



TRIVOREX®

V2

Approved by:
J. BLOMET

J. Blomet

Safety Data
Sheet

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Process:
REALIZE

File:
FDS

Reference:
GAS_QAL_FDS_Trivorex v2_en

Effective Date:
29/09/2015

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In accordance with European Regulation 1272/2008 (CLP)
SDS read in accordance with European Regulation 2015/830 (REACH)

SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier:

TRIVOREX®

1.2. Relevant identified uses of the substance or mixture and uses advised against:

Absorbent and neutralizer for accidental chemical spills

1.3. Details of the supplier of the safety data sheet:

PREVOR

Moulin de Verville

BP1

F-95760 VALMONDOIS - FRANCE

Phone: +33(0)1 30 34 76 76

Fax : +33(0)1 30 34 76 70

fds@prevor.com

1.4. Emergency telephone number:

+33(0)1 30 34 76 76 (business hours, GMT+1)

SECTION 2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture:

Non-hazardous mixture in accordance with Regulation 1272/2008/EC.

Trivorex® absorbent is a non-hazardous mixture, it does not require legally SDS according to the article 31 of the Directive 1907/2006 and seen the modifications of this article in the Directive 1272/2008 (article 57).

2.2. Label elements:

The mixture being non-hazardous, no danger and warning labelling is necessary.

2.3. Other hazards:

No danger other than those being able to entail legally the classification.

SECTION 3. COMPOSITION / INFORMATION ON INGREDIENTS

3.2. Mixture:

No hazardous ingredients

Name	wt. %
Neutralizing agents	70-90 %
Absorbent polymers	10-30 %

Impurities:

No hazardous impurities.

SECTION 4. FIRST AID MEASURES

4.1. Description of first aid measures:

4.1.1. Inhalation:

As for all powder and if necessary, blow nose in order to remove any particles from the respiratory tract.

4.1.2. Eye contact:

As for all powder and if necessary, perform a washing with NaCl by PREVOR® solution or otherwise, wash with copious amounts of water, eyes and under eyelids.

4.1.3. Skin contact:


Without particular danger.

4.1.4. Ingestion:

Make spit the absorbent. Rinse thoroughly mouth with water. Do not give anything by mouth. In case of adverse effects, consult a doctor.

4.2. Most important symptoms and effects, both acute and delayed:

No known unwanted effects.

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4.3. Indication of any immediate medical attention and special treatment needed:

No specific care.

SECTION 5. FIREFIGHTING MEASURES

5.1. Extinguishing media:

Water spray, carbon dioxide, dry powder, foam.

5.2. Special hazards arising from the substance or mixture:

Thermal decomposition above 100°C in toxic products: carbon monoxide and dioxide, nitrogen oxides, organic vapours.

5.3. Advice for firefighters:

In case of fire, wear self-contained breathing apparatus identical to that usually carried during any fire.

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures:

Limit contact with eyes by wearing safety glasses mask.

Limit inhaling dust by wearing a dust mask.

6.2. Environmental precautions:

Even if the mixture is not ecotoxic, limit discharges into the environment (sewers, rivers, soils).

6.3. Methods and material for containment and cleaning up:

Recover the entire product by means of diverse brooms, scrapers and shovels.

6.4. Reference to other sections:

None.

SECTION 7. HANDLING AND STORAGE

7.1. Precautions for safe handling:

Respect hygiene measures (no eating or drinking) when manipulating product.

Wash hands after use.

Avoid the formation of dust clouds in order to avoid inhalation. Thus, sprinkle Trivorex® absorbent as near as possible to the spill.

For important chemical spreading, wear chemical protective boots.

Very low sensitivity to electrostatic sparks (Minimal Inflammation Energy : MIE > 1000 mJ)

7.2. Conditions for safe storage, including any incompatibilities:

Keep well closed in the original packaging.

Store shielded from humidity, heat and sources of ignition.

7.3. Specific end use(s):

Absorbent and neutralizer for accidental chemical spills.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1. Control parameters:

Mixture:

Name	STEL
Neutralizing agents	None
Absorbent polymers	None

Total dust: TWA = 10 mg.m⁻³.

Possible contamination of the air during use of Trivorex® absorbent on an acid and resulting from the chemical reaction:

Name	CAS N°	TWA (8h)	STEL (15 min)
Carbon dioxide (CO ₂)	124-38-9	5000 ppm or 0.5 % or 9000 mg.m ⁻³	the value depends on the national regulations (*)

(*) The European Agency for Safety and Health at Work does not give any short-term exposure limit for carbon dioxide. National agencies usually may give values or recommendations.



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To interpret the value of short-term exposure, we provide the rule for knowing the size limit of a completely airtight area (without ventilation or aeration) from which carbon dioxide is hazardous during the use of the Trivorex® absorbent:

$$\text{Volume}_{\text{area}} (\text{m}^3) = \text{Volume}_{\text{acid}} (\text{L}) \times \text{Concentration}_{\text{acid}} (\text{mol.L}^{-1}) \times 44 (\text{CO}_2 \text{ molecular weight}) / \text{STEL} (\text{g.m}^{-3})$$

The calculation is made for the reaction of Trivorex® absorbent with 98% sulphuric acid (36 mol.L⁻¹) and the French STEL value, which is 45 g.m⁻³. 1L may produce enough CO₂ to fill 35.2 m³. It corresponds to a completely sealed area (without ventilation or aeration) of 14 m² (2.5 m ceiling and less than 4 m wide). With 10 liters of the same acid, the CO₂ concentration "limit" can be reached for a warehouse of 88 m² (4m ceiling and within 5 m of side) and completely sealed.

8.2. Exposure controls:

8.2.1. Appropriate engineering controls:

Plan adequate ventilation for places where dust is formed.

In case of prolonged use (over 15 minutes) and enclosed spaces (without ventilation or aeration), carry a direct reading device for CO₂.

8.2.2. individual protective measures, such as personal protective equipment:

Eye/face protection:

If dust clouds are formed wear safety goggles.

Skin protection:

Hand protection:

For frequent or prolonged manipulation, wear waterproof gloves to limit contact between the skin and the absorbent.

Other:

No additional protection for the skin.

Respiratory protection:

No protection necessary.

In case of prolonged use in a confined atmosphere (no ventilation and no aeration) or in case of dust cloud formation, ventilate the premises or wear a dust mask.

Thermal risk:

No thermal risk with this absorbent alone.

In use of concentrated acids or concentrated bases, an exothermic reaction (<80 °C) is possible. Avoid contact with the amalgam during the absorption reaction / neutralization.

Spill response protection when using Trivorex® absorbent:

Wear safety equipment appropriate for the type of chemical which has been spilled.

8.2.3. Environmental exposure controls:

Non applicable.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties:

a) Appearance (at 20°C):

Solid (fine granules) yellow or slightly orange.

b) Odor:

None.

c) Odor detection threshold:

Non applicable because the mixture does not smell.

d) pH:

pH = 7,1 (at 100 g.L⁻¹ and at 20°C)

e) Melting point / freezing point:

> 200 °C.

f) Initial boiling point and boiling range:


Non applicable because Trivorex® absorbent is not a liquid.

g) Flash point:

Non applicable because Trivorex® absorbent does not emit combustible vapours.

h) Evaporation rate:

Non applicable because Trivorex® absorbent is not vaporisable.

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i) Flammability (solid, gas):

Minimal Inflammation Energy (M.I.E.) > 1000 mJ.

j) Upper / lower flammability or explosive limits:

Non applicable because Trivorex® absorbent does not emit combustible vapours.

k) Vapour pressure:

Non applicable because Trivorex® absorbent is not vaporisable.

l) Vapour density:

Non applicable because Trivorex® absorbent is not vaporisable.

m) Relative density:

0.7 g.cm⁻³.

n) Solubility (ies):

Absorbs water.

o) Partition coefficient n-octanol/water:

Trivorex® absorbent does not dissolve in water or in n-octanol.

p) Auto-ignition temperature:

960°C (Minimal Inflammation temperature for Trivorex® absorbent not sieved).

q) Decomposition temperature:

Thermal decomposition above 100°C.

r) Viscosity:

Non applicable because Trivorex® absorbent is not a liquid.

s) Explosive properties:

Very low sensitivity to electrostatic sparks (Minimal Inflammation Energy : M.I.E > 1000 mJ).

t) Oxidising properties:

No oxidising property.

9.2. Others information:

Granulometry : d(0,5) = 171 µm (average on three tests)
Upper limit 1000 µm

SECTION 10. STABILITY AND REACTIVITY

10.1. Reactivity:

The product swells in presence of liquids.

10.2. Chemical stability:

Stable in the conditions recommended for storage.

10.3. Possibility of hazardous reactions:

None known to date.

10.4. Conditions to avoid:

None known to date.

10.5. Incompatible materials:

None known to date.

10.6. Hazardous decomposition products:

Thermal decomposition above 100°C with liberation of carbon monoxide and dioxide, nitrogen oxides, organic vapours.

SECTION 11. TOXICOLOGICAL INFORMATION

11.1. Informations on toxicological effects:

a) Acute toxicity

Mixture of non-toxic products.

b) Skin corrosion / irritation:

Mixture of non-irritant and non-corrosive products.

c) Serious eye damage / irritation:


Mixture of non-irritant and non-corrosive products.

d) Respiratory or skin sensitisation:

Mixture of non sensitisable products.

e) Germ cell mutagenicity:

Mixture of non-mutagenic products.

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f) Carcinogenicity:

Mixture of non-carcinogen products

g) Reproductive toxicity:

Mixture of non-reprotoxic products.

h) Specific target organ toxicity – single exposure:

Mixture of non-toxic products.

i) Specific target organ toxicity – repeated exposure:

Mixture of non-toxic products.

j) Aspiration hazard:

Mixture of non-toxic products.

SECTION 12. ECOLOGICAL INFORMATION

12.1. Toxicity:

Trivorex® absorbent is a mixture of non-ecotoxic products.

12.2. Persistence and degradability:

Mixture of non-persistent and non-degradable products.

12.3. Bioaccumulative potential:

Mixture of non-bioaccumulative products.

12.4. Mobility in soil:

Mixture of products having no mobility in soil.

12.5. Results of PBT and vPvB assessment:

Non applicable because the report on the chemical safety is not required.

12.6. Other adverse effects:

No other adverse effects known to date.

SECTION 13. DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods:

Burn according to current country regulations.

SECTION 14. TRANSPORT INFORMATION

14.1. UN number:

The UN number is not applicable because Trivorex® absorbent is non-hazardous (see section 2).

14.2. UN proper shipping name:

Non applicable.

14.3. Transport hazard class(es):

RID: Non applicable.

ADN: Non applicable.

ADR: Non applicable.

IMDG: Non applicable.

IATA (ICAO): Non applicable.

14.4. Packing group:

Non applicable.

14.5. Environmental hazards:


Trivorex® absorbent presents no danger for the environment and is not a marine pollutant.

14.6. Special precautions for user:

No special precautions to be taken by the user.

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:

Non applicable because the products are delivered conditioned.

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SECTION 15. REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture:

Classified as non-hazardous in accordance with the European Regulations concerning labelling of hazardous mixtures: regulations 1272/2008/EC.

Regulation reference: REACH Regulation 2015/830/EC.

Regulation 2015/830/EC modifying regulation n° 453/2010/EC and n° 1907/2006/EC of European Parliament and Council concerning recording, evaluation and authorization of chemical substances, as well as limitations applicable to these substances (REACH).

15.2. Chemical Safety Assessment:

Non applicable.

SECTION 16. OTHER INFORMATION

Recommended use:

Neutralizer and absorbent for accidental chemical spills.

Recommendation before use:

- 1- Store Trivorex® absorbent near to potential risk.
- 2- Read operating instructions.
- 3- Wear safety equipment appropriate for the type of chemical which has been spilled.
- 4- Use Trivorex® absorbent as quickly as possible.

Think of ventilating the area if necessary (important formation of dusts or important release of CO₂ in confined area).

In case of eye or skin contact with spilled chemical, wash with Diphoterine® solution, then with Afterwash II® solution for eye contact or alternatively, wash thoroughly with water.

Instructions for use:

- 1- First sprinkle Trivorex® absorbent around and then over the spill.
- 2- Allow product to work by neutralization and absorption. If chemical is anhydrous and to facilitate neutralization, add Le Vert® materiel decontamination solution or, otherwise, water.
- 3- Collect the solidified residue by means of various brooms, scrapers and shovels.

Abbreviations:

CLP: Classification, Labelling and Packaging of substance and mixtures.

REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals.

EC: European Commission.

SDS: Safety Data Sheet.

GMT: Greenwich Mean Time.

CAS n°: Chemical Abstract Service (registry) number.

wt. %: weight percent. It is the ratio of the mass of one element to the total mass of a compound.

MIE: Minimal Inflammation Energy.

d(0.5): volumetric distribution of fifty percent of the powder. Size below (and above) which fifty percent of the grains are.

STEL: Short-Term Exposure Limit. It represents the maximum level of concentration of pollutants in the atmosphere, beyond which a short exposure presents a risk to human health or environmental degradation, from which emergency measures must be taken. This term is very general and does not always accurately inform on the duration of exposure (usually 15 minutes).

TWA: Time-Weighted Average exposure limit. It is the acceptable average maximal concentration, for a given substance, in the air of the workplace, where the worker is brought to work for a whole day (8h).

ppm: parts per million.


RID: Regulations concerning the International carriage of Dangerous goods by rail.

ADN: International transport of goods by ways of inner navigation.

ADR: Accord for dangerous goods by road.

IMDG: International Maritime Dangerous Goods.

IATA (ICAO): International Civil Aviation Organization.

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This sheet complements the technical sheets but does not replace them. The information that is contained herein is based on the state of our knowledge related to the product concerned at the date of issue and is given in good faith. Moreover, user's attention is drawn to the possible risks incurred by using the product for any other use than that for which it was intended.