



SAFETY DATA SHEET In Accordance with ISO/DIS 11014

Review Date 01/25/2018

Revision Date 01/25/2018

1 Identification of the Substance/Mixture and Company

Product Name: Morse's Solution

SDS Code: SSDCM01

Product Description: Histology Bone Decalcifier

Manufacturer/Supplier:

American MasterTech
1330 Thurman Street
Lodi, CA 95240
USA
(800) 860-4073

European Authorized Representative:

Emergo Europe
Prinsessegracht 20
2514 AP The Hague,
The Netherlands

Emergency Telephone Number: Infotrac (800) 535-5053 (24 hours) - International (011) 352-323-3500

2 Hazards Identification

Classification of the substance or mixture



GHS05 Corrosion

Skin Corr. 1B H314 Causes severe skin burns and eye damage.

Eye Dam. 1 H318 Causes serious eye damage.

Label elements

GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).

Hazard pictograms



GHS05

Signal word Danger

Hazard-determining components of labeling:

formic acid

Hazard statements

Causes severe skin burns and eye damage.

Precautionary statements

Do not breathe dusts or mists.

Wash thoroughly after handling.

Wear protective gloves/protective clothing/eye protection/face protection.

If swallowed: Rinse mouth. Do NOT induce vomiting.

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

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If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Immediately call a poison center/doctor.

Specific treatment (see on this label).

Wash contaminated clothing before reuse.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

Classification system:

NFPA ratings (scale 0 - 4)

Health = 3

Fire = 0

Reactivity = 0

HMIS-ratings (scale 0 - 4)

Health = 3

Fire = 0

Reactivity = 0

Other hazards

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

3 Composition

Chemical characterization: Mixtures

Description: Mixture of the substances listed below with nonhazardous additions.

Dangerous components:

| | | |
|---------|-------------|------|
| 64-18-6 | formic acid | <25% |
|---------|-------------|------|

4 First Aid Measures

Description of first aid measures

General information: Immediately remove any clothing soiled by the product.

After inhalation: In case of unconsciousness place patient stably in side position for transportation.

After skin contact: Immediately wash with water and soap and rinse thoroughly.

After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.

After swallowing: Drink copious amounts of water and provide fresh air. Immediately call a doctor.

Information for doctor:

Most important symptoms and effects, both acute and delayed: No further relevant information available.

Indication of any immediate medical attention and special treatment needed:

No further relevant information available.

5 Firefighting Measures

Extinguishing media

Suitable extinguishing agents: Use fire fighting measures that suit the environment.

Special hazards arising from the substance or mixture: No further relevant information available.

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Advice for firefighters**Protective equipment:** No special measures required.

6 Accidental Release Measures

Personal precautions, protective equipment and emergency procedures:

Wear protective equipment. Keep unprotected persons away.

Environmental precautions: Dilute with plenty of water.**Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Use neutralizing agent.

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

Protective Action Criteria for Chemicals**PAC-1:**

| | | |
|---------|-------------|-------|
| 64-18-6 | formic acid | 3 ppm |
|---------|-------------|-------|

PAC-2:

| | | |
|---------|-------------|--------|
| 64-18-6 | formic acid | 25 ppm |
|---------|-------------|--------|

PAC-3:

| | | |
|---------|-------------|---------|
| 64-18-6 | formic acid | 250 ppm |
|---------|-------------|---------|

7 Handling and Storage

Handling:**Precautions for safe handling:** No special precautions are necessary if used correctly.**Information about protection against explosions and fires:** No special measures required.**Conditions for safe storage, including any incompatibilities****Storage:****Requirements to be met by storerooms and receptacles:** No special requirements.**Information about storage in one common storage facility:** Not required.**Further information about storage conditions:** Keep receptacle tightly sealed.**Specific end use(s):** No further relevant information available.

8 Exposure Controls/Personal Protection

Additional information about design of technical systems: No further data; see item 7.**Control parameters****Components with limit values that require monitoring at the workplace:****64-18-6 formic acid**

| | |
|-----|--|
| PEL | Long-term value: 9 mg/m ³ , 5 ppm |
| REL | Long-term value: 9 mg/m ³ , 5 ppm |

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| | |
|-----|---|
| TLV | Short-term value: 19 mg/m ³ , 10 ppm Long-term value: 9.4 mg/m ³ , 5 ppm |
|-----|---|

Additional information: The lists that were valid during the creation were used as basis.

Exposure controls:**Personal protective equipment:****General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.

Avoid contact with the eyes.

Avoid contact with the eyes and skin.

Breathing equipment: Not required.

Protection of hands:

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves:

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Penetration time of glove material:

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection: Tightly sealed goggles

9 Physical and Chemical Properties

Information on basic physical and chemical properties

General Information**Appearance**

| | |
|------------------------|-----------------|
| Form: | Liquid |
| Color: | Colorless |
| Odor: | Acidic |
| Odor threshold: | Not determined. |

pH-value: Not determined.

Change in condition

| | |
|-------------------------------------|---------------|
| Melting point/Melting range: | Undetermined. |
| Boiling point/Boiling range: | Undetermined. |

Flash point: Not applicable.

Flammability (solid, gaseous): Not applicable.

Ignition temperature: 520 °C (968 °F)

Decomposition temperature: Not determined.

Auto igniting: Product is not selfigniting.

Danger of explosion: Product does not present an explosion hazard.

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| | |
|---|--|
| Explosion limits: | |
| Lower: | 14 Vol % |
| Upper: | 33 Vol % |
| Vapor pressure at 20 °C (68 °F): | 43 hPa (32.3 mm Hg) |
| Density: | Not determined. |
| Relative density: | Not determined. |
| Vapour density: | Not determined. |
| Evaporation rate: | Not determined. |
| Solubility in / Miscibility with Water: | Fully miscible. |
| Partition coefficient (n-octanol/water): | Not determined. |
| Dynamic: | Not determined. |
| Kinematic: | Not determined. |
| Other information: | No further relevant information available. |

10 Stability and Reactivity

Reactivity: No further relevant information available.

Chemical stability:

Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.

Possibility of hazardous reactions: No dangerous reactions known.

Conditions to avoid: No further relevant information available.

Incompatible materials: No further relevant information available.

Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicology Information

Information on toxicological effects

Acute toxicity:

LD/LC50 values that are relevant for classification:

64-18-6 formic acid

| | |
|-----------|-------------------|
| Oral LD50 | 1,100 mg/kg (rat) |
|-----------|-------------------|

Primary irritant effect:

On the skin: Caustic effect on skin and mucous membranes.

On the eye:

Strong caustic effect.

Strong irritant with the danger of severe eye injury.

Sensitization: No sensitizing effects known.

Additional toxicological information:

The product shows the following dangers according to internally approved calculation methods for preparations:

Corrosive

Irritant

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

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Carcinogenic categories

| |
|--|
| IARC (International Agency for Research on Cancer) |
| None of the ingredients are listed. |
| NTP (National Toxicology Program) |
| None of the ingredients are listed. |
| OSHA-Ca (Occupational Safety & Health Administration) |
| None of the ingredients are listed. |

12 Ecological Information

Toxicity:
Aquatic toxicity: No further relevant information available.

Persistence and degradability: No further relevant information available.

Behavior in environmental systems:
Bioaccumulative potential: No further relevant information available.

Mobility in soil: No further relevant information available.

Additional ecological information:
General notes: Must not reach bodies of water or drainage ditch undiluted or unneutralized.

Results of PBT and vPvB assessment
PBT: Not applicable.

vPvB: Not applicable.


Other adverse effects: No further relevant information available.

13 Disposal Considerations

Uncleaned packagings:
Recommendation: Disposal must be made according to official regulations.

Recommended cleansing agent: Water, if necessary with cleansing agents.

14 Transport Information

| | |
|---|--|
| UN-Number DOT, ADR, IMDG, IATA | UN3412 |
| UN proper shipping name DOT ADR IMDG, IATA | Formic acid mixture 3412 Formic acid mixture FORMIC ACID mixture |
| Transport hazard class(es) DOT | |
|  | |
| Class | 8 Corrosive substances |


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| | |
|---|---|
| Label | 8 |
| ADR, IMDG, IATA | |
|  | |
| Class Label | 8 Corrosive substances 8 |
| Packing group DOT, ADR, IMDG, IATA | II |
| Environmental hazards | Not applicable. |
| Special precautions for user: | Warning: Corrosive substances |
| Danger code (Kemler): | 80 |
| EMS Number: | F-A,S-B |
| Segregation groups | Acids, acids |
| Stowage Category | A |
| Stowage Code | SW2 Clear of living quarters. |
| Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: | Not applicable. |
| Transport/Additional information: | |
| DOT | |
| Quantity limitations | On passenger aircraft/rail: 1 L On cargo aircraft only: 30 L |
| ADR | |
| Excepted quantities (EQ) | Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml |
| IMDG | |
| Limited quantities (LQ) | 1L |
| Excepted quantities (EQ) | Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml |
| UN "Model Regulation": | UN 3412 FORMIC ACID MIXTURE, 8, II |

15 Regulatory Information

Safety, health and environmental regulations/legislation specific for the substance or mixture
SARA

Section 355 (extremely hazardous substances):

None of the ingredients are listed.

Section 313 (Specific toxic chemical listings):

64-18-6 | formic acid

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TSCA (Toxic Substances Control Act):

64-18-6 formic acid

7732-18-5 water, distilled, conductivity or of similar purity

TSCA new (21st Century Act) (Substances not listed)**Proposition 65****Chemicals known to cause cancer:**

None of the ingredients is listed.

Chemicals known to cause reproductive toxicity for females:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for males:

None of the ingredients are listed.

Chemicals known to cause developmental toxicity:

None of the ingredients are listed.

Carcinogenic categories**EPA (Environmental Protection Agency)**

None of the ingredients are listed.

TLV (Threshold Limit Value established by ACGIH)

None of the ingredients are listed.

NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients are listed.

GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).**Hazard pictograms**

GHS05

Signal word Danger**Hazard-determining components of labeling:**

formic acid

Hazard statements

Causes severe skin burns and eye damage.

Precautionary statements

Do not breathe dusts or mists.

Wash thoroughly after handling.

Wear protective gloves/protective clothing/eye protection/face protection.

If swallowed: Rinse mouth. Do NOT induce vomiting.

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Immediately call a poison center/doctor.

Specific treatment (see on this label).

Wash contaminated clothing before reuse.

Store locked up.

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Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other Information

This information contained herein is believed to be accurate but is not warranted to be so. Data and calculations are based on information furnished by the manufacturer of the product and manufacturers of the components of the product. Users are advised to confirm in advance of need that information is current, applicable and suited to the circumstances of use. Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Furthermore, vendor assumes no responsibility for injury caused by abnormal use of the material even if reasonable safety procedures are followed. Any questions regarding this product should be directed to the manufacturer of the product as described in Section 1.

Department issuing SDS: Regulatory Department

Contact: Phone (800) 860-4073

Date of preparation / last revision 01/25/2018 / -

Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

Skin Corr. 1B: Skin corrosion/irritation – Category 1B

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

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