SAFETY DATA SHEET

SECTION 1 Product And Company Identification

PRODUCT

PRODUCT NAME: PRODUCT DESCRIPTION: PRODUCT USE: **3405SHR HORIZONTAL RETARDER** Preparation/Mixture As surface retarder, when sprayed on fresh soft concrete will retard the cement and expose the aggregate to produce a three dimensional surface.

MANUFACTURER INFORMATION

INNOVATIVE MANUFACTURING INC 861 DERWENT WAY DELTA, BC, CANADA, V3M 5R4 (604) 522-2811

EMERGENCY INFORMATION

INNOVATIVE MANUFACTURING CONTACT: 1-800-667-8246 24-HOUR EMERGENCY AND SDS HELP: CANUTEC: 613-966-6666

Section 2 – Hazards Identification

Classification of the substance or mixture

Not classified as hazardous according to the criteria of the Globally Harmonized System of Classification and labelling of Chemicals (GHS).

Label elements

Hazard pictograms

Signal word

Hazard statements:

Precautionary statements

Other hazards

HAZARDS NOT OTHERWISE CLASSIFIED (HNOC)

Not applicable

Unknown acute toxicity 0% of the mixture consists of ingredients(s) of unknown toxicity

Section 3 - Composition/Information on Ingredients

COMPONENTS	CAS No.	% BY WEIGHT
Water	7732-18-5	80-84
Granulated Sugar	57-50-1	10-15
Propylene Glycol	57-55-6	1-5

Section 4 – First Aid Measures

Description of 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.
Eye Contact	Immediately flush eyes with plenty of cool water for at least 20 minutes, occasionally lifting the eye lids to ensure thorough rinsing. Get medical attention if irritation persists.
Skin Contact	Remove contaminated clothing. Wash skin thoroughly with soap and water or use a recognized skin cleanser.

Ingestion

Unlikely to cause adverse effects. If ingested in large amounts and symptoms develop seek medical attention.

Most important symptoms and effects, both acute and delayed

Aside from the information found under Description of First Aid Measures (above) and indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

Indication of any immediate medical attention and special treatment needed

Note to physicians	No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.
Specific treatments	No specific treatment.
Protection of first-aiders	No action shall be taken involving any personal risk or without suitable training. If it s suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

Section 5 – Fire Fighting Measures

Extinguishing media

Suitable extinguishing media	Use alcohol resistant foam, dry chemical, or carbon dioxide or 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

	Hazardous combustion products	During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and /or irritating. Combustion products may include and are not limited to: carbon monoxide, carbon dioxide.
	Unusual fire and explosion hazards	Container may rupture from gas generation in a fire situation. Violent steam generation or eruption may occur upon application of direct water stream to hot liquids.
Advice for fire	fighters	
	Special protective actions for fire-fighters	Keep people away. Isolate fire and deny unnecessary entry. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of resignation has passed. Fight fire from protected location or safe distance. Consider the use of unmannered hose holders or monitor nozzles. Immediately withdraw all personnel from the area in case of rising sound from venting safety device or discoloration of the container. Burning liquids may be extinguished by dilution with water. Do not use direct water stream. May spread fire. Move container from fire area if this is possible without hazard. Burning liquids may be moved by flushing with water to protect personnel and minimize property
	Special protective equipment for fire-fighters	Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). If protective equipment is not available or not used, fight fire from a protected location of safe

Section 6 – Accidental Release Measures

Personal precautions, protective equipment, and emergency procedures

Use appropriate safely equipment. Keep unnecessary and unprotected personnel from entering the area. Keep personnel out of low areas.

Environmental precautions

Prevent from entering into soil, ditches, sewers, waterways and /or groundwater.

Methods and materials for containment and cleaning up

Contain spilled material if possible. Small spills: any absorbent material. Collect in suitable and properly labeled open containers. Wash the spill site with large quantities of water. Large spills: Dike area to contain spill. Pump into suitable and properly labeled container.

Reference to other sections

For additional information, see Section 8, Exposure Controls and Personal Protection and Section 13 for disposal considerations.

Section 7 - Handling and Storage

Precautions for safe handling

Handle in accordance with good industrial hygiene and safety practices. Wear personal protective equipment. Product handled hot may require additional ventilation or local exhaust. Spills of these organic material on hot fibrous insulations may lead to lowering of the autoignition temperatures possibly resulting in spontaneous combustion.

Conditions for safe storage, including any incompatibilities

Store away from direct sunlight or ultraviolet light. Keep container tightly closed when not in use. Store in a dry place. Protect from atmospheric moisture. Store in the following materials: Stainless steel. Aluminum. Container lined with phenolic or epoxy-phenolic FDA food contact approved coating. 316 stainless steel. Opaque HDPE plastic container.

Specific end use(s)

No data available.

Section 8 – Exposure Controls / Personal Protection

Control Parameters

Exposure Guidelines

Exposure limits are listed below, if they exist.

Components	ACGIH	OSHA	NIOSH
	TLV	PEL	REL
Granulated Sugar 57-50-1	TWA: 10 mg/m ³	TWA: 10 mg/m ³ , Total dust TWA: 5 mg/m ³ , Respirable dust	-

Exposure Controls

Appropriate engineering
controlUse appropriate engineering control such as process enclosures, local exhaust ventilation,
or other engineering controls to control airborne levels below recommended exposure
limits. Good general ventilation should be sufficient to control airborne levels. Where such
systems are not effective wear suitable personal protective equipment, which performs
satisfactorily and meets OSHA or other recognized standards. Consult with local
procedures for selection, training, inspection and maintenance of the personal protective

Personal protective equipment

Eye/Face Protection

Wear appropriate protective glasses or splash goggles as described by 20 CFR1910.133, OSHA eye and face protection regulation, or the European standard EN 166.

Skin/Body Protection	Chemical-resistant gloves and chemical goggles, face-shield and synthetic apron or coveralls should be used to prevent contact with eyes, skin or clothing.
Respiratory Protection	A NIOSH approved air-purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.
Other Protective	Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.
General Hygiene Considerations	The usual precautionary measures are to be adhered to when handling chemicals. Keep away from food, beverages and feed sources. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work. Do not inhale gases/fumes/dust/ mist/vapor/aerosols. Avoid contact with the eyes and skin.
Environmental exposure controls	Avoid release to the environment.

Section 9 – Physical and Chemical Properties

	PRODUCT CRITERIA
PHYSICAL STATE	Liquid
APPEARANCE - COLOR	Clear blue
ODOR	odorless
ODOR THRESHOLD	No data available
PH	7.5-8.5
MELTING POINT/FREEZING POINT	< 0°C
INITIAL BOILING POINT AND BOILING RANGE	>100°C
FLASH POINT	104°C (219°F)
EVAPORATION RATE	No data available
FLAMMABILITY (solid, gas)	No data available
UPPER/LOWER FLAMMABILITY OR EXPLOSIVE LIMITS	No data available
VAPOR PRESSURE	No data available
VAPOR DENSITY (AIR=1)	No data available
SPECIFIC GRAVITY(@25°C)	1.06
SOLUBILITY	Soluble in water
AUTO IGNITION TEMPERATURE	>400°C (752°F)
DECOMPOSITION TEMPERATURE	No data available
VISCOSITY	No data available
VOC CONTENT	0 g/L

Section 10 – Stability and Reactivity

Reactivity:	Hazardous polymerization will not occur.
Chemical Stability:	Stable under normal circumstances.
Possibility of Hazardous Reactions:	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to Avoid:	No data available.
Incompatibility (Materials to Avoid):	Strong acids, strong bases, strong oxidizing agents./
Hazardous Decomposition Products:	Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: aldehydes, alcohols, ethers, organic acids.

Section 11 – Toxicological Information

GHS Required Criteria	Toxicity Criteria	Toxicity Information	Commen	Chemical Constituent
Acute Toxicity	LD50 (Oral/Rat)	20000 mg/kg		Propylene Glycol
	LC50 (Inhalation/Rat male)	317 mg/L		57-55-6
	LD50 (Dermal/Rabbit)	2000 mg/kg		57-55-6

	LD50 (Oral/Rat)	29700 mg/kg	Granulated sugar
	LC50 (Inhalation/Rat male)	-	57-50-1
	LD50 (Dermal/Rabbit)	-	37-30-1
Skin Corrosion/Irritation	Not classified		
Serious Eye Damage / Eye Irritation	Not classified		
Respiratory or Skin Sensitization	Not classified, no data availa	able	
Germ Cell Mutagenicity	No evidence of mutagenic ef	ffects	Based on information
Carcinogenicity	Not classified, no data availa		of the components
Reproductive Toxicity	No evidence of reproductive	effects	or the components
STOT - Single Exposure	Not a STOT-SE toxicant		
STOT - Repeated Exposure	Based on available data, not	t expected	
Aspiration Hazard	Not classified, no data availa	able	

Section 12 – Ecological Information

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Ecotoxicity
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This material may be toxic to aquatic organisms and should be kept out of sewage and drainage systems and all bodies of water. The environmental impact of this product has not been fully investigated.

ECOTOXICITY DATA

ECOTOXICITY DATA	Chemical Name			
Lootoxiony	Propylene Glycol 57-55-6			
	EC50 / 72 h	>19000 mg/L (Pseudokirchneriella subcapitat		
Toxicity to algae	NOEC / 96 h or 72 h	-		oupliala)
locities to algue	M factor	-		
	LC 50 / 96 h	>40613 mg/L (Oncot	hhvnchus mvukiss	.)
Toxicity to fish	NOEC / 21 days	-		7
	M factor	-		
	EC50 / 48 h			
Toxicity to Daphnia	NOEC / 21 days	-	<u> </u>	
	M factor	-		
Persistence and Degradability	Readily biodegradable.			
Bioaccumulative potential	Product/Ingredient Name	Log Pow	BCF	Potential
	Propylene glycol	-1.07	0.09	Low
Mobility in Soil	No further relevant informati	on available.		
Other Adverse Effects	No further relevant informati	on available.		
Section 13 – Disposal Considerat	tions			
Waste Disposal	The generation of waste should be avoided or minimized wherever possible. Dispose of waste according to local, state/provincial, and federal requirements. Avoid disposal into wastewater treatment facilities.			
Contaminated Materials	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.			
Container Disposal	Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.			
·			or landill should c	only be considered
	when recycling is not feasibl		or landill should c	only be considered
Section 14 – Transportation Infor	when recycling is not feasibl	e.		only be considered
Section 14 – Transportation Infor	when recycling is not feasibl	e.	ort	only be considered
Section 14 – Transportation Infor DOT TDG IATA	when recycling is not feasibl mation Not Regulated as a hazardo	e. us material for transpo us material for transpo	ort	only be considered

Section 15 – Regulatory Information

Canada

WHMIS Classification:

This product has not been classified as hazardous according to the hazard criteria of the CPR and the SDS contains all of the information required by the CPR.

US Federal Information

	CERCLA Hazardous Substance List (40 CFR 302.4)			Not listed		
	OSHA Specifically Regulated Substances (29CFR 1910.1001-1050)			Not listed		
	SARA 302 Extremely Hazard Substance			Not listed		
	SARA 304 Emergency Release Notification			Not regulated		
	SARA 311/312 Hazardous Chemical			Not listed		
	SARA Hazard Categories	Immediate Hazard Delayed Hazard Fire Hazard Pressure Hazard Reactivity Hazard	No No No No			
	SARA 313 (TRI reporting)			Not listed		
	TSCA Section 12(b) Export Notification (40 CFR 707, Subpt.D)			Not regulated		
Other federal regulations						
	Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List			Not regulated		
	Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)			Not regulated		
	Safe Drinking Water Act (SDWA)					
US state regu	lations					
	US Massachusetts RTK - S	-				
	US New Jersey Worker and Community Right-to-Know Act			-		
	US Pennsylvania Worker and Community Right-to-Know Law			Listed		
	US Rhode Island RTK			-		
	US California Proposition 65 Carcinogens & Reproductive Toxicity (CRT): Listed substance			Not listed		
International	Inventories					
Country	Inventory Name			On Inventory		
Australia	Australian Inventory of Chemical Substances (AICS)			Yes		
Canada	Domestic Substances List (DSL)			Yes		
Canada	Non-Domestic Substances List (NDSL)			No		
China	Inventory of Existing Chemical Substances in China (IECSC)			Yes		
Europe	European INventory of Existing Commercial chemical Substances (EINECS)			200-338-0		
Europe	European List of Notified Chemical Substances (ENINCS)			-		

Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemical List (ECL)	Yes
New Zealand	New Zealand Inventory	-
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States	Toxic Substances Control Act (TSCA) Inventory	Yes

Section 16 – Other Information

HMIS Rating:	NFPA Rating:
Health 1	Health 1
Flammability 1	Flammability 1
Physical Hazard 0	Instability 0
Personal Protection x	Special -

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Prepared By:	Joey Wang

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