Safety Data Sheet
CORAFOAM® PIR FOAM

1. PRODUCT AND COMPANY IDENTIFICATION

Product name	CORAFOAM® PIR FOAM
CAS number	Mixture
Product type and use	Rigid expanded polyurethane modified polyisocyanurate foam for thermal insulation
Company	DUNA-USA Inc. 4210 FM 1405 Baytown, TX, 77523 USA 1-281-383-3862 info-dunausa@dunagroup.com
In case of emergency call	**CHEMTREC 1-800-424-9300 (24 HOURS DAY, 7 DAYS A WEEK)**

2. HAZARDS IDENTIFICATION

Physical state	Solid
Appearance	Rigid foam
Emergency overview	Low hazard for usual industrial or commercial handling
OSHA regulatory status	This product is considered NOT hazardous under OSHA Hazard Communication Standard (29 CFR 1910.1200).
Potential health effects	
Eyes	Dust may irritate the eyes.
Skin	Nonirritating. May cause irritation only through mechanical abrasion.
Inhalation	Dust may irritate the respiratory system.
Ingestion	May cause discomfort if swallowed. However, ingestion is not likely to be a primary route of occupational exposure.
Target organs	Inhalation Skin Eye
Chronic effects	Frequent inhalation of dust over a long period of time increases the risk of developing lung diseases.
Signs and symptoms	May cause eye irritation. Itching, redness, burning of skin.
Potential environmental effects	The product is not classified as environmentally hazardous.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Name	*CAS number*	*%*
Rigid expanded polyurethane modified polyisocyanurate foam	not applicable	90 - 100
Cyclopentane	287-92-3	2.5 - 10.0
2-Methylbutane	78-78-4	1 - 2.5

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4. FIRST AID MEASURES

First aid procedures

Eye contact	Dust in the eyes: Flush thoroughly with water for at least 15 minutes. Get medical attention if any discomfort continues.
Skin contact	Contact with dust: Essentially nonirritating to skin. Wash with soap and water if mechanical injury occur.
Inhalation	If symptoms develop, move to fresh air. Get medical attention if discomfort develops or persists.
Ingestion	Do not induce vomiting. Get medical attention immediately.

5. FIRE-FIGHTING MEASURES

Flammable properties: Not flammable by OSHA criteria

Extinguishing media

Suitable extinguishing media

No specific measures are required as this product is a fire extinguishing medium.

Protection of firefighters

Specific hazards arising from the chemical

Not a fire hazard.

Fire fighting instructions: Keep people away. Isolate fire and deny unnecessary entry. Soak throughly with water to cool and prevent re-ignition. Cool surroundings with water to localize fire zone. Hand held dry chemical or carbon dioxide extinguisher may be used for small fires.

Fire fighting equipment: 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.

Specific methods: Not applicable.

Hazardous combustion products

Carbon monoxide. Nitrogen oxides.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: No special precautions are necessary beyond normal good hygiene practices. See Section 8 of the MSDS for additional personal protection advice when handling this product.

Environmental precautions: No specific precautions.

Methods for cleaning up: For waste disposal, see Section 13 of the MSDS.

7. HANDLING AND STORAGE

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Handling	Use work methods which minimize dust production. Use only in well-ventilated areas. Wear appropriate personal protective equipment. Wash hands after handling. Observe good industrial hygiene practices. Refer to "EXPOSURE CONTROLS AND PERSONAL PROTECTION", Section 8 of the MSDS. No smoking, open flames or sources of ignition in handling and storage area. 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. Good housekeeping and controlling of dusts are necessary for safe handling of product.
Storage	Store away from incompatible materials. Minimize sources of ignition, such as static build-up, heat, spark or flame. During shipment, storage, installation and use, this material should not be exposed to flame or other ignition sources. Read and follow manufacturer's recommendations.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Occupational exposure limits

US. ACGIH Threshold Limit Values

Components	Type	Value
2-Methylbutane (78-78-4)	TWA	600 ppm
Cyclopentane (287-92-3)	TWA	600 ppm

Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

Components	Type	Value
2-Methylbutane (78-78-4)	TWA	600 ppm 1770 mg/m^3
Cyclopentane (287-92-3)	TWA	600 ppm 1720 mg/m^3

Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

Components	Type	Value
2-Methylbutane (78-78-4)	TWA	600 ppm
Cyclopentane (287-92-3)	TWA	600 ppm

Canada. Ontario OELs. (Ministry of Labor - Control of Exposure to Biological or Chemical Agents)

Components	Type	Value
2-Methylbutane (78-78-4)	STEL	2210 mg/m^3 750 ppm
	TWA	600 ppm 1770 mg/m^3
Cyclopentane (287-92-3)	TWA	600 ppm 1720 mg/m^3

Canada. Quebec OELS. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment)

Components	Type	Value
Cyclopentane (287-92-3)	TWA	600 ppm 1720 mg/m^3

Engineering controls	Provide sufficient ventilation for operations causing dust formation. Observe occupational exposure limits and minimize the risk of exposure.

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Personal protective equipment

Eye/face protection
No special precautions.

Skin protection: Gloves, for handling rough edges

Respiratory protection
When engineering controls are not sufficient to lower exposure levels below the applicable exposure limit, use a NIOSH approved respirator for dusts.

General hygiene considerations
Handle in accordance with good industrial hygiene and safety practice. Routinely wash work clothing and protective equipment to remove contaminants. Observe any medical surveillance requirements.

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

Appearance	Rigid foam
Physical state	Solid
Odor	Odorless
Odor threshold	Not available
Form	Foam
pH	Not available
Flash point	Closed cup: > 300°C (> 572°F)
Auto-ignition temperature	> 400°C (> 752°F)
Solubility in water	Insoluble

10. STABILITY AND REACTIVITY

Chemical stability	Thermally stable at typical use temperatures. See TDS.
Conditions to avoid	Avoid temperatures above 260°C (500°F). UV rays may cause discoloration.
Incompatibility materials	Strong acids, strong alkalies and oxidizing agents
Hazardous polymerization	Will not occur
Thermal decomposition	Decomposition products depend upon temperature, air supply and the presence of other materials. Toxic gases are released during decomposition.

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11. TOXICOLOGICAL INFORMATION

Toxicological data

Components	**Test results**
2-Methylbutane (78-78-4)	Acute Inhalation LC50 Mouse: 450 mg/l 2 Hours

Acute effects — Under normal conditions of intended use, this material does not pose a risk to health.

Local effects — Exposure to particles from cutting operations may cause mechanical irritation of eyes.

Repeated dose toxicity — Repeated exposures to dusts of this material are not anticipated to result in systemic toxicity or permanent lung injury; however, excessive exposures may cause less severe respiratory effects.

12. ECOLOGICAL INFORMATION

Ecotoxicity — The product is not classified as environmentally hazardous. Not expected to be acutely toxic to aquatic organisms

Persistence and degradability

The product is not biodegradable. Surface photodegradation is expected with exposure to sunlight. No appreciable biodegradation is expected.

Mobility in environmental media

The product is insoluble in water. 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.

13. DISPOSAL CONSIDERATIONS

Disposal instructions: — Disposal recommendations are based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal.

14. TRANSPORT INFORMATION

DOT, TDG, IMDG, IATA-ICAO: Not regulated.

15. REGULATORY INFORMATION

US federal regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D): Not regulated.

CERCLA (Superfund) reportable quantity (lbs) (40 CFR 302.4)

Cyclopentane: 100

2-Methylbutane: 100

Superfund Amendments and Reauthorization Act of 1986 (SARA)

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Hazard categories

Immediate Hazard	No
Delayed Hazard	No
Fire Hazard	No
Pressure Hazard	No
Reactivity Hazard	No

Section 302 extremely hazardous substance (40 CRF 355, Appendix A)

No

Section 311/312 (40 CFR 370)

No

Drug Enforcement Administration (DEA) (21 CFR 1308.11-15)

Not controlled

WHMIS status

Non controlled

Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

**A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)*

State regulations

US - California Hazardous Substances (Director's): Listed substance

Cyclopentane (CAS 287-92-3) Listed.

US - Massachusetts RTK - Substance: Listed substance

2-Methylbutane (CAS 78-78-4) Listed.

Cyclopentane (CAS 287-92-3) Listed.

US - New Jersey Community RTK (EHS Survey): Reportable threshold

2-Methylbutane (CAS 78-78-4) 500 LBS

US - New Jersey RTK - Substances: Listed substance

2-Methylbutane (CAS 78-78-4) Listed.

Cyclopentane (CAS 287-92-3) Listed.

US - Pennsylvania RTK - Hazardous Substances: Listed substance

2-Methylbutane (CAS 78-78-4) Listed.

Cyclopentane (CAS 287-92-3) Listed.

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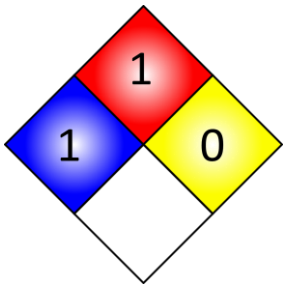
California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986)
This product contains no listed substances known to the State of California to cause cancer, birth defects or other reproductive harm, at levels which would require a warning under the statute.

16. OTHER INFORMATION

Label requirements: None

Hazardous Material Information System

National Fire Protection Association



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THE PRODUCT MAY PRESENT HAZARDS AND SHOULD BE USED WITH CAUTION. WHILE CERTAIN HAZARDS ARE DESCRIBED IN THIS PUBLICATION, NO GUARANTEE IS MADE THAT THESE ARE THE ONLY HAZARDS THAT EXIST.

Hazards, toxicity and behaviour of the products may differ when used with other materials and are dependent upon the manufacturing circumstances or other processes. Such hazards, toxicity and behaviour should be determined by the user and made known to handlers, processors and end users.

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