

1. Identification

Product identifier Futura Retardant M

Other means of identification

SKU# VE991E

Recommended use Not available.

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name	ITW Polymers Coatings North America	
Address	130 Commerce Drive Montgomeryville, PA 18936 US US	
Telephone	Customer Service	(215) 855-8450
Website	www.itwcoatings.com	
E-mail	orders@itwcoatings.com	
Contact person	EHS Department	
Emergency phone number	CHEMTREC	(800) 424-9300
	International	(703) 527-3887

2. Hazard(s) identification

Physical hazards Flammable liquids Category 3

Health hazards Acute toxicity, oral Category 4

Acute toxicity, dermal Category 4

Acute toxicity, inhalation Category 4

Skin corrosion/irritation Category 2

Serious eye damage/eye irritation Category 2

Sensitization, skin Category 1

Carcinogenicity Category 2

OSHA defined hazards Not classified.

Label elements



Signal word Warning

Hazard statement Flammable liquid and vapor. Harmful if swallowed. Harmful in contact with skin. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. Harmful if inhaled. Suspected of causing cancer.

Prevention Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Avoid breathing mist or vapor. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Contaminated work clothing must not be allowed out of the workplace. Wear protective gloves/protective clothing/eye protection/face protection.

Response If swallowed: Call a poison center/doctor if you feel unwell. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If exposed or concerned: Get medical advice/attention. Rinse mouth. If skin irritation or rash occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash before reuse. In case of fire: Use appropriate media to extinguish.

Storage Store in a well-ventilated place. Keep cool. Store locked up.

Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.	
Hazard(s) not otherwise classified (HNOC)	Static accumulating flammable liquids	Classified
Environmental hazards	Hazardous to the aquatic environment, acute hazard	Category 2
	Hazardous to the aquatic environment, long-term hazard	Category 2

Supplemental information

Hazard statement

Static accumulating flammable liquid can become electrostatically charged even in bonded and grounded equipment. Sparks may ignite liquid and vapor. May cause flash fire or explosion. Toxic to aquatic life. Toxic to aquatic life with long lasting effects.

Prevention

Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Ground/bond container and receiving equipment. These alone may be insufficient to remove static electricity. Avoid release to the environment.

Response

Eliminate all ignition sources if safe to do so.

10.03% of the mixture consists of component(s) of unknown acute oral toxicity. 10.03% of the mixture consists of component(s) of unknown acute inhalation toxicity. 11.8% of the mixture consists of component(s) of unknown acute hazards to the aquatic environment. 11.8% of the mixture consists of component(s) of unknown long-term hazards to the aquatic environment.

3. Composition/information on ingredients

Mixtures

Hazardous components Chemical name	Common name and synonyms	CAS number	%
Styrene		100-42-5	60 - 100
T-butylcatechol		98-29-3	10 - 30
Methyl Alcohol		67-56-1	1 - 5

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation

Remove victim to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

Skin contact

Take off immediately all contaminated clothing. Wash off with soap and plenty of water. If skin irritation or rash occurs: Get medical advice/attention. For minor skin contact, avoid spreading material on unaffected skin.

Eye contact

Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

Ingestion

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth.

Most important symptoms/effects, acute and delayed

Irritation of eyes and mucous membranes. May cause allergic skin reaction.

Indication of immediate medical attention and special treatment needed

Provide general supportive measures and treat symptomatically. In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

General information

Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. IF exposed or concerned: Get medical advice/attention. Wash contaminated clothing before reuse.

5. Fire-fighting measures

Suitable extinguishing media

Water fog. Foam. Carbon dioxide (CO₂). Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.

Unsuitable extinguishing media

Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical

This product is a poor conductor of electricity and can become electrostatically charged. If sufficient charge is accumulated, ignition of flammable mixtures can occur. To reduce potential for static discharge, use proper bonding and grounding procedures. This liquid may accumulate static electricity when filling properly grounded containers. Static electricity accumulation may be significantly increased by the presence of small quantities of water or other contaminants. Material will float and may ignite on surface of water. By heating and fire, harmful vapors/gases may be formed. Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back.

Special protective equipment and precautions for firefighters	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. Structural firefighters protective clothing will only provide limited protection.
Fire-fighting equipment/instructions	In case of fire and/or explosion do not breathe fumes. Use standard firefighting procedures and consider the hazards of other involved materials. Move containers from fire area if you can do so without risk. Water runoff can cause environmental damage.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials. Move container from fire area if it can be done without risk. In the event of fire and/or explosion do not breathe fumes.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate personal protective equipment. Fully encapsulating, vapor protective clothing should be worn for spills and leaks with no fire. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Avoid inhalation of vapors or mists. Ventilate closed spaces before entering them. Use appropriate containment to avoid environmental contamination. Transfer by mechanical means such as vacuum truck to a salvage tank or other suitable container for recovery or safe disposal. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the MSDS.

Methods and materials for containment and cleaning up Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Take precautionary measures against static discharge. Use only non-sparking tools. Keep combustibles (wood, paper, oil, etc.) away from spilled material. This material is classified as a water pollutant under the Clean Water Act and should be prevented from contaminating soil or from entering sewage and drainage systems which lead to waterways.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills in original containers for re-use. For waste disposal, see section 13 of the MSDS.

Environmental precautions Avoid release to the environment. Contact local authorities in case of spillage to drain/aquatic environment. Prevent further leakage or spillage if safe to do so. Do not contaminate water. Avoid discharge into drains, water courses or onto the ground. Use appropriate containment to avoid environmental contamination.

7. Handling and storage

Precautions for safe handling Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Minimize fire risks from flammable and combustible materials (including combustible dust and static accumulating liquids) or dangerous reactions with incompatible materials. Handling operations that can promote accumulation of static charges include but are not limited to: mixing, filtering, pumping at high flow rates, splash filling, creating mists or sprays, tank and container filling, tank cleaning, sampling, gauging, switch loading, vacuum truck operations. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Do not taste or swallow. Avoid breathing vapor. Avoid contact with skin. Avoid contact with eyes. Avoid prolonged exposure. Avoid contact with clothing. Use only outdoors or in a well-ventilated area. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. When using, do not eat, drink or smoke. Wash hands thoroughly after handling. Wash contaminated clothing before reuse. Avoid release to the environment. Do not empty into drains.

For additional information on equipment bonding and grounding, refer to the Canadian Electrical Code in Canada, (CSA C22.1), or the American Petroleum Institute (API) Recommended Practice 2003, "Protection Against Ignitions Arising out of Static, Lightning, and Stray Currents" or National Fire Protection Association (NFPA) 77, "Recommended Practice on Static Electricity" or National Fire Protection Association (NFPA) 70, "National Electrical Code".

Conditions for safe storage, including any incompatibilities Store locked up. Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Avoid spark promoters. Eliminate sources of ignition. Ground/bond container and equipment. These alone may be insufficient to remove static electricity. Keep container tightly closed. Store in a cool, dry place out of direct sunlight. Store in a well-ventilated place. Refrigeration recommended. Keep in an area equipped with sprinklers.

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Methyl Alcohol (CAS 67-56-1)	PEL	260 mg/m ³
		200 ppm

US. OSHA Table Z-2 (29 CFR 1910.1000)

Components	Type	Value
Styrene (CAS 100-42-5)	Ceiling	200 ppm
	TWA	100 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
Methyl Alcohol (CAS 67-56-1)	STEL	250 ppm
	TWA	200 ppm
Styrene (CAS 100-42-5)	STEL	40 ppm
	TWA	20 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Methyl Alcohol (CAS 67-56-1)	STEL	325 mg/m ³
	TWA	250 ppm 260 mg/m ³ 200 ppm
Styrene (CAS 100-42-5)	STEL	425 mg/m ³ 100 ppm
	TWA	215 mg/m ³ 50 ppm

US. Workplace Environmental Exposure Level (WEEL) Guides

Components	Type	Value
T-butylcatechol (CAS 98-29-3)	Ceiling	2 mg/m ³

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
Methyl Alcohol (CAS 67-56-1)	15 mg/l	Methanol	Urine	*
Styrene (CAS 100-42-5)	400 mg/g	Mandelic acid plus phenylglyoxylic acid	Creatinine in urine	*
	0.2 mg/l	Styrene	Venous blood	*

* - For sampling details, please see the source document.

Exposure guidelines

US - California OELs: Skin designation

Methyl Alcohol (CAS 67-56-1) Can be absorbed through the skin.
Styrene (CAS 100-42-5) Can be absorbed through the skin.

US - Minnesota Haz Subs: Skin designation applies

Methyl Alcohol (CAS 67-56-1) Skin designation applies.
Styrene (CAS 100-42-5) Skin designation applies.

US - Tennessee OELs: Skin designation

Methyl Alcohol (CAS 67-56-1) Can be absorbed through the skin.

US ACGIH Threshold Limit Values: Skin designation

Methyl Alcohol (CAS 67-56-1) Can be absorbed through the skin.

US NIOSH Pocket Guide to Chemical Hazards: Skin designation

Methyl Alcohol (CAS 67-56-1) Can be absorbed through the skin.

US WEEL Guides: Skin designation

T-butylcatechol (CAS 98-29-3) Can be absorbed through the skin.

Appropriate engineering controls	Explosion-proof general and local exhaust ventilation. Provide eyewash station.
Individual protection measures, such as personal protective equipment	
Eye/face protection	Wear safety glasses with side shields (or goggles). Wear a full-face respirator, if needed.
Hand protection	Wear protective gloves.
Other	Wear appropriate chemical resistant clothing.
Respiratory protection	In case of insufficient ventilation, wear suitable respiratory equipment.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.

9. Physical and chemical properties

Appearance	Liquid.
Physical state	Liquid.
Form	Liquid.
Color	Clear colorless or nearly colorless
Odor	Aromatic. Sweet
Odor threshold	Not available.
pH	Not available.
Melting point	Not available.
Initial boiling point and boiling range	154.4 °F (68 °C) estimated
Flash point	89.60 °F (32.00 °C) estimated
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	16.02 hPa estimated
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	914 °F (490 °C) estimated
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Density	7.69 lb/gal
Flammability class	Flammable IC estimated
Specific gravity	0.92

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Heat, flames and sparks. Avoid temperatures exceeding the flash point.
Incompatible materials	Aluminum. Strong acids. Peroxides.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Ingestion	Harmful if swallowed.
Inhalation	Harmful if inhaled.
Skin contact	Harmful in contact with skin. May cause an allergic skin reaction.
Eye contact	Causes serious eye irritation.

Symptoms related to the physical, chemical and toxicological characteristics Irritant effects.

Information on toxicological effects

Acute toxicity	Harmful if inhaled. Harmful if swallowed. Harmful in contact with skin. May cause allergic skin reaction.
Skin corrosion/irritation	Causes skin irritation.
Serious eye damage/eye irritation	Causes serious eye irritation.
Respiratory sensitization	Due to lack of data the classification is not possible.
Skin sensitization	May cause an allergic skin reaction.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	Suspected of causing cancer.

IARC Monographs. Overall Evaluation of Carcinogenicity

Styrene (CAS 100-42-5) 2B Possibly carcinogenic to humans.

US. National Toxicology Program (NTP) Report on Carcinogens

Styrene (CAS 100-42-5) Reasonably Anticipated to be a Human Carcinogen.

Reproductive toxicity	Possible reproductive hazard.
Specific target organ toxicity - single exposure	Due to lack of data the classification is not possible.
Specific target organ toxicity - repeated exposure	Not available.
Aspiration hazard	Due to lack of data the classification is not possible.
Chronic effects	Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects.

12. Ecological information

Ecotoxicity	Toxic to aquatic life with long lasting effects. Accumulation in aquatic organisms is expected.
Persistence and degradability	No data is available on the degradability of this product.
Bioaccumulative potential	No data available for this product.
Partition coefficient n-octanol / water (log Kow)	
Methyl Alcohol	-0.77
Styrene	2.95
Mobility in soil	Not available.
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT

UN number	UN1993
UN proper shipping name	Flammable liquids, n.o.s. (Styrene), MARINE POLLUTANT
Transport hazard class(es)	3
Subsidiary class(es)	Not available.
Packing group	III
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Labels required	3
Special provisions	B1, B52, IB3, T4, TP1, TP29
Packaging exceptions	150
Packaging non bulk	203
Packaging bulk	242

IATA

UN number	UN1993
UN proper shipping name	Flammable liquid, n.o.s. (Styrene)
Transport hazard class(es)	3
Subsidiary class(es)	-
Packaging group	III
Environmental hazards	No
Labels required	Not available.
ERG Code	3L
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

IMDG

UN number	UN1993
UN proper shipping name	FLAMMABLE LIQUID, N.O.S. (Styrene), MARINE POLLUTANT
Transport hazard class(es)	3
Subsidiary class(es)	-
Packaging group	III
Environmental hazards	
Marine pollutant	Yes
Labels required	Not available.
EmS	F-E, S-E
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code This substance/mixture is not intended to be transported in bulk.

General information DOT Regulated Marine Pollutant. IMDG Regulated Marine Pollutant.

DOT



IATA; IMDG





15. Regulatory information

US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Methyl Alcohol (CAS 67-56-1) LISTED
Styrene (CAS 100-42-5) LISTED

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

SARA 304 Emergency release notification

Not regulated.

US EPCRA (SARA Title III) Section 313 - Toxic Chemical: De minimis concentration

Methyl Alcohol (CAS 67-56-1) 1.0 %
Styrene (CAS 100-42-5) 0.1 %

US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Listed substance

Methyl Alcohol (CAS 67-56-1) Listed.
Styrene (CAS 100-42-5) Listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
Immediate Hazard - Yes
Delayed Hazard - Yes
Fire Hazard - Yes
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance No

SARA 311/312 Hazardous chemical No

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Methyl Alcohol (CAS 67-56-1)
Styrene (CAS 100-42-5)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

DEA Essential Chemical Code Number

Not regulated.

Food and Drug Administration (FDA) Not regulated.

US state regulations

US. Massachusetts RTK - Substance List

Methyl Alcohol (CAS 67-56-1)
Styrene (CAS 100-42-5)
T-butylcatechol (CAS 98-29-3)

US. New Jersey Worker and Community Right-to-Know Act

Methyl Alcohol (CAS 67-56-1) 500 lbs
Styrene (CAS 100-42-5) 500 lbs

US. Pennsylvania RTK - Hazardous Substances

Methyl Alcohol (CAS 67-56-1)
Styrene (CAS 100-42-5)

T-butylcatechol (CAS 98-29-3)

US. Rhode Island RTK

Methyl Alcohol (CAS 67-56-1)

Styrene (CAS 100-42-5)

US. California Proposition 65

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

US - California Proposition 65 - CRT: Listed date/Developmental toxin

Methyl Alcohol (CAS 67-56-1)

Listed: March 16, 2012

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
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)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 09-24-2013

Version # 01

Further information Not available.

HMIS® ratings Health: 2*
Flammability: 3
Physical hazard: 1

NFPA ratings Health: 2
Flammability: 3
Instability: 1

Disclaimer The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release.