

SECRETARIAT OF COMMUNICATIONS AND TRANSPORT

Mexican Official Standard NOM-011-SCT2/2003, Conditions for the transportation of hazardous substances and materials in limited quantities.

At the margin, a seal with the National Crest, that says: United Mexican States.- Secretariat of Communications and Transport.

AARON DYCHTER POLTOLAREK Under Secretary of Transport and President of the National Standardization Consultative Committee of Land Transport, with foundation on Articles 36, Section I of the Federal Public Administration Organic Law; 1st., 38 section II, 40 sections I, II, V, XVI, ANDXVII, 41,43 AND 47 of the Law on Metrology and Standardization, 4th. of the Federal Law of Administrative Procedure; 5th. Section VI of the Law of Roads, Bridges and Federal Auto transport; 28 and 34 of the Regulation of the Federal Law on Metrology and Standardization; 48 of the Regulation for the Land Transport of Hazardous Materials and Wastes; 6th. Section XIII of the Interior Regulation of the Secretariat of Communications and Transport as well as other legal ordainments that may result applicable, and

CONSIDERING

That the transportation of hazardous substances and materials in limited quantities must be performed within the functions corresponding to the risk class and division to which it corresponds to and of the quantity to be transported.

That as a result of the works for the implementation of the Free Trade Agreement between Mexico, the United States of America and Canada, on Chapter IX Measures related to Standardization, article 905 Use of international standards it is pointed out that each one of the parties will use as a base for their own standardization measures the pertinent international standards or of imminent adoption. As far as the transport of hazardous materials is concerned, it will be taken as the foundation for it the Model Regulation of the United Nations Organization for the safe transport of dangerous Goods or other standards that the parties will agreed upon.

That having complied with the procedure established on the Federal Law on Metrology and Standardization and its Regulation, for the issuance of Mexican Official Standards, the Under Secretary of Transport and President of the National Consultative Committee of Standardization of Land Transport, ordered the publication of the Project for the Official Mexican Standard PROY-NOM-011-SCT2/2001, Conditions for the transportation of the hazardous substances and materials in limited quantities at the **Federal Official Register** on March 17, 2003.

That during the 60 natural days period counted as of the date of publication of the Project of the Mexican Official Standard, the analysis that served as a base for the elaboration on the regulatory impact manifest, which is referred on article 45 of the Federal Law on Metrology and Standardization, were at general public disposition for its consultation.

That having received comments during the mentioned period, the Committee of reference, proceeded to its study and made resolutions on them, integrating them to the definitive standard those modifications that were considered acceptable.

In view of that fact, and with the previous approval of the National Consultative Standardization Committee for the Land Transport, I have issued the following: Official Mexican Standard NOM-011-SCT2/2003, Conditions for the transportation of the hazardous substances and materials in limited quantities.

Mexico, D.F., on nineteenth day of the month of November of Two Thousand and Three.- The Under Secretary of Transport and President of the National Standardization Consultative Committee for Land Transport ,**Aarón Dychter Poltolarek.**- Signed

OFFICIAL MEXICAN STANDARD NOM-011-SCT2/2003, CONDITIONS FOR THE TRANSPORTATION OF HAZARDOUS SUBSTANCES AND MATERIALS IN LIMITED QUANTITIES**PREFACE**

In the preparation of this Official Mexican Standard were participants:

SECRETARIAT OF COMMUNICATIONS AND TRANSPORT
DIRECTORATE GENERAL OF FEDERAL AUTO TRANSPORT
DIRECTORATE GENERAL OF TARIFFS, RAILROAD AND MULTIMODAL TRANSPORTATION
DIRECTORATE GENERAL OF MERCHANT MARINE
DIRECTORATE GENERAL OF CIVIL AERONAUTICS
DIRECTORATE GENERAL OF LEGAL MATTERS

SECRETARIAT OF ECONOMY
DIRECTORATE GENERAL OF STANDARDS

SECRETARIAT OF THE INTERIOR
DIRECTORATE GENERAL OF CIVIL PROTECTION
NATIONAL CENTER FOR PREVENTION OF DISASTERS

SECRETARIAT OF NATIONAL DEFENSE
DIRECTORATE GENERAL OF FEDERAL REGISTRY OF FIREARMS AND EXPLOSIVES CONTROL
DIRECTORATE GENERAL OF MILITARY INDUSTRY

SECRETARIAT OF THE ENVIRONMENT AND NATURAL RESOURCES
DIRECTORATE GENERAL OF THE INTEGRAL MANAGEMENT OF CONTAMINANTS

SECRETARIAT OF ENERGY
NATIONAL COMMISSION OF NUCLEAR SAFETY AND SAFEGUARDS
DIRECTORATE GENERAL OF L.P. GAS

SECRETARIAT OF LABOR AND SOCIAL PROVISION
DIRECTORATE GENERAL OF LABOR HEALTH

SECRETARIAT OF HEALTH
NATIONAL COMMISSION FOR THE PREVENTION AGAINST SANITARY RISKS

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LAND TRANSPORTATION MANAGEMENT

NATIONAL CONFEDERATION OF INDUSTRIAL CHAMBERS

NATIONAL CHAMBER OF INDUSTRY
SECTION 64 CHEMICAL AND PARACHEMICAL INDUSTRY
SECTION 105 MANUFACTURERS OF TRAILERS AND SEMI-TRAILERS

NATIONAL CHAMBER OF CARGO AUTO TRANSPORTATION
NATIONAL ASSOCIATION OF THE CHEMICAL INDUSTRY, A.C.
NATIONAL ASSOCIATION OF PAINTS AND DYES MANUFACTURERS, A.C.
MEXICAN ASSOCIATION OF NON-DESTRUCTIVE TESTS COMPANIES, A.C.
NATIONAL ASSOCIATION OF AROMATIC PRODUCTS MANUFACTURERS, A.C.
CARGO CARRIERS ASSOCIATION OF THE CENTRAL ZONE OF THE STATE OF VERACRUZ
GRUPO INTERMEX
GRUPO TMM, S.A.
PARADISE ENTERPRISE
DESC CORPORATION, S.A. DE C.V.
DUPONT, S.A. DE C.V.
COCA COLA DE MEXICO, S.A. DE C.V.

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1. Objective

This Mexican Official Standard has, as an objective, to establish the provisions to which transportation of certain hazardous substances and materials (of minor risk) must be subject to, of classes 2,3,4,5,6,8 and 9, when these are intended and can be transported in the limited quantities specified in this standard. The transportation of substances and materials in other amounts not specified in this standard is not limited.

2. Field of Application

This Official Mexican Standard is of obligatory application for the shippers, carriers and recipients of hazardous materials and substances, that are to be carried through the general means of transportation.

3. References

For the correct application of this Standard, it is necessary to consult the following Mexican Official Standards or those replacing them:

- | | |
|-------------------|--|
| NOM-002-SCT/2003, | LIST OF THE HAZARDOUS SUBSTANCES AND MATERIALS MORE USUALLY TRANSPORTED. |
| NOM-043-SCT/2003, | SHIPPING DOCUMENT FOR HAZARDOUS SUBSTANCES, MATERIALS AND WASTES. |

4. Definitions

For the purposes of this Standard, the following definitions are herewith established:

4.1 Limited quantity.- Maximum quantitative limit of hazardous substance or material of classes 2, 3, 4, 5, 6, 8 and 9, that may be transported, representing a minor risk, in packages and packaging that comply with what is established in this Standard.

4.

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4.2 Package.- Any vessel or wrapping in which the product is contained for its distribution or sale (

4.3 Packaging.- A material that duly wraps, contains and protects the pre-packed products, which facilitates and withstands the storage and transportation operations

4.4 Combined packaging.- They are packages that combine an inner package and an outer package that are manufactured separately

4.5 Inner package.- Every vessel destined to contain a product and that enters in direct contact with it, conserving its chemical, physical and sanitary integrity.

4.6 External package.- It is understood as such one that contains the primary packaging and that serves it as protection.

4.7 Secretariat.- Secretariat of Communications and Transport.

4.8 Evaluation of Conformity.- The determination of the degree of compliance with the Mexican Official Standards, the international standards or any other specifications, prescriptions or characteristics. It encompasses, among others, the procedures of sampling, testing, calibration, certification and verification

4.9 Certification of qualification of Verification and/or Verification Certificate.- A document that includes all the results of the examinations and the determining of the conformity made due to these results of compliance with this Mexican Official Standard, issued by an approved and accredited Verification Unit, which is recognized by the Directorate General of Federal Auto Transport, as well as by the organisms of certification and based on them they may act within the terms of the law and according to their respective attributions.

4.10 Packaging Groups.- Packages and packaging containing hazardous substances of all classes or their residues, excepting the risk classes 1 and 2 and divisions 5.2 and 6.2, are classified in the following groups:

Group I.- For very dangerous substances.

Group II.- For medium dangerous substances

Group III.- For little dangerous substances.

All of which are referenced on column 5, table 2 of NOM-002-SCT.

4.11 NOM.- The technical regulation of obligatory compliance, issued by the competent agencies, according to what is established on article 40 of the Federal Law on Metrology and Standardization, which establishes rules, specifications, attributes, directives, characteristics or prescriptions applicable to a product, process, installation, system, activity, service or method of production or operation, as well as those relative to terminology, symbolism, packaging, markings, labeling, and those that are referred to its compliance or application.

4.12 Law.- Federal Law on Metrology and Standardization.

4.13 Verification Unit.- The physical person or company that performs actions of verification.

4.14 Verification.- The visual inspection or proving through sampling, measuring, laboratory tests or examination of documents done to evaluate conformity at a given moment

5. General provisions

5.1 Regulation and standardization for the land transport of hazardous substances and materials, is applied equally to the transportation performed under the concept of Limited Quantities (LTD. QTY[©]) specified in this Standard, save for those defined as None, as specified on section 5.2.1.

5.2 Hazardous substances and materials transported as Limited Quantity must comply with the above and subsequent points:

5.2.1 The inner packages that contain hazardous substances and materials must have quantities equal or smaller to those listed on NOM-002-SCT, table 2, column 7. The word None on such column signifies that the concepts of NOM 011-SCT2 are not applicable, for the corresponding substance.

5.2.2 The hazardous substances and materials in limited quantities must be transported in in combined packaging. Nevertheless, the usage of inner packages is not necessary for the transportation of objects such as aerosols, or smaller vessels containing gas.

5.2.3 Packaging will be adjusted to the prescriptions of points 5.3.1 through 5.3.9 of this Standard and will be designed in such a manner that will satisfy the indicated construction standards. The total gross mass of each combined package should not exceed 30 kilograms. The number of combined packaging that may be transported by each vehicle unit, is not limited, according to its capacity of design, having to comply point 5.2.8 of this same Standard.

5.2.4 All packages and packaging that contain hazardous substances and materials, must have identification labeling of the class of risk, when they surpass the maximum quantitative limit specified on column 7 of table 2 of the Mexican Official Standard NOM-002-SCT.

5.2.5 The outside packages (packaging) which are provided with elastic or flexible steel bands and are adjusted to what is provided for on points 5.3.1 through 5.3.9 of this Standard, are acceptable as exterior packaging of objects, or as interior packages, containing hazardous substances or materials whose transportation is done according to this Standard, excepting those interior packages that may break or are easily perforated, such as glass, porcelain, ceramic or certain plastics, etc.

The total gross weight of each exterior packaging that contains hazardous substances or materials and are provided with elastic or flex steel bands should not exceed 20 kilograms.

5.2.6 Hazardous substances or materials in liquid form of class 8 in packaging, interior packages of group II in glass, porcelain or ceramics, will be placed on an intermediate vessel that is compatible and rigid.

5.2.7 Hazardous materials and substances of different class of risk but compatible and packaged independently of each other in Limited Quantities may be placed in the same packaging, as long as no dangerous interaction may be produced in case of a spill.

5.2.8 The transportation of hazardous substances and materials under de concept of Limited Quantities (LTD. QTY.), do not require vehicles that post placards of risk class (when not carrying over 454 kilograms in total per vehicle); certified inner and outer packages and packaging, according to what is required on NOM-024-SCT2

5.2.8.1 For the transportation of Limited Quantities, packaging must bear the marking corresponding to Limited Quantities.

It will not be necessary to indicate the official transport designation of the contents over the packages and packaging containing hazardous materials in limited quantities, but they must be marked with the UN number of the contents (preceded by the letters UN) placed inside a rhomboidal figure. The width of the line bordering the rhomboid will be as minimum of 2 mm.; the number must have a height minimum of 6 mm. When in the package or packaging there are more than one substance with different assigned UN numbers, The rhomboid must be sufficiently large so that they can fit in it all the necessary UN numbers

5.2.9 Besides the provisions specified on the Mexican Official Standard NOM-043-SCT2, Relative to a shipping document for hazardous substances, materials and wastes, complementary to it will be included in the description of the shipment the words "Limited Quantity" or the abbreviation "LTD. QTY."

5.2.10 In the case of the Limited Quantities of hazardous substances and materials specified on this Standard, for personal or domestic use that are packed and packaged and are distributed in a way destined for the sale on the part of retailers or in a way appropriate for it, besides what is excepted in previous points, it will not be obligatory to mark them with the official designation for transportation nor the UN number in the package or packaging, nor satisfy the requisites in relation to the shipping document.

5.3 General provisions in relation with the package and packaging of hazardous substances, materials and wastes.

5.3.1 Limited Quantities of hazardous materials, must be packaged in packages and packaging of good and adequate quality, in such a way that they will guarantee the integrity of the substances and materials. They must be sufficiently resistant as to withstand shocks and movements that are normally generated during transportation, including the transference within various units of transport and/or warehouses, as well as the withdrawal of platforms, pallets or specially conditioned contraptions for its future manual or mechanical handling.

5.3.2 Packages and packaging must be manufactured and closed in such a manner that once they are ready to be shipped and during the normal transportation conditions they will not be damaged so that it may produce leakage due to vibration or changes in temperature, humidity or pressure (caused by example due to changes in altitude)

5.3.3 During transportation it should not be adhered to the outside of the packages and packaging any hazardous substance that may react with the material being transported or risk the integrity of the package in which the material is contained. These provisions are applied, correspondingly to new packages and packaging, reused ones, reconditioned ones or renewed.

5.3.4 The parts of the inside package that are in direct contact with the substances, materials and wastes:

- a) Should not be affected or weakened in a significant manner by those hazardous substances.
- b) Will not provoke dangerous effects, for example, provoking a catalytic reaction or reacting with the hazardous substances and materials.

When so necessary, they will be provided with an adequate inner layer or will be subject to an adequate interior treatment.

5.3.5 When the interior packages are filled with the dangerous substances or materials, a sufficiently empty space will be left depending on the density of the product (10 – 25%), to avoid any leakage of the contents and any permanent deformation of the inner package due to dilation of the liquid caused by the temperatures reached during its transportation. Save an specific provision against the regulations, liquids are not to fill completely an inner package at temperatures of 55° C.

5.3.6 Inner packages should be placed in outer packages and packaging in such a manner that under normal conditions of transportation, these cannot be broken, perforated or its contents to leak within the outer package and packaging. Inner packages that are liable to brake more easily, such as those made of glass, porcelain or certain plastic materials, etc., must be assured inside the outer package and packaging with an adequate shock absorbing material. Any leakage of the content, should not disable substantially the shock absorbing properties of such material or of the outer package or packaging.

5.3.7 Hazardous substances and materials contained inside in inner packages, will not be placed in the same outer package and packaging with other inner packages that contain substances or materials, if there is the risk that they may react dangerously with each other and provoke:

- a) Combustion and/or considerable heat radiation.
- b) Release of flammable, toxic or asphyxiating gases.
- c) Creation of corrosive substances.
- d) Creation of unstable substances.

5.3.8 Closures of the inner packages containing hazardous substances and materials that are humidified or diluted will be such that the percentage of liquid (water, solvent) does not diminish, during transportation, below the prescribed limits.

5.3.9 Liquids can only be introduced in the inner packages that have adequate resistance to withstand internal pressures that may be produced during normal transportation conditions. When pressure may increase within an inner package as a consequence of the contents gas release (due to increase in temperature or other causes), the package and packaging may be fixed with a ventilation orifice as far as the released gas is not dangerous due to its toxicity, its flammability, the amount of the release, etc., The ventilation orifice will be designed in such manner, that when the outer package (packaging) and the inner package is in the proper position for its transportation, liquid leakages are avoided as well as the penetration of foreign matter during the normal transportation conditions.

5.4 The provisions, lineaments, or maximum quantitative limits pointed out on NOM-002-SCT2, table 2 column 7, can only be varied and will be expressly demonstrated through a document issued by the agency, according to the actualization that in its moment includes the latest edition of Model Regulation for the Transport of Dangerous Goods of the United Nations Organization or else, through the demonstration of technical basis and tests of accredited laboratories and approved within the terms of the Federal Law on Metrology and Standardization, that guarantees that the alternate methods utilized give, as a result the compliance of the objective of safety set forth in this Standard.

6. Bibliography

- a) Model Regulation for the Transport of Dangerous Goods, issued by the United Nations Organization, eleventh revised edition, New York and Geneva, 2001.
- b) Federal Law on Metrology and Standardization and its Regulation.
- c) NOM-041-scfi/1997, Measurement instruments, Volumetric-cylindrical measures from 25 milliliters to 10 liters.
- d) NOM-042/SCFI/1997, Measurement instruments/Volumetric measures with oval neck for liquids with capacity of 5, 10 and 20 liters.
- e) NMX-EC-17020-IMNC-2000, General criteria for the operation of various types of units (organisms) which perform verification (inspection).
- f) NOM-003-SCT/2000, Characteristics of the labels for packages and Packaging destined to the transport of hazardous substances, materials and wastes.
- g) NOM-004-SCT/2000, Identification system for units destined to the transportation of hazardous substances, materials and wastes.
- h) NOM-024-SCT2/2002, Specifications for the construction and reconstruction, as well as the test methods of the packages and packaging of the hazardous substances, materials and wastes.
- i) NOM-027-SCT2, General provisions for the packing, packaging and transportation of the hazardous substances, materials and wastes of division 5.2 organic peroxides.
- j) NOM-008-SCFI, General System of Measuring Units of Mexico.

7. Harmonization with Mexican Standards or International Lineaments

This Mexican Official Standard, is equivalent to the Chapter 3.4 of the Model Regulation for the Transport of Dangerous Goods of the United Nations Organization, New York and Geneva, 2001.

8. Compliance

With foundation on the provisions of the Regulation for the Land Transport of Hazardous Materials and Wastes, this Mexican Official Standard is of obligatory compliance.

9. Inspection

The Secretariat of Communications and Transport through the Directorate General with the intermeddling is the competent authority to watch for the compliance of this Mexican Official Standard.

10. Procedure for the evaluation of conformity

10.1 Verification for the compliance of this Mexican Official Standard, will be performed through documentary and visual inspection, or else, by the application of the most advanced technologies available in the market.

10.2 Verification of compliance of this Mexican Official Standard, will be performed on Roads and Bridges of Federal Jurisdiction, by inspectors of general means of communications, Preventive Federal Police and duly accredited personnel (only in documentary form); in installations, factories, prior to the beginning of a trip by the transport units (through the verification units and/or the shipper itself) and on the installations of the approved auto transport companies or carriers (when they also perform loading and unloading operations) before circulating towards their destination.

10.3 Verification on roads will be done through operational actions, on strategic points that had been previously been determined by the Secretariat of Communications and Transport, Through the Directorate General of Auto Transport and by the Federal Preventive Police, when irregularities have been detected during their routine inspections. This verification will be only of the documentary type, it will be compared with the shipping documents or else in the report that will be issued by the Verification Units.

10.4 This verification will be applied to the auto transport vehicle units to which refers this Mexican Official Standard that travels on roads and bridges of federal jurisdiction, providing for the avoidance of traffic congestions on the circulating way.

10.5 Evaluation of Conformity on plants and installations of carriers, may be effected by units of verification duly accredited and approved which will issue a Verification Report in which they will asses and certify the results obtained in such verification. For the Accreditation and approval of the interested parties in evaluating the conformity of this Standard, will be what is stated in the Federal Law on Metrology and Standardization and to the citation that will be issued for the proper effect.

10.6 For the effect, the verification units must verify visually and based on the shipping document (when this applies), shipping order, or shipping papers, that the hazardous substances, materials and wastes, correspond to the risk class or division established on this Standard for its transportation as Limited Quantities.

10.7 Also, it must be verified that the packages and packaging either individual or integrated packages do not exceed the quantitative limit authorized for its transportation as Limited Quantities, in accordance to its class or risk division and in compliance with its packing group stated on column 7, table 2, of NOM-002-SCT.

10.7.1 The packaging must bear the corresponding mark to Limited Quantities, in accordance to section 5.2..8.1 of this same Standard.

10.7.2 It will be verified that when the vehicles are carrying over 454 kg of Limited Quantities, to bear the placards that will signal, at least the two main risks.

10.8 Likewise, it must be visually asses that the packages and packaging do not show fractures or malformation or distortion, as well as they are exempt of leakage of the hazardous substances, materials or wastes, specially on packages made of fragile materials such as plastics. These must be properly secured inside its package and outside packaging.

10.9 When after the visual and documentary inspection a discrepancy or incongruity exists and is been found, with relation to the risk class or division of the hazardous substances, materials or wastes or else on the maximum quantitative limit allowed for its transportation as Limited Quantity according to this Standard, the verification units may require from the applicants of the evaluation of conformity, to present a report issued by a test laboratory, in which is stated authentically the risk class or division of the hazardous substances, materials or wastes, or else the capacity of the packages and packaging utilized, according to the case.

10.10 The verification units, duly accredited and approved, personnel duly accredited and approved and the Federal Preventive Police, will verify that no hazardous substances, materials or wastes are transported as Limited Quantities when signaled as NONE on table 2, column 7 on NOM-002-SCT, as well as that they not go over the quantitative fixed in accordance to the inner packing group and the total gross weight of packaging and that each packaging do not go over the 30 kg or 20 kg when is referred to packages secured by flexible steel bands.

10.11 In those cases in which from the verification results it is determined that the conditions differ from those established on this Standard, the Verification Unit will advise the shipper and in due case to the carrier in the sense that its cargo is not considered as Limited Quantity. Also, it will notify the Directorate General of Auto Transport of the result of the verification.

10.12 The verification units interested in evaluating the conformity of this Mexican Official Standard must have the accreditation of the authorized accreditation entity to such effect and with the approval of the Directorate General of Auto Transport. To do the above, the applicants, by type of verification units, (A,B or C), will abide by the requisites of the convocation to be issued and will be subject to the favorable result of the evaluation call that will be done in a coordination manner between the Committee of Evaluation of the Verification Units and the Directorate General of Federal Auto Transport .

11. Sanctions

The non-compliance of the provisions contained in this Mexican Official Standard will be sanctioned by this Secretariat, according to what is established on Article 48 of the Regulation for the Land Transport of Hazardous Materials and Wastes and other legal ordainments that may be applicable without prejudice of other sanctions that may be applied by other agencies of the Federal Executive, in exercising their attributions or of the civil or penal responsibility resultant thereof.

12. Period in force

This Mexican Official Standard will be in force after 60 natural days following its publication in the **Federal Official Register**.

13. Transitory

FIRST.- This Standard will be in observance, once the NOM-002-SCT, List of hazardous substances and materials more usually transported, which includes on table 2, column 7, the maximum quantitative limits for the transport in Limited Quantities, is published in the **Federal Official Register** as definitive.

SECOND.- As this Mexican Official Standard enters in force, the previous NOM-011-SCT2/1994, Conditions for the transport of hazardous materials, substances and wastes in limited quantities, published on the **Federal Official Register** on September 25, 1995, will be derogated.
