



SAFETY DATA SHEET

DIE SPACER (*Gold*)

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT DESCRIPTION: DVA Die Spacer - Gold

Date Revised: June, 2015

MANUFACTURER

Dental Ventures of America, Inc.
1787 Pomona Rd., Suite C
Corona, 92880, CA.

Emergency Contact: Infotrack: 800.535.5053

Emergency Phone: 951.270.0606

Alternative Emergency Phone: 800.228.6696

USE OR APPLICATION:

The application of die spacer results in additional space between the finished restoration and the natural tooth surface to accommodate the cement used for bonding the restoration.

USES ADVISED AGAINST: Not known.

2. HAZARD(S) IDENTIFICATION

GHS CLASSIFICATIONS

SIGNAL WORD

DANGER

GHS LABEL ELEMENTS

Using the Toxicity Data listed in Section 11 and 12 the product is labeled as follows:



Classification of the substance or mixture

Flam. Liq. 2; H225	Highly flammable liquid and vapor.
Eye Irrit.2; H319	Causes serious eye irritation.
Skin Sens. 1; H317	May cause an allergic skin reaction
Repr. 2; H361D	Suspected of damaging the unborn child.
STOT SE 3; H336	May cause drowsiness or dizziness.
Aquatic Acute 1;H400	Very toxic to aquatic life
Aquatic Chronic 2; H411	Toxic to aquatic life with long lasting effects.



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HAZARD STATEMENTS

- H225 Highly flammable liquid and vapor.
- H317 May cause an allergic skin reaction.
- H319 Causes serious eye irritation.
- H336 May cause drowsiness and dizziness.
- H361d Suspected of damaging the unborn child.
- H400 Very toxic to aquatic life.
- H411 Toxic to aquatic life with long lasting effects.

[Prevention]:

- P201 Obtain special instructions before use.
- P202 Do not handle until all safety precautions have been read and understood.
- P210 Keep away from heat / sparks / open flames / hot surfaces - No smoking.
- P235 Keep cool.
- P240 Ground / bond container and receiving equipment.
- P241 Use explosion-proof electrical / ventilating / light / equipment.
- P242 Use only non-sparking tools.
- P243 Take precautionary measures against static discharge.
- P261 Avoid breathing dust / fume / gas / mist / vapors / spray.
- P264 Wash thoroughly after handling.
- P271 Use only outdoors or in a well-ventilated area.
- P272 Contaminated work clothing should not be allowed out of the workplace.
- P273 Avoid release to the environment.
- P280 Wear protective gloves / eye protection / face protection.
- P302+352 IF ON SKIN: Wash with plenty of soap and water.
- P303+361+353 IF ON SKIN (or hair): Remove / Take off immediately all contaminated clothing. Rinse skin with water / shower.
- P304+312 IF INHALED: Call a POISON CENTER or doctor / physician if you feel unwell.
- P305+351+338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing.
- P308+313 IF exposed or concerned: Get medical advice / attention.
- P321 Specific treatment (see information on this label).
- P333+313 If skin irritation or a rash occurs: Get medical advice / attention.
- P337+313 If eye irritation persists: Get medical advice / attention.
- P340 Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- P363 Wash contaminated clothing before reuse.
- P370+378 In case of fire: Use extinguishing media listed in section 5 of SDS for extinction.
- P391 Collect spillage.

[Storage & Disposal]

- P403+233 Store in a well ventilated place. Keep container tightly closed.
- P405 Store locked up.
- P501 Dispose of contents/container in accordance with local/national regulations.

3. COMPOSITION /INFORMATION ON INGREDIENTS

This product contains the following substances that present a hazard within the meaning of the relevant State and Federal Hazardous Substances regulations.

Ingredient/Chemical Designations	Weight %	GHS Classification	Notes
Butanone CAS Number: 0000078-93-3	50 - 75	Flam. Liq. 2;H225 Eye Irrit. 2;H319 STOT SE 3;H336	[1][2]
Copper CAS Number: 0007440-50-8	10 - 25	Not Classified	[1][2]
Zinc powder (stabilized) CAS Number: 0007440-66-6	1.0 - 10	Aquatic Acute 1;H400 Aquatic Chronic 1;H410	[1]
Toluene CAS Number: 0000108-88-3	0.10 - 1.0	Flam. Liq. 2;H225 Repr. 2;H361 Asp. Tox. 1;H304 STOT RE 2;H373 Skin Irrit. 2;H315 STOT SE 3;H336	[1][2]
Methyl methacrylate CAS Number: 0000080-62-6	0.10 - 1.0	Flam. Liq. 2;H225 STOT SE 3;H335 Skin Irrit. 2;H315 Skin Sens. 1;H317	[1][2]

In accordance with paragraph (i) of §1910.1200, the specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

[1] Substance classified with a health or environmental hazard.

[2] Substance with a workplace exposure limit.

[3] PBT-substance or vPvB-substance.

*The full texts of the phrases are shown in Section 16.

4. FIRST-AID MEASURES

General In all cases of doubt, or when symptoms persist, seek medical attention.
Never give anything by mouth to an unconscious person.

Inhalation Remove to fresh air, keep patient warm and at rest. If breathing is irregular or stopped, give artificial respiration. If unconscious place in the recovery position and obtain immediate medical attention. Give nothing by mouth.

Eyes Irrigate copiously with clean water for at least 15 minutes, holding the eyelids apart and seek medical attention.



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- Skin** Remove contaminated clothing. Wash skin thoroughly with soap and water or use a recognized skin cleanser.
- Ingestion** If swallowed obtain immediate medical attention. Keep at rest. Do NOT induce vomiting.

Most important symptoms and effects, both acute and delayed

Overview

INHALATION/INGESTION: Solvent vapor or mist can cause headache, nausea, dizziness, uncoordination, stupor, irritation of nose, throat, lungs. Irritation of digestive tract. Nervous system depression (fatigue, drowsiness, dizziness).

SKIN/EYES: Burning, tearing, redness and swelling of eyes, transient corneal injury, drying and cracking of skin.

Medical Conditions - Generally Aggravated by Exposure:

Copper/Zinc alloy powder - pre-existing skin disorders, respiration, liver, kidney & Wilson's disease.

Exposure to solvent vapor concentrations from the component solvents in excess of the stated occupational exposure limits may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Symptoms include headache, nausea, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness.

Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in dryness, irritation and possible non-allergic contact dermatitis. Solvents may also be absorbed through the skin. Splashes of liquid in the eyes may cause irritation and soreness with possible reversible damage. See section 2 for further details.

- Inhalation** May cause drowsiness or dizziness.
- Eyes** Causes serious eye irritation.
- Skin** May cause an allergic skin reaction.

5. FIRE-FIGHTING MEASURES

Extinguishing media

Recommended extinguishing media; alcohol resistant foam, CO₂, powder, water spray.
Do not use: water jet.

Special hazards arising from the substance or mixture

Hazardous decomposition:

Hydrogen Gas, CuO, ZnO

Keep away from heat / sparks / open flames / hot surfaces - No smoking. Keep cool.

Ground / bond container and receiving equipment.

Use explosion-proof electrical / ventilating / light / equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Avoid breathing dust / fume / gas / mist / vapors / spray.



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Advice for fire-fighters

Special Fire Fighting Procedures:

Wear self-contained breathing apparatus (pressure-demand, MSHA/NIOSH-approved or equivalent) and full protective gear. Use water spray to cool containers. Do not use water on open flame. Dike fire area gently with fine, dry sand to extinguish fire. Do not use halogenated hydrocarbon extinguishing agents.

Unusual Fire and Explosion Hazards:

Vapors can travel to a source of ignition and flash back. Material can form explosive vapors with air. Avoid contact with water.

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6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Put on appropriate personal protective equipment (see section 8).

Environmental precautions

Do not allow spills to enter drains or waterways.

Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet.

Promptly remove soiled clothing and wash thoroughly before reuse.

Methods and material for containment and cleaning up

Personal Precautions:

Appropriate protective equipment must be worn for handling spill, see Section 8. If exposed to material, see Section 6.

Environmental Precautions:

Warning - Keep spills and cleaning runoffs out of municipal sewers and open bodies of water.

Waste Disposal Method:

Spill Clean up: Eliminate all ignition sources. Evacuate personnel to safe areas. Ventilate the area. Floor may be slippery, use caution. Soak up with inert absorbent material (Paper towel, sand, silica gel, sawdust). Avoid breathing vapor. Wear MSHA/NIOSH approved respirator.

Note: Spills on porous surfaces can contaminate ground water.

NORMAL DISPOSAL:

Waste Classification:

Methyl Ethyl Ketone (78-93-3), 40 CFR 261.20-.24. For discard, this is classified as a hazardous waste with the characteristic of ignitability and toxicity. RCRA #D001. Reportable quantity is 100 lbs.(40 CFR 302) Incinerate liquid and contaminated solids in accordance with local, state, and federal regulations. (See 40 CFR 268). For small quantity spills, allow solvent in paper towel to evaporate in well ventilated areas or outdoors (preferred).

CONTAMINATED PACKAGING: Empty containers should be taken for local recycling or waste disposal.



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7. HANDLING AND STORAGE

Precautions for safe handling

See section 2 for further details. - [Prevention]:

Conditions for safe storage, including any incompatibilities

Handle containers carefully to prevent damage and spillage.

Incompatible materials: Water, acids, alkalis, chlorinated solvents

Precautions to Be Taken in Handling and Storing:

Limit storage of flammable material to approved areas. Keep properly ventilated. Ground all containers when transferring material. Store bottles away from heat. Keep away from open flame of bunsen burner or furnace. Keep containers tightly sealed. Periodically clean neck of bottle of resin build up (clean inside of cap) to maintain proper seal. Do not smoke when using. Avoid storing near acids, chlorinated solvents. Add thinner as needed, to keep proper thinness of material.

Other Precautions: Storage Temp:

60C/140F min. STEL: 125 ppm MEK. CONTAINERS MAY BE HAZARDOUS WHEN EMPTY.

Emptied containers contain residue. Follow all MSDS and labels. Keep away from spark.

See section 2 for further details. - [Storage]:

Specific end use(s): No data available.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure

CAS No.	Ingredient	Source	Value
0000078-93-3	Butanone	OSHA	TWA 200 ppm (590 mg/m ³)
		ACGIH	TWA: 50 ppm STEL: 100 ppm
		NIOSH	TWA 200 ppm (590 mg/m ³) ST 300 ppm (885 mg/m ³)
		Supplier	No Established Limit
0000080-62-6	Methyl methacrylate	OSHA	TWA 100 ppm (410 mg/m ³)
		ACGIH	TWA: 50 ppm STEL: 100 ppm S
		NIOSH	TWA 100 ppm (410 mg/m ³)
		Supplier	No Established Limit
0000108-88-3	Toluene	OSHA	TWA 200 ppm C 300 ppm 500 ppm (10-minute maximum peak) STEL 150 ppm
		ACGIH	TWA: 20 ppmR
		NIOSH	TWA 100 ppm (375 mg/m ³) ST 150 ppm (560 mg/m ³)
		Supplier	No Established Limit



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Exposure CAS No.	Ingredient	Source	Value
0007440-50-8	Copper	OSHA	TWA 1 mg/m ³ [*Note: The PEL also applies to other copper compounds (as Cu) except copper fume.]
(dusts)		ACGIH	TWA: 0.2 mg/m ³ (fume) 1 mg/m ³ and mists)
		NIOSH	TWA 1 mg/m ³ [*Note: The REL also applies to other copper compounds (as Cu) except Copper fume.]
0007440-66-6	Zinc powder (stabilized)	Supplier	No Established Limit
		OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	No Established Limit
		Supplier	No Established Limit

Carcinogen Data

CAS No.	Ingredient	Source	Value
0000078-93-3	Butanone	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;
0000080-62-6	Methyl methacrylate	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: Yes; Group 4: No;
0000108-88-3	Toluene	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: Yes; Group 4: No;
0007440-50-8	Copper	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;
0007440-66-6	Zinc powder (stabilized)	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;



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Exposure controls

Respiratory

If workers are exposed to concentrations above the exposure limit they must use the appropriate, certified respirators.

Eyes

Chemical-resistant goggles

Skin

Use chemical-resistant apron or other impervious clothing, and rubber boots if necessary, to avoid contaminating regular clothing and shoes and to prevent skin contact. Chemical resistant gloves.

Engineering Controls

Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and any vapor below occupational exposure limits suitable respiratory protection must be worn.

Other Work Practices Use good personal hygiene practices.

Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

See section 2 for further details. - [Prevention]:

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Gold Liquid
Odor	sweet/sharp odor
Odor threshold	Not determined
pH	Not Measured
Melting point / freezing point	-86/-123 F initial
Initial boiling point and boiling range	80 C/176 F initial
Flash Point	-4 C/25 F (SFCC)
Evaporation rate (Ether = 1)	> 1 (Butyl Acetate = 1)
Flammability (solid, gas)	Not Applicable
Upper/lower flammability or explosive limits	Lower Explosive Limit: 1.8 est Upper Explosive Limit: 11.5 est
Vapor pressure (Pa)	70 mmHg est. 20 C/68 F
Vapor Density	> 1
Specific Gravity	0.95 (H ₂ O = 1)
Solubility in Water	Slight
Partition coefficient n-octanol/water (Log Kow)	Not Measured
Auto-ignition temperature	516 C/961 F
Decomposition temperature	Not Measured
Viscosity (cSt)	400 cPs max
% Volatile	> 65%

10. STABILITY AND REACTIVITY

Reactivity	Hazardous Polymerization will not occur.
Chemical stability	Stable under normal circumstances.
Possibility of hazardous reactions	No data available.
Conditions to avoid	Avoid contact with water, mineral acids, chlorinated solvents
Incompatible materials	Water, acids, alkalis, chlorinated solvents
Hazardous decomposition products	Hydrogren Gas, CuO, ZnO

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Exposure to solvent vapor concentrations from the component solvents in excess of the stated occupational exposure limits may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Symptoms include headache, nausea, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness.

Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in dryness, irritation and possible non-allergic contact dermatitis. Solvents may also be absorbed through the skin. Splashes of liquid in the eyes may cause irritation and soreness with possible reversible damage.

Copper dust and mists: Can cause irritation of eyes, mucous membranes, skin and respiratory tract.

Chronic overexposures: Can cause reduction in the number of red blood cells (anemia), skin abnormalities (pigmentation changes) and hair discoloration.

Copper fume: Can cause irritation of eyes, mucous membranes and respiratory tract.

Acute overexposures: Can cause nausea, fever, chills, shortness of breath and malaise (metal fume fever).

Wilson's disease may be affected by copper exposure.

Ingredient	Oral LD50 mg/kg	Skin LD50 mg/kg	Inhalation Vapor LC50, mg/L/4hr	Inhalation Dust/Mist mg/L/4hr	Inhalation Gas LC50, ppm
Butanone - (78-93-3)	2,737.00, Rat-Cat. 5	6,480.00, Rabbit Category:NA	32.00, Mouse Category: NA	No data	No data
Copper - (7440-50-8)	2,500.00, Category 5	>2,000.00, Rat Category 5	No data No Data	5.11, Rat Category:NA	No data available No data available
Zinc powder (stabilized) - (7440-66-6)	No data	No data	No data	No data	No data
Toluene - (108-88-3)	636.00, Rat Cat.: 4	8,400.00, Rabbit, Cat:NA	No data No data	No data No data	No data No data
Methyl methacrylate - (80-62-6)	5,000.00, Rat, Cat. 5	5,000.00, Rabbit, Cat. 5	29.80, Rat Rat, Cat. NA	No data No data	No data No data



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Note: When no route specific LD50 data is available for an acute toxin, the converted acute toxicity point estimate was used in the calculation of the product's ATE (Acute Toxicity Estimate).

Classification	Category	Hazard Description
Acute toxicity (oral)	---	Not Applicable
Acute toxicity (dermal)	---	Not Applicable
Acute toxicity (inhalation)	---	Not Applicable
Skin corrosion/irritation	---	Not Applicable
Serious eye damage/irritation	2	Causes serious eye irritation.
Respiratory sensitization	---	Not Applicable
Skin sensitization	1	May cause an allergic skin reaction.
Germ cell mutagenicity	---	Not Applicable
Carcinogenicity	---	Not Applicable
Reproductive toxicity	2	Suspected of damaging the unborn child.
STOT-single exposure	3	May cause drowsiness or dizziness.
STOT-single exposure	---	Not Applicable
STOT-repeated exposure	---	Not Applicable
Aspiration hazard	---	Not Applicable

12. ECOLOGICAL INFORMATION

Toxicity

Very toxic to aquatic life.

Toxic to aquatic life with long lasting effects.

No additional information provided for this product. See Section 3 for chemical specific data.

Aquatic Ecotoxicity

Data available upon request.

Persistence and degradability

There is no data available on the preparation itself.

Bioaccumulative potential

Not Measured

Mobility in soil

No data available.

Results of PBT and vPvB assessment

This product contains no PBT/vPvB chemicals.

Other adverse effects

No data available.



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13. DISPOSAL CONSIDERATIONS

Observe all federal, state and local regulations when disposing of this substance.

14. TRANSPORT INFORMATION

	DOT (Domestic Surface Transportation)	IMO / IMDG (Ocean Transportation)	ICAO/IATA
UN number	UN1993	UN1993	UN1993
UN proper shipping name	Flammable liquids, n.o.s., (Ethyl Methyl Ketone)		Flammable liquids, n.o.s., (Ethyl Methyl Ketone)
Transport hazard class(es)	DOT Hazard Class: 3		IMDG: 3
Sub Class: Not Applicable	Air Class: 3		
Packing group	II	II	II
Environmental hazards			
IMDG Marine Pollutant:	Yes (Zinc powder (stabilized))		
Special precautions for user	No further information		

15. REGULATORY INFORMATION

Regulatory Overview

The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented.

Toxic Substance Control Act (TSCA) All components of this material are either listed or exempt from listing on the TSCA Inventory.

WHMIS Classification B2 D2A
 US EPA Tier II Hazards Fire: Yes
 Sudden Release of Pressure: No
 Reactive: No
 Immediate (Acute): Yes
 Delayed (Chronic): No

EPCRA 311/312 Chemicals and RQs (lbs):
 Butanone (5,000.00)
 Copper (5,000.00)
 Zinc powder (stabilized) (1,000.00)

EPCRA 302 Extremely Hazardous:

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

EPCRA 313 Toxic Chemicals:



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Copper

Zinc powder (stabilized)

Proposition 65 - Carcinogens (>0.0%):

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65 - Developmental Toxins (>0.0%):

Toluene

Proposition 65 - Female Repro Toxins (>0.0%):

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65 - Male Repro Toxins (>0.0%):

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

New Jersey RTK Substances (>1%):

Butanone

Copper

Zinc powder (stabilized)

Pennsylvania RTK Substances (>1%):

Butanone

Copper

Zinc powder (stabilized)

16. OTHER INFORMATION

The full text of the phrases appearing in section 3 is:

H225 Highly flammable liquid and vapor.

H304 May be fatal if swallowed and enters airways.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

H336 May cause drowsiness and dizziness.

H361d Suspected of damaging the unborn child.

H373 May cause damage to organs through prolonged or repeated exposure.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

This is the first version in the GHS SDS format. Listings of changes from previous versions in other formats are not applicable.

DATE PREPARED: June 2015

SUPERSEDES MSDS: 2006

MANUFACTURER DISCLAIMER:

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