

SAFETY DATA SHEET

Section 1 – Product And Company Identification

PRODUCT

PRODUCT NAME: 3405S RETARDER R20
PRODUCT DESCRIPTION: Preparation/Mixture
PRODUCT USE: 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
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EMERGENCY INFORMATION

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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

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|---------------------|--|
| 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 is 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 |

Section 5 – Fire Fighting Measures**Extinguishing media**

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|---------------------------------------|---|
| 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

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| 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 firefighters

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|---|---|
| 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 re-ignition 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 damage. |
| 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 distance. |

Section 6 – Accidental Release Measures**Personal precautions, protective equipment, and emergency procedures**

Use appropriate safety 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 TLV | OSHA PEL | NIOSH 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 control Use 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 equipment.

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

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| 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 57-55-6 |
| | LC50 (Inhalation/Rat male) | 317 mg/L | | |
| | LD50 (Dermal/Rabbit) | 2000 mg/kg | | |
| | LD50 (Oral/Rat) | 29700 mg/kg | | Granulated sugar 57-50-1 |
| | LC50 (Inhalation/Rat male) | - | | |
| | LD50 (Dermal/Rabbit) | - | | |
| Skin Corrosion/Irritation | Not classified | | | Based on information of the components |
| Serious Eye Damage / Eye Irritation | Not classified | | | |
| Respiratory or Skin Sensitization | Not classified, no data available | | | |
| Germ Cell Mutagenicity | No evidence of mutagenic effects | | | |
| Carcinogenicity | Not classified, no data available | | | |
| Reproductive Toxicity | No evidence of reproductive effects | | | |
| STOT - Single Exposure | Not a STOT-SE toxicant | | | |
| STOT - Repeated Exposure | Based on available data, not expected | | | |
| Aspiration Hazard | Not classified, no data available | | | |

Section 12 – Ecological Information

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|--------------------|--|
| Ecotoxicity | 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 | Chemical Name | |
|--------------------------|---------------------------------|---|
| | Propylene Glycol 57-55-6 | |
| Toxicity to algae | EC50 / 72 h | >19000 mg/L (Pseudokirchneriella subcapitata) |
| | NOEC / 96 h or 72 h | - |
| | M factor | - |

| | | |
|---------------------|----------------|-----------------------------------|
| Toxicity to fish | LC 50 / 96 h | >40613 mg/L (Oncorhynchus mykiss) |
| | NOEC / 21 days | - |
| | M factor | - |
| Toxicity to Daphnia | EC50 / 48 h | >18340 mg/L (Daphnia magna) |
| | NOEC / 21 days | - |
| | M factor | - |

Persistence and Degradability Readily biodegradable.

| Bioaccumulative potential | Product/Ingredient Name | Log P _{ow} | BCF | Potential |
|---------------------------|-------------------------|---------------------|------|-----------|
| | Propylene glycol | -1.07 | 0.09 | Low |

Mobility in Soil No further relevant information available.

Other Adverse Effects No further relevant information available.

Section 13 – Disposal Considerations

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.

Section 14 – Transportation Information

DOT Not Regulated as a hazardous material for transport

TDG Not Regulated as a hazardous material for transport

IATA Not Regulated as a hazardous material for transport

IMDG Not Regulated as a hazardous material for transport

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 | No |
| Delayed Hazard | No |
| Fire Hazard | No |
| Pressure Hazard | No |
| Reactivity Hazard | 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) | Not regulated |

US state regulations

| | |
|---|------------|
| US Massachusetts RTK - Substance List | - |
| 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:**

| | |
|---------------------|---|
| Health | 1 |
| Flammability | 1 |
| Physical Hazard | 0 |
| Personal Protection | x |

NFPA Rating:

| | |
|--------------|---|
| Health | 1 |
| Flammability | 1 |
| Instability | 0 |
| Special | - |

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