDS and the name of the substance. On each and all pages of each SDS the name of the substance must appear on the upper right corner.

SECTION I. General SDS data:

- **a)** manufacturing date;
- **b)** actualization date;
- **c)** name or company name of the SDS manufacturer;
- **d)** general data of the manufacturer or importer of the dangerous chemical substance;
- **e)** where to contact in case of emergency.

SECTION II. Data of the dangerous chemical substance, showing at least:

- **a)** chemical name or code;
- **b)** commercial name;
- **c)** chemical family or group;
- **d)** synonyms;
- **e)** other relevant data.

SECTION III. Identification of the dangerous chemical substance:

III.1 Identification:

- **a)** CAS No.;
- **b)** UN No.;
- **c)** MPEL-PTA, MPEL-ST and MPEL-P (Maximum Permissible Exposure Limit) (Pondered Time Average) (Short Time) (Peak).
- **d)** IDLH

III.2 Classification of degrees of risk:

- **a)** Health;
- **b)** Flammability;
- **c)** Reactivity;
- **d)** Special

On dangerous components: name and percentage of the dangerous components, including their identification and classification of the degree of risk, according to what is stated on III.1 and III.2 of this Appendix.

SECTION IV. Physical and Chemical properties:

- **a)** Boiling temperature;
- **b)** Fusion temperature
- **c)** Flammable temperature;
- **d)** Auto ignition temperature;
- **e)** Density
- **f)** pH;
- **g)** Molecular weight;
- **h)** Physical condition;
- **i)** Color;
- **j)** Odor;
- **k)** Evaporation velocity;
- **l)** Water solubility;
- **m)** Vapor pressure;
- **n)** Volatility percentage;
- **o)** Flammable or explosive limits;
  - **1)** Upper limit;
  - **2)** Lower limit;
- **p)** Other relevant data.

SECTION V. Risks of Fire or explosion:

V.1 Means of extinction:
- **a)** water;
- **b)** foam;
- **c)** CO2;
- **d)** chemical powder;
- **e)** other means**.**

V.2 Specific personal protection equipment to be used on fire fighting work.

V.3 Special procedure and cautions to be taken during a fire fighting.

V.4 Conditions that may drive to another special risk.

V.5 Combustion residues that may be health hazardous.

SECTION VI. Reactivity data:

VI.1 Conditions of:
- **a)** stability;
- **b)** instability.

VI.2 Incompatibility.

VI.3 Dangerous products from decomposition.

VI.4 Spontaneous polymerization.

VI.5 Other conditions to consider while using the dangerous substance, in order to avoid its reactivity.

SECTION VII. Health risks and firs aid:

VII.1 Depending on the means of entering the organism:
- **a)** ingestion;
- **b)** inhalation;
- **c)** contact.

VII.2 Chemical substance considered as:
- **a)** carcinogenic;
- **b)** mutagenic
- **c)** teratogenic.

VII.3 Complementary information:
- **a)** LC50;
- **b)** LD50.

VII.4 Emergency and first aid.
VII.4.1 Caution measures in case of:
- **a)** ingestion;
- **b)** inhalation;
- **c)** contact

VII.4.2 Other risks or effects on health.
VII.4.3 Antidotes.
VII.4.4 Other important information for the primary medical attention.
SECTION VIII. Directions in case of leaks or spills.
VIII.1 Procedures and immediate precautions.
VIII.2 Mitigation methods.
SECTION IX. Specific special protection for emergency situations.
IX.1 Specific personal protection equipment.
SECTION X. Information on transportation. According to:
X.1 Regulation for the Transport of Dangerous Goods and Residues.
X.2 NOM-004-SCT2-1994
X.3 U.N. Recommendations on the Transport of Dangerous Goods.
X.4 North American Emergency Response Guidebook.
SECTION XI. Information on ecology.
XI.1 In accordance with resolutions of the Secretariat of the Environment, Natural Resources and Fisheries on matters of water, air, ground and dangerous residues.
SECTION XII. Special precautions:
XII.1 For its handling, transportation and storage.
XII.2 Other precautions.

APPENDIX D
INSTRUCTIONS ON THE FILLING OUT OF SAFETY DATA SHEETS

SECTION I. General data that must be written on the SDS's:

a) Date of the SDS writing;
b) Date of last SDS updating;
c) Name or company name of the SDS writer;
d) Name or company name and full address of the manufacturer or importer
e) Proper name or company name for communication and phone number that may be used in case of emergency 24 hours of the day.

SECTION II. Data to be registered about the chemical substance.

a) Its chemical name or code according to the scientific designation developed by the International Union of Pure and Applied Chemistry (IUPAC);
b) Its commercial name;
c) The chemical group it belongs to;
d) Synonyms for which it is also known;
e) Any other information that may be considered important.

SECTION III: Identification data of the dangerous chemical substance that must be noticedÑ

III.1 Identification:

a) The CAS number, which is the established number by the Chemical Abstract Service;
b) The UN number which is the assigned number to the dangerous chemical substance, according to the Recommendations of the United nations on the Transport of Dangerous Goods;
c) Write down the values of maximum permissible exposure limits, as established within NOM-010-STPS-1999, in relation to:

1) Maximum Permissible Exposure Limit on Pondered Time Average (MPEL-PTA);
2) Maximum Permissible Exposure Limit for Short Time (MPEL-ST)
3) Maximum Permissible Exposure Limit of Peak Exposure (MPEL-P)
d) IDLH value. As a reference, the Pocket Guide to Chemical Hazards may be utilized.

Note: An additional source of information may be utilized for c) and d) indicating the source.

III.2 Classification of the degree of risk.
Enter the selected system that may be rhomboidal or rectangular model or any other. In the case of other, it must be authorized by the General Directorate of Labor Safety and Hygiene indicating the justification as well as the health, flammability, reactivity, special risks values, and in its case, the necessary personal protection equipment.

III.3 About risky components.
When the properties of the mixture components change it will be reported as a final product, and in the case that the individual properties of the components do not change, they will be individually blotted out, entering the chemical names of all the components of the substance that has been determined as toxic and which percentage be larger than or equal to 1% of the mixture. When the latter is secret, report the chemical group.

SECTION IV: Data of the physical and chemical properties that most be noted down:

IV.1 The corresponding values according to their physical and chemical properties.

SECTION V. Data of fire and explosion risks that must be noted down:

V.1 The recommended extinguishing agents and, in due case, the forbidden ones.
V.2 The personal protection equipment that must be used for fire fighting.
V.3 The steps for the procedure for fire fighting and special precautions that must be taken.
V.4 Conditions that may drive the dangerous chemical substance to generate a special risk.
V.5 If there are generation of products during combustion, such as: health hazardous gases, smoke or noxious vapors.

SECTION VI. Reactivity data that must be noted:

VI.1 If dealing with a dangerous chemical substance either stable or instable.

VI.2 If the chemical substance shows incompatibility with other substances, having to specify which are these substances.

VI.3 If the chemical substance may generate decomposing dangerous products and which are these.

VI.4 Which conditions must be avoided in order not to generate a polymerization risk from the dangerous chemical substance.

VI.5 Other conditions to be avoided while using the dangerous chemical substance in order to avoid its reaction.

SECTION VII. Health risks:

VII.1 Note down the most exceeding effects due to acute exposition to the dangerous chemical substance, through each way of intake to the organism.

VII.2 Note down the most exceeding data due to the effects of chronic exposure to the dangerous chemical substance and indicate if it is considered carcinogenic, mutagenic or theratogenic.

VII.3 Note down complementary information regarding mean lethal concentration and mean lethal dose. If additional information of developed laboratory tests on mean lethal concentrations and mean lethal doses, indicate so.

VII.4 Emergency data and first aid procedures to be noted down.

VII.4.1 All procedures for the application of first aid for the different ways of intake to the organism;

VII.4.2 Any other risks or effects on health;

VII.4.3 The antidote, if there is one;

VII.4.4 Any other important information for the primary medical attention and pertinent countermeasures.

SECTION VIII. Directions to be noted down for the case of leaks or spills:

VIII.1 All procedures and special precautions required for cases of leaking or spills.

VIII.2 Mitigation methods for substance control.

SECTION IX. Special Protection for emergency situations:

IX.1 Note down the specific personal protection equipment to be utilized in these cases.

SECTION X. Data on information for transportation that must be noted down:

X.1 Everything related to the transport through the general means of land transportation and its connected auxiliary services, in relation to the Regulation for the Transport of Dangerous Goods and its Residues, from the Secretariat of Communications and Transport.

X.2 The kind of transport risk of the dangerous chemical substance according to Standard NOM-004-SCT2-1994.

X.3 The assigned number in the UN Recommendations for the Transport of Dangerous Goods for the dangerous chemical substance.

X.4 The corresponding information for the substance as shown on the North American Emergency Guidebook, showing the number and year of publication.

SECTION XI. Data on information regarding the ecology that must be noted down:

XI. Indicate the behavior of the dangerous chemical substance when freed to the air, water or ground and its effects on flora and fauna.

SECTION XII. Special precautions:

XII.1 Note down all there is in relation to the precautions that must be taken in the handling, transportation and storage of the substance.

XII.2 If any additional special precaution is deemed necessary to be mentioned, do so.