Haigh Industries Inc.

SAFETY DATA SHEET

This Safety Data Sheet complies with the Canadian Controlled Product Regulations, the United States Occupational Safety and Health Administration (OSHA) Hazard Communication Standard, 29 CFR 1910 (OSHA HCS) and the European Union Directives.

1. Product and Supplier Identification

1.1 Product: **UV/LED Options Opti-Bond**

1.2 Product Use: **Nail Gel**

1.3 Producer: **Haigh Industries Inc.,**
#5 – 8118 North Fraser Way,
Burnaby, B.C.
Canada, V5J 0E5
Telephone: (604) 278-5851

Supplier: **As above**

1.4 Emergencies (24-hour number): +1(604) 278-5851

2. Hazards Identification

2.1 Classification of product or mixture

Note to reader: This product in an untested mixture and GHS classification is based on the classification of the ingredients and their concentrations. Proprietary ingredients do NOT exhibit any health effects not listed in this SDS.

GHS Classification:
Skin Corrosion/Irritation: Category 1A
Serious Eye Damage: Category 1
Skin Sensitization: Category 1
Reproductive Toxicity: Category 2

2.2 GHS Label Elements, including precautionary statements

Pictogram:

Signal Word: Warning

GHS Hazard Statements:

H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H361	Suspected of damaging fertility or the unborn child.

GHS Precautionary Statements:

Prevention:

P203	Obtain, read and follow all safety instructions before use.
P260	Do not breathe dust/fume/gas/mist/spray
P264	Wash skin thoroughly after handling.
P272	Contaminated work clothing should not be allowed out of the workplace.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

Response:

P301+P330+P331	IF SWALLOWED: Rinse mouth. Do not Induce vomiting.
P302+P361+P354	IF ON SKIN: Take off immediately all contaminated clothing. Immediately rinse with water for several minutes.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable breathing.
P305+P354+P338	IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P316	Get emergency medical help immediately.
P318	If exposed or concerned, get medical advice.
P321	Specific treatment (see Section 4).
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P363	Wash contaminated clothing before reuse.
P362+P364	Take off contaminated clothing and wash it before reuse.

Storage:

P405	Store locked up.

Disposal:

P501	Dispose of contents/container to an approved waste disposal plant.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS: None

2.4 Additional Information

Primary Routes of Entry:

Skin Contact:	Yes
Skin Absorption:	Yes
Eye Contact:	Yes
Ingestion:	No
Inhalation:	Yes

Emergency Overview: This product contains an ingredeint which may cause severe eye damage or skin burns. Exposure to eyes may result in irritation, redness, pain, inflammation, itching, burning, tearing, corneal damage and loss of vision. Exposure to skin may result in redness pain,.burning, inflammation and tissue damage. Contact with skin may cause an allergic reaction due to prior sensitization. Local redness, rash, or itchy skin may occur in those persons with a pre-existing sensitivity or those predisposed to skin problems. In rare cases an allergic skin reaction may occur after long term contact with this product.

Effects of Short-Term (Acute) Exposure:

Inhalation: Due to the low volatility of this product, no significant adverse health conditions are expected to occur during the proper use of this product. In rare cases some respiratory irritation may occur.
Skin Contact: It is expected that absorption through the skin will contribute to overall exposure. Contact with skin may cause an immediate allergic reaction in persons who may be sensitized by

previous exposures. Symptoms may include an immediate rash, local redness, or itching of the skin.
Eye Contact: Exposure to the eye may cause symptoms which include irritation, redness, pain, inflammation, itching, burning, tearing, corneal damage and loss of vision.

Ingestion: May result in burns of the mouth and throat, abdominal pain, burning, sensation in the throat and chest, nausea, vomiting, shock or collapse.

Effects of Long-Term (Chronic) Exposure: This product contains ingredients which have been known to cause skin sensitization in some people. Sensitization may occur after prolonged or repeated exposures to this product. Prolonged contact with skin may defat tissue causing dermititis or aggravate existing skin problems.

Medical Conditions Aggravated By Exposure: Persons susceptable to skin problems may find that the use of this product will cause increased symptoms of existing skin problems.

3. Composition

3.1 Mixture composition

Component	CAS No.	EINECS No.	% (w/w)	GHS Classification
Isobornyl Acrylate	5888-33-5	227-561-6	20-40	Skin Irritant (Category 2): H315 Skin Sensitizer (Category 1): H317 Eye Irritant (Category 2A): H319 STOT-SE (Category 3): H335 Hazardous to the aquatic environment, acute hazard (Category 1): H400 Very toxic to aquatic life with long lasting effects (Category 1): H410
Bis-Hydroxyethyl Acrylate Poly(Neopentyl Glycol Adipate)/IPDI Copolymer	82339-15-9		20-40	Skin Irritant (Category 2): H315 Skin Sensitizer (Category 1): H317
Bis-HEA Poly(Glycol/1,4-Butanediol Adipate)/IPDI Copolymer			5-15	None assigned
HEMA Maleate	51978-15-5	257-569-5	5-10	Skin Corrosion (Category 1A): H314 Serious Eye Damage (Category 1): H318 Skin Sensitizer (Category 1): H317
Trimethylbenzoyl Diphenylphosphine Oxide	75980-60-8	278-355-8	1-3	Skin Sensitizer (Category 1): H317 Reproductive Hazard (Category 2): H361 Chronic Aquatic Toxicity (Category 2): H411
Hydroxycyclohexyl Phenyl Ketone	947-19-3	213-426-9	1-3	None assigned
Maleic Acid	110-16-7	203-742-5	0-1	Acute Toxicity Oral (Category 4,): H302 Acute Toxicity Dermal (Category 4): H312 Skin Irritation (Category 2): H315 Skin Sensitization (Category 1): H317 Serious Eye Damage (Category 1): H318 STOT-SE (Category 3) H335 Acute Aquatic Toxicity (Category 3): H402
HEMA (2-Hydroxyethyl Methacrylate)	868-77-9	212-782-2	0-1	Skin Irritant (Category 2): H315 Skin Sensitizer (Category 1): H317 Eye Irritant (Category 2A): H319
P-Hydroxyanisole (4-Methoxyphenol)	150-76-5	205-769-8	< 0.01	Acute Toxicity Oral (Category 4): H302 Eye Irritant (Category 2A): H319 Acute Aquatic Toxicity (Category 3): H402 Chronic Aquatic Toxicity (Category 3): H412

4. First Aid Measures

4.1 Description of First Aid Measures

General advice: Consult a physician. Show this safety data sheet to the physician in attendance. Move away from dangerous area. Remove contaminated clothing. Completely decontaminate clothing, shoes and leather goods before re-use or discard.

In case of eye contact: Immediately flush the contaminated eye(s) with lukewarm, gently flowing water for 20 to 30 minutes or until the chemical is removed, while holding the eyelid(s) open. Obtain medical attention immediately or transport to a medical facility and continue to flush the eyes en route.
In case of skin contact: Wash gently and thoroughly with water and non-abrasive soap for at least 20 minutes or until chemical is removed. If signs of sensitization or irritation occur, obtain medical advice.
If inhalation: Remove source of contamination or move victim to fresh air. If breathing is difficult, give artificial respiration. If breathing is difficult oxygen may be beneficial if administered by trained personnel, preferably on a doctor's advice. DO NOT allow the victim to move about unnecessarily. Consult a physician.
If ingestion: Ingestion unlikely. Never give anything by mouth if victim is rapidly losing consciousness. Have victim rinse mouth thoroughly with water. **Do not induce vomiting**. Dilute contents of stomach with 240 to 300 ml of water. If vomiting occurs naturally have victim lean forward to reduce risk of aspiration. Seek immediate medical attention.

4.2 Most important symptoms and effects, both acute and delayed

Effects of Short-Term (Acute) Exposure:

Inhalation: Due to the low volatility of this product, no significant adverse health conditions are expected to occur during the proper use of this product. In rare cases some respiratory irritation may occur.
Skin Contact: It is expected that absorption through the skin will contribute to overall exposure. Contact with skin may cause an immediate allergic reaction in persons who may be sensitized by previous exposures. Symptoms may include an immediate rash, local redness, or itching of the skin.
Eye Contact: This product is an eye irritant. Exposure to the eye may cause symptoms which include a burning sensation, tearing, redness and swelling.
Ingestion: No adverse health effects are expected if a small amount of this product is accidentally ingested.
Effects of Long-Term (Chronic) Exposure: This product contains ingredients which have been known to cause skin sensitization in some people. Sensitization may occur after prolonged or repeated exposures to this product. Prolonged contact with skin may defat tissue causing dermititis or aggravate existing skin problems.
Medical Conditions Aggravated By Exposure: Persons susceptable to skin problems may find that the use of this product will cause increased symptoms of existing skin problems.

4.3 Indication of any immediate medical attention and special treatment needed
In the event of an allergic reaction, immediate medical help is required. Allergic reactions may result in various health effects including respiration.

5. Fire Fighting Measures

5.1 Extinguishing Media

Suitable extinguishing media: Dry chemical, carbon dioxide, water spray, foam, or water fog.

5.2 Special hazards arising from mixture: Carbon dioxide, carbon monoxide, oxides of nitrogen, undetermined organic compounds in acrid smoke.

5.3 Advice for firefighters: Do not enter fire area without proper protection. Fight fire from a safe distance, upwind. Use of water may be ineffective due to low solubility. If water is used, direct fine spray or fog at fire to cool and extinguish flames.

5.4 Further Information:

Sensitivity to Impact: No

Sensitivity to Static Discharge: No

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) HAZARD INDEX:
HEALTH: 3
FLAMMABILITY: 1
REACTIVITY: 0

6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Respiratory Protection: Vapours will be generated particularly if product is atomized, or heated. If used or sprayed in an enclosed area, at a minimum use a NIOSH approved organic vapour respirator. When cartridge type respirators are used, ensure that the cartridges are changed frequently according to the manufacturer's recommendations. Respirator selection must be done by a qualified person and be based upon a risk assessment of the work activities and exposure levels. Respirators must be fit tested and users must be clean shaven where the respirator seals to face. Exposure must be kept at or below the applicable exposure limits and the maximum use concentration of the respirator must not be exceeded.
Skin protection: Depending upon the conditions of use, protective gloves and clothing to prevent skin contact.
Eye and Face Protection: Chemical splash goggles and/or face shield must be worn when a possibility exists for eye contact due to spashing or spraying liquid. Contact lenses should not be worn.
Footwear: No specific recommendation.
Other: Emergency eyes wash fountains should be available in vicinity of use. At minimum, an eye lavage kit should be kept on hand.

6.2 Environmental precautions

Ensure that any release of this material is contained to prevent leakage into waterways and sanitary sewers.

6.3 Methods and materials for containment and cleanup

Remedial Measures: Wash spill area with strong detergent and water solution, rinse with minimal water, if possible.
Large Spills: For large spills, dike area and prevent leakage into waterways or sanitary sewers. Recover using spark proof equipment and store in approved vented containers for re-use or disposal.
Small Spills: Small spills may be absorbed on an inert medium such as vermiculite or clay, then sweep into vented disposal containers.

6.4 Reference to other sections

For disposal, see section 13

7. Handling and Storage

7.1 Precautions for safe handling

Handling Procedures: Wear proper protective equipment when handling this material. Only use non-sparking tools when handling this material.

7.2 Conditions for safe storage, including incompatibilities

Storage: Store indoors in a well-ventilated area where the storage temperature can be maintained between 1^{o}C and 38^{o}C. Storage above 38^{o}C will result in reduced product life. Store in tightly closed containers away from heat, sparks, open flame, strong oxidizers, radiation and other initiators. Prevent contamination with foreign materials, including moisture.

7.3 Specific end use(s)

No other uses except those mentioned in Section 1.2

8. Exposure Controls/Personal Protection

8.1 Control parameters

Components with workplace control parameters
None

8.2 Exposure controls

Engineering Controls: When using indoors, ensure adequate ventilation by using local exhaust. Mechanical ventilation is recommended for all indoor situations to control fugitive emissions. Electrical and mechanical equipment should be explosion proof.
Respiratory Protection: Vapours will be generated particularly if product is atomized, or heated. If used or sprayed in an enclosed area, at a minimum use a NIOSH approved organic vapour respirator. When cartridge type respirators are used, ensure that the cartridges are changed frequently according to the manufacturer's recommendations. Respirator selection must be done by a qualified person and be based upon a risk assessment of the work activities and exposure levels. Respirators must be fit tested and users must be clean shaven where the respirator seals to face. Exposure must be kept at or below the applicable exposure limits and the maximum use concentration of the respirator must not be exceeded.
Skin protection: Depending upon the conditions of use, protective gloves and clothing to prevent skin contact.
Eye and Face Protection: Chemical splash goggles and/or face shield must be worn when a possibility exists for eye contact due to spashing or spraying liquid. Contact lenses should not be worn.
Footwear: No specific recommendation.
Other: Emergency eyes wash fountains should be available in vicinity of use.
Control of environmental exposure
Prevent further leakage or spillage, if safe to do so. Do not let product enter drains.

9. Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Appearance:	Viscous liquid
Odour:	Characteristic acrylic odour
Odour Threshold:	Not available
pH:	Not applicable
Melting Point/Freezing Point:	0°C
Initial Boiling Point:	131 ^{o}C
Flash Point:	**>**94 ^{o}C
Evaporation Rate:	Negligible
Flammability:	Not flammable
Upper Explosion Limit:	No data
Lower Explosion Limit:	No data
Vapour Pressure:	< 0.01 @ 20^{o}C
Vapour Density:	No data
Relative Density:	1.15 @ 25^{o}C (water=1)
Solubility:	Negligible in water
Partition Coefficient:	Not available
Autoignition Temperature:	No data
Decomposition Temperature:	No data
Viscosity:	No data

Explosive Properties: Not explosive. Not expected to be sensitive to electrostatic discharge.
Oxidizing Properties: No data

9.2 Other safety information: None

10. Stability and Reactivity

10.1 Reactivity
Product may become reactive if inhibitor is depleted.

10.2 Chemical Stability
Stable as supplied.

10.3 Possibility of hazardous reactions
High temperatures, inhibitor depletion, accidental impurities, or exposure to radiation or oxidizers may initiate spontaneous polymerization, generating heat and pressure. Closed containers may rupture during hazardous polymerization.

10.4 Conditions to avoid
Exposure to heat, light and moisture.

10.5 Incompatible materials
Keep away from strong oxidizers and moisture.

10.6 Hazardous decomposition products
Carbon monoxide, carbon dioxide and various oxides of nitrogen.

11. Toxicological Information

11.1 Information on toxicological effects

Note to reader: *We do NOT test our products on animals. In compliance with current SDS preparation requirements, the values listed are published values for generic ingredients with known animal toxicity.*

Acute toxicity

Component	LD_{50}	LC_{50}
Isobornyl Acylate CAS No. 5888-33-5 EINECS No. 227-561-6	4890 mg/kg(oral/rat) >5000 mg/kg) (dermal/rabbit)	N/av
2-Hydroxyethyl Methacrylate (HEMA) CAS No. 868-77-9 EINECS No. 212-782-2	5564 mg/kg (oral/rat) >3000 mg/kg (dermal/rabbit)	N/av
Trimethylbenzoyl Diphenylphosphine Oxide CAS No. 75980-60-8 EINECS No. 278-355-8	>5000 mg/kg (oral/rat) >2000 mg/kg (dermal/rabbit)	N/av
Bis-Hydroxyethyl Acrylate Poly(Neopentyl Glycol Adipate)/IPDI Copolymer CAS No. 82339-15-9	N/av	N/av
Bis-HEA Poly(Glycol/1,4-Butanediol Adipate)/IPDI Copolymer	N/av	N/av
HEMA Maleate CAS No. 51978-15-5 EINECS No. 257-569-5	N/av	N/av
Hydroxycyclohexyl Phenyl Ketone CAS No. 947-19-3 EINECS No. 213-426-9	2895 mg/kg (oral/rat)	N/av
Maleic Acid CAS No. 110-16-7 EINECS No. 203-742-5	1091 mg/kg (oral/rat) 1560 mg/kg (dermal/rabbit)	>720 mg/m3 Rat, 1 hour
4- Methoxyphenol (p- Hydroxyanisole) CAS No. 150-76-5 EINECS No. 205-769-8	N/av	N/av

ABBREVIATION KEY: N/p: not published, N/d: not determined, N/ap: not applicable, N/av: not available

Skin corrosion/irritation
Components of this mixture cause severe skin burns and eye damage, H314, Category 1, Warning

Serious eye damage/eye irritation
Components of this mixture cause serious eye damage, H318, Category 1, Warning

Respiratory or skin sensitization
Components of this mixture may cause skin sensitization, H317, Category 1, Warning

Germ cell mutagenicity
No information available

Carcinogenicity
Not classifiable as a human carcinogen.

Reproductive toxicity
Components in this mixture are suspected of damaging fertility or the unborn child, H361, Category 2, Warning

Specific Target Organ Toxicity – Single exposure
No information available

Specific Target Organ Toxicity – Repeated exposure
No information available

Aspiration Hazard
No information available

Additional information
None

12. Ecological Information

12.1 Toxicity

To fish:

2-Hydroxyethyl Methacrylate	LC_{50}	96H	227 mg/L (Flathead Minnow)
4-Methoxyphenol	LC_{50}	96H	28.5 mg/L (Rainbow Trout)
Trimethylbenzoyl diphenylphosphine oxide	LC_{50}	48H	6.53 mg/L
Maleic Acid	LC_{50}	96H	75 mg/L (Rainbow Trout)

To algae:

2-Hydroxyethyl Methacrylate	EC_{50}	72H	345 mg/L (Green Algae)
4-Methoxyphenol	No data available		
Trimethylbenzoyl diphenylphosphine oxide	EC_{50}	72H	> 2.01 mg/L
Maleic Acid	EC_{50}	72H	74.35 mg/L

To daphnia:

2-Hydroxyethyl Methacrylate	EC_{50}	48H	380 mg/L
4-Methoxyphenol	No data available		
Trimethylbenzoyl diphenylphosphine oxide	EC_{50}	48H	3.53 mg/L
Maleic Acid	EC_{50}	48H	42.81 mg/L

12.2 Persistence and degradability
Trimethylbenzoyl diphenylphosphine oxide is considered to be poorly biodegradable.

12.3 Bioaccumulative potential
No data available

12.4 Mobility in soil
No data available

12.5 Results of PBT and vPvB assessment
Not conducted

12.6 Other adverse effects
No data available

13. Disposal Considerations

13.1 Waste treatment methods

Product
Review federal, provincial or state, and local government requirements prior to disposal. Store material for disposal as indicated in Storage Conditions. Disposal by controlled incineration or by secure land fill may be acceptable.
Contaminated packaging
Dispose as above.

14. Transport Information

Transport of Dangerous Goods (TDG and CLR): Not regulated

United States Department of Transport (49CFR): Not regulated

International Air Transport Association (IATA): Not regulated

International Maritime Organization (IMO): Not regulated

15. Regulatory Information

CANADIAN FEDERAL REGULATIONS:
CEPA, DOMESTIC SUBSTANCES LIST: Listed
UNITED STATES – FEDERAL REGULATIONS:
TOXIC SUBSTANCES CONTROL ACT (TSCA): All components are listed in the inventory.
CALIFORNIA Proposition 65, Safe Drinking Water and Toxicity Enforcement Act, 1986:
No ingredients listed
OSHA, 29 CFR 1910, Subpart Z: Meets criteria for a hazardous substance.
CERCLA, 40 CFR 302: No ingredients listed
SARA 302, 40 CFR 355: No ingredents listed
SARA 313, 40 CFR 372: No ingedients listed
SARA 311/312, 40 CFR 370: Immediate (Acute) Health, Delayed (Chronic) Health
Massachusetts Right to Know: 4-Methoxyphenol (p-Hydroxyanisole), Maleic Acid
New Jersey Right to Know: 4-Methoxyphenol (p-Hydroxyanisole), 2-Hydroxyethyl Methacrylate (HEMA) Trimethylbenzoyl Diphenylphosphine Oxide, Maleic Acid, HEMA Maleate
Pennsylvania Right to Know: 4-Methoxyphenol (p-Hydroxyanisole), 2-Hydroxyethyl Methacrylate (HEMA), Trimethylbenzoyl Diphenylphosphine Oxide, Maleic Acid, HEMA Maleate

16. Other Information

Original Preparation Date: June 29, 2022

Prepared by: Haigh Industries Inc.,
#5 – 8118 North Fraser Way,
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Disclaimer: This Safety Data Sheet (SDS) was prepared using information provided by ingredient supplier SDS and other relevant sources. This product has been classified using weight of evidence, expert judgment and previous testing as per Part 1.3 of the Fifth Edition of The Globally Harmonized System of Classification and Labelling of Chemicals (GHS). The information in this SDS is offered for your consideration and guidance when exposed to this product. Haigh Industries Inc. expressly disclaims all expressed or implied warranties and assumes no responsibilities for the accuracy or completeness of the data contained herein. The data in this SDS does not apply to use with any other product or in any other process.