

MATERIAL SAFETY DATA SHEET

ERYAP GRUP YALITIM MALZEMLERİ SAN. VE TİC. A.Ş

Product Name: Bonus

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1. Product and Company Identification

Product Name: Bonus Extruded Polystrene Foam (XPS)

Usage of Product: Thermal Insulation

Company Identification:

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2. Composition/ Information of Components

| Components | Chemical Name | Amount Weight % | CAS No |
|-------------------------------------|--|-----------------|---------------------------------|
| Polystrene | Ethylbenzene polymer | 90 | 90003-53-6 |
| HFC152a, DME, CO ₂ | Difluoroethane, Dimethylether, Carbondioxide | 10 (Others) | 75-37-6 115-10-6 124-38-9 |

3. Hazards Identification

Essentially Non-Hazardous. Contact with the product may cause irritation to sensitive skin.

4. First Aid Measures

Eye Contact: Flush eyes with plenty of water; remove contact lenses after the first 1-2 minutes then continue flushing for several minutes. Only mechanical effects expected. If effects occur, consult a physician, preferably an ophthalmologist.

Skin Contact: Wash skin with plenty of water.

Inhalation: Move person to fresh air; if effects occur, consult a physician.

Ingestion: If swallowed, seek medical attention. May cause gastrointestinal blockage. Do not give laxatives. Do not induce vomiting unless directed to do so by medical personnel.

Notes to Physician: No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

5. Fire Fighting Measures

Extinguishing Media: Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam.

Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry. Soak thoroughly with water to cool and prevent re-ignition. If material is molten, do not apply direct water stream. Use fine water spray or foam. Cool surroundings with water to localize fire zone.

Special Protective Equipment for Firefighters: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). If protective equipment is not available or not used, fight fire from a protected location or safe distance.

Unusual Fire and Explosion Hazards: Mechanical cutting, grinding or sawing can cause formation of dusts. To reduce the potential for dust explosion, do not permit dust to accumulate. This product contains a flame retardant to inhibit accidental ignition from small fire sources. This plastic foam product is combustible and should be protected from flames and other high heat sources. Dense smoke is produced when product burns.

Hazardous Combustion Products: During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. In smoldering or flaming conditions, carbon monoxide, carbon dioxide and carbon are generated. Combustion products may include trace amounts of: Hydrogen bromid, hydrogen fluoride. Based on combustion toxicity testing, the effects of combustion from this foam are not more acutely toxic than the effects of combustion from common building materials such as wood.

6. Accidental Release Measures

Steps to be Taken if Material is Released or Spilled: Contain spilled material if possible. Sweep up. Collect in suitable and properly labeled containers. See Section 13, Disposal Considerations, for additional information.

Personal Precautions: There are no special required instructions.

Environmental Precautions: There are no special required instructions.

7. Handling and Storage

Handling

General Handling: Fabrication methods which involve cutting into this product may release the blowing agent(s) remaining in the cells. Provide adequate ventilation to assure localized concentrations in release areas are maintained below the lower flammable limit. This product is combustible and may constitute a fire hazard if improperly used or installed. When installed, this product should be adequately protected as directed by national building regulations or instructions in the specific application brochure.

Storage: Minimize sources of ignition, such as static build-up, heat, spark or flame. When large quantities of this product are stored or fabricated, blowing agents may be released. Released blowing agents may thermally decompose to form gases which may accelerate corrosion or rust formation of heaters, boilers, gas fired recirculating air furnaces or heaters, or gas water heaters. Flammable vapors may accumulate in some storage situations. In order to prevent buildup of combustible vapors, do not store large quantities of this product in unventilated spaces. Keep away from direct sunlight, heat and ignition sources. Don't smoke in storage area. Unauthorized entry into this area should be prohibited. Warehouse and roof should be ventilated in order to protect from high temperatures.

8. Exposure Control and Personal Protection

Eye/Face Protection: Eye protection should not be necessary. For fabrication operations safety glasses are recommended. If there is a potential for exposure to particles which could cause eye discomfort, wear chemical goggles.

Skin Protection: No precautions other than clean body-covering clothing should be needed.

Hand protection: Use gloves to protect from mechanical injury. Selection of gloves will depend on the task.

Respiratory Protection: Atmospheric levels should be maintained below the exposure guideline. When respiratory protection is required for certain operations, including but not limited to saw, router or hot-wire cutting, use an approved air-purifying respirator. The following should be effective types of air-purifying respirators: Organic vapor cartridge with a particulate pre-filter.

Ingestion: No precautions necessary due to the physical properties of the material.

Engineering Controls

Ventilation: Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines.

9. Physical and Chemical Properties

Physical State: Board

Color: Blue

Odor: Odorless

Flash Point - Closed Cup: 346⁰C *Literature*

Flammable Limits: In Air Lower: 3,5 % (V) *Literature* Ethanol, **Upper:** Not applicable.

Autoignition Temperature: 491⁰C *Literature*

Vapor Pressure: Not applicable.

Boiling Point (760 mmHg): Not applicable.

Vapor Density (air = 1): Not applicable.

Specific Gravity (H₂O = 1): Not applicable.

Solid Density: 20-52 kg/m³

Freezing Point: Not applicable.

Melting Point: >75⁰C *Literature*

Softening Point/Limits: >75⁰C *Literatür*

Solubility in Water: Insoluble in water.

pH: Not applicable.

Kinematic Viscosity: Not applicable.

10. Stability and Reactivity

Stability/Instability: Thermally stable at typical use temperatures.

Conditions to Avoid: Avoid temperatures above 300⁰C (572⁰F) Exposure to elevated temperatures can cause product to decompose. Avoid direct sunlight.

Incompatible Materials: Avoid contact with oxidizing materials. Avoid contact with: Aldehydes, amines, esters, liquid fuels, organic solvents.

Hazardous Polymerization: Will not occur.

Thermal Decomposition: Does not normally decompose. Evolution of small amounts of hydrogen halides occur when heated over 250°C (482°F). Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Aromatic compounds, aldehydes, ethylbenzene, hydrogen bromide, hydrogen fluoride, polymer fragments, styrene. Under high heat, nonflaming conditions, small amounts of aromatic hydrocarbons such as styrene and ethylbenzene are generated.

11. Toxicological Information

Acute Toxicity

Ingestion: Swallowing is unlikely because of the physical state. Very low toxicity if swallowed. harmful effects not anticipated from swallowing small amounts. May cause choking or blockage of the digestive tract if swallowed.

Eye Contact: Solid or dust may cause irritation due to mechanical action. Fumes/vapor released during thermal operations such as hot-wire cutting may cause eye irritation.

Skin Contact: Essentially nonirritating to skin. Mechanical injury only.

Skin Absorption: Skin absorption is unlikely due to physical properties.

Inhalation: Dust may cause irritation to upper respiratory tract (nose and throat). Fumes/vapors released during thermal operations such as hot wire cutting may cause respiratory irritation.

Repeated Dose Toxicity: Contains component(s) which have been reported to cause effects on the following organs in people: Liver, central nervous system. Component(s): Ethanol. The tests, normal processing and cutting of the listed potential effects are concluded to be shown that adequate levels of exposure.

Developmental Toxicity: Components does not include what is causing miscarriage, but other effects on the fetus at doses of toxic was emerged for the mother. The tests, normal processing and cutting of the listed potential effects are concluded to be shown that adequate levels of exposure.

12. Ecological Information

Chemical Fate

Movement & Partitioning: No bioconcentration is expected because of the relatively high molecular weight (MW greater than 1000). In the terrestrial environment, material is expected to remain in the soil. In the aquatic environment, material is expected to float.

Persistence and Degradability: Surface photodegradation is expected with exposure to sunlight. No appreciable biodegradation is expected.

Ecotoxicity

Not expected to be acutely toxic to aquatic organisms. Product without any known negative environmental effects. Positive effects on the environment through the use as thermal insulation. Product which can be recycled.

13. Disposal Considerations

Waste and absorbed packages should be disposed in accordance with "hazardous waste control regulation". Regulations stated in national legislations should be applied.

Waste From Residues: Dispose of in accordance with regulations and procedures in force.

Contaminated Packaging: Dispose of in accordance with regulations and procedures in force.

European Waste Catalogue: 07 02 13 – Waste plastic materials. Eventually contact the manufacturer

14. Transport Information

ADR/RID (Transportation by road, International agreement on dangerous goods by road and train – European / Cross-Border) Class: Transportation is not limited.

IMDG (The International Maritime Dangerous Goods) Class: Transportation is not limited.

ICAO/IATA (International Air Transport Association) Class: Transportation is not limited.

In accordance with transportation regulations, it is not classified as a dangerous material (ADR/RID, IMDG, ICAO/IATA).

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

15. Regulatory Information

According to Directives 67/548/EEC and 99/45/EC and any amendments thereof, this material is not hazardous.

16. Other Information

Person who wish to obtain more detailed information can contact the producer. (Address on first page of this sheet.)

The attention of users is drawn to possible risks taken when the product is used for other application than the ones it has been designed for. Special conditions for use of this product is not controlled by manufactures so the consumer is responsible for ensuring the requirements of relevant legislations. The information contained in this from is based on the current state of national legislation and guides for health, safety and environment. It does not guarantee technical performance and eligibility for special occasions.

