

1. PRODUCT & COMPANY IDENTIFICATION

1.1	Product Name:	RETAINER
1.2	Chemical Name:	Polyether Urethane Methacrylate Mixture
1.3	Synonyms:	NA
1.4	Trade Names:	Retainer
1.5	Product Uses & Restrictions:	Professional Use Only
1.6	Distributor's Name:	SprintRay, Inc.
1.7	Distributor's Address:	2710 Media Center Drive, #100A, Los Angeles, CA 90065 USA
1.8	Emergency Phone:	CHEMTREC: +1 (703) 527-3887 // +1 (800) 424-9300
1.9	Business Phone / Fax:	Tel: +1 (800) 914-8004

2. HAZARDS IDENTIFICATION

2.1	Hazard Identification:	Prepared in accordance with UN Globally Harmonized standards. Intended to comply with OSHA 29 CFR 1910.1200. Canadian WHMIS and Australian Work Health and Safety standards. WARNING! CAUSES SKIN IRRITATION. MAY CAUSE AN ALLERGIC SKIN REACTION. CAUSES SERIOUS EYE IRRITATION. Classification: Skin Irrit. 2, Skin Sens. 1B, Eye Irrit. 2A	
2.2	Label Elements:	<p>Hazard Statements (H): H315 – Causes skin irritation. H317 – May cause an allergic skin reaction. H319 – Causes serious eye irritation.</p> <p>Precautionary Statements (P): P261 – Avoid breathing fume/mist/vapors/spray. P264+P265 – Wash hands and exposed skin areas with soap and warm water thoroughly after handling. Do NOT touch eyes. P272 – Contaminated work clothing should not be allowed out of the workplace. P280 – Wear protective gloves/eye protection/face protection. P302+P352 – IF ON SKIN: wash with plenty of water and soap. P305+P351+P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P321 – Specific treatment see section 4 (First Aid) of this SDS. P333+P317 – If skin irritation or rash occurs: Get medical help. P337+P317 – If eye irritation persists: Get medical help. P362+P364 – Take off contaminated clothing and wash it before reuse. P405 – Store locked up. P501 – Dispose of contents/container to a licensed treatment, storage, or disposal facility (TSDF).</p>	
2.3	Other Warnings:	KEEP OUT OF REACH OF CHILDREN.	

3. COMPOSITION & INGREDIENT INFORMATION

CHEMICAL NAME(S)	CAS No.	RTECS No.	EINECS No.	%	EXPOSURE LIMITS IN AIR (mg/m ³)									OTHER
					ACGIH		NOHSC			OSHA				
					Ppm		Ppm			Ppm				
					TLV	STEL	ES-TWA	ES-STEL	ES-PEAK	PEL	STEL	IDLH		
URETHANE METHACRYLATE	NA	NA	NA	20-50	NA	NA	NF	NF	NF	NA	NA	NA		
METHACRYLATE MONOMER	NA	NA	NA	10-40	NA	NA	NF	NF	NF	NA	NA	NA		
MONOMERIC METHACRYLATE	NA	NA	NA	10-40	NA	NA	NF	NF	NF	NA	NA	NA		
HMONOMERIC METHACRYLATE	NA	NA	NA	10-40	NA	NA	NF	NF	NF	NA	NA	NA		
PHOTOINITIATOR	NA	NA	NA	0-2	NA	NA	NF	NF	NF	NA	NA	NA		
PROPRIETARY INGREDIENTS	NA	NA	NA	0-2	NA	NA	NF	NF	NF	NA	NA	NA		

4. FIRST AID MEASURES

4.1	First Aid:	<p>Ingestion: If ingested, do not induce vomiting. If product has been swallowed, drink plenty of water or milk IMMEDIATELY. If the patient is vomiting, continue to offer water or milk. Never give water or milk to an unconscious person. Contact the nearest Poison Control Center or local emergency number. Provide an estimate of the time at which the material was ingested and the amount of the substance that was swallowed.</p> <p>Eyes: Splashes are not likely; however, if product gets in the eyes, flush with copious amounts of lukewarm water for at least 15 minutes lifting upper and lower lids, occasionally.</p> <p>Skin: Wash thoroughly with soap and water. In case of contact, immediately flush skin with plenty of water for at least 15 minutes.</p> <p>Inhalation: Remove victim to fresh air at once. If breathing difficult, administer oxygen. If breathing stops give artificial respiration. Keep person warm, quiet and get medical attention.</p>
4.2	Effects of Exposure:	<p>Ingestion: If product is swallowed, may cause nausea, vomiting and/or diarrhea.</p> <p>Eyes: Moderately irritating to the eyes. Symptoms of overexposure may include redness, itching, irritation and watering.</p> <p>Skin: May be irritating to skin. The product can cause allergic skin reactions (e.g., rashes, welts, dermatitis) in some sensitive individuals.</p> <p>Inhalation: None expected.</p>

4. FIRST AID MEASURES

4.3	Symptoms of Overexposure:	<p>Ingestion: Nausea, intestinal discomfort, vomiting and/or diarrhea.</p> <p>Eyes: Overexposure in eyes may cause redness, itching and watering.</p> <p>Skin: Symptoms of skin overexposure may include redness, itching, and irritation of affected areas. Frostbite like symptoms. The product can cause allergic skin reactions (e.g., rashes, welts, dermatitis) in some individuals.</p>											
4.4	Acute Health Effects:	Non-irritating when used as directed. Moderate irritation to eyes and skin near affected areas.											
4.5	Chronic Health Effects:	Non-irritating when used as directed. Overexposure may also induce skin sensitization and respiratory hypersensitivity. Possible allergic dermatitis.											
4.6	Target Organs:	Eyes, Skin.											
4.7	Medical Conditions Aggravated by Exposure:	Pre-existing dermatitis, other skin conditions, and disorders of the target organs (eyes, skin, and respiratory system).	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="background-color: #0000FF; color: white;">HEALTH</td> <td style="text-align: center;">2</td> </tr> <tr> <td style="background-color: #FF0000; color: white;">FLAMMABILITY</td> <td style="text-align: center;">1</td> </tr> <tr> <td style="background-color: #FFA500;">PHYSICAL HAZARDS</td> <td style="text-align: center;">0</td> </tr> <tr> <td colspan="2">PROTECTIVE EQUIPMENT</td> </tr> <tr> <td>EYES</td> <td>SKIN</td> </tr> </table>	HEALTH	2	FLAMMABILITY	1	PHYSICAL HAZARDS	0	PROTECTIVE EQUIPMENT		EYES	SKIN
HEALTH	2												
FLAMMABILITY	1												
PHYSICAL HAZARDS	0												
PROTECTIVE EQUIPMENT													
EYES	SKIN												

5. FIREFIGHTING MEASURES

5.1	Fire & Explosion Hazards:	This material can burn but will not readily ignite. However, if involved in a fire, this product may decompose at high temperatures to form toxic gases (e.g., CO, CO _x , Hydrocarbons).	
5.2	Extinguishing Methods:	CO ₂ , Dry Chemical, Alcohol foam, Dry Chemical. Use water spray to cool containers.	
5.3	Firefighting Procedures:	Keep containers cool until well after the fire is out. Fight fires as for surrounding materials. As in any fire, wear MSHA/NIOSH approved self-contained breathing apparatus (pressure-demand) and full protective gear. Keep containers cool until well after the fire is out. Use water spray to cool fire-exposed surfaces and to protect personal. Fight fire upwind. Avoid spraying water directly into storage containers because of danger of boil-over. Prevent runoff from fire control or dilution from entering sewers, drains, drinking water supply, or any natural waterway. Firefighters must use full bunker gear including NIOSH-approved positive pressure self-contained breathing apparatus to protect against potential hazardous combustion or decomposition products and oxygen deficiencies.	

6. ACCIDENTAL RELEASE MEASURES

6.1	Spills:	<p>Before cleaning any spill or leak, individuals involved in spill cleanup must wear appropriate Personal Protective Equipment. Plastic or rubber gloves, respirator, eye protection and apron may be required for clean-up of large spills.</p> <p>For small Spills (e.g., < 1 gallon (3.8 L)) wear appropriate protective equipment including gloves and protective eyewear. Use a non-combustible material such as vermiculite or sand to soak up the product and place into a container for later disposal. Do not use water or a material such as "speedy dry" to soak up material.</p> <p>For large Spills (e.g., ≥ 1 gallon (3.8 L)), keep incompatible materials away from spill. Dike and contain spill with inert material (e.g., sand or earth). Transfer liquid to containers for recovery or disposal and solid diking material to separate containers for proper disposal. Remove contaminated clothing promptly and wash affected skin areas with soap and water. Keep runoff from waterways.</p>	
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7. HANDLING & STORAGE INFORMATION

7.1	Work & Hygiene Practices:	Do not eat, drink, or smoke when handling this product. Avoid contact to eyes and skin. Avoid inhalation of vapors, fumes and dusts. Wash thoroughly after handling and use. Do not smoke, eat, drink, chew gum or tobacco, or apply cosmetics within the working area.	
7.2	Storage & Handling:	Use and store in a cool, dry, well-ventilated location (e.g., local exhaust ventilation, fans) away from heat and direct sunlight. Use normal precautions common to safe manufacturing practices should be followed in handling and storage. Keep product contained and retain all warning and identity labels. Store out of direct sunlight. Keep out of the reach of children. Keep away from open flames, sparks, and other possible sources of ignition. Keep away from incompatible materials listed in Section 10. Keep container tightly closed when not in use.	
7.3	Special Precautions:	Read and understand the manufacturer's instructions and the precautionary label on this product. Avoid overexposure of skin contact. Clean all spills promptly. Open containers slowly on a stable surface. Keep container tightly closed when not in use. Empty containers may contain residual amounts of this product; therefore, empty containers should be handled with care.	

8. EXPOSURE CONTROLS & PERSONAL PROTECTION

8.1	Exposure Limits: ppm (mg/m ³)		ACGIH	NOHSC			OSHA			OTHER
		CHEMICAL NAME(S)	TLV	STEL	ES-TWA	ES-STEL	ES-PEAK	PEL	STEL	IDLH
8.2	Ventilation & Engineering Controls:	General mechanical (e.g., fans) or natural ventilation is sufficient when this product is in use. Use local or general exhaust ventilation to effectively remove and prevent buildup of vapors or mist generated from the handling of this product. Ensure appropriate decontamination equipment is available (e.g., sink, safety shower, eye-wash station).								

8. EXPOSURE CONTROLS & PERSONAL PROTECTION – cont'd

8.3	Respiratory Protection:	No special respiratory protection is required under typical circumstances of use or handling. In instances where mist or vapors of this product are generated, and respiratory protection is needed, use only protection authorized by 29 CFR §1910.134, applicable U.S. State regulations, or the Canadian CAS Standard Z94.4-93 and applicable standards of Canadian Provinces, EC member States, or Australia.	
8.4	Eye Protection:	Wear chemical splash proof goggles and/or face shield. Ensure appropriate decontamination equipment is available (e.g., sink, safety shower, eye-wash station).	
8.5	Hand Protection:	Wear impervious resistant gloves when using or handling this product. When handling large quantities of fluid (e.g., ≥ 1 gallon (3.8 L)), wear rubber, nitrile or impervious plastic gloves.	
8.6	Body Protection:	No apron required. Eye wash stations and deluge showers should be available. Upon completion of work activities involving large quantities of this product (fluid), wash any exposed areas thoroughly with soap and water.	

9. PHYSICAL & CHEMICAL PROPERTIES

9.1	Appearance:	Viscous liquid
9.2	Odor:	NA
9.3	Odor Threshold:	NA
9.4	pH:	NA
9.5	Melting Point/Freezing Point:	NA
9.6	Initial Boiling Point/Boiling Range:	NA
9.7	Flashpoint:	NA
9.8	Upper/Lower Flammability Limits:	NA
9.9	Vapor Pressure:	NA
9.10	Vapor Density:	NA
9.11	Relative Density:	NA
9.12	Solubility:	NA
9.13	Partition Coefficient (log P _{ow}):	NA
9.14	Autoignition Temperature:	NA
9.15	Decomposition Temperature:	NA
9.16	Viscosity:	< 1000 cPs @ 25 °C
9.17	Other Information:	NA

10. STABILITY & REACTIVITY

10.1	Stability:	Relatively stable under ambient conditions when stored properly.
10.2	Hazardous Decomposition Products:	If exposed to <u>extremely high temperatures</u> , products of thermal decomposition may include irritating vapors and toxic gases (e.g., oxides of carbon & nitrogen).
10.3	Hazardous Polymerization:	May occur, if exposed to extremely high temperatures.
10.4	Conditions to Avoid:	Exposure or contact to extreme temperatures, incompatible chemicals, strong light sources, sparks, flame.
10.5	Incompatible Substances:	Strong oxidizers, peroxides, strong alkalis or acids, UV light.

11. TOXICOLOGICAL INFORMATION

11.1	Routes of Entry:	Inhalation: YES	Absorption: YES	Ingestion: YES
11.2	Toxicity Data:	This product has NOT been tested on animals to obtain toxicology data. Toxicology data, found in scientific literature, is available for some of the components of the product, but is not presented in this document.		
11.3	Acute Toxicity:	See Section 4.4		
11.4	Chronic Toxicity:	See Section 4.5		
11.5	Suspected Carcinogen:	NA		
11.6	Reproductive Toxicity:	This product is not reported to produce reproductive toxicity in humans.		
	Mutagenicity:	This product is not reported to produce mutagenic effects in humans.		
	Embryotoxicity:	This product is not reported to produce embryotoxic effects in humans.		
	Teratogenicity:	This product is not reported to cause teratogenic effects in humans.		
	Reproductive Toxicity:	This product is not reported to cause reproductive effects in humans.		
11.7	Irritancy of Product:	The product can cause allergic skin reactions (e.g., rashes, welts, dermatitis) upon prolonged or repeated exposure.		
11.8	Biological Exposure Indices:	NE		
11.9	Physician Recommendations:	Treat symptomatically.		

12. ECOLOGICAL INFORMATION

12.1	Environmental Stability:	There is no specific data available for this product.
12.2	Effects on Plants & Animals:	There is no specific data available for this product.
12.3	Effects on Aquatic Life:	There is no specific data available for this product; however, very large releases of this product may be harmful or fatal to overexposed aquatic life. WGK 1 (Slightly hazardous to waters)

13. DISPOSAL CONSIDERATIONS

13.1	Waste Disposal:	Products covered by this SDS, in their original form, when disposed as waste, are considered non-hazardous waste according to Federal RCRA regulations (40 CFR 261). Disposal should be in accordance with local, state, and federal regulations. Dispose of in accordance with federal, state and local regulations.
13.2	Special Considerations:	NA

14. TRANSPORTATION INFORMATION

The basic description (ID Number, proper shipping name, hazard class & division, packing group) is shown for each mode of transportation. Additional descriptive information may be required by 49 CFR, IATA/ICAO, IMDG and the CTDGR.

14.1	49 CFR (GND):	NOT REGULATED
14.2	IATA (AIR):	NOT REGULATED
14.3	IMDG (OCN):	NOT REGULATED
14.4	TDGR (Canadian GND):	NOT REGULATED
14.5	ADR/RID (EU):	NOT REGULATED
14.6	SCT (MEXICO):	NOT REGULATED
14.7	ADGR (AUS):	NOT REGULATED

15. REGULATORY INFORMATION

15.1	SARA Reporting Requirements:	This product does not contain any substances subject to SARA Title III, Section 313 reporting requirements.
15.2	SARA Threshold Planning Quantity:	There are no specific Threshold Planning Quantities for the components of this product.
15.3	TSCA Inventory Status:	The components of this product are listed on the TSCA Inventory.
15.4	CERCLA Reportable Quantity (RQ):	NA
15.5	Other Federal Requirements:	NA
15.6	Other Canadian Regulations:	This product has been classified according to the hazard criteria of the HPR and the SDS contains all of the information required by the HPR. The components of this product are listed on the DSL/NDSL. None of the components of this product are listed on the Priorities Substances List.
15.7	State Regulatory Information:	No hazardous ingredients in this product, present in a concentration of 1.0% or greater, are listed on any of the following state criteria lists: California Proposition 65 (CA65), Delaware Air Quality Management List (DE), Florida Toxic Substances List (FL), Massachusetts Hazardous Substances List (MA), Michigan Critical Substances List (MI), Minnesota Hazardous Substances List (MN), New Jersey Right-to-Know List (NJ), New York Hazardous Substances List (NY), Pennsylvania Right-to-Know List (PA), Washington Permissible Exposures List (WA), Wisconsin Hazardous Substances List (WI). This product does not contain any chemicals known to the State of California to cause cancer or other reproductive harm. For more information go to www.P65Warnings.ca.gov .
15.8	Other Requirements:	This product is found on the following inventory lists: Australia - AICS, China - IECSC, Europe - ELINCS/EINEC, Japan - ENCS; Korea - KECl; New Zealand - NZIoC; Philippines - PICCS; USA - TSCA

16. OTHER INFORMATION

16.1	Other Information:	<p>WARNING! CAUSES SKIN IRRITATION. MAY CAUSE AN ALLERGIC SKIN REACTION. CAUSES SERIOUS EYE IRRITATION.</p> <p>Avoid breathing fume/mist/vapors/spray. Wash hands and exposed skin areas with soap and warm water thoroughly after handling. Do NOT touch eyes. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves/eye protection/face protection. IF ON SKIN: wash with plenty of water and soap. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical help. Specific treatment: see section 4 (First Aid) of this SDS. If skin irritation or rash occurs: Get medical help. If eye irritation persists: Get medical help. Take off contaminated clothing and wash it before reuse. Store locked up. Dispose of contents/container to a licensed treatment, storage, or disposal facility (TSDF). KEEP LOCKED UP AND OUT OF REACH OF CHILDREN.</p>	
16.2	Terms & Definitions:	See last page of this Safety Data Sheet.	
16.3	Disclaimer:	<p>This Safety Data Sheet is offered pursuant to OSHA's Hazard Communication Standard, 29 CFR §1910.1200. Other government regulations must be reviewed for applicability to this product. To the best of ShipMate's & SprintRay, Inc.'s, knowledge, the information contained herein is reliable and accurate as of this date; however, accuracy, suitability or completeness is not guaranteed and no warranties of any type, either expressed or implied, are provided. The information contained herein relates only to the specific product(s). If this product(s) is combined with other materials, all component properties must be considered. Data may be changed from time to time. Be sure to consult the latest edition.</p>	

DEFINITION OF TERMS

A large number of abbreviations and acronyms appear on a SDS. Some of these that are commonly used include the following:

GENERAL INFORMATION:

CAS No.	Chemical Abstract Service Number
RTECS No.	Registry of Toxic Effects of Chemical Substances Number
EINECS No.	European Inventory of Existing Commercial Chemical Substances Number

EXPOSURE LIMITS IN AIR:

ACGIH	American Conference on Governmental Industrial Hygienists
IDLH	Immediately Dangerous to Life and Health
NOHSC	National Occupational Health and Safety Commission (Australia)
OSHA	U.S. Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
STEL	Short Term Exposure Limit
TLV	Threshold Limit Value
TWA	Time Weighted Average

FIRST AID MEASURES:

CPR	Cardiopulmonary resuscitation - method in which a person whose heart has stopped receives manual chest compressions and breathing to circulate blood and provide oxygen to the body.
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HAZARDOUS MATERIALS IDENTIFICATION SYSTEM: HMIS

HEALTH, FLAMMABILITY & REACTIVITY RATINGS:

0	Minimal Hazard
1	Slight Hazard
2	Moderate Hazard
3	Severe Hazard
4	Extreme Hazard

HEALTH
FLAMMABILITY
PHYSICAL HAZARDS
PERSONAL PROTECTION

PERSONAL PROTECTION RATINGS:

A		G	
B		H	
C		I	
D		J	
E		K	
F		X	Consult your supervisor or SOPs for special handling directions.

Safety Glasses	Splash Goggles	Face Shield & Protective Eyewear	Gloves
Boots	Protective Apron	Protective Clothing & Full Suit	Dust Respirator
Full Face Respirator	Dust & Vapor Half-Mask Respirator	Full Face Respirator	Airline Hood/Mask or SCBA

OTHER STANDARD ABBREVIATIONS:

Carc	Carcinogenic
Irrit	Irritant
NA	Not Available
NR	No Results
ND	Not Determined
NE	Not Established
NF	Not Found
SCBA	Self-Contained Breathing Apparatus
Sens	Sensitization
STOT RE	Specific Target Organ Toxicity – Repeat Exposure
STOT SE	Specific Target Organ Toxicity – Single Exposure

NATIONAL FIRE PROTECTION ASSOCIATION: NFPA

FLAMMABILITY LIMITS IN AIR:	
Autoignition Temperature	Minimum temperature required to initiate combustion in air with no other source of ignition
LEL	Lower Explosive Limit - lowest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source
UEL	Upper Explosive Limit - highest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source

HAZARD RATINGS:

0	Minimal Hazard	
1	Slight Hazard	
2	Moderate Hazard	
3	Severe Hazard	
4	Extreme Hazard	
ACD	Acidic	
ALK	Alkaline	
COR	Corrosive	
W	Use No Water	
OX	Oxidizer	
TREFOIL	Radioactive	

TOXICOLOGICAL INFORMATION:

LD₅₀	Lethal Dose (solids & liquids) which kills 50% of the exposed animals
LC₅₀	Lethal concentration (gases) which kills 50% of the exposed animal
ppm	Concentration expressed in parts of material per million parts
TD₀₁	Lowest dose to cause a symptom
TCLo	Lowest concentration to cause a symptom
TD₀₁, LD₀₁, & LD₀₁ or TC, TC₀₁, LC₀₁, & LC₀₁	Lowest dose (or concentration) to cause lethal or toxic effects
IARC	International Agency for Research on Cancer
NTP	National Toxicology Program
RTECS	Registry of Toxic Effects of Chemical Substances
BCF	Bioconcentration Factor
TL_m	Median threshold limit
log K_{ow} or log K_{oc}	Coefficient of Oil/Water Distribution

REGULATORY INFORMATION:

WHMIS	Canadian Workplace Hazardous Material Information System
DOT	U.S. Department of Transportation
TC	Transport Canada
EPA	U.S. Environmental Protection Agency
DSL	Canadian Domestic Substance List
NDSL	Canadian Non-Domestic Substance List
PSL	Canadian Priority Substances List
TSCA	U.S. Toxic Substance Control Act
EU	European Union (European Union Directive 67/548/EEC)
WGK	Wassergefährdungsklassen (German Water Hazard Class)

CLP/GHS (1272/2008/EC) PICTOGRAMS:

GHS01	GHS02	GHS03	GHS04	GHS05	GHS06	GHS07	GHS08	GHS09
Explosive	Flammable	Oxidizer	Pressurized	Corrosive	Toxic	Harmful Irritating	Health Hazard	Environment