FUTUREFUEL Superior chemistry. Sustainable fuels.

SAFETY DATA SHEET

1. Identification

Product identifier

FutureChem® DMSIP

Other means of identification

Product code

3640

Recommended use

Polymer Additive.

Recommended restrictions

None known.

Manufacturer/Importer/Supplier/Distributor information

Company name

FutureFuel Chemical Company

Address

2800 Gap Road

Telephone

Batesville, AR 72501 870-698-3000

Contact person

Product Safety

Emergency Telephone

CHEMTREC: US 800-424-9300, International 703-527-3887

Email

productsafety@ffcmail.com

2. Hazard(s) identification

Physical hazards

Not classified.

Health hazards

Skin corrosion/irritation

Category 2

Serious eye damage/eye irritation

Category 2A

OSHA defined hazards

Not classified.

Label elements



Signal word

Warning

Hazard statement

Causes skin irritation. Causes serious eye irritation.

Precautionary statement

Prevention

Wash thoroughly after handling. Wear protective gloves. Wear eye/face protection.

Response

If on skin: Wash with plenty of water. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If skin irritation occurs: Get medical advise/ettention. Take off.

medical advice/attention. If eye irritation persists: Get medical advice/attention. Take off

contaminated clothing and wash before reuse.

Storage

Store away from incompatible materials.

Disposal

Dispose of waste and residues in accordance with local authority requirements.

Hazard(s) not otherwise

classified (HNOC)

None known.

3. Composition/information on ingredients

Substances

Chemical name	Common name and synonyms	CAS number	%
Dimethyl 5-(sodiosulfo)isophthalate		3965-55-7	
Impurities			
Chemical name		CAS number	%
5-(sodiosulfo)isophthalic acid		6362-79-4	<1

4. First-aid measures

Inhalation

Move to fresh air. Call a physician if symptoms develop or persist.

Skin contact

Remove contaminated clothing. Wash with plenty of soap and water. If skin irritation occurs; Get

medical advice/attention. Wash contaminated clothing before reuse.

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

Rinse mouth. Get medical attention if symptoms occur.

vision. Skin irritation. May cause redness and pain.

Most important

symptoms/effects, acute and

delaved

Indication of immediate medical attention and special treatment needed

Provide general supportive measures and treat symptomatically. Keep victim under observation.

Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred

Symptoms may be delayed.

General information

Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media

Unsuitable extinguishing media

Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2). Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from

the chemical

During fire, gases hazardous to health may be formed.

Special protective equipment

and precautions for firefighters

Self-contained breathing apparatus and full protective clothing must be wom in case of fire.

Fire fighting equipment/instructions

Specific methods General fire hazards Move containers from fire area if you can do so without risk.

Use standard firefighting procedures and consider the hazards of other involved materials.

May form combustible dust concentrations in air.

6. Accidental release measures

Personal precautions. protective equipment and emergency procedures

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up 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. Absorb in vermiculite, dry sand or earth and place into containers. 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 to original containers for re-use. For waste disposal, see section 13 of the SDS. Avoid discharge into drains, water courses or onto the ground.

Environmental precautions

7. Handling and storage Precautions for safe handling

Avoid contact with eyes, skin, and clothing. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

No exposure limits noted for ingredient(s).

Biological limit values

No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide easy access to water supply and eye wash facilities.

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Individual protection measures, such as personal protective equipment

Eye/face protection Chemical goggles are recommended. Wear face shield if there is risk of splashes.

Skin protection

Hand protection Wear appropriate chemical resistant gloves.

Other Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

Respiratory protection No personal respiratory protective equipment normally required. Respiratory protections should be

worn when there is a potential to exceed the exposure limit requirements or guidelines.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

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.

9. Physical and chemical properties

Appearance

Physical state Solid.

Form White powder.

Color White.

Odor Mild.

Odor threshold Not available.

Not applicable

Melting point/freezing point > 572 °F (> 300 °C)

Initial boiling point and boiling

range

Not available.

Not applicable Flash point **Evaporation rate** Not available.

Flammability (solid, gas) Not available. Upper/lower flammability or explosive limits

Not available.

Flammability limit - lower (%)

Flammability limit - upper

(%)

Not available.

Explosive limit - lower (%) Explosive limit - upper (%) Not available. Not available.

Vapor density

Not applicable

Relative density

> 1

Solubility(ies)

Solubility (water)

Not available.

Partition coefficient (n-octanol/water)

Not available.

Auto-ignition temperature

Not available.

Decomposition temperature

Not available.

Viscosity

Not available.

10. Stability and reactivity

Reactivity The product is stable and non-reactive under normal conditions of use, storage and transport.

No dangerous reaction known under conditions of normal use.

Chemical stability

Material is stable under normal conditions.

Possibility of hazardous reactions

Conditions to avoid

Contact with incompatible materials.

Incompatible materials

Strong oxidizing agents.

Hazardous decomposition

No hazardous decomposition products are known.

products

Thermal decomposition of this product can generate carbon monoxide and carbon dioxide. Sulfur oxides (SOx.). Metal oxides.

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11. Toxicological information

Information on likely routes of exposure

Inhalation No adverse effects due to inhalation are expected.

Skin contact

Causes skin irritation.

Eye contact

Causes serious eye irritation.

Ingestion

Expected to be a low ingestion hazard.

Symptoms related to the physical, chemical and toxicological characteristics Severe eve irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred

vision. Skin irritation. May cause redness and pain.

Information on toxicological effects

Acute toxicity

Not expected to be acutely toxic.

Skin corrosion/irritation

Causes skin irritation.

Serious eve damage/eve

Causes serious eye irritation.

irritation

Respiratory or skin sensitization

Respiratory sensitization

Not classified.

Skin sensitization

This product is not expected to cause skin sensitization.

Germ cell mutagenicity

No data available to indicate product or any components present at greater than 0.1% are

mutagenic or genotoxic.

Carcinogenicity

This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Reproductive toxicity

This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity -

single exposure

Not classified.

Specific target organ toxicity -

repeated exposure

Not classified.

Aspiration hazard

Not classified.

12. Ecological information

Ecotoxicity

The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Persistence and degradability

No data available.

Bioaccumulative potential

Mobility in soil

No data 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. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations

Dispose in accordance with all applicable regulations.

No data is available on the degradability of this product.

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

Not regulated as dangerous goods.

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IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to

Not applicable.

Annex II of MARPOL 73/78 and

the IBC Code

15. Regulatory information

US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication

Standard, 29 CFR 1910,1200.

All components are on the U.S. EPA TSCA Inventory List.

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

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

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

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous

Yes

chemical

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

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

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

Not regulated.

Safe Drinking Water Act

Not regulated.

(SDWA)

US state regulations

US. Massachusetts RTK - Substance List

Not regulated.

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

Not listed.

US. Pennsylvania Worker and Community Right-to-Know Law

Not listed.

US. Rhode Island RTK

Not regulated.

US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	No
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No

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Country(s) or region	Inventory name	On inventory (yes/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	No
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).

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

Issue date

15-December-2014

Revision date

Version #

01

NFPA ratings



Disclaimer

FutureFuel Chemical Company cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.

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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).