

## SAFETY DATA SHEET - SDS

Product : THG-FM 110

Revision 1.0 on Jan 4, 2026

### 1. IDENTIFICATION OF SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

|                              |                                                                                                                                          |
|------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| Product                      | THG FM 110                                                                                                                               |
| Internal identification code | --                                                                                                                                       |
| Relevant recommended uses    | Industrial uses.                                                                                                                         |
| Company                      | The Hanson Group                                                                                                                         |
| Address                      | 3044 Adriatic Court<br>Peachtree Corners, GA 30071                                                                                       |
| Phone number                 | 770-495-9554                                                                                                                             |
| Fax                          | 404-521-4396                                                                                                                             |
| Emergency Phone number       | For Chemical Emergency - Spill, Leak, Fire, Exposure or Accident:<br>Call CHEMTREC Day or Night 800-424-9300/703-527-3887 (USA & Canada) |

### 2. HAZARDS IDENTIFICATION

**Classification** No classification is assigned according to OSHA HCS 2012.

#### Label Elements

- **Hazard Pictograms** Not applicable.
- **Signal Word** Not applicable.
- **Hazard Statements** Not applicable.
- **Precautionary Statements** Not applicable.

### 3. COMPOSITION AND INFORMATION ON INGREDIENTS

|                                                                    |                                                                                  |
|--------------------------------------------------------------------|----------------------------------------------------------------------------------|
| Brand or Generic Chemical Name                                     | THG FM 110                                                                       |
| Product Type                                                       | Substance.                                                                       |
| # Synonyms                                                         | Not applicable.                                                                  |
| CAS Number                                                         | Proprietary                                                                      |
| Impurities which contribute to the classification of the substance | There are no impurities which contribute to the classification of the substance. |

### 4. FIRST-AID MEASURES

#### Procedure in Case of:

- **Ingestion**  
Seek prompt medical attention.  
Do not induce vomiting.  
Vomiting should only be induced by medical personnel.  
If vomiting occurs, keep the head lower than chest to avoid aspiration into the lungs.  
Never give anything by mouth to an unconscious or convulsing person.
- **Inhalation**  
Seek prompt medical attention.  
Remove victim to fresh air.  
If breathing is difficult, give oxygen.  
If not breathing, give artificial respiration.
- **Skin contact**  
Remove contaminated clothing and shoes. Wash affected areas with plenty of running water, preferably under a shower.  
Seek prompt medical attention.
- **Eye contact**  
Immediately flush with plenty of running water for at least 15 minutes, keeping eyelids open.  
Remove contact lenses if easy to do.  
Seek prompt medical attention.

**Most important symptoms/effects, acute and delayed**

## SAFETY DATA SHEET - SDS

Ingestion - Low toxicity. In large amounts may cause nausea, vomiting and diarrhea.

Inhalation - Due to your low vapor pressure, is unlikely to cause inhalation problems at room temperature. Vapors from the liquid at high temperatures or mist of the product, in high concentrations, may cause irritation of the respiratory system.

Skin - It is unlikely that exposure to small amounts for short periods, may have any irritant or toxic effect. It can be absorbed through the skin and cause mild irritation.

Eyes- May cause mild irritation.

### Information for doctor

There is not known any specific antidote.

Direct the treatment in accordance with the symptoms and clinical conditions of the patient.

## 5. FIRE-FIGHTING MEASURES

### Extinguishing Media

In case of fire, use:

Water spray.

Carbon dioxide (CO<sub>2</sub>).

Alcohol resistant foam.

Dry chemical powder.

### Specific Hazards

Product is not flammable.

In case of combustion it may generate carbon monoxide, besides CO<sub>2</sub>.

### Protective measures for fire-fighters

Water jets should not be used directly on igniting products because it may disperse the material and intensify the fire.

Self-contained breathing apparatus and protective clothing are required.

Cool the intact fire-exposed containers with water spray and remove them.

### NFPA Rating

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

## 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures

Isolate and signalize area.

Keep heat and/or ignition sources away.

Use personal protection equipment as indicated in Section 8, in order to avoid contact with spilled product.

### Environmental Precautions

Prevent product from entering into soil and waterways.

Notify the competent authorities if the product has run into drainage systems or watercourse or has contaminated the ground or vegetation.

### Methods and materials for containment and cleaning up

Stop if possible.

Contain and dike spilled product with earth or sand.

Eliminate ignition or heat sources.

Transfer to proper container.

Collect remnants with an appropriate absorbent material.

Wash the contaminated surface with water, which should be collected for disposal.

## 7. HANDLING AND STORAGE

### Precautions for safe handling

Use in a well-ventilated area.

Avoid inhalation and contact with eyes, skin or clothing through proper protection.

Emergency eyewashes and showers shall be located in accessible locations.

Wash hands and face thoroughly after handling.

Wash contaminated clothing before reuse.

### Conditions for safe storage

Store in a covered and well-ventilated area, away from sunlight and sources of heat or open flames.

Ensure that the storage location has adequate moisture, pressure and temperature.

Keep containers tightly closed when not in use.

### Incompatibilities

Avoid contact with:

Acids.

Combustible materials.

Oxidizing materials.

### # Packaging Material

Recommended:

Stainless steel.

Polypropylene.

## 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

### Control parameters



## SAFETY DATA SHEET - SDS

|                                       |                                                                                                                                                                                                                                                            |
|---------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| # • TLV-TWA (ACGIH)                   | 1,4-Dioxane: 20 ppm; 72 mg/m <sup>3</sup> [Skin].<br>Ethylene oxide: 1 ppm; 1.8 mg/m <sup>3</sup> .<br>Skin - Danger of cutaneous absorption.                                                                                                              |
| # • PEL-TWA (OSHA)                    | 1,4-Dioxane: 100 ppm; 360 mg/m <sup>3</sup> [Skin].<br>Ethylene oxide: 1 ppm.<br>Skin - Danger of cutaneous absorption.                                                                                                                                    |
| # • TLV-STEL (ACGIH)                  | Ethylene glycol: 100 mg/m <sup>3</sup> .<br>(H) - Aerosol only.<br>Ceiling (C) - The concentration that shall not be exceeded during any part of the working exposure.<br>A4 - Not classifiable as a Human Carcinogen.                                     |
| • LT(NR15)                            | Ethylene oxide: 39 ppm; 70 mg/m <sup>3</sup> .                                                                                                                                                                                                             |
| • Odor Threshold                      | Ethylene glycol: 60.3 mg/m <sup>3</sup> .                                                                                                                                                                                                                  |
| • IDLH                                | 1,4-Dioxane: 500 ppm.<br>Ethylene oxide: 800 ppm.                                                                                                                                                                                                          |
| • Biological Exposure Indices (ACGIH) | Not established.                                                                                                                                                                                                                                           |
| Engineering Control Measures          | In closed environments, this product should be handled keeping proper exhaust (general diluter or local exhaust).                                                                                                                                          |
| Individual Protection Measures        |                                                                                                                                                                                                                                                            |
| • Eye Protection                      | Side shields or wide vision safety goggles.                                                                                                                                                                                                                |
| • Skin Protection                     | PVC apron.<br>It is recommended to adopt safety boots/shoes.                                                                                                                                                                                               |
| • Hand Protection                     | Gloves made of:<br>Rubber.<br>PVC (Polyvinyl chloride).                                                                                                                                                                                                    |
| • Breathing equipment                 | In case of emergency or contact with high concentrations of the product, wear an air supplied mask or self contained breathing apparatus.<br>It is recommended to wear a face mask with mechanical filter in case of exposure to the particulate material. |

## 9. PHYSICAL AND CHEMICAL PROPERTIES

|                                              |                                  |
|----------------------------------------------|----------------------------------|
| Appearance                                   | White flakes.                    |
| Odour and Odour threshold                    | Odorless.                        |
| # pH                                         | 5.0 to 7.0 (sol 5% / 25 °C).     |
| # Melting point/Freezing point               | 54 - 61 °C.                      |
| Initial Boiling Point and Boiling Range      | Not available.                   |
| Flash point                                  | > 300 °C (open cup).             |
| Evaporation rate                             | Not available.                   |
| Flammability (solid, gas)                    | Not available.                   |
| Upper/lower flammability or explosive limits | Not available.                   |
| Vapour pressure                              | Not available.                   |
| Vapour density (air = 1)                     | Not available.                   |
| Relative density (water=1)                   | > 1.12 g/cm <sup>3</sup> (fused) |
| Apparent density                             | 1.01 g/cm <sup>3</sup> (25 C)    |
| Solubility                                   | 55% in water (20 °C).            |
| # Partition Coefficient n-octanol/water      | Log Kow: -2.30.                  |
| Auto-ignition temperature                    | Not available.                   |
| Decomposition temperature                    | Not available.                   |



## SAFETY DATA SHEET - SDS

# Viscosity 76.0 – 110.0 cSt (210 °F).

### 10. STABILITY AND REACTIVITY

|                                          |                                                                                  |
|------------------------------------------|----------------------------------------------------------------------------------|
| Chemical stability                       | Stable under normal conditions of use and storage.                               |
| Reactivity                               | No hazardous reactivity is expected.                                             |
| Possibility of Hazardous Reactions       | Not polymerize.                                                                  |
| Conditions to avoid                      | High temperatures, ignition sources and prolonged exposure to the air.           |
| Incompatible materials                   | Avoid contact with:<br>Acids.<br>Combustible materials.<br>Oxidizing materials.  |
| Hazardous decomposition products         | In case of combustion it may generate carbon monoxide, besides CO <sub>2</sub> . |
| Considerations on the use of the product | Not applicable.                                                                  |

### 11. TOXICOLOGICAL INFORMATION

#### Acute Toxicity

- Oral LD<sub>50</sub>, rat: > 15000 mg/kg.
- Inhalation Not available.
- Dermal LD<sub>50</sub>, rabbit: > 20000 mg/kg.

Skin corrosion/irritation Slightly irritating (rabbit, 24h, 500 mg).

Serious eye damage/eye irritation Slightly irritating (rabbit, 24h, 500 mg).

Respiratory or skin sensitization Not available.

Germ cell mutagenicity Negative.  
50 pph, hamster; 25 mmol/L, 3h, hamster (+S9); 3 - 7 mmol/L, 16h, hamster; 100 g/L, others microorganisms.

Carcinogenicity Produced no tumorigenic effect in mice after intravaginal contacts for 1 year. TDLo: 416 mg/kg.

Reproductive toxicity Produced no effect in pregnant rabbits (6-18 days) after ingestion. TDLo: 130 mg/kg.

Specific target organ toxicity - Single exposure Not available.

# Aspiration hazard Not expected to be an aspiration hazard.

### 12. ECOLOGICAL INFORMATION

Ecotoxicity Fish -  
LC<sub>50</sub>, 24h, Carassius auratus: > 5000 mg/L.  
LC<sub>50</sub>, 96h, Carassius auratus: > 20000 mg/L.  
LC<sub>50</sub>, 96h, Lepomis macrochirus: 1700 mg/L.

Persistence and Degradability Not readily biodegradable.  
56.2% of BOD in the MITI test.

Bioaccumulative Potential It is not expected to bioaccumulate in the environment.  
Log Kow: -2.30.

Mobility in soil It is expected to have high mobility in soil.  
Log Koc: -1.532.

Other Adverse Effects Water hazard class 1: Slightly hazardous to water.

### 13. DISPOSAL CONSIDERATIONS

Recommended methods of disposal

## SAFETY DATA SHEET - SDS

- **Product**  
The preferred options for disposal include reuse, recycling, co-processing, finding a use for a by-product, incineration or other thermal destruction process at licensed facilities. All procedures must follow specific operation standards in order to reduce health, safety and environmental risks. Perform co-processing, incineration or other thermal destruction process at facilities capable of minimizing or reducing air pollution emissions. The disposal must comply with federal, state, and local laws and regulations in accordance with the environmental agencies.
- **Product Remains**  
Same method as indicated for product.
- **Packaging**  
Do not cut or pierce the packaging, nor do hot work near them.  
Do not remove labels until the product has been fully removed and the packaging cleaned.  
The preferred options for disposal include reuse, recycling or reclamation at licensed facilities. All procedures must follow specific operation standards in order to reduce health, safety and environmental risks.  
The disposal must comply with local legislation and in accordance with standards from local environmental agencies.

### 14. TRANSPORT INFORMATION

**Land Transport ANTT** Product not classified as hazardous in accordance with Resolution 420/2004 - Transport Ministry.

- **UN number** N/A
- **Proper Shipping Name** Not classified.
- **Hazard Class** Not classified.
- **Hazard Number** Not classified.
- **Packaging Group** Not classified.

**Maritime Transport IMDG** Product not classified as hazardous in accordance with IMDG Code - 2012 Edition - IMO (International Maritime Organization).

- **UN number** N/A
- **Proper Shipping Name** Not classified.
- **IMDG Class** Not classified.
- **Packaging Group** Not classified.
- **EmS** Not classified.

**Air Transport ICAO-TI and IATA-DGR** Product not classified as hazardous in accordance with Dangerous Goods Regulations - 56th Edition - IATA (International Air Transport Association).

- **UN number** N/A
- **Proper Shipping Name** Not classified.
- **ICAO/IATA Class** Not classified.
- **Label** Not classified.
- **Packaging Group** Not classified.

**Land Transportation ADR/RID (cross-border)** Product not classified as hazardous in accordance with Dangerous Goods by Road - Applicable from 1st January 2011 - Unece (United Nations Economic Commission for Europe).

- **UN number** N/A
- **Proper Shipping Name** Not classified.
- **ADR/RID class** Not classified.
- **Packaging Group** Not classified.
- **Danger code (Kemler)** Not classified.
- **Restriction Code** Not classified.

**Land Transportation U.S DOT** Product not classified as hazardous in accordance with U.S. DOT (United States Department of Transportation) - 49 CFR 172.101.

**Packaging Type** Bulk and Non-bulk



## SAFETY DATA SHEET - SDS

|                          |                 |
|--------------------------|-----------------|
| Proper Shipping Name     | Not classified. |
| Hazard Class or Division | Not classified. |
| ID Number                | Not classified. |
| Packaging Group          | Not classified. |
| Remarks                  | Not classified. |

### 15. REGULATORY INFORMATION

|                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|---------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Applicable standards                                                      | Resolution 420 / 2004 – Transport Ministry.<br>Dangerous Goods by Road (ADR) – Available from January 1st, 2011 – Unece (United Nations Economic Commission for Europe).<br>IMDG Code - 2012 Edition - IMO (International Maritime Organization).<br>U.S.A Department of Transportation – DOT – 49 CFR 172.101.<br>Dangerous Goods Regulations - 56th Edition - IATA (International Air Transport Association).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| OSHA Hazard Communication Standard                                        | This product is not a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| SARA Title III - Sections 311 / 312 (40 CFR 370 Subparts B and C)         | Immediate (Acute) Health Hazard: No.<br>Delayed (Chronic) Health Hazard: No.<br>Fire Hazard: No.<br>Sudden Release of Pressure Hazard: No.<br>Reactive Hazard: No.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| SARA Title III - Section 313 (40 CFR 372.65)                              | This product does not contain a chemical which is listed in Section 313 at or above de minimis concentrations.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| SARA Title III - Section 302 (40 CFR 355 Appendix A)                      | Ethylene oxide (CAS 75-21-8): max. 10 ppm. TPQ: 1000 lb.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| CERCLA (40 CFR 302.4) / SARA 304                                          | 1,4-Dioxane (CAS 123-91-1): max. 10 ppm. RQ: 100 lb.<br>Ethylene oxide (CAS 75-21-8): max. 10 ppm. RQ: 10 lb.<br>Ethylene glycol (CAS 107-21-1): max. 0.25%. RQ: 5000 lb.<br>Reportable Quantity (RQ) of this product is 1000000 pounds based upon Ethylene oxide which yielded the lowest resultant RQ according to the following formula: CERCLA ingredient RQ / % of that ingredient in the product.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| New Jersey Hazardous Substance List                                       | 1,4-Dioxane (CAS 123-91-1): Substance# 0789 (Special Health Hazard Code: CA – Carcinogen; F3 – Flammable 3rd degree).<br>Ethylene oxide (CAS 75-21-8): Substance# 0882 (Special Health Hazard Code: CA – Carcinogen; MU – Mutagen; TE – Teratogen; F4 – Flammable 4th degree; R3 – Reactive 3rd degree).<br>Ethylene glycol (CAS 107-21-1): Substance# 0878.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act) | WARNING! This product contains a chemical known to the State of California to cause cancer.<br>- 1,4-Dioxane.<br>- Ethylene oxide.<br>WARNING! This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.<br>- Ethylene oxide.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Pennsylvania Hazardous Substance List                                     | 1,4-Dioxane (CAS 123-91-1) and Ethylene oxide (CAS 75-21-8): Listed also as an environmental hazard and as a special hazardous substance.<br>1,2-ethanediol (CAS 107-21-1): Listed as an environmental hazard.<br>Ethanol, 2,2 -oxybis- (CAS 111-46-6): Listed.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Inventory Status                                                          | United States & Puerto Rico – Toxic Substances Control Act (TSCA) Inventory: Yes<br>Canada – Domestic Substances List (DSL): Yes<br>Canada – Non-Domestic Substances List (NDSL): No<br>Europe – European Inventory of Existing Commercial Chemical Substances (EINECS): No<br>Europe – European List of Notified Chemical Substances (ELINCS): No<br>Australia – Australian Inventory of Chemical Substances (AICS): Yes<br>Philippines – Philippine Inventory of Chemicals and Chemical Substances (PICCS): Yes<br>Japan – Inventory of Existing and New Chemical Substances (ENCS): Yes<br>Korea – Existing Chemicals List (ECL): Yes<br>China – Inventory of Existing Chemical Substances in China (IECSC): Yes<br>New Zealand – New Zealand Inventory: Yes<br>*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s). |

### 16. OTHER INFORMATION

|         |                 |
|---------|-----------------|
| Remarks | Not applicable. |
|---------|-----------------|

## SAFETY DATA SHEET - SDS

### # Sources

LOLI - ChemADVISOR's Regulatory Database.  
eChemPortal - The Global Portal to Information on Chemical Substances.  
European Chemicals Agency - <http://echa.europa.eu/>.  
OECD Screening Information Data Sets (SIDS).  
Toxnet - Toxicology Data Network.  
2016 Guide to Occupational Exposure Values – ACGIH.  
2016 TLVs and BEIs – Based on the Documentation of the Threshold Limit Values for Chemical Substances and Physical Agents & Biological Exposure Indices – ACGIH.

### Abbreviations and acronyms

ACGIH: American Conference of Governmental Industrial Hygienists (USA).  
ADR: European agreement concerning the international carriage of dangerous goods by road.  
CAS: Chemical Abstracts Service (American Chemical Society - EUA).  
EC50: Average concentration for 50% of maximum response.  
LC: Lethal Concentration - substance concentration in the environment that leads to death after a certain period of exposure.  
LC50: Lethal concentration for 50% of the test animals.  
BOD: Biochemical Oxygen Demand.  
LD50: Lethal Dose for 50% of the test animals.  
LDLo: Lethal Dose Low - minimal amount of a chemical lethal to animals in testing.  
EINECS: European Inventory of Existing Commercial Chemical Substances.  
GHS: Globally Harmonized System of Classification and Labelling of Chemicals.  
IARC: International Agency for Research on Cancer.  
IATA: International Air Transport Association.  
IATA-DGR: Dangerous Goods by Regulations by the IATA  
ICAO: International Civil Aviation Organization  
ICAO-TI: Technical Instructions by the ICAO.  
IMDG: International Maritime Code for Dangerous Goods.  
IDLH - Immediately Dangerous To Life or Health Concentrations.  
Kow: Octanol/water partition coefficient.  
LT (NR 15): Exposure limits of the standard number 15 - Unhealthy Operations and Activities from the Ministry of Labour and Employment of Brazil.  
LOAEL: Lowest Adverse Effect Level  
LOLI - List Of Lists™ - ChemADVISOR's Regulatory Database  
NLP: No Longer Polymers.  
NIOSH: National Institute for Occupational Safety and Health.  
NOAEL: No Observed Adverse Effect Level  
NTP: National Toxicology Program.  
OSHA: Occupational Safety and Health Administration (EUA).  
PEL-TWA: Exposure Limit Allowed – time-weighted average.  
RID: Regulations concerning the international transport of dangerous goods by rail.  
TLV-STEL: Tolerance Limit - short period of time (15 minutes, maximum).  
TLV-TWA: Tolerance Limit – time weighted average.  
WGK: Wassergefährdungsklasse (Germany) - Water Hazard Class.

This Safety Data Sheet was authored according to our current knowledge and experience, however cannot imply guarantee of any nature. Considering the variety of factors that can affect their process or application, the information on this sheet does not exempt the processors from the responsibility of executing their own tests and experiments.

Revision Date: Jan 4, 2026

ELECTRONICALLY APPROVED