

SAFETY DATA SHEET

SECTION 1 Product And Company Identification

PRODUCT

PRODUCT NAME: 3405FD RETARDER R50
PRODUCT DESCRIPTION: Preparation/Mixture
PRODUCT USE: Apply to wood or steel form work to 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

Hazardous according to the criteria of the Globally Harmonized System of Classification and labelling of Chemicals (GHS).

Flammable Liquids	Category 2
Serious eye damage/eye irritation	Category 2A
Specific target organ toxicity (single exposure)	Category 3 (central nervous system)

Label elements

Hazard pictograms



Signal word

Danger

Hazard statements:

H225 Highly flammable liquid and vapour.
 H319 Causes serious eye irritation.
 H336 May cause drowsiness or dizziness.

Precautionary statements

Prevention	P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking. P233 Keep container tightly closed. P240 Ground/bond container and receiving equipment. P241 Use explosion-proof electrical/ventilating/lighting/equipment. P242 Use only non-sparking tools. P243 Take precautionary measures against static discharge. P261 Avoid breathing dust/fume/gas/mist/vapours/spray. P264 Wash hands thoroughly after handling. P271 Use only outdoors or in a well-ventilated area.
Response	P280 Wear protective gloves/protective clothing/eye protection/face protection. P303 + P361 + P353 – IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P312 Call a POISON CENTER or doctor/physician if you feel unwell. P337 + P313 If eye irritation persists: Get medical advice/attention. P370 + P378 In case of fire: Use extinguishing media listed in Section 5 of SDS for extinction.

Storage	P403 + P233 Store in a well-ventilated place. Keep container tightly closed. P403 + P235 Store in a well-ventilated place. Keep cool.
Disposal	P405 Store locked up. P501 Dispose of contents/container: Follow the waste disposal requirements of your country, state, or local authorities.

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	45-55
Isopropyl Alcohol	67-63-0	30-35
Granulated Sugar	57-50-1	15-20

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	Do not induce vomiting without medical advice. Immediate medical attention is required. Never give anything by mouth to an unconscious person. Call a physician.

Most important symptoms and effects, both acute and delayed**Potential acute health effects**

Eye contact	Causes serious eye irritation.
Inhalation	Can cause central nervous system (CNS) depression. May cause drowsiness and
Skin contact	No known significant effects or critical hazards.
Ingestion	Can cause central nervous system (CNS) depression. Irritating to mouth, throat and stomach.
Frostbite	Try to warm up the frozen tissues and seek medical attention.

Over-exposure signs/symptoms

Eye contact	Adverse symptoms may include: pain or irritation, watering, redness.
Inhalation	Adverse symptoms may include: nausea or vomiting, headache, drowsiness, fatigue, dizziness, vertigo, unconsciousness.
Skin contact	No specific data.
Ingestion	No specific data.

Indication of any immediate medical attention and special treatment needed

Note to physicians	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
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 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

Highly flammable liquid and vapor. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Runoff to sewer may create fire or explosion hazard. Decomposition products may include carbon dioxide and carbon monoxide.

Advice for firefighters

Special protective actions for fire-fighters	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
Special protective equipment for fire-fighters	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

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

Wear personal protective equipment. Immediately evacuate personnel to safe areas. Keep people away from the upwind of spill/leak. Ensure adequate ventilation. Remove all sources of ignition. Do not swallow. Avoid breathing vapours, mist or gas. Avoid contact with skin, eyes, and clothing.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Discharge into the environment must be avoided. Do not flush into surface water or sanitary sewer system. Prevent product from entering drains. Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

Methods and materials for containment and cleaning up

Spill Management	Stop source of release if you can do it without risk. Contain release to prevent further contamination of soil, surface water or groundwater. Clean up spill as soon as possible.
Methods for cleaning up	Dam up. Absorb with inert materials, e.g. sand, earth, vermiculite, diatomaceous earth. Pick up and transfer to properly labeled containers and dispose according to local regulations. Clean contaminated surface thoroughly.

Reference to other sections

See 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. Do not eat, drink, or smoke while handling this product. Wash thoroughly after handling. Avoid breathing vapors/mists generated by this product. Use in a well-ventilated location.

Conditions for safe storage, including any incompatibilities

Store in area designed for storage of flammable liquids. Protect from physical damage. Keep containers tightly closed in a dry, cool and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Keep away from heat, sources of ignition, direct sunlight. Store away from incompatible substances. Do not pressurize, cut, weld, braze, solder, drill and grind.

Specific end use(s)

No data available.

Section 8 – Exposure Controls / Personal Protection

Control Parameters

Exposure Guidelines

Components	ACGIH TLV	OSHA PEL	NIOSH REL
Isopropyl Alcohol 67-63-0	TWA: 200 ppm STEL: 400 ppm	TWA: 400 ppm STEL: 500 ppm	TWA: 400 ppm ST: 500 ppm
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

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 Pink
ODOR	Alcoholic odour
ODOR THRESHOLD	No data available
PH	7.5-8.5
MELTING POINT/FREEZING POINT	< 0°C
INITIAL BOILING POINT AND BOILING RANGE	87.7°C
FLASH POINT	11.7°C (53.1°F)
EVAPORATION RATE	1.3
FLAMMABILITY (solid, gas)	No data available
UPPER/LOWER FLAMMABILITY OR EXPLOSIVE LIMITS	2% / 12%
VAPOR PRESSURE	No data available
VAPOR DENSITY (AIR=1)	2.1
SPECIFIC GRAVITY(@25°C)	0.98
SOLUBILITY	Soluble in water
AUTO IGNITION TEMPERATURE	350°C (662°F)
DECOMPOSITION TEMPERATURE	No data available
VISCOSITY	No data available
VOC CONTENT	618 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:	Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapor to accumulate in low or confined areas.
Incompatibility (Materials to Avoid):	Strong acids, strong oxidizing agents, metals, acetaldehyde, aluminum, chloride, ethylene oxide, isocyanates, oxygen, plastic, rubbers and coatings.
Hazardous Decomposition Products:	Burning may produce carbon monoxide, carbon dioxide contamination.

Section 11 – Toxicological Information

GHS Required Criteria	Toxicity Criteria	Toxicity Information	Comment	Chemical Constituent	
Acute Toxicity	LD50 (Oral/Rat)	4710 mg/kg		Isopropyl Alcohol 67-63-0	
	LC50 (Inhalation/Rat male)	72.6 mg/L			
	LD50 (Dermal/Rabbit)	12800 mg/kg			
		LD50 (Oral/Rat)	29700 mg/kg		Granulated sugar 57-50-1
		LC50 (Inhalation/Rat male)	-		
		LD50 (Dermal/Rabbit)	-		
Skin Corrosion/Irritation	May dry skin leading to discomfort and dermatitis.			Based on information of the components	
Serious Eye Damage / Eye Irritation	Irritating and will injure eye tissue.				
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	May cause drowsiness or dizziness.				
STOT - Repeated Exposure	Based on available data, not expected				
Aspiration Hazard	Not classified, no data available				

Section 12 – Ecological Information

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	
	Isopropyl Alcohol 67-63-0	
Toxicity to algae	EC50 / 72 h	>2000 mg/L (Desmodesmus subspicatus)
	NOEC / 96 h or 72 h	-
	M factor	-
Toxicity to fish	LC 50 / 96 h	>10400 mg/L (Pimephales promelas)
	NOEC / 21 days	-
	M factor	-
Toxicity to Daphnia	EC50 / 48 h	>100 mg/L (Daphnia magna)
	NOEC / 21 days	-
	M factor	-

Persistence and Degradability No further relevant information available.

Bioaccumulative potential

Product/Ingredient Name	Log Pow	BCF	Potential
Isopropyl Alcohol	0.05	-	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. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally.

Section 14 – Transportation Information

Regulatory Information	UN number	UN proper shipping name	Transport Hazard Class(es)	Packing Group
DOT	UN 1993	Flammable liquid, N.O.S. (Isopropyl Alcohol)	3	III
TDG	UN 1993	Flammable liquid, N.O.S. (Isopropyl Alcohol)	3	III
IMDG	UN 1993	Flammable liquid, N.O.S. (Isopropyl Alcohol)	3	III
ICAO/IATA	UN 1993	Flammable liquid, N.O.S. (Isopropyl Alcohol)	3	III

Section 15 – Regulatory Information**Canada****WHMIS Classification:**

This product has been classified 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	Yes
Delayed Hazard	No
Fire Hazard	Yes
Pressure Hazard	No
Reactivity Hazard	No
SARA 313 (TRI reporting)	Yes
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	Listed
US New Jersey Worker and Community Right-to-Know Act	Listed
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)	-
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	Yes
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	2
Flammability	3
Physical Hazard	0
Personal Protection	x

NFPA Rating:

Health	2
Flammability	3
Instability	0
Special	-

Issue Date: December 20, 2016
Supersedes: May 05, 2014
Prepared By: Joey Wang

THE INFORMATION CONTAINED HEREIN IS BASED ON DATA BELIEVED TO BE RELIABLE BY INNOVATIVE MANUFACTURING INC. IT IS TRUE AND ACCURATE TO THE BEST OF OUR KNOWLEDGE, BUT IS NOT INTENDED TO BE ALL-INCLUSIVE. USERS SHOULD CONSIDER THIS INFORMATION AS A SUPPLEMENT TO OTHER INFORMATION GATHERED BY THEM AND MUST MAKE THEIR OWN DETERMINATION OF SUITABILITY AND COMPLETENESS TO ASSURE PROPER SAFE USE AND DISPOSAL OF THESE MATERIALS.