



# SAFETY DATA SHEET

according to Regulation (EC) No.

Dental Use  
Date Issued : 4/2016  
SDS No : M10-20  
Date Revised : 01/2017  
Revision No : 01

Morva-Etch 3 ml®

## SECTION 1: Identification of The Substance/Preparation and of The Company/Undertaking

### 1.1 Product Identifier:

Product code:

M10-20

Trade Name (as labeled):

Morva-Etch 3 ml®

Product Description:

Phosphoric Acid dental etchant

### 1.2 Relevant Identified Uses of the Substance or Mixture and Uses Advised Against:

Relevant Identified Uses:

For Professional Use Only.

### 1.3 Details of the Supplier of the Safety Data Sheet:

Manufacturer/Supplier Name:

MORVABON Trading & Manufacturing Co.

Manufacturer/Supplier Address:

No. 135, Seraj Bldg., Pardis Technology Park, 20<sup>th</sup> km  
Damavand Road, Tehran, IRAN

Manufacturer/Supplier Telephone Number:

+98(21)76251702

Manufacturer/Supplier Zip code:

1657163871

Email address:

[Dent.pro@morvabon.com](mailto:Dent.pro@morvabon.com)

### 1.5 Distributer Name:

MORVABON Trending Co.

Distributor Address:

No. 154, 7 Floor, Block C, Borjsaz Tower, Azadi Ave.,  
Tehran, IRAN

Distributor Telephone Number:

+98(21)66581438

Distributor Zip code:

1313655666

Email address:

[info@morvabon.com](mailto:info@morvabon.com)

### 1.4 Emergency Telephone Number:

Transportation Emergency Contact Number:

+98(21)76251704

## SECTION 2: Hazards Identification

**2.1 Classification of the Substance or Mixture:** The mixture has been assessed and/or tested for its physical, health and environmental hazards and the following classification applies.

GHS Classification:		
Health	Environmental	Physical
Eye Damage Category 1(H318) Skin Corrosive Category 1B (H314)	Not Hazardous	Not Hazardous

EU Classification: Corrosive (C) R34

Danger symbols: C

R phrases: R34

**2.2 Label Elements:**



**Hazard pictogram(s):**



**R&S statement(s):** R34: Causes burns.

**Signal Word:** Danger

Hazard Phrases	Precautionary Phrases
H314 Causes severe skin burn and eye damage	P260 Do not breathe mists. P264 Wash thoroughly after handling. P280 Wear protective gloves, protective clothing, eye protection, and face protection. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P303 + P361 + P353 IF ON SKIN (or hair): Remove immediately all contaminated clothing. Rinse skin with water or shower. P363 Wash contaminated clothing before reuse. P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. P310 Immediately call a POISON CENTER or doctor. P301+ 330 + 331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P405 Store locked up. P501 Dispose of contents and container in accordance with local and national regulations.

**2.3 Other Hazards:** None known.

**SECTION 3: Composition / Information On Ingredients**

**Mixture:**

Hazardous Components	C.A.S. #	EINECS #	Classification	WT %
Phosphoric Acid	7664-38-2	231-633-2	C, R34 Skin Corr. Cat 1B, H314	<40

The exact concentration is being withheld as a trade secret.

Refer to Section 16 for the full text of the GHS and EU Classifications.

**SECTION 4: First Aid Measure**

**4.1 Description of First Aid Measures:**

<b>Eye</b>	Immediately flush eyes with plenty of water for at least 30 minutes while holding the eyelids apart. Remove contact lenses, if present and easy to do. Get immediate medical attention.
<b>Skin</b>	Remove contaminated clothing. Wash skin thoroughly with soap and water for at least 30 minutes. Seek immediate medical attention. Launder clothing before re-use.
<b>Inhalation</b>	Remove victim to fresh air. Give artificial respiration if needed. If breathing is difficult, oxygen should be administered by qualified personnel. Get medical attention if symptoms of exposure persist.
<b>Ingestion</b>	Do not induce vomiting. If conscious, rinse mouth with a small amount of water and give one glass of water to dilute. Never give anything by mouth to an unconscious or drowsy person. Get medical attention.

#### 4.2 Most Important Symptoms and Effects, Both Acute and Delayed:

<b>Eye</b>	Causes severe eye irritation and burns
<b>Skin</b>	Corrosive, causes skin burning.
<b>Inhalation</b>	Harmful if swallowed.
<b>Ingestion</b>	None expected for this product./ may cause severe irritation and burns to respiratory tract.

#### 4.3 Indication of Any Immediate Medical Attention and Special Treatment Needed:

If contact occurs seek immediate medical attention.
Note to Physicians (Treatment, Testing, and Monitoring): Treat symptomatically.

### SECTION 5: Fire-Fighting Measures

#### 5.1 Extinguishing Media:

<b>Extinguishing Media</b>	Please see Fire Fighting Equipment under Section 5.3. / Use media appropriate for surrounding fire. Cool fire exposed containers and structures with water.
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#### 5.2 Special Hazards Arising from the Substance or Mixture:

<b>Hazardous combustion products</b>	Phosphine, oxides of phosphorous, hydrogen gas. / Reacts with most metals to form flammable hydrogen gas. Combustion produces phosphorous oxides.
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#### 5.3 Advice for Fire-Fighters:



<b>Fire-fighting procedures</b>	General: Evacuate all personnel; use protective equipment for fire-fighting. Use self-contained breathing apparatus when the product is involved in fire.
<b>Fire-fighting equipment</b>	The product is not combustible. Substance does not burn but may decompose upon heating to produce corrosive and/or toxic fumes. Keep product and empty container away from heat and sources of ignition. Use appropriate media for adjacent fire. Cool containers with water

<b>Recommended Protective Equipment for Fire Fighters:</b>			
<b>EYES/FACE</b>	<b>HANDS</b>	<b>RESPIRATORY</b>	<b>THERMAL</b>
			

### SECTION 6: Accidental Release Measures

#### 6.1 Personal Precautions, Protective Equipment and Emergency Procedures:

Evacuate spill area and keep unprotected personnel away. Avoid contact with skin, eyes or clothing. Avoid breathing vapors. Wear appropriate protective clothing. Ventilate area. Prevent contact with flammable or combustible material. Keep away from heat, flames and high temperatures.
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Recommended Personal Protective Equipment for Containment and Clean-up:			
EYES/FACE	HANDS	RESPIRATORY	THERMAL
			

### 6.2 Environmental Precautions:

<b>Water spill</b>	Prevent entry into sewers and waterways. Report releases as required by local, state, and national authorities. / Do not allow to enter sewers or drains that may lead to waterways.
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### 6.3 Methods and Material for Containment and Cleaning up:

<b>Small spill</b>	Clean up spills immediately, observing precautions in Protective Equipment section.
<b>Large spill</b>	Absorb with inert, damp non-combustible material, then flush area with water.

Or

Contain and collect using an inert absorbent material and place in appropriate containers for disposal. Rinse spill area with water. Prevent spill from entering sewers and water courses. Report releases as required by local, state and federal authorities.

### 6.4 Reference to Other Sections:

Refer to Section 8 for Personal Protective Equipment and Section 13 for Disposal information. / Not Applicable
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## SECTION 7: Handling and Storage

### 7.1. Precautions for safe handling:

<b>General procedures</b>	Avoid contact with eyes, skin and clothing. / Avoid contact with the eyes, skin and clothing. Avoid breathing mists. Wear protective clothing and equipment as described in Section 8. Use with adequate ventilation. Wash thoroughly with soap and water after handling. Keep containers closed when not in use.
<b>Handling</b>	Use suitable protective equipment. / Do not reuse containers. Empty containers retain product residues that can be hazardous. Follow all SDS precautions when handling empty containers.
<b>Storage</b>	Store in a cool, dry, well-ventilated area away from heat and incompatible materials. Protect from physical damage./ See product labeling.

### 7.2. Conditions for safe storage, including any incompatibilities:

<b>Shelf Life</b>	See product labeling.
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### 7.3 Specific End Use (s):

<b>Specific End Use (s)</b>	Professional Dental Acid Etching Gel. / For professional use only
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## SECTION 8: Exposure Controls / Personal Protection

### 8.1. Control parameters

<b>Occupational Exposure Limits:</b>		
<b>Phosphoric Acid</b>	United States	1 ppm TWA ACGIH TLV 1 ppm TWA OSHA PEL
	Germany	2 mg/m <sup>3</sup> DFG MAK(Inhalable fraction)
	United Kingdom	1 mg/m <sup>3</sup> TWA UK WEL, 2 mg/m <sup>3</sup> STEL
	European Union	1 mg/m <sup>3</sup> TWA, 2 mg/m <sup>3</sup> / STEL
<b>Biological Exposure Limits:</b> None Established		

### 8.2 Exposure Controls:

Eye/face Protection	Chemical safety goggles with side guards and a face shield should be worn. / Wear eye protection
Skin Protection	Wear suitable protective clothing and gloves. / Wear impervious gloves such as natural rubber or neoprene to avoid skin contact.
Respiratory Protection	Good general ventilation should be sufficient to control airborne levels. / None should be needed for normal use. If the exposure limits are exceeded, an approved supplied air respirator appropriate for the form and concentration of the contaminants should be used. Selection and use of respiratory equipment must be in accordance with applicable regulations and good industrial hygiene practice.
Thermal Hazards	None required.

<b>Recommended Personal Protective Equipment:</b>			
EYES/FACE	HANDS	RESPIRATORY	THERMAL
			

## SECTION 9: Physical and Chemical Properties

### 9.1. Information on basic physical and chemical properties:

<b>Appearance:</b>	Blue Gel	<b>Oxidizing Properties:</b>	Not an oxidizer
<b>Odor:</b>	Odorless or no characteristic odor/Acidic odor	<b>Flash point:</b>	Not flammable
<b>pH:</b>	< 1	<b>Explosive Properties:</b>	Not explosive
<b>Relative density:</b>	1.1g/cm <sup>3</sup>	<b>Solubility(ies) in Water:</b>	Partially Soluble
<b>Initial boiling point and boiling range:</b>	108°C (226°F)	<b>Viscosity:</b>	Not applicable

### 9.2 Other Information: Not Determined

## SECTION 10: Stability and Reactivity

### 10.1. Reactivity:

Reactivity	Stable / Not normally reactive.
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### 10.2 Chemical Stability:

Chemical Stability	Stable under normal storage and handling conditions. / Stable when stored and handled under recommended conditions.
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### 10.3. Possibility of hazardous reactions:

Hazardous polymerization	None / Reacts with most common metals to form flammable hydrogen gas.
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### 10.4 Conditions to Avoid:

Conditions to Avoid	Avoid temperatures greater than 50°C for extended periods. / Strong bases, metals, excess heat, exposure to moist air or water.
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### 10.5. Incompatible materials:

Incompatible materials	Strong caustics, most metals. / Avoid caustics, alcohols, aldehydes, cyanides, combustible materials, ketones, metals, phenols, esters, sulfides and halogenated organics
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### 10.6. Hazardous decomposition products:

Hazardous decomposition products	Phosphine, oxides of phosphorous, hydrogen gas /Thermal decomposition may produce phosphorus oxides
Additional information	Reacts with bases to form phosphate salts and is corrosive (especially when hot) to many metals and alloys. Liberates explosive hydrogen gas when reacting with chlorides and stainless steel, and reacts violently with sodium tetrahydroborate. Forms flammable gases with sulfides, mercaptans, cyanides, and aldehydes. Also forms toxic fumes with cyanides, sulfides, fluorides, organic peroxides, and halogenated organics.

## SECTION 11: Toxicological Information

### 11.1 Information on Toxicological Effects:

Acute Notes	Device is a strong acid and is extremely toxic. It is to be used only as directed with PPE, and only by licensed dental professionals.
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## SECTION 12: Ecological Information

### 12.1. Toxicity:

Toxicity	Not Determined / Phosphoric Acid: 96 hour LC50 Mosquitofish-138 mg/L
Aquatic toxicity (acute)	Do not allow to enter sewers or drains that may lead to waterways
96-hour LC <sub>50</sub>	Not Determined
48-hour LC <sub>50</sub>	Not Determined
96-hour LC <sub>50</sub>	Not Determined

**12.2. Persistence and Degradability:**

<b>Persistence and degradability</b>	Not Determined
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**12.3. Bio-accumulative potential:**

<b>Bio-accumulative potential</b>	Not Determined / Product is not expected to bio-accumulate.
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**12.4. Mobility in soil**

<b>Mobility in soil</b>	Not Determined
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**12.5. Results of PBT and vPvB assessment**

<b>Results of PBT and vPvB assessment</b>	Not Determined
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**12.6. Other adverse effects**

<b>Environmental data</b>	Do not flush to sewer.
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## SECTION 13: Disposal Considerations

**13.1. Waste treatment methods**

<b>Regulations</b>	Dispose in accordance with national and local regulations.
<b>Properties (Physical/Chemical) Affecting Disposal</b>	Empty containers retain product residues that can be hazardous. Follow all SDS precautions when handling empty containers.
<b>Waste Treatment Recommendations</b>	Dispose in accordance with national and local regulations.

## SECTION 14: Transport Information

**14.1. UN number:**

<b>UN number</b>	1760
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**14.2. UN proper shipping name:**

<b>UN proper shipping name</b>	Corrosive liquid, n.o.s. (Phosphoric acid mixture)
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**14.3. Transport hazard class(es):**

<b>Primary hazard class/division</b>	8
<b>Hazard classification</b>	8

**14.4. Packing group:**

<b>Packing group</b>	III
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**14.5. Environmental hazards:**

<b>Marine pollutant #1</b>	N/A
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**14.6. Special precautions for user:**

ADR – road	N/A
RID – rail	N/A
IMDG – sea	N/A
IATA – air	N/A

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

Transport in bulk	N/A
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## SECTION 15: Regulatory Information

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

ROHS	Please refer to Medical Devices Directive 93/42/EEC
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**15.2. Chemical safety assessment:**

Chemical safety assessment	See Section 11.
Additional information	IARC has identified cobalt and cobalt compounds as "possibly carcinogenic" as a group, however IARC did not specifically identify the cobalt compound in this product as a possible carcinogen.  OSHA- Select Carcinogens: Present.

## SECTION 16: Other Information

Relevant R-phrases and/or H statements (number and full text)	R22: Harmful if swallowed. R34: Causes burns. R36/37/38: Irritating to eyes, respiratory system and skin. Eye Irr., Cat. 2: Eye Irritation, Category 2. STOT SE, Cat. 3: Target Organ Toxicity (Single exposure), Category 3. Skin Corr., Cat. 1B: Skin Corrosion, Category 1B. Skin Irr., Cat. 2: Skin Irritation, Category 2. H314: Causes severe skin burns and eye damage. H315: Causes skin irritation. H319: Causes serious eye irritation. H335: May cause respiratory irritation.
Prepared by	Morvabon Trending & Manufacturing Co.
Prepared Date	5 May 2017
Revision summary	Converted MSDS to Reach SDS. Updated all sections.
General statements	N/A= Not Applicable C= Corrosive
Manufacturer disclaimer	<b>FOR DENTAL USE ONLY:</b> Use as directed. The information and recommendations are taken from sources (raw material SDS(s) and manufacturer's knowledge) believed to be accurate; however, the manufacturer, makes no warranty with respect to the accuracy of the information or the suitability of the recommendation and assumes no liability to any user thereof. Each user should review these recommendations in the specific context of the intended use and determine whether they are appropriate.