

SECTION 1: Identification

1.1. Identification

Product form : Mixture
Product name : SURFACE BONDER ZERO

1.2. Recommended use and restrictions on use

Use of the substance/mixture : Adhesives, sealants
Restrictions on use : No additional information available

1.3. Supplier

Supplier

Integra Adhesives
600 Ellis Road
Durham, NC 27703 - USA
T 1-919-598-2400
www.integra-adhesives.com

1.4. Emergency telephone number

Emergency number : Transportation and Medical: CHEMTEL Tel. 800-255-3924; +1 813-248-0585 (International)

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS classification

Flammable liquids, Category 2	H225 Highly flammable liquid and vapour.
Acute toxicity (oral), Category 4	H302 Harmful if swallowed.
Skin corrosion/irritation, Category 2	H315 Causes skin irritation.
Skin sensitisation, Category 1	H317 May cause an allergic skin reaction.
Reproductive toxicity, Category 1B	H360 May damage fertility or the unborn child.
Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation	H335 May cause respiratory irritation.

Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements

GHS-US labelling

Hazard pictograms (GHS) :



Signal word (GHS) : Danger

Hazard statements (GHS US) :

- H225 - Highly flammable liquid and vapour.
- H302 - Harmful if swallowed.
- H315 - Causes skin irritation.
- H317 - May cause an allergic skin reaction.
- H335 - May cause respiratory irritation.
- H360 - May damage fertility or the unborn child.

Precautionary statements (GHS) :

- P201 - Obtain special instructions before use.
- P202 - Do not handle until all safety precautions have been read and understood.
- P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P233 - Keep container tightly closed.
- P240 - Ground/bond container and receiving equipment
- P241 - Use explosion-proof electrical/ventilating/lighting equipment.
- P242 - Use only non-sparking tools.
- P243 - Take precautionary measures against static discharge.
- P261 - Avoid breathing mist, spray, vapours.
- P264 - Wash hands, forearms and face thoroughly after handling.
- P270 - Do not eat, drink or smoke when using this product.
- P271 - Use only outdoors or in a well-ventilated area.
- P272 - Contaminated work clothing must not be allowed out of the workplace.

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P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P301+P312 - If swallowed: Call a poison center or doctor if you feel unwell.
P302+P352 - If on skin: Wash with plenty of water.
P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing.
P308+P313 - If exposed or concerned: Get medical advice/attention.
P312 - Call a poison center/doctor if you feel unwell.
P321 - Specific treatment (see supplemental first aid instruction on this label).
P330 - Rinse mouth.
P332+P313 - If skin irritation occurs: Get medical advice/attention.
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.
P362+P364 - Take off contaminated clothing and wash it before reuse.
P363 - Wash contaminated clothing before reuse.
P370+P378 - In case of fire: Use media other than water to extinguish.
P403+P233 - Store in a well-ventilated place. Keep container tightly closed.
P403+P235 - Store in a well-ventilated place. Keep cool.
P405 - Store locked up.
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS_US)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	% (w/w)	GHS classification
Methyl methacrylate	(CAS-No.) 80-62-6	45 - 55	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Skin Sens. 1, H317 STOT SE 3, H335
DICYCLOHEXYL PHTHALATE	(CAS-No.) 84-61-7	0.1 - 0.5	Skin Sens. 1, H317 Repr. 1B, H360
1,1'-(P-TOLYLIMINO)DIPROPAN-2-OL	(CAS-No.) 38668-48-3	0.1 - 0.5	Acute Tox. 2 (Oral), H300 Eye Irrit. 2A, H319 Aquatic Chronic 3, H412
DIBENZOYL PEROXIDE	(CAS-No.) 94-36-0	0.1 - 0.5	Org. Perox. B, H241 Eye Irrit. 2, H319 Skin Sens. 1, H317
Pentaerythritol tetrakis(3-mercaptopropionate)	(CAS-No.) 7575-23-7	0.1 - 0.2	Acute Tox. 4 (Oral), H302 Skin Sens. 1A, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Drometizole	(CAS-No.) 2440-22-4	0.1 - 0.2	Skin Sens. 1, H317 Aquatic Chronic 1, H410

*Chemical name, CAS number and/or exact concentration have been withheld as a trade secret

Full text of hazard classes and H-statements : see section 16

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general	: Never give anything by mouth to an unconscious person. IF exposed or concerned: Get medical advice/attention.
First-aid measures after inhalation	: If inhaled and if breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.
First-aid measures after skin contact	: Take off immediately all contaminated clothing. Wash skin thoroughly with mild soap and water. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical advice/attention.
First-aid measures after eye contact	: Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persists.

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First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Call a POISON CENTER/doctor if you feel unwell.

4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects : May damage fertility or the unborn child.
Symptoms/effects after inhalation : May cause respiratory irritation.
Symptoms/effects after skin contact : Causes skin irritation. May cause an allergic skin reaction.
Symptoms/effects after ingestion : Swallowing a small quantity of this material will result in serious health hazard. Harmful if swallowed.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.
Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

Fire hazard : Highly flammable liquid and vapour. Flammable vapours may accumulate in the container. Heavier than air, vapours may travel long distances along ground, ignite and flash back to source.
Explosion hazard : May form flammable/explosive vapour-air mixture. Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns and injuries.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment.
Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection. Wear a self contained breathing apparatus. Wear fire/flamm resistant/retardant clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Remove ignition sources. Use special care to avoid static electric charges. No open flames. No smoking. Do not breathe vapour. Do not get in eyes, on skin, or on clothing. Do not handle until all safety precautions have been read and understood.

6.1.1. For non-emergency personnel

Protective equipment : Refer to section 8.2.
Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Refer to section 8.2.
Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters.

6.3. Methods and material for containment and cleaning up

For containment : Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.
Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : Handle empty containers with care because residual vapours are flammable.
Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour. No open flames. No smoking. Use only non-sparking tools. Do not breathe vapours. Do not handle until all safety precautions have been read and understood. Obtain special

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Hygiene measures : instructions before use. Use only outdoors or in a well-ventilated area. Do not get in eyes, on skin, or on clothing.
: Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep only in the original container. Keep in fireproof place. Keep container tightly closed.
Incompatible products : Strong acids. Strong oxidizers.
Incompatible materials : Sources of ignition. Direct sunlight. Heat sources.
Storage area : Store in dry, cool, well-ventilated area.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

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No additional information available	
Methyl methacrylate (80-62-6)	
USA - ACGIH - Occupational Exposure Limits	
Local name	Methyl methacrylate
ACGIH TWA (mg/m ³)	205 mg/m ³
ACGIH TWA (ppm)	50 ppm
ACGIH STEL (mg/m ³)	410 mg/m ³
ACGIH STEL (ppm)	100 ppm
Remark (ACGIH)	TLV® Basis: URT & eye irr; body weight eff; pulm edema. Notations: DSEN; A4 (Not classifiable as a Human Carcinogen)
Regulatory reference	ACGIH 2020
USA - OSHA - Occupational Exposure Limits	
Local name	Methyl methacrylate
OSHA PEL (TWA) (mg/m ³)	410 mg/m ³
OSHA PEL (TWA) (ppm)	100 ppm
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1
USA - NIOSH - Occupational Exposure Limits	
NIOSH REL (TWA) (mg/m ³)	410 mg/m ³
NIOSH REL (TWA) (ppm)	100 ppm
Pentaerythritol tetrakis(3-mercaptopropionate) (7575-23-7)	
No additional information available	
1,1'-(P-TOLYLIMINO)DIPROPAN-2-OL (38668-48-3)	
No additional information available	
Drometrizole (2440-22-4)	
No additional information available	
DICYCLOHEXYL PHTHALATE (84-61-7)	
No additional information available	
DIBENZOYL PEROXIDE (94-36-0)	
USA - ACGIH - Occupational Exposure Limits	
Local name	Benzoyl peroxide
ACGIH TWA (mg/m ³)	5 mg/m ³
Remark (ACGIH)	TLV® Basis: URT & skin irr. Notations: A4 (Not classifiable as a Human Carcinogen)
Regulatory reference	ACGIH 2020
USA - OSHA - Occupational Exposure Limits	
Local name	Benzoyl peroxide
OSHA PEL (TWA) (mg/m ³)	5 mg/m ³
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1
USA - NIOSH - Occupational Exposure Limits	
NIOSH REL (TWA) (mg/m ³)	5 mg/m ³

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8.2. Appropriate engineering controls

Appropriate engineering controls

: Avoid creating mist or spray. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Avoid splashing. Ensure good ventilation of the work station. Provide local exhaust or general room ventilation.

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

Avoid all unnecessary exposure.

Hand protection:

Wear suitable gloves resistant to chemical penetration. nitrile rubber gloves. natural rubber gloves. Minimum glove thickness: >3 mm. Butyl rubber gloves

Eye protection:

Safety glasses

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

In case of inadequate ventilation wear respiratory protection. Wear a self contained breathing apparatus

Other information:

Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: No data available
Odour	: No data available
Odour threshold	: No data available
pH	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: 101 °C
Flash point	: 10 °C
Relative evaporation rate (butylacetate=1)	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Solubility	: No data available
Log Pow	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive limits	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available

9.2. Other information

No additional information available

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SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reactions known.

10.2. Chemical stability

Highly flammable liquid and vapour. May form flammable/explosive vapour-air mixture.

10.3. Possibility of hazardous reactions

Hazardous Polymerization may occur.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures. Open flame.

10.5. Incompatible materials

Strong acids. Strong oxidizers.

10.6. Hazardous decomposition products

Carbon monoxide. Carbon dioxide. May release flammable gases.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Harmful if swallowed.

Acute toxicity (dermal) : Not classified

Acute toxicity (inhalation) : Not classified

ATE (oral)	1282.083 mg/kg bodyweight
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Methyl methacrylate (80-62-6)

LD50 oral rat	7900 – 9400 mg/kg
LD50 dermal rabbit	> 5000 mg/kg
ATE (oral)	7900 mg/kg bodyweight
ATE (dust,mist)	29.8 mg/l/4h

Pentaerythritol tetrakis(3-mercaptopropionate) (7575-23-7)

LC50 inhalation rat (mg/l)	> 3363 mg/m ³ 4 h
ATE (oral)	500 mg/kg bodyweight

1,1'-(P-TOLYLIMINO)DIPROPAN-2-OL (38668-48-3)

ATE (oral)	5 mg/kg bodyweight
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Drometrizole (2440-22-4)

LD50 oral rat	10000 mg/kg
LD50 dermal rat	> 2000 mg/kg
LC50 inhalation rat (mg/l)	> 590 mg/m ³
ATE (oral)	10000 mg/kg bodyweight

DIBENZOYL PEROXIDE (94-36-0)

LD50 oral rat	> 5000 mg/kg bodyweight
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Skin corrosion/irritation : Causes skin irritation.

Serious eye damage/irritation : Not classified

Respiratory or skin sensitisation : May cause an allergic skin reaction.

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Methyl methacrylate (80-62-6)

IARC group	3 - Not classifiable
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Drometrizole (2440-22-4)

NOAEL (chronic, oral, animal/male, 2 years)	100 mg/kg bodyweight
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DIBENZOYL PEROXIDE (94-36-0)

IARC group	3 - Not classifiable
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Reproductive toxicity : May damage fertility or the unborn child.

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STOT-single exposure : May cause respiratory irritation.

Methyl methacrylate (80-62-6)

STOT-single exposure : May cause respiratory irritation.

STOT-repeated exposure : Not classified

Aspiration hazard : Not classified

Viscosity, kinematic : No data available

Likely routes of exposure : Inhalation. Skin and eye contact.

Symptoms/effects : May damage fertility or the unborn child.

Symptoms/effects after inhalation : May cause respiratory irritation.

Symptoms/effects after skin contact : Causes skin irritation. May cause an allergic skin reaction.

Symptoms/effects after ingestion : Swallowing a small quantity of this material will result in serious health hazard. Harmful if swallowed.

SECTION 12: Ecological information

12.1. Toxicity

Methyl methacrylate (80-62-6)

LC50 fish 1 : > 79 mg/l 96 h

EC50 crustacea : 69 mg/l 48 h

Pentaerythritol tetrakis(3-mercaptopropionate) (7575-23-7)

LC50 fish 1 : 0.42 mg/l 96 h Oncorhynchus mykiss

EC50 crustacea : > 0.35 mg/l 48 h

LC50 fish 2 : 0.034 mg/l 96 h Oncorhynchus mykiss

Drometrizole (2440-22-4)

LC50 fish 1 : > 0.17 mg/l

EC50 crustacea : > 1000 mg/l

LOEC (chronic) : 0.041 mg/l 21d

NOEC (acute) : 0.17 mg/l

NOEC chronic crustacea : 0.013 mg/l 21d

12.2. Persistence and degradability

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Persistence and degradability : May cause long-term adverse effects in the environment.

Methyl methacrylate (80-62-6)

Persistence and degradability : Readily biodegradable.

BOD (% of ThOD) : 94.3 % ThOD

Pentaerythritol tetrakis(3-mercaptopropionate) (7575-23-7)

Persistence and degradability : Not readily biodegradable.

Biodegradation : 26 % 28 d

Drometrizole (2440-22-4)

Biodegradation : 84.3 % 28 days

12.3. Bioaccumulative potential

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Bioaccumulative potential : Not established.

Methyl methacrylate (80-62-6)

Log Pow : 1.38

Pentaerythritol tetrakis(3-mercaptopropionate) (7575-23-7)

Log Pow : 3.03

Drometrizole (2440-22-4)

BCF fish 2 : ≤ 2000 l/kg

Log Pow : 4.2 @ 25C

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12.4. Mobility in soil

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Ecology - soil	Not established.

12.5. Other adverse effects

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Disposal methods

Sewage disposal recommendations : Do not dispose of waste into sewer.
Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.
Additional information : Handle empty containers with care because residual vapours are flammable.
Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

Transportation of Dangerous Goods

Transport document description : UN 1133 ADHESIVES, 3, II
UN-No. (TDG) : UN 1133
Proper Shipping Name (Transportation of Dangerous Goods) : ADHESIVES
Primary Hazard Classes : 3 - Class 3 - Flammable Liquids
Packing group : II - Medium Danger

Transport by sea

Transport document description (IMDG) : UN 1133 ADHESIVES, 3, II
UN-No. (IMDG) : 1133
Proper Shipping Name (IMDG) : ADHESIVES
Class (IMDG) : 3 - Flammable liquids
Packing group (IMDG) : II - substances presenting medium danger
Limited quantities (IMDG) : 5 L

Air transport

Transport document description (IATA) : UN 1133 ADHESIVES, 3, II
UN-No. (IATA) : 1133
Proper Shipping Name (IATA) : ADHESIVES
Class (IATA) : 3 - Flammable Liquids
Packing group (IATA) : II - Medium Danger

SECTION 15: Regulatory information

CANADA

SURFACE BONDER ZERO	
All ingredients are listed on the Canadian Domestic Substances List (DSL) or Non-Domestic Substances List (NDSL).	

SECTION 16: Other information

Data sources : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006. European Chemicals Agency (ECHA) C&L Inventory database. Accessed at <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>.
Kristen Forsberg and S.Z. Mansdorf, "Quick Selection Guide to Chemical Protective Clothing", Fifth Edition. National Fire Protection Association. Fire Protection Guide to Hazardous Materials; 10th edition. Manufacturer Information. United Nations Economic Commission for Europe: About the GHS. Accessed at http://www.unece.org/trans/danger/publi/ghs/ghs_welcome_e.html. Canadian Centre for Occupational Health and Safety. Accessed at:

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http://www.ccohs.ca/oshanswers/legisl/whmis_classifi.html. WHMIS: The Workplace Hazardous Materials Information System: Canada's national hazard communication standard. Australia Worksafe "Preparation of Safety Data Sheets for Hazardous Chemicals".

Other information

: None.

Full text of H-statements:

H225	Highly flammable liquid and vapour.
H241	Heating may cause a fire or explosion.
H300	Fatal if swallowed.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H360	May damage fertility or the unborn child.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Abbreviations and acronyms:

	ATE: Acute Toxicity Estimate
	CAS (Chemical Abstracts Service) number
	CLP: Classification, Labelling, Packaging.
	EC50: Environmental Concentration associated with a response by 50% of the test population.
	GHS: Globally Harmonized System (of Classification and Labeling of Chemicals).
	European List of Waste (LoW) code
	LD50: Lethal Dose for 50% of the test population
	TWA: Time Weighted Average
	STEL: Short Term Exposure Limits
	PBT: Persistent, Bioaccumulative, Toxic
	WEL: Workplace Exposure Limit
vPvB	Very Persistent and Very Bioaccumulative

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This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.