SAFETY DATA SHEET

Creation Date	Revision Date	Version
07-Feb-2023	13-Jun-2023	2

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name Natural-Therm® 2.0 HFO Winter

Synonyms Natural-Therm 2.0 HFO IBW B Component
Natural Therm 2.0 IBW HFO series; Winter Closed Cell Spray Foam Insulation

Product Code OCNP00012

Manufacturer Address Natural Polymers, LLC , a subsidiary of Owens Corning
14438 E North Ave
Cortland, IL 60112

Company Phone Number 1-800-GET-PINK or 1-800-438-7465
24 Hour Emergency Phone Number Chemtrec 1-800-424-9300 or 1-703-741-5970 CCN17393
Emergency Telephone 1-419-248-5330 (after 5 pm ET and weekends)

2. HAZARDS IDENTIFICATION

OSHA Regulatory Status This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Oral	Category 4
Serious eye damage/eye irritation	Category 2A

Label elements

Warning

Hazard statements Harmful if swallowed
Causes serious eye irritation

Eyes
- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
- If eye irritation persists: Get medical advice/attention

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

Precautionary Statements - Disposal • Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified • Not applicable

(HNOC)

Unknown acute toxicity • No information available

3. COMPOSITION/INFORMATION ON INGREDIENTS

Product Components

Chemical name	CAS No.	Weight-%	Trade Secret
TCPP	13674-84-5	10-15	*
2,2`-oxydiethanol	111-46-6	<10	*
Triethyl phosphate	78-40-0	1-2	*
Surfactant	Proprietary	<1	*
Imidazole catalyst (component 1)	Proprietary	<=0.5	*
Reactive Amine Catalyst	Proprietary	0.1-0.2	*

*The exact percentage (concentration) of composition has been withheld as a trade secret

4. FIRST AID MEASURES

Description of First Aid Measures

General advice Show this safety data sheet to the doctor in attendance. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. Wear appropriate safety eyewear, gloves, protective clothing and respiratory protection to prevent exposure. DO NOT use the mouth to mouth method if victim has ingested or inhaled the product. Give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper device.

Eye contact
- Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes
- Remove contact lenses, if present and easy to do. Continue rinsing
- Protect uninjured eye.
- Seek immediate medical attention, preferably from an ophthalmologist.

Skin contact
- Remove contaminated clothing and shoes
- Rinse skin with copious amounts of water [shower] for several minutes.
- Wash contaminated clothing before reuse
- Get medical attention if irritation develops and persists

Inhalation
- IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing
- If breathing is difficult, give oxygen
- If breathing has stopped, give artificial respiration. Get medical attention immediately
- (Get medical attention immediately if symptoms occur.)

Ingestion
- If swallowed, DO NOT induce vomiting unless told to do so by a physician or poison control center.
- Rinse mouth with water (only if the person is conscious)
- Never give anything by mouth to an unconscious person
- If vomiting occurs, place on the left side with head down to prevent aspiration of liquid into the lungs.
- (Get medical attention immediately if symptoms occur.)

Most important symptoms and effects, both acute and delayed
- Eye contact may result in irritation, redness, pain, inflammation, itching, burning, tearing, corneal damage and loss of vision.
- Skin contact may result in redness, pain, burning, and inflammation.
- Acute oral exposure may lead to dizziness, drowsiness, headache, breathing difficulties, nausea, vomiting, abdominal pain, and lowering of consciousness. Adverse effects are dependent on exposure(dose, concentration, contact time).
- May cause damage to organs through prolonged or repeated exposure. Effects are

dependent on exposure (dose, concentration, contact time).
• Prolonged or repeated skin contact may cause dermatitis
• Symptoms of exposure may be delayed.

Note to physicians • Treat symptomatically

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media
• Water spray (fog)
• Carbon dioxide (CO2)
• Dry chemical
• Alcohol resistant foam

Unsuitable extinguishing media • DO NOT use water jet, it may spread the fire.

Specific hazards arising from the chemical • Non-combustible, substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes

Explosion data
Sensitivity to Mechanical Impact • No
Sensitivity to Static Discharge • No

Protective equipment and precautions for firefighters
• As in any fire, wear self-contained breathing apparatus (SCBA) in positive pressure mode and full fire-fighting protective gear.
• Avoid breathing dust/fume/gas/mist/vapors/spray
• Avoid contact with skin, eyes, hair and clothing.
• Cool containers with flooding quantities of water until well after fire is out
• Move containers from fire area if you can do it without risk
• Avoid unnecessary run-off of extinguishing media which may cause pollution.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions
• Remove all sources of ignition
• Avoid friction and impact.
• Evacuate personnel to safe areas
• Keep people away from and upwind of spill/leak
• Use personal protections recommended in Section 8
• Ventilate affected area
• Avoid contact with skin, eyes or clothing
• Avoid breathing dust/fume/gas/mist/vapors/spray
• DO NOT walk through spilled material.
• Wash thoroughly after handling

Environmental precautions
• Prevent further leakage or spillage if safe to do so
• Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and material for containment and cleaning up

Methods for containment
• Do not touch damaged containers or spilled material unless wearing appropriate protective clothing
• Perform without risk.
• Contain and soak up spill with absorbent that does not react with spilled product. Place used absorbent into suitable, covered, labelled containers for disposal.

Methods for cleaning up • Clean and neutralize spill area, tools and equipment by washing with water and soap.

- Absorb reinstate and add to the collected waste.
- Waste must be classified and labeled prior to recycling or disposal.
- Dispose of waste as indicated in Section 13.

7. HANDLING AND STORAGE

Precautions for safe handling

- Use personal protections recommended in Section 8
- Provide adequate ventilation
- Do not taste or swallow.
- Avoid contact with skin, eyes or clothing
- Avoid breathing mist/vapor/spray.
- When using, do not eat, drink or smoke.
- Wash hands, forearms and face after handling.
- No smoking - keep away from sources of ignition

Conditions for safe storage, including any incompatibilities

Storage Conditions

- Keep containers tightly closed in a dry, cool and well-ventilated place
- Protect from direct sunlight
- Keep away from food and beverages.
- Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity)
- Do not store near incompatible materials (see Section 10)

Incompatible materials

- Halogenated compounds
- Strong oxidizing agents
- Sulfuric acid
- Nitric acid
- Alkali

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies

Chemical name	ACGIH TLV	OSHA PEL	NIOSH REL
Ethylene glycol 107-21-1	STEL: 50 ppm vapor fraction STEL: 10 mg/m³ inhalable particulate matter, aerosol only TWA: 25 ppm vapor fraction	-	-

Engineering Controls.

Showers
Eyewash stations
Ventilation systems
Provide adequate ventilation to maintain the airborne concentrations of vapor, mists, and/or dusts below the applicable workplace exposure limits, while observing recognized national standards (or equivalent).

Individual protection measures, such as personal protective equipment

Eye/face protection

- Wear safety glasses with side shields (or goggles)
- Wear face shield if splash hazard exist
- Ensure compliance with OSHA's PPE standard(29 CFR 1910.132 and .133) for eye and face protection.

Skin and body protection

- The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
- Gloves must be inspected prior to and during the use.

• It should be noted that the time to breakthrough for any glove material may be different for different glove manufactures. Protection time for the mixtures may not be accurately estimated.
• Avoid contract with used gloves.
• Remove contaminated clothing and used gloves properly to avoid any skin contact.
• Full body protection shall be worn. PPE selection should be based on the task being performed and risks involved. Approval by a specialist before handling is necessary.
• National standards for the PPEs associated with using this product shall be met.

Respiratory protection

• If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations

General Hygiene Considerations

• Do not eat, drink or smoke when using this product
• Wash hands after handling, before breaks, and at the end of the workday.
• Avoid contact with skin, eyes or clothing
• Wash contaminated clothing before reuse
• Perform routine housekeeping.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Liquid
Appearance	Liquid
Odor	Aromatic
Color	Tan
pH value	7.0-9.0
Melting point / freezing point	No data available
Boiling point / boiling range	No data available
Flash point	> 230 °F
Evaporation rate	No data available
Autoignition temperature	No data available
Viscosity	450-650 cP at 77 °F (25°C) (Kinematic viscosity)
Specific Gravity	1.08-1.15 g/cc

10. STABILITY AND REACTIVITY

Reactivity

• Not reactive under recommended handling and storage conditions.

Chemical stability

• Stable under recommended handling and storage conditions.

Possibility of Hazardous Reactions

• No hazardous decomposition under normal conditions of storage and use

Conditions to avoid

• Incompatible materials
• Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking

Incompatible materials

• Halogenated compounds
• Strong oxidizing agents
• Sulfuric acid
• Nitric acid
• Alkali

Hazardous Decomposition Products

• In a fire, product will give off irritating fumes (CO, CO2).

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information Harmful if swallowed
No data available on the mixture

Chemical name	Oral LD50	LD50/dermal/rat - NO UNITS (Wizards mg/kg)	Inhalation LC50
TCPP 13674-84-5	= 1500 mg/kg (Rat)	> 5000 mg/kg (Rabbit)	> 5.05 mg/L (Rat) 4 h
2,2`-oxydiethanol 111-46-6	= 12565 mg/kg (Rat)	= 11890 mg/kg (Rabbit)	> 4600 mg/m³ (Rat) 4 h
HFO blowing agent 3	-	-	= 120000 ppm (Rat) 4 h
HFO blowing agent 1	-	-	> 690 mg/L (Rat) 4 h
Amine Catalyst	-	= 1220 mg/kg (Rabbit) = 1171 mg/kg (Rabbit)	-
Triethyl phosphate 78-40-0	1100 - 1600 mg/kg (Rat)	> 20 g/kg (Rabbit)	> 8817 mg/m³ (Rat) 4 h
Amine Catalyst #3	> 2000 mg/kg (Rat)	= 4.29 mL/kg (Rabbit)	-
Polyether Polyol	= 2830 µL/kg (Rat) > 64 mL/kg (Rat)	> 2000 mg/kg (Rat)	-
Ethylene glycol 107-21-1	= 4700 mg/kg (Rat)	= 10600 mg/kg (Rat)	> 2.5 mg/L (Rat) 6 h
Amine Catalyst #4	= 2260 mg/kg (Rat)	-	-
Surfactant	= 1310 mg/kg (Rat)	-	-
Imidazole catalyst (component 1)	-	> 200 mg/kg (Rabbit)	> 3 mg/L (Rat) 4 h
Reactive Amine Catalyst	-	= 5700 mg/kg (Rabbit)	-
Alkyl Tin Catalyst	-	1000 - 2000 mg/kg (Rabbit)	-

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization No information available.
Germ cell mutagenicity No information available.
Carcinogenicity No information available

Reproductive toxicity No information available.
STOT - single exposure No information available.
STOT - repeated exposure No information available.
Aspiration hazard No information available.

12. ECOLOGICAL INFORMATION

Chemical name	Algae/aquatic plants	Fish	Crustacea
TCPP 13674-84-5	45: 72 h Desmodesmus subspicatus mg/L EC50 4: 96 h Pseudokirchneriella subcapitata mg/L EC50	56.2: 96 h Brachydanio rerio mg/L LC50 static 98: 96 h Pimephales promelas mg/L LC50 static 30: 96 h Poecilia reticulata mg/L LC50 static	63: 48 h Daphnia magna mg/L EC50
2,2`-oxydiethanol 111-46-6	-	75200: 96 h Pimephales promelas mg/L LC50 flow-through	84000: 48 h Daphnia magna mg/L EC50
HFO blowing agent 1	-	76.1: 96 h Oryzias latipes mg/L LC50 semi-static	-

Amine Catalyst #3	-	0.256: 96 h Danio rerio mg/L LC50 semi-static	-
Ethylene glycol 107-21-1	6500 - 13000: 96 h Pseudokirchneriella subcapitata mg/L EC50	41000: 96 h Oncorhynchus mykiss mg/L LC50 14 - 18: 96 h Oncorhynchus mykiss mL/L LC50 static 27540: 96 h Lepomis macrochirus mg/L LC50 static 40761: 96 h Oncorhynchus mykiss mg/L LC50 static 40000 - 60000: 96 h Pimephales promelas mg/L LC50 static 16000: 96 h Poecilia reticulata mg/L LC50 static	46300: 48 h Daphnia magna mg/L EC50
Amine Catalyst #4	-	100: 96 h Danio rerio mg/L LC50 semi-static	-
Imidazole catalyst (component 1)	-	63.03: 96 h Danio rerio mg/L LC50 static	-

Persistence and degradability Formulation data is not available.

Bioaccumulation Formulation data is not available.

Chemical name	Partition coefficient
TCPP 13674-84-5	2.68
2,2`-oxydiethanol 111-46-6	-1.98
HFO blowing agent 3	2.2
HFO blowing agent 1	2.3
Amine Catalyst #2	-0.49
Amine Catalyst	>=0 - 0.05
Triethyl phosphate 78-40-0	1.11
Ethylene glycol 107-21-1	-1.36
Surfactant	5.669
Imidazole catalyst (component 1)	0.11
Reactive Amine Catalyst	-0.48

Other adverse effects No information available

13. DISPOSAL CONSIDERATIONS

Disposal of wastes Disposal should be in accordance with applicable regional, national and local laws and regulations

Contaminated packaging Do not reuse container

14. TRANSPORT INFORMATION

Note: • Not regulated.

DOT Not regulated

15. REGULATORY INFORMATION

International Inventories

Chemical name	TSCA	DSL	NDSL	EINECS	ELINCS	ENCS	IECSC	KECL	PICCS	AICS
TCPP 13674-84-5	X	X		X		X	X	X	X	X
2,2`-oxydiethanol 111-46-6	X	X		X		X	X	X	X	X
Triethyl phosphate 78-40-0	X	X		X		X	X	X	X	X
Surfactant	X	X				X	X	X	X	X
Imidazole catalyst (component 1)	X	X		X		X	X		X	X
Reactive Amine Catalyst	X	X			X	X	X		X	

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical name	SARA 313 - Threshold Values %
Ethylene glycol - 107-21-1	1.0
Surfactant -	1.0

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
2,2`-oxydiethanol 111-46-6	-	-	X
Ethylene glycol	X	X	X

107-21-1			

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

Creation Date 07-Feb-2023
Revision Date 13-Jun-2023
Revision Note No information available

Disclaimer
Reasonable care has been taken in the preparation of this information, but the manufacturer makes no warranty of merchantability or any other warranty, expressed or implied, with respect to this information. The manufacturer makes no representations and assumes no liability for any direct, incidental or consequential damages resulting from its use.

End of Safety Data Sheet