

Affixit
SDS Preparation Date (dd/mm/yyyy): 16/12/2011

Product code(s): Bonding agents.
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SAFETY DATA SHEET

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

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

Product identifier : **Affixit**
Product Code(s) : Bonding agents.

Relevant identified uses of the substance or mixture and uses advised against

: Cosmetic nail adhesion improvement.
Use pattern: Consumers.

Details of the supplier of the safety data sheet:

Haigh Industries Inc.

106 - 2971 Viking Way
Richmond, British Columbia, Canada
V6V 1Y1

Email: contact.info@akzentz.com

Telephone : 001-604-278-5851

Emergency Telephone Number : 001-352-323-3500 (INFOTRAC - Contract # 103390)

SECTION 2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

Clear liquid. Ester-like odour.

Most important hazards: The preparation is classified as dangerous in accordance with Directive 1999/45/EC. Classification:

F;R11 - Highly flammable.

Xi - Irritant

R36/38 - Irritating to eyes and skin.

R43 - May cause sensitization by skin contact.

R67 - Vapours may cause drowsiness and dizziness.

Label elements



Highly flammable



Irritant

This product is subject to the EEC Directive for Cosmetics, 76/768/EEC, and its National implementations in the European Union. Refer to these regulations for Ingredient disclosure requirements on the label.

R11 - Highly flammable.
R36/38 - Irritating to eyes and skin.
R43 - May cause sensitization by skin contact.
R67 - Vapours may cause drowsiness and dizziness.

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- S 2 - Keep out of the reach of children.
- S24/25 - Avoid contact with skin and eyes.
- S37 - Wear suitable gloves.
- S16 - Keep away from sources of ignition - No smoking.
- S46 - If swallowed, seek medical advice immediately and show this container or label.
- S35 - This material and its container must be disposed of in a safe way.

Other hazards

Other hazards which do not result in classification:

May polymerize when heated or on contact with incompatible materials. Freezing may cause depletion of inhibitor increasing the risk of polymerization. Burning produces obnoxious and toxic fumes. Prolonged or repeated overexposure could cause adverse liver effects. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Mild respiratory irritant.

Environmental precautions:

Avoid release to the environment. See ECOLOGICAL INFORMATION, Section 12. The product should not be allowed to enter drains, water courses or the soil.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances

Not applicable

Mixtures

Chemical nature of the preparation: Mixture - Acrylates; Ester.

The following substances shall be indicated according to legislation:

Chemical name	CAS #	EC No.	Concentration	EU Classification
Ethyl acetate	141-78-6	205-500-4	70.0 - 80.0	F - Highly flammable; R11 Xi - Irritant; R36 R66 R67
Isopropylidenediphenyl bisoxyhydroxypropyl methacrylate (Bis-GMA)	1565-94-2	216-367-7	10.0 - 30.0	Xi - Irritant; R36/38 - R43 (self classified)
2-Hydroxyethyl methacrylate (HEMA)	868-77-9	212-782-2	3.0 - 7.0	Xi - Irritant; R36/38 - R43

For the full text of the R phrases mentioned in this section, see Section 2 or 16.

SECTION 4. FIRST-AID MEASURES

Description of first aid measures

- Ingestion* : Do NOT induce vomiting. If swallowed, seek medical advice immediately and show this container or label. Never give anything by mouth to an unconscious person.
- Inhalation* : If breathed in, move person into fresh air. If breathing is irregular or stopped, administer artificial respiration. If breathing is difficult, give oxygen by qualified medical personnel only. When symptoms persist or in all cases of doubt seek medical advice.
- Skin contact* : Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Obtain medical advice.
- Eye contact* : In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

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Most important symptoms and effects, both acute and delayed

- : Irritating to eyes and skin.
May cause sensitization by skin contact.
Vapours may cause drowsiness and dizziness.
Prolonged or repeated overexposure could cause adverse liver effects.
Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.
Mild respiratory irritant.

Indication of any immediate medical attention and special treatment needed

- : Treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing media

Suitable extinguishing media

- : Carbon dioxide (CO₂); Dry chemical; Alcohol-resistant foam; water fog.

Unsuitable extinguishing media

- : Do not use a solid water stream as it may scatter and spread fire.

Special hazards arising from the substance or mixture

- : Highly flammable. May be ignited by open flame. Vapours are heavier than air and may spread along floors. The product is insoluble and floats on water. May polymerize when heated or on contact with incompatible materials. Fire or intense heat may cause violent rupture of packages. Freezing may cause depletion of inhibitor increasing the risk of polymerization. The pressure in sealed containers can increase under the influence of heat. Burning produces obnoxious and toxic fumes. In the event of fire the following can be released: formaldehyde; Carbon oxides; Nitrogen oxides (NO_x); Metal oxides; Methacrylic acid; Methacrolein; Propene; Other unidentified organic compounds.

Advice for firefighters

Protective equipment for fire-fighters

- : Wear self-contained breathing apparatus and protective suit. Fight fire with normal precautions from a reasonable distance.

Special fire-fighting procedures

- : Move containers from fire area if safe to do so. Cool closed containers exposed to fire with water spray. Do not allow run-off from fire fighting to enter drains or water courses. Dike for water control.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

- : Wear suitable protective equipment. Keep people away from and upwind of spill/leak.

Environmental precautions

- : Do not allow material to contaminate ground water system. If necessary, dike well ahead of the spill to prevent runoff into drains, sewers, or any natural waterway or drinking supply.

Methods and material for containment and cleaning up

- : Ventilate the area. Prevent further leakage or spillage if safe to do so. Use only non-sparking tools. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Clean with detergents. Avoid solvents. Do not flush into surface water or sanitary sewer system. Pick up and transfer to properly labelled containers. Contaminated absorbent material may pose the same hazards as the spilled product. Contact the proper local authorities.

Reference to other sections

- : Refer to protective measures listed in sections 7 and 8. Refer to Section 13 for disposal of contaminated material.

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SECTION 7. HANDLING AND STORAGE

Precautions for safe handling

- : Persons with recurrent skin eczema or sensitization problems should be excluded from working with this product. Once a person is sensitized, no further exposure to the material that caused the sensitization should be permitted. Wear suitable protective equipment. Use only in well-ventilated areas. Avoid breathing vapours. Avoid contact with skin, eyes and clothing. Avoid strong oxidizers. Keep away from incompatibles. Keep away from heat, sparks and open flame. - No smoking. Keep containers closed when not in use. Empty containers retain residue (liquid and/or vapour) and can be dangerous. Wash thoroughly after handling.

Conditions for safe storage, including any incompatibilities

- : Store in cool/well-ventilated place. Inspect periodically for damage or leaks. Protect from sunlight. Store away from heat. Store in a place accessible by authorized persons only. Do not freeze. Recommended storage temperature: 1 - 30°C.

Specific end use(s) : Cosmetics.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control Parameters

<u>Exposure Limits:</u>			
<u>Chemical Name</u>	<u>Exposure Limits</u>	<u>Type</u>	<u>Notes</u>
2-Hydroxyethyl methacrylate (HEMA)	Lithuania: 20 mg/m ³ (TWA)	European Union (OEL)	None.
	2 ppm (11 mg/m ³) (TWA) 4 ppm (16.5 mg/m ³) (STEL)	Norway (OEL)	None.
Ethyl acetate	400 ppm (1400 mg/m ³) (TWA)	France (OEL)	None.
	400 ppm (1500 mg/m ³) (TWA)	Germany (OEL)	(exposure factor 2)
	400 ppm (1400 mg/m ³) (TWA)	Greece (OEL)	None.
	200 mg/m ³ (TWA) 600 mg/m ³ (STEL)	Poland (OEL)	None.
	400 ppm (1460 mg/m ³) (TWA)	Spain (OEL)	None.
	200 ppm (TWA) 400 ppm (STEL)	The United Kingdom (The United Kingdom (WELs))	None.
Isopropylidenediphenyl bisoxyhydroxypropyl methacrylate (Bis-GMA)	None known.	European Union (OEL)	None.

Exposure controls

Ventilation and engineering measures

- : Use only in well-ventilated areas. Apply technical measures to comply with the occupational exposure limits. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. In case of insufficient ventilation wear suitable respiratory equipment.

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- Respiratory protection** : In the case of vapour formation use a respirator with an approved filter. The filter class for the respirator must be suitable for the maximum expected contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. If this concentration is exceeded, self-contained breathing apparatus must be used.
- Skin protection** : Wear protective gloves. The suitability for a specific workplace should be discussed with the producers of the protective gloves. The selected protective gloves have to satisfy the specifications of EU Directive 89/689/EEC and the standard EN 374 derived from it.
- Eye / face protection** : If splashing is anticipated, splash goggles and a faceshield are recommended. Do not wear contact lenses. See also EN 166.
- Other protective equipment** : Wear sufficient clothing to prevent skin contact. Ensure that eyewash stations and safety showers are close to the workstation location.
- General hygiene considerations** : Avoid breathing dust/fume/gas/mist/vapours/spray. Avoid contact with skin, eyes and clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Remove and wash contaminated clothing before re-use.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

- Appearance** : Clear liquid.
- Odour** : Ester-like odour.
- Odour threshold** : No information available.
- pH** : Not applicable.
- Flash point** : 3.3°C
- Flashpoint (Method)** : Tag closed cup
- Lower flammable limit (% by vol.)** : 2.0% (based on ingredients)
- Upper flammable limit (% by vol.)** : 11.5% (based on ingredients)
- Flammability (solid, gas)** : Not applicable.
- Auto-ignition temperature** : 427°C (based on ingredients)
- Decomposition temperature** : No information available.
- Oxidizing properties** : None known.
- Explosive properties** : Not explosive May be sensitive to static discharge.
- Initial boiling point and boiling range** : 77°C (based on ingredients)
- Melting/Freezing point** : - 83°C (based on ingredients)
- Relative density** : 0.94 @ 25°C
- Solubility in water** : negligible
- Other solubility(ies)** : Soluble in ethanol, acetone, chloroform, diethyl ether and benzene.
- Vapour pressure** : 9.73 kPa @ 20°C (based on ingredients)
- Vapour density** : > 1.0
- Partition coefficient: n-octanol/water** : Log P(oct) = 0.66
- Viscosity** : No information available.
- Evaporation rate (BuAe = 1)** : 6.2
- Other Information**
- Volatiles (% by weight)** : No information available.

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Volatile organic Compounds (VOC's)

: No information available.

Other physical/chemical comments

: No additional information.

SECTION 10. STABILITY AND REACTIVITY

- Reactivity** : Product becomes reactive if inhibitor becomes depleted. Freezing may cause depletion of inhibitor increasing the risk of polymerization.
- Chemical stability** : Stable under normal conditions.
- Possibility of hazardous reactions** : May polymerize when heated or on contact with incompatible materials.
- Conditions to avoid** : Direct sources of heat. Keep away from direct sunlight. Do not freeze. Do not use in areas without adequate ventilation.
- Incompatible materials** : Oxidizing materials; Amines; Polymerization initiators; Inert gases; Copper; Brass; Mild steel; Ultraviolet light (e.g. sunlight).
- Hazardous decomposition products** : Burning produces obnoxious and toxic fumes. In the event of fire the following can be released: formaldehyde; Carbon oxides; Nitrogen oxides (NOx) Metal oxides; Methacrylic acid; Methacrolein; Propene; Other unidentified organic compounds .

SECTION 11. TOXICOLOGICAL INFORMATION

Information on Toxicological effects:

- Acute toxicity** : According to the classification criteria of the European Union, this product is not considered as being an acutely toxic chemical.
- Irritation** : The product is classified as dangerous in accordance with Directive 1999/45/EC.
Classification:
Xi - Irritant. Irritating to eyes and skin.
- Corrosivity** : According to the classification criteria of the European Union, this product is not considered as being a corrosive material.
- Sensitisation** : According to the classification criteria of the European Union, this product is not considered as being an allergic respiratory sensitiser.
The product is classified as dangerous in accordance with Directive 1999/45/EC.
Classification:
Xi - Irritant. May cause sensitization by skin contact. May cause severe skin sensitization with allergic contact dermatitis symptoms such as swelling, rash and eczema.
- Mutagenicity** : Contains no ingredient listed as a mutagen.
- Carcinogenicity** : Contains no ingredient listed as a carcinogen
- Reproductive toxicity** : Contains no ingredient listed as toxic to reproduction.
- Repeated dose toxicity** : The preparation is classified as dangerous in accordance with Directive 1999/45/EC.
Classification:
R67 - Vapours may cause drowsiness and dizziness.
- Toxicological data** : There is no available data for the product itself, only for the ingredients. See below for individual ingredient acute toxicity data.

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<u>Chemical name</u>	<u>LC₅₀(4hr)</u> <u>inh, rat</u>	<u>LD₅₀</u>	
		<u>(Oral, rat)</u>	<u>(Rabbit, dermal)</u>
Ethyl acetate	19,600 ppm	5620 mg/kg	> 18,000 mg/kg
Isopropylidenediphenyl bisoxyhydroxypropyl methacrylate (Bis-GMA)	No information available.	No information available.	No information available.
2-Hydroxyethyl methacrylate (HEMA)	No information available.	> 4000 mg/kg	> 3000 mg/kg

Routes of exposure

: Eye contact; Skin contact; Inhalation; Ingestion.

Effects of acute exposure

: Inhalation: Vapours may cause drowsiness and dizziness. May cause respiratory irritation. Inhalation may provoke the following symptoms: Headache; Pain; Nausea; Vomiting; other central nervous effects

Skin contact: Irritating to skin. Can be absorbed through skin.

Eye contact: Irritating to eyes. May cause burning sensation, redness and tearing (watering).

Ingestion: May cause nausea, abdominal spasms and irritation of the mucous membranes. Ingestion of larger amounts may cause defects to the central nervous system (e.g. dizziness, headache).

Potential Chronic Health Effects

: Prolonged or repeated overexposure could cause adverse liver effects.

Other important hazards

: May aggravate pre-existing skin, eye and respiratory problems.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

: No data is available on the product itself. Should not be released into the environment. Contains: 2-Hydroxyethyl methacrylate (HEMA); Ethyl acetate.

The acute toxicity of 2-Hydroxyethyl methacrylate (HEMA) is (literature):

Toxicity to fish - LC50/96h/Fathead minnows = 227 mg/L

Toxicity to daphnia - EC50/48h/daphnia = 380 mg/L

Toxicity to algae - EC50/72h/algae = 380 mg/L

The acute toxicity of ethyl acetate is (IUCLID):

Toxicity to fish - LC50/96h/Fathead minnows = 230 mg/L

Toxicity to daphnia - EC50/48h/daphnia = 717 mg/L

Toxicity to algae - EC50/72h/algae = > 1000 mg/L

Persistence and degradability

: The product itself has not been tested.
Contains: 2-Hydroxyethyl methacrylate (HEMA); Ethyl acetate.
2-Hydroxyethyl methacrylate (HEMA) and ethyl acetate are considered to be readily biodegradable.

Bioaccumulation potential

: The product itself has not been tested.

Mobility in soil

: The product itself has not been tested.

Results of PBT and vPvB assessment

: This preparation contains no substance considered to be persistent, bioaccumulating nor toxic (PBT).

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Other Adverse Environmental effects

: None known.

Water contaminating class (Germany)

: 1 (self classified)




SECTION 13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods:

Handling for Disposal : Handle in accordance with good industrial hygiene and safety practice. Refer to protective measures listed in sections 7 and 8.

Methods of Disposal : Dispose of in accordance with the European Directives on waste and hazardous waste. Waste must be classified and labelled prior to recycling or disposal. According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. Waste codes should be assigned by the user based on the application for which the product was used.

SECTION 14. TRANSPORTATION INFORMATION

Regulatory Information	UN Number	UN proper shipping name	Transport hazard class(es)	Packing Group	Label
ADR/RID	UN1993	FLAMMABLE LIQUID, N.O.S. (Ethyl acetate)	3	II	
EU ADR/RID Classification Code	F1 - Flammable liquids having a flash-point of or below 60 °C				
EU ADR / RID Hazard Identification Number	33 - highly flammable liquid (flash-point below 23°C)				
ADR/RID Additional information	May be shipped as LIMITED QUANTITY when transported in containers no larger than 1.0 Litre, in packages not exceeding 30 kg gross mass.				
ICAO/IATA	UN1993	Flammable liquid, n.o.s. (Ethyl acetate)	3	II	
ICAO/IATA Additional information	Refer to the appropriate Packing Instruction, prior to shipping this material. Review all State and Operator Variations, prior to shipping this material.				
IMDG	UN1993	FLAMMABLE LIQUID, N.O.S. (Ethyl acetate)	3	II	
IMDG Additional information	May be shipped as LIMITED QUANTITY when transported in containers no larger than 1.0 Litre, in packages not exceeding 30 kg gross mass.				

Special precautions for user : Keep away from heat, sparks and open flame. - No smoking. Do not freeze. Appropriate advice on safety must accompany the package.

Environmental hazards : This product does not meet the criteria for an environmentally hazardous mixture, according to the IMDG Code. Although this product does not meet the criteria for an environmentally hazardous mixture, according to the IMDG Code, this product does contain substances toxic for the environment. See Section 12 for more environmental information.

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Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

: Not applicable.

SECTION 15. REGULATORY INFORMATION

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

- : 1. Substances presenting a health or environmental hazard within the meaning of Directive 67/548/EEC.
- 2. Classification according to European directive on classification of hazardous preparations 1999/45/EC.
- 3. This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.
- 4. In accordance with the legislation of the United Kingdom.
- 5. German legislation on water endangering substances VwVwS (see Section 12).

Chemical safety assessment : A chemical safety assessment has not been carried out by the Manufacturer of this product.

SECTION 16. OTHER INFORMATION

Legend

- : ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
- CAS: Chemical Abstract Services
- EC: European Community
- EEC: European Economic Community
- EHC: Environmental Health Criteria
- EINECS: European Inventory of Existing Commercial chemical Substances
- EN: European Standard
- EU: European Union
- HSDB: Hazardous Substances Data Bank
- IATA: International Air Transport Association
- IBC: Intermediate Bulk Container
- ICAO: International Civil Aviation Organisation
- IMDG: International Maritime Dangerous Goods
- IUCLID: International Uniform Chemical Information Database
- LC: Lethal Concentration
- LD: Lethal Dose
- OEL: National occupational exposure limits
- RID: Regulations concerning the International Carriage of Dangerous Goods by Rail
- RTECS: Registry of Toxic Effects of Chemical Substances
- SDS: Safety Data Sheet
- STEL: Short Term Exposure Limit
- TWA: Time Weighted Average
- WEL: Workplace Exposure Limit

Information Source

- : 1. Material Safety Data Sheet from manufacturer.
- 2. Canadian Centre for Occupational Health and Safety, CCHInfoWeb Databases, 2011 (Chempendium, RTECs, HSDB, INCHEM).
- 3. European Chemicals Bureau, Existing Chemicals Work Area, EINECS Information System, 2011.
- 4. European Chemicals Agency, Classification Legislation, 2011.

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R-Phrases (Full text) : R66 - Repeated exposure may cause skin dryness or cracking.
Refer to section 2 for additional R phrases not listed here.

Other special considerations for handling

: Provide adequate information, instruction and training for operators.
This product is subject to the EEC Directive for Cosmetics, 76/768/EEC, and its National implementations in the European Union.

<p><u>Prepared for:</u> Haigh Industries Inc. 106 - 2971 Viking Way Richmond, B.C., Canada, V6V 1Y1 Telephone: 001-604-278-5851 http://www.haighindustries.com Direct all enquiries to Haigh Industries.</p>	
<p><u>Prepared by:</u> ICC The Compliance Center Inc. http://www.thecompliancecenter.com</p>	

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