

MATERIAL SAFETY DATA SHEET

according to the standard ISO 11014-1

Product name: ENDOSOLV E
MSDS n° 079A Version: 02

Date: 16/02/1998 (Still Current May 31, 2004)
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1. PRODUCT AND COMPANY IDENTIFICATION

Product name: **ENDOSOLV E**

DISTRIBUTOR

Name: SEPTODONT OF CANADA, INC
Address: 36 Wolseley Court, Cambridge, Ontario CANADA N1R 6X3
Telephone: (519) 623-0506 ext 307
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Emergency phone number: (519) 623-0506 ext 307

2. COMPOSITION/INFORMATION ON COMPONENTS

PREPARATION

Chemical nature: tetrachloroethylene based solution

Component contributing to danger: tetrachloroethylene [CAS: 127-18-4; EC classification: Xn N R40-51/53] >
80%

Hazardous component: Thymol [CAS: 89-83-8; EC classification: C-R22-34]: 0-5%

3. HAZARD IDENTIFICATION

MAIN HAZARDS

Effects on environment: toxic for aquatic organisms may cause long-term adverse effects in the aquatic environment. No disposal in natural waters, waste waters and on the ground.

Specific hazards: possible carcinogenic effects through inhalation and if swallowed (cf paragraph 11)

4. FIRST AID MEASURES

Inhalation: give fresh air to the patient. If he does not breathe, practice artificial respiration (mouth to mouth resuscitation preferably). In case of respiratory problem, give oxygen and seek medical advice.

Skin contact: rinse immediately with plenty of water and soap. If irritation persists, seek medical advice.

Eye contact: rinse immediately with plenty of water for at least 15 minutes. Consult an ophthalmologist.

Ingestion: do not induce vomiting even if the patient is conscious. Give him some spoonful of activated medical charcoal. Seek medical advice.

5. FIRE-FIGHTING MEASURES

Extinguishing media

Appropriate: water, powder, foam.

Specific hazards: toxic and irritating gas may form by combustion (phosgen, HCl, CO, CO₂)

Particular methods of intervention: cool the containers

Protection of intervening persons: have a self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: do not inhale

Environmental precautions: no disposal directly into drains

Methods for cleaning up: absorb with specific resorbing material for liquid (sand,...) Collect in a closed container and dump in a suitable disposal site.

Cleaning/decontamination: wash the contaminated area with plenty of water.

7. HANDLING AND STORAGE

HANDLING

Technical measures: hoods, safety shower and eye bath should be available for immediate use.

Precautions: do not inhale. Avoid any direct contact.

Technical precautions: refer to the technical sheet.

STORAGE

Technical measures: keep in the original container tightly closed.

Storage conditions:

Recommended: keep in a cool and ventilated place

Incompatible products: strong bases

Packaging conditions: 13-ml flask, amber glass

PACKAGING MATERIALS

Recommended: glass

Unadvised: metals

8. EXPOSURE CONTROL/PERSONAL PROTECTION

Technical measures: no particular technical or specific measure.

Personal protective equipment

Respiratory protection: protective mask if the ventilation is not sufficient

Hand protection: protective gloves

Eye protection: safety glasses

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE

Physical: liquid

Color: colorless

Odor: tetrachloroethylene and amyl acetate odor

pH: not determined

Characteristic temperatures

Boiling point: tetrachloroethylene: 121°C

FLAMMABLE PROPERTIES

Flash point: not applicable

EXPLOSION PROPERTIES

Explosion limits in air: not available

Relative density: (water = 1) close to 1.515

SOLUBILITY

in water: insoluble

In (organic) solvents: soluble in the main organic solvents

10. STABILITY AND REACTIVITY

Stability: stable in normal conditions of use.

Hazardous reactions

Material to avoid: light metals, finely divided and strong bases.

Hazardous decomposition products: in case of fire: phosgen, HCl, CO, CO₂

11. TOXICOLOGICAL INFORMATION

Acute toxicity* Tetrachloroethylene: LD₅₀ (oral route, rat) = 8 850 mg/kg

LC₅₀ (inhalation, rat)/6H = 4 100 ppm

Local effects:

In case of inhalation: CNS manifestations. Narcotic, anesthetic effect, dizziness, nausea, headache.

Skin contact: possible irritation, possibility of dermatitis due to contact.

Eye contact: irritation. Pains, inflammation.

If swallowed: nausea

Long-term chronic toxicity: asthenia, headache, neurological problems (difficulty of concentration, troubles of memory, change of mood), harm to kidneys.

If swallowed: chronic effects: lesions to liver and kidneys. Alcohol may increase toxic effects.

Specific effects

Carcinogenesis: an experiment carried out in the mouse, receiving by oral route doses higher than 300 mg/kg/d for 78 weeks shows an increase of the occurrence of liver-cell cancers. On the contrary, other animal experiments carried out in this field (by oral route and inhalation in the Rat and by skin contact in the Mouse) show negative results.

According to criteria of annex VI of Guideline 67/548/EEC, this product is classified as CARCINOGENIC –category 3 (possible carcinogenic effects).

12. ECOLOGICAL INFORMATION

ECOTOXICITY:

Effects on aquatic organisms: toxic for aquatic organisms, can have long-term adverse effects on aquatic environment.

Other ecological information: hazardous for environment. No disposal into drains.

13. DISPOSAL CONSIDERATIONS

Waste from residues

Banning: no disposal into drains and rivers

Destruction/elimination: refer to local regulation in force.

Soiled packaging

Destruction/elimination: refer to local regulation in force.

Note: user's attention is drawn on the possible existence of specific legislative, regulatory and administrative dispositions related to its elimination; these regulations may be applicable either in the European Community or be national or local.

14. TRANSPORT INFORMATION

INTERNATIONAL REGULATIONS*

Land routes

Rail/road (RID/ADR): Class: 6.1. (toxic material) – UN N°: 1897 (tetrachloroethylene)

Enumeration: 15°c

Labeling: 6.1.

(If parcel smaller than 2 liters, not regulated).

Air route (OACI-IT/IATA-DGR): UN N° 1897 (tetrachloroethylene) – Class: 6.1 – Label: toxic.

Packaging group: III (minor hazard)

(If parcel smaller than 2 liters, not regulated).

Maritime route (code: IMDG) UN N°: 1897 – Class: 6.1 – Packaging group: III – Sea pollutant

(If parcel weighing less than 30 kg, not regulated)

Note: The regulatory instructions cited above are those in force at the time of printing. However, one must always consider an eventual evolution of the rules related to the transportation of hazardous materials and thus should the MSDS in your possession be older than 1 year, it is recommended to have its validity checked by your commercial agent.

15. REGULATORY INFORMATION

REGULATIONS IN THE COMMUNITY

EC labeling: Compulsory regulatory labeling for hazardous preparations, (auto-classification): CONCERNED

Identification of the hazardous products: contains tetrachloroethylene.

Hazard indications: Xn: harmful

N: hazardous for environment.

"R" phrases:

R40: possible risk of irreversible effects

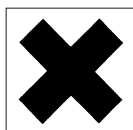
R 51/53: toxic to aquatic organisms, may cause long term adverse effects in the aquatic

environment

"S" Phrases:

S36/37: wear suitable protective clothing and gloves.

LABELING for the mentioned packaging*



Xn - Harmful



N - Dangerous for the environment

Tetrachloroethylene (*this name must appear on the label*)

Possible risk of irreversible effects

Toxic to aquatic organisms, may cause long term adverse effects on the aquatic environment

Wear suitable protective clothing and gloves

NATIONAL REGULATION: France: table of professional diseases N° 12: professional diseases caused by halogenated by-products

Note: The regulatory information gathered in this paragraph only recall the main prescriptions specifically applicable to the product for which this MSDS is prepared. The basic EC texts referred to are always updated and transferred to the national right. It is advised to consult any international, national or local regulations likely to be applied. User's attention is drawn on the fact that other complementary regulation might also be applicable.

16. OTHER INFORMATION

TYPE OF UTILIZATION

Recommended: please consult the technical sheet.

Updated: On 16.02.1998. Modifications are preceded by an asterisk. (Information on transport concerned labeling, national regulation).

Warning to users:

This data sheet completes the technical notices but does not supersede them. The information contained in it is grounded on the statement of our knowledge of the product concerned at the publishing date.

Moreover, user's attention should be drawn on the possible risks incurred when a product is used for other purposes than those for which it has been designed. It does not stop in any case the user from knowing and following the whole regulatory texts related to his activity. He will be the sole responsible of the precautions related to the use of the product he knows.

The aim of the whole regulatory prescriptions mentioned is to help the receiver to fulfill his duties when using a hazardous product. This list must not be considered as exhaustive. It does not stop the user from making sure that he complies with the written obligations other than those previously cited and which rule the fact of keeping and using the product for which he is the sole responsible person

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