
SAFETY DATA SHEET

OR75DCL Part A

Section 1 (PRODUCT/MANUFACTURER)

Manufactured by:

Oak Ridge Foam & Coating Systems, Inc
575 Commercial Ave
Green Lake, WI 54941 USA

TRANSPORTATION EMERGENCY
CALL CHEMTREC: (800) 424-9300
INTERNATIONAL: (703) 527-3887

Section 1 (COMPOSITION/INFO ON INGREDIENTS)

Hazardous Components

Residual Diisocyanate monomer content:, <0.30%

Weight %	Components	CAS-No.
>60-100	Hexane, 1, 6-Diisocyanato, Homopolymer	28182-81-2
<=0.5	Hexane,-1, 6-Diisocyanato	822-06-0
>=10-20	Non regulated/Exempt Mixture	CAS# Trade Secret

Section 3 (HAZARDS IDENTIFICATION)

Emergency Overview

WARNING! Color: Colorless to light yellow form: liquid odor: slight. Toxic gases/fumes may be given off during burning or thermal decomposition. Closed container may forcibly rupture under extreme heat or when contents have been contaminated with water. Use cold water spray to cool fire-exposed containers to minimize the risk of rupture. Causes respiratory tract irritation. May cause allergic respiratory reaction. Harmful if inhaled. Respiratory sensitizer. Lung damage and respiratory sensitization may be permanent. Causes skin irritation. May cause allergic skin reaction. Skin sensitizer. Causes eye irritation. May cause lung damage.

Potential Health Effects

Primary Routes of Entry

Skin Contact, Inhalation, Eye Contact

Medical Conditions Aggravated by Exposure

Skin Allergies, Eczema, Asthma, Respiratory disorders

HUMAN EFFECTS AND SYMPTOMS OF OVEREXPOSURE

Inhalation

Acute Inhalation

Diisocyanate or polyisocyanate vapors or mist at concentrations above the exposure limits or guidelines can irritate (burning sensation) the mucous membranes in the respiratory tract (nose, throat, lungs) with symptoms of runny nose, sore throat, coughing, chest discomfort, shortness of breath and reduced lung function (breathing

difficulty). Persons with preexisting, nonspecific bronchial hyperreactivity can respond to concentrations below the exposure limits or guidelines with similar symptoms as well as asthma attack or asthma – like symptoms. Exposure well above the exposure limits or guidelines may lead to bronchitis, bronchial spasm and pulmonary edema (fluid in lungs). Chemical or hypersensitivity pneumonitis, with flu-like symptoms (e.g. fever, chills) , has also been reported. These symptoms can be delayed up to several hours after exposure. These effects are usually reversible.

Chronic Inhalation

As a result previous repeated overexposures or a single large dose, certain individuals may develop sensitization to diisocyanates or polyisocyanates (asthma or asthma-like symptoms) that may cause them to react to a later exposure to diisocyanates or polyisocyanates at levels well below the exposure limits or guidelines. These symptoms, which can include chest tightness, wheezing, cough, shortness of breath or asthmatic attack, could be delayed up to several hours after exposure. Extreme asthmatic reactions can be life threatening. Similar to many non-specific asthmatic responses, there are reports that once sensitized an individual can experience these symptoms upon exposure to dust, cold air, or other irritants. This increased lung sensitivity can persist for weeks and in severe cases for several years. Sensitization can be permanent. Chronic overexposure to diisocyanates has also been reported to cause lung damage (including fibrosis, decrease in lung function) that may be permanent.

Skin

Acute Skin

Causes irritation with symptoms of reddening, itching, and swelling. Persons previously sensitized can experience allergic skin reaction with symptoms of reddening, itching, swelling, and rash. Cured material is difficult to remove.

Chronic Skin

Prolonged contact can cause reddening, swelling, rash, and in some cases, skin sensitization.

Eye

Acute Eye

Causes irritation with symptoms of reddening, tearing, stinging, and swelling. May cause temporary corneal injury. Vapor may cause irritation with symptoms of burning and tearing.

Chronic Eye

Prolonged vapor contact may cause conjunctivitis.

Ingestion

Acute Ingestion

May cause irritation; symptoms may include abdominal pain, nausea, vomiting, and diarrhea.

Carcinogenicity:

No carcinogenic substances as defined by IARC, NTP and/or OSHA

Section 4 (FIRST AID MEASURES)

Eye Contact

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Use lukewarm water if possible. Use fingers to ensure that eyelids are separated and that the eye is being irrigated. Then remove contact lenses, if easily removable, and continue eye irrigation for not less than 15 minutes. Get medical attention if irritation develops.

Skin Contact

Immediately remove contaminated clothing and shoes. Wash off with soap and water. Use lukewarm water if possible. Wash contaminated clothing before reuse. For severe exposures, immediately get under safety shower and begin rinsing. Get medical attention if irritation develops and persists.

Inhalation

Move to an area free from further exposure. Get medical attention immediately. Administer oxygen or artificial respiration as needed. Asthmatic symptoms may develop and may be immediated or delayed up to several hours. Extreme asthmatic reactions can be life threatening.

Ingestion

Do not induce vomiting. Wash mouth out with water. Do not give anything by mouth to an unconscious person. Get medical attention.

Notes to physician

Eyes

Stain for evidence of corneal injury. If cornea is burned, instill antibiotic/steroid preparation as needed. Workplace vapors could product reversible corneal epithelial edema impairing vision. Skin: This compound is a skin sensitizer. Treat symptomatically as for contact dermatitis or thermal burn. Ingestion: Treat symptomatically. There is no specific antidote. Inducing vomiting is contraindicated because of the irritating nature of the compound. Inhalation: Treatment is essentially symptomatic. An individual having a dermal or pulmonary sensitization reaction to this material should be removed from further exposure to any diisocyanate.

Section 5 (FIRE FIGHTING MEASURES)

Suitable Extinguishing Media

Dry chemical, carbon dioxide (CO₂), foam, water spray for large fires.

Special Fire Fighting Procedures

Firefighters should wear NFPA compliant structural firefighting protective equipment, including self-contained breathing apparatus and NFPA compliant helmet, hood, boots and gloves. Avoid contact with product. Decontaminate equipment and protective clothing prior to reuse. During a fire, isocyanate vapors and other irritating, highly toxic gases may be generated by thermal decomposition or combustion. Exposure to heated diisocyanate can be extremely dangerous.

Unusual Fire/Explosion Hazards

Closed container may forcibly rupture under extreme heat or when contents are contaminated with water (CO₂ formed). Use cold-water spray to cool fire-exposed containers to minimize the risk of rupture. Large fires can be extinguished with large volumes of water applied from a safe distance, since reaction between water and hot diisocyanate can be vigorous.

Section 6 (ACCIDENTAL RELEASE MEASURES)

Spill and Leak Procedures

Evacuate non-emergency personnel. Isolate the area and prevent access. Remove ignition sources. Notify management. Put on protective equipment. Control source of the leak. Ventilate. Contain the spill to prevent spread into drains, sewers, water supplies, or soil. Call Enhanced Flooring Products LLC at 800-625-9577 for assistance and advice. Major spill or leak (Standing liquid): To minimize vapor, cover the spillage with fire fighting foam (AFFF). Release material may be pumped into closed, but not sealed, metal container for disposal. Process can generate heat. Minor spill or leak (wet surface): Cover spill area with suitable absorbent material (kitty litter, Oil-Dri, etc.). Saturate absorbent material with neutralization solution and mix. Wait 15 minutes. Collect material in open-head metal containers. Repeat applications of decontamination solution, with scrubbing, followed by absorbent until the surface is decontaminated. Check for residual surface contamination. Swipe test kits have been used for this purpose. Apply lid loosely and allow containers to vent for 72 hours to let carbon dioxide (CO₂) escape.

Additional Spill Procedures/Neutralization

Neutralization solutions:

- (1) Colorimetric Laboratories Inc. (CLI) decontamination solution.
- (2) A mixture of 75% water, 20% non-ionic surfactant (e.g. Poly-Tergent SL-62, Tergitol TMN-10) and 5% n-propanol.
- (3) A mixture of 80% water, 20% non-ionic surfactant (e.g. Poly-Tergent SL-62, TergitolTMN-10).
- (4) A mixture of 90% water, 3-8% ammonium hydroxide or concentrated ammonia, and 2% liquid detergent.

Enhanced Flooring Products LLC requires that CHEMTREC be immediately notified (800-424-9300) when this product is unintentionally released from its container during its course of distribution, regardless of the amount release. Distribution includes transportation, storage incidental to transportation, loading and unloading. Such notification must be immediate and made by the person having knowledge of the release.

Section 7 (HANDLING AND STORAGE)

Storage Temperature:

Minimum: -34° C (-29.2 ° F)

Maximum: 50 °C (122 ° F)

Storage Period

6 months @ 25 deg C (77 ° F): after receipt of material by customer

Handling/Storage Precautions

Do not breathe vapors, mists, or dusts. Use adequate ventilation to keep airborne isocyanate levels below the exposure limits. Wear respiratory protection if material is heated, sprayed, used in a confined space, or if the exposure limit is exceeded. Warning properties (irritation of the eyes, nose and throat or odor) are not adequate to prevent overexposure from inhalation. This material can product asthmatic sensitization upon either single inhalation exposure to relatively high concentration or upon repeated inhalation exposures to lower concentrations. Individuals with lung or breathing problems or prior allergic reactions to isocyanates must not be exposed to vapor or spray mist. Avoid contact with skin and eyes. Wear appropriate eye and skin protection. Wash thoroughly after handling. Do not breathe smoke and gases created by overheating or burning this material. Decomposition products can be highly toxic and irritating. Store in tightly closed containers to prevent moisture contamination. Do not reseal if contamination is suspected.

Further Info on Storage Conditions

Employee education and training in the safe use and handling of this product are required under the OSHA Hazard Communication Standard 29 CFR 1910.1200.

Section 8 (EXPOSURE CONTROLS/PERSONAL PROTECTION)

Homopolymer of Hexamethylene Diisocyanate (28182-81-2)

EFPLLC Exposure Limit

Time Weighted Average (TWA):0.5 mg/m³

EFPLLC Exposure Limit

Short Term Exposure Limit (STEL):1.00 mg/m³ (15-min)

Hexamethylene-1, 6-Diisocyanate (822-06-0)

US, ACGIH Threshold Limit Values

Time Weighted Average (TWA): 0.005 ppm

EFPLLC Exposure Limit

Ceiling Limit Value: 0.02ppm

Industrial Hygiene/ Ventilation Measures

Good industrial hygiene practice dictates that worker protection should be achieved through engineering controls, such as ventilation, whenever feasible. When such controls are not feasible to achieve full protection, the use of respirators and other personal protective equipment is mandated. Exhaust air may need to be cleaned by scrubbers or filters to reduce environmental contamination. Curing ovens must be ventilated to prevent emissions into the workplace. IF oven off-gases are not vented properly (i.e. they are released into the work area), it is possible to be exposed to airborne monomeric HDI.

Respiratory Protection

A respirator that is recommended or approved for use in isocyanate-containing environments (air-purifying or fresh air-supplied) may be necessary for spray applications or other situations such as high temperature use which may produce inhalation exposures. A supplied-air respirator (either positive pressure or continuous flow-type) is recommended. Before an air-purifying respirator can be used, air monitoring must be performed to measure airborne concentrations of HDI monomer and HDI polyisocyanate. Specific conditions under which air-purifying respirators can be used are outlined in the following sections. Observe OSHA regulations for respirator use (29 CFR 1910.134). **SPRAY APPLICATION:** A. Good industrial hygiene practice dictates that when isocyanate-based coatings are spray applied, some form of respiratory protection should be worn. During the spray application of coatings containing this product the use of a supplied-air (either positive pressure or continuous flow-type) respirator is mandatory when ONE OR MORE of the following conditions exists: -the airborne isocyanate concentrations are not known; or –the airborne isocyanate monomer concentrations exceed 0.05 ppm averaged over eight(8) hours (10 times the 8 hours TWA exposure limit); or – the airborne polyisocyanate (polymeric, oligomeric) concentrations exceed 5 mg/m³ averaged over 8 hours or 10 mg/m³ averaged over 15 minutes (10 times the 8 hour TWA or the 15 minute STEL exposure limits); or –operations are performed in a confined space (See OSHA Confined Space Standard, 29 CFR 1910.146). A properly fitted air-purifying (combination organic vapor and particulate) respirator, proven by test to be effective in isocyanate-containing spray paint environments, and used in accordance with all recommendations made by the manufacturer, can be used when all of the following conditions are met: -The airborne isocyanate monomer concentrations are known to be below 0.05 ppm averaged over eight(*) hours (10 times 8 hour TWA exposure limit); and –the airborne

polyisocyanate (polymeric, oligomeric) concentrations are known to be below 5mg/m³ averaged over 8 hours or 10 mg/m³ averaged over 15 minutes (10 times the 8 hour TWA or the 15 minute STEL exposure limits) and -a NIOSH-Certified End of service life indicator or a change schedule based upon objective information or data is used to ensure that cartridges are replaced before the end of their service life. In addition, prefilters should be changed whenever breathing resistance increases due to particulate buildup.

NON-SPRSY OPERATIONS: A. During non-spray operations such as mixing, batch-making, brush or roller application, etc., at elevated temperatures (for example, heating of material or application to a hot substrate), it is possible to be exposed to airborne isocyanate vapors. Therefore, when the coatings system will be applied in a non-spray manner, a supplied-air (either positive pressure or continuous flow-type) respirator is mandatory when ONE OR MORE of the following conditions exists: -the airborne isocyanate concentrations are not known; or – the airborne isocyanate monomer concentrations exceed 0.05 ppm averaged over eight (8) hours (10 times the 8 hour TWA exposure limit); or – the airborne polyisocyanate (polymeric, oligomeric) concentrations exceed 5 mg/m³ averaged over 8 hours or 10 mg/m³ averaged over 15 minutes (10 times the 8 hour TWA or the 15 minute STEL exposure limits); or – operations are performed in a confined space (See OSHA Confined Space Standard, 29 CFR 1910.146) A properly fitted air-purifying (combination organic vapor and particulate) respirator, proven by test to be effective in isocyanate-containing paint environments, and used in accordance with all recommendations mad by the manufacturer, can be used when ALL of the following conditions are met: -the airborne concentrations of the isocyanate monomer are below 0.05 ppm averaged over eight (8) hours (10 times the 8 hours TWA exposure limit); and – the airborne polyisocyanate (polymeric, oligomeric) concentrations are known to be below 5 mg/m³ averaged over eight (8) hours or 10 mg/m³ averaged over 15 minutes (10 times the 8 hour TWA or the 15 minute STEL exposure limits) and – a NIOSH-certified End of Service Life Indicator or a change schedule based upon objective information or data is used to ensure that cartridges are replaced before the end of their service life. In addition, prefilters should be changed whenever breathing resistance increased due to particulate buildup.

Hand Protection

Gloves should be worn. Nitrile rubber gloves, Butyl rubber gloves, Neoprene gloves.

Eye Protection

When directly handling liquid product, eye protection is required. Examples of eye protection include a chemical safety goggle or chemical safety goggle in combination with a full face shield when there is a greater risk of splash.

Skin and body protection

Avoid all skin contact. Depending on the conditions of use, cover as much of the exposed skin area as possible with appropriate clothing to prevent skin contact., Gloves, long sleeved shirts and pants.

Medical Surveillance

All applicants who are assigned to an isocyanate work area should undergo a pre-placement medical evaluation. A history of eczema or respiratory allergies such as hay fever, are possible reasons for medical exclusion from isocyanate areas. Applicants who have a history of adult asthma should be restricted from work with isocyanates. Applicants with a history of prior isocyanate sensitization should be excluded from further work with isocyanates. A comprehensive annual medical surveillance program should be instituted for all employees who are potentially exposed to diisocyanates. Once a worker has been diagnosed as

sensitized to any isocyanate, no further exposure can be permitted. Refer to the Oak Ridge Foam & Coating Systems, Inc pamphlet (Medical Surveillance Program for Isocyanate Workers) for additional guidance.

Additional Protective Measures

Emergency showers and eye wash stations should be available. Educate and train employees in the safe use and handling of this product. Follow all label instructions.

Section 8 (PHYSICAL AND CHEMICAL PROPERTIES)

Form:	liquid
Color:	Colorless to light yellow
Odor:	Slight
pH:	Not established
Freezing Point:	Not established
Boiling Point/Range:	Not applicable, Decomposition
Flash Point:	193 deg C (379.4 °F)
Lower Explosion Limit:	Not Established
Upper Explosion Limit:	Not Established
Vapor Pressure:	HDI Polyisocyanate: 5.2 X 10 ⁻⁹ @ 68° F (20C) mmHg
Specific Gravity:	Approximately 1.15 @ 20 deg C (68° F)
VOC Content:	0%
Solubility in Water:	Insoluble – Reacts slowly with water to liberate CO ₂ gas
Autoignition Temperature:	Approximately 435 deg C (815° F)
Viscosity, Dynamic:	Approximately 726 mPa.s @ 23 deg C (73.4 ° F)
Bulk Density:	Approximately 8.1 lb/gal
Molecular Weight:	500 Approximate Value, for the polyisocyanate

Section 10 (STABILITY AND REACTIVITY)

Hazardous Reactions

Contact with moisture, other materials that react with isocyanates, or temperatures above 350° F (177 C), may cause polymerization.

Stability

Stable under normal conditions of use and storage.

Materials to avoid: Water, amines, strong bases, alcohols, copper alloys

Conditions to avoid: None known

Hazardous decomposition products

By fire and high heat: Carbon dioxide (CO₂), carbon monoxide (CO), oxides of Nitrogen (NO_x), dense black smoke, Hydrogen cyanide, Isocyanate, Isocyanic Acid, other undetermined compounds.

Section 11 (TOXICOLOGICAL INFORMATION)

Toxicity Data for Homopolymer of Hexamethylene Diisocyanate

Acute Oral Toxicity

LD50: >5,000 mg/kg (Rat)

Estimated Value

Acute Inhalation Toxicity

LC50: 390-453 mg/m³, aerosol, 4 hrs (Rat, Male/Female)

RD50: 20.8 mg/m³, 3 hrs

Acute Dermal Toxicity

LD50: >5,000 mg/kg (rabbit)

Skin Irritation

Rabbit, Draize, Slightly irritating

Eye Irritation

Rabbit, Draize, Slightly irritating

Sensitization

Dermal: sensitizer (guinea pig, Maximisation Test (GPMT))

Dermal: non-sensitizer (Guinea pig, Buehler)

Inhalation: non-sensitizer (guinea pig)

Repeated Dose Toxicity

3 wks, inhalation: NOAEL: 3.7-4.3 mg/m³, (Rat)

90 ds, inhalation: NOAEL: 3.3-3.4 mg/m³, (Rat)

Mutagenicity

Genetic Toxicity in Vitro:

Ames: negative (Salmonella typhimurium, Metabolic Activation: with/without)

Section 12 (ECOLOGICAL INFORMATION)

Ecological Data for Homopolymer of Hexamethylene Diisocyanate Diodegradation 0%, Exposure time: 28 days, not readily biodegradable.

Acute and Prolonged Toxicity to Fish

LCO: >100 mg/L (Zebra fish (Brachydanio rerio), 96 hrs)

Acute Toxicity to Aquatic Invertebrates

ECO: >100 mg/L (Water flea (Daphnia magna), 48 hrs)

Toxicity to Aquatic Plants

EC50: >1,000 mg/L (Green algae (Scenedesmus subspicatus), 72 hrs)

Toxicity to Microorganisms

EC50: >1,000 mg/L (Activated sludge microorganisms, 3 hrs)

Section 13 (DISPOSAL CONSIDERATIONS)

Waste Disposal Method

Waste disposal should be in accordance with existing federal, state and local environmental control laws. Incineration is the preferred method.

Empty Container Precautions

Empty containers retain product residue; observe all precautions for product. Do not heat or cut empty container with electric or gas torch because highly toxic vapors and gases are formed. Do not reuse without thorough commercial cleaning and reconditioning. If container is to be disposed, ensure all product residues are removed prior to disposal.

Section 14 (TRANSPORTATION INFORMATION)

Land transport (DOT)

Not Regulated

Sea transport (IMDG)

Non-Regulated

Air transport (ICAO/IATA)

Non-Regulated

Additional Transportation Information

When in individual containers of less than the Product RQ, this material ships as non-regulated.

Section 15 (REGULATORY INFORMATION)

United States Federal Regulations

OSHA Hazcom Standard Rating: Hazardous

US. Toxic Substances Control Act: Listed on the TSCA Inventory.

US. EPA CERCLA Hazardous Substances (40 CFR 302):

Components

None

SARA Section 311/312 Hazard Categories:

Acute Health Hazard, Chronic Health Hazard, Reactivity Hazard

US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 302 Extremely Hazardous Substances (40 CFR 355, Appendix A):

Components

None

US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 313 Toxic Chemicals (40 CFR 372.65) – Supplier Notification Required:

Components

None

US. EPA Resource Conservation and Recovery Act (RCRA) Composite List of Hazardous Wastes and Appendix VIII Hazardous Constituents (40 CFR 261): If discarded in its purchased form, this product would not be a hazardous waste either by listing or by characteristic. However, under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste. (40 CFR 261.20-24)

State Right-To-Know Information

The following chemicals are specifically listed by individual states; other product specific health and safety data in other sections of the MSDS may also be applicable for state requirements. For details on your regulatory requirements you should contact the appropriate agency in your state.

Inventory Status

Inventory	Status
UNITED STATES (TSCA)	Y
CANADA (DSL)	Y
EUROPE (EINECS/ELINCS)	P
AUSTRALIA (AICS)	Y
JAPAN (MITI)	Y
SOUTH KOREA (KECL)	Y

Y=All ingredients are on the inventory.

E=All ingredients are on the inventory or exempt from listing

P=One or more ingredients fall under the polymer exemption or are on the no longer polymer list. All other ingredients are on the inventory or exempt from listing.

N=Not determined or one or more ingredients are on the inventory and are not exempt from listing.

Federal and State Regulations

Inventory Issues:

SARA Title III Hazard classes: Fire Hazard- NO Reactive Hazard- YES Release of Pressure-NO Acute Health Hazard-YES Chronic Health Hazard-NO

SARA Title III Hazard Classes:

Fire Hazard	-No
Reactive Hazard	-Yes
Release of Pressure	-No
Acute Health Hazard	-Yes
Chronic Health Hazard	-No

California Prop. 65:

To the best of our knowledge, this product does not contain any of the listed chemicals, which the state of California has found to cause cancer, birth defects or other reproductive harm.

Section 16 (OTHER INFORMATION)

NFPA 704M Rating

Health 2
Flammability 1
Reactivity 1
Other
0=Insignificant 1=Slight 2=Moderate 3=High 4=Extreme

HMIS Rating
Health 2*
Flammability 1
Physical Hazard 1
0=Minimal 1=Slight 2=Moderate 3=Serious 4=Severe *=Chronic Health Hazard

The method of hazard communication for ORDCLR is comprised of Product Labels and Material Safety Data Sheets. HMIS and NFPA ratings are provided by Oak Ridge Foam & Coating Systems, Inc as a customer service.

The handling of products containing reactive HDI polyisocyanate/prepolymer and/or monomeric HDI requires appropriate protective measures referred to in this MSDS. These products are therefore recommended only for use in industrial or trade (commercial) applications. They are not suitable for use in Do-It-Yourself applications.

For Additions Information:

Contact: MSDS Coordinator- Oak Ridge Foam & Coating Systems, Inc
During business hours, Center-800-625-9577

NOTICE

Oak Ridge expressly disclaims all express or implied warranties of merchantability and fitness for a particular purpose with respect to the product or information provided herein, and shall under not circumstances be liable for incidental or consequential damages.

Do not use ingredient information and/or ingredient percentages in this MSDS as a product specification. For product specification information refer to a Product Specification Sheet and/or a Certificate of Analysis. These can be obtained from your local Oak Ridge sales office.

All information appearing herein is based upon data obtained from the manufacturer and/or recognized technical sources. While the information is believed to be accurate, Oak Ridge makes no representations as to its accuracy or sufficiency. Conditions of use are beyond Oak Ridge control. Therefore, users are responsible to verify this data under their own operating conditions to determine whether the product is suitable for their particular purposes, and they assume all risks of their use, handling, and disposal of the product or from the publication or use of, or reliance upon, information contained herein. This information relates only to the product designated herein and does not relate to its use in combination with any other material or in any other process.

END OF MSDS

MFG by Oak Ridge Foam & Coating Systems, Inc
1-16

SAFETY DATA SHEET

OR75DCL Part B

Section 1 (PRODUCT/MANUFACTURER INFO)

Manufactured by:

Oak Ridge Foam & Coating Systems, Inc
575 Commercial Ave.
Green Lake, WI 54941 USA

TRANSPORTATION EMERGENCY
CALL CHEMTREC: (800) 424-9300
INTERNATIONAL: (703) 527-3887

Section 2 (COMPOSITION/INFO ON INGREDIENTS)

Hazardous Components

Weight %	Components	CAS-No.
60-100%	Aspartic Ester	CAS# is a trade secret
5-10%	Monoaspartate	
1-5%	Aliphatic Carboxylic Ester	623-91-6

Section 3 (HAZARDS IDENTIFICATION)

Emergency Overview

CAUTION! Color: Light yellow, Amber Form: Liquid Odor: Slight. Irritating gases/fumes may be given off during burning or thermal decomposition. Use cold water spray to cool fire-exposed containers to minimize the risk of rupture. May cause respiratory tract irritation. May cause allergic skin reaction. May cause skin irritation.

Potential Health Effects

Primary Routes of Entry

Skin Contact, Eye Contact, Ingestion, Inhalation

Medical Conditions Aggravated by Exposure

Skin disorders, Respiratory disorders, Eye disorders, Skin Allergies

HUMAN EFFECTS AND SYMPTOMS OF OVEREXPOSURE

Inhalation

Acute Inhalation

Inhalation is unlikely due to the low vapor pressure. If misted or handled at elevated temperatures, high concentrations may cause respiratory tract irritation.

For Component: Aspartic Ester

Inhalation is unlikely due to the low vapor pressure. If misted or handled at elevated temperatures, high concentrations may cause respiratory tract irritation.

Skin

Acute Skin

May cause irritation with symptoms of reddening and itching. May cause allergic skin reaction with symptoms of reddening, itching, swelling, and rash. May cause sensitization of susceptible persons.

For component: Aspartic Ester

May cause irritation with symptoms of reddening and itching. May cause allergic skin reaction with symptoms of reddening, itching, swelling, and rash.

Chronic Skin

Prolonged contact can cause reddening, swelling, rash, and in some cases, skin sensitization.

Eye

Acute Eye

Not expected to be irritating.

For Component: Aspartic Ester

Not expected to be irritating.

Ingestion

Acute Ingestion

Ingestion is not a typical route of industrial exposure. Not expected to be harmful if swallowed.

For Component: Aspartic Ester

Not expected to be harmful if swallowed.

For Component: Aliphatic Carboxylic Ester

May be harmful if swallowed

General Effects of Exposure

Chronic Effects of Exposure

No applicable information was found concerning any adverse chronic health effects from overexposure to this product. Repeated or prolonged overexposure may cause effects as noted under acute health effects.

Carcinogenicity

No Carcinogenic substances as defined by IARC, NTP and/or OSHA.

Section 4 (FIRST AID MEASURES)

Eye Contact

In case of contact, flush eyes with plenty of lukewarm water. Get medical attention if irritation develops.

Skin Contact

In case of skin contact, wash affected areas with soap and water. Immediately remove contaminated clothing and shoes. Get medical attention if irritation develops and persists. Thoroughly clean shoes before reuse. Wash clothing before reuse.

Inhalation

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if irritation develops.

Ingestion

If ingested, do not induce vomiting unless directed to do so by medical personnel. Do not give anything by mouth to an unconscious person.

Section 5 (FIRE FIGHTING MEASURES)

Suitable Extinguishing Media

All extinguishing media are suitable.

Special Fire Fighting Procedures

Firefighters should be equipped with self-contained breathing apparatus to protect against potentially toxic and irritating fumes. Use cold water spray to cool fire-exposed containers to minimize risk of rupture. Toxic and irritating gases/fumes may be given off during burning or thermal decomposition.

Section 6 (ACCIDENTAL RELEASE MEASURES)

Spill and Leak Procedures

Cleanup personnel must use appropriate personal protective equipment. Cover spill with inert material (e.g. dry sand or earth) and collect for proper disposal. Prevent from entering open drains and waterways. Ventilate area to remove vapors or dust. Evacuate and keep unnecessary people out of spill area.

Section 7 (HANDLING AND STORAGE)

Storage Temperature:

Minimum: 0 C (32° F)

Maximum: 50C (122° F)

Storage Period: 6 months in unopened containers

Handling/Storage Precautions

Avoid contact with skin or clothing. Avoid contact with eyes. Use only with adequate ventilation/personal protection. Wash thoroughly after handling. Keep container closed when not in use. Do not breathe vapors or spray mist. Store in a dry place away from excessive heat. Material is hygroscopic and may absorb small amounts of atmospheric moisture.

Further Info on Storage Conditions

Avoid contact with moisture/water. Material can be stored safely at ambient temperatures.

Section 8 (EXPOSURE CONTROLS/PERSONAL PROTECTION)

Country specific exposure limits have not been established or are not applicable.

Industrial Hygiene/Ventilation Measures

General dilution and local exhaust as necessary to control airborne vapors, mists, dusts and thermal decomposition products below appropriate airborne concentration standards/guidelines. Curing ovens must be ventilated to prevent the build up of explosive atmospheres and to prevent off gases from entering the work place.

Respiratory Protection

In spray applications, an organic vapor/particulate respirator or air supplied unit is necessary. The use of a positive pressure supplied air respirator is recommended if the airborne concentration is unknown or if spraying is performed in a confined space or area with limited ventilation.

Hand Protection

Permeation resistant clothing and foot protection. Gloves, long sleeved shirts and pants.

Eye Protection

Chemical safety goggles or safety glasses with side-shields.

Skin and body protection

Permeation resistant clothing and foot protection. Gloves, long sleeved shirts and pants.

Additional Protective Measures

Employees should wash their hands and face before eating, drinking, or using tobacco products. Educate and train employees in the safe use and handling of this product. Emergency showers and eye wash stations should be available.

Section 9 (PHYSICAL AND CHEMICAL PROPERTIES)

Form:	Liquid
Color:	Light yellow, Amber
Odor:	Slight
pH:	Not Established
Freezing Point:	Not Established
Boiling Point/Range:	Approximately 185 C (365° F) @ 1,013 mbar
Flash Point:	Approximately 145 C (293° F)
Lower Explosion Limit:	Not Established
Upper Explosion Limit:	Not Established
	Approximately 8 mbar @ 20 C (68° F)
	Approximately 17 mbar @ 50 C (122° F)
	Approximately 20 mbar @ 55 C (131° F)
Density	1.06 g/cm ³ @ 20 C (68° F)
Solubility in Water:	Insoluble
Autoignition Temperature:	Approximately 365 C (689° F)
Viscosity Dynamic:	Approximately 1,450 mPas @ 25 C (77° F)
Bulk Density:	8.8 lb/gal @ 25 C (77° F)
Pour Point:	Approximately -15 C (5° F)

Section 10 (STABILITY AND REACTIVITY)

Hazardous Reactions

Hazardous polymerization does not occur.

Stability

Stable

Materials to avoid
Oxidizing Agents

Conditions to avoid
Avoid Extreme Heat

Hazardous decomposition products

By fire and thermal decomposition: Carbon oxides, nitrogen oxides (NO_x), Amines, other aliphatic fragments which have not been determined, Ammonia Gas may be liberated at high temperatures.

Section 11 (TOXICOLOGICAL INFORMATION)

Toxicity note

Toxicity Data is based on a similar product

Acute Oral Toxicity

LD50: >2,000 mg/kg (Rat)

Acute Inhalation Toxicity

LC50: >4,224 mg/L, 4 h (Rat)

Acute Dermal Toxicity

LD50: >2,000 mg/kg (Rat)

Skin Irritation

Rabbit, Non-irritating

Eye Irritation

Rabbit, Moderately irritating

Sensitization

(Magnusson/Kligmann (Maximization Test))

Mutagenicity

Genetic Toxicity in Vitro:

Ames test: negative

Based on a similar product

Toxicity Data for Aspartic Ester

Toxicity Note

Toxicity data is based on a similar product

Acute Oral Toxicity

LD50: >2,000 mg/kg (Rat)

Acute Inhalation Toxicity

LC50: >4224 mg/m³, aerosol, 4 hrs (Rat)

Acute dermal Toxicity
LD50: >2,000 mg/kg (Rat)

Skin Irritation
Rabbit, Irritating to skin.

Eye Irritation
Rabbit, No eye irritation

Sensitization
Dermal: sensitizer (Guinea pig, Magnusson/Kligmann (Maximization Test))

Mutagenicity
Genetic Toxicity in Vitro:
Ames: negative (metabolic activation: with/without)

Toxicity Data for Aliphatic Carboxylic Ester
Acute Oral Toxicity
LD50: 1,780 mg/kg (Rat)

Section 12 (ECOLOGICAL INFORMATION)

Biodegradation
13% exposure time: 28 d, not readily biodegradable. According to the results of tests of biodegradability this product is not readily biodegradable.

Acute and Prolonged Toxicity to Fish
LC50: 66mg/L (Zebra fish (*Brachydanio rerio*), 96 h)

Acute Toxicity to Aquatic Invertebrates
EC50: 88.6 mg/L (Water flea (*Daphnia Magana*), 48h)

Toxicity to Aquatic Plants
EC50: 3,110 mg/I (*Scenedesmus subspicatus*)

Toxicity to Terrestrial Plants
113 mg/L, (72H)

Additional Ecotoxicological Remarks
Ecotoxicological data is based on a similar product. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Ecological Data for Aliphatic Carboxylic Ester
Acute and Prolonged Toxicity to Fish
38 g/L (Fathead minnow (*Pimephales promelas*), 96h)

Section 13 (DISPOSAL CONSIDERATIONS)

Waste Disposal Method

Waste disposal should be in accordance with existing federal, state and local environmental control laws.

Empty Container Precautions

Recondition or dispose of empty container in accordance with governmental regulations. Do not reuse empty container without proper governmental regulations. Do not reuse empty container without proper cleaning. Empty containers retain product residue (dust, liquid, vapor and/or gases) and can be dangerous. Do not heat or cut container with electric or gas torch.

Section 14 (TRANSPORTATION INFORMATION)

Land transport (DOT)

Non-Regulated

Sea transport (IMDG)

Non-regulated

Air Transport (ICAO/IATA)

Non-Regulated

Section 15 (REGULATORY INFORMATION)

United States Federal Regulations

OSHA Hazcom Standard Rating: Hazardous

USA Toxic Substances Control Act: Listed on the TSCA Inventory.

USA EPA CERCLA Hazardous Substances (40 CFR 302):

Components

None

SARA Section 311/312 Hazard Categories:

Acute Health Hazard

USA EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 302 Extremely Hazardous Substances (40 CFR 355, Appendix A):

Components

None

USA EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 313 Toxic Chemicals (40 CFR 372.65) – Supplier Notification Required:

Components

None

USA EPA Resource Conservation and Recovery Act (RCRA) Composite List of Hazardous Wastes and Appendix VIII Hazardous Constituents (40 CFR 261): If discarded in its purchased form, this product would not be a hazardous waste either by listing or by characteristic. However, under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste. (40 CFR 261.20-24)

State Right-To-Know Information

The following chemicals are specifically listed by individual states; other product specific health and safety data in other sections of the MSDS may also be applicable for state requirements. For details on your regulatory requirements you should contact the appropriate agency in your state.

Massachusetts, New Jersey or Pennsylvania Right to Know Substance Lists:

Weight %	Components	CAS-No.
60-100%	Aspartic Ester	CAS# is a trade secret
5-10%	Monoaspartate	
1-5%	Aliphatic Carboxylic Ester	623-91-6

California Prop. 65:

To the best of our knowledge, this product does not contain any of the listed chemicals, which the state of California has found to cause cancer, birth defects or other reproductive harm.

Section 16 (OTHER INFORMATION)

NFPA 704M Rating

Health	2
Flammability	1
Reactivity	0

Other

0=Insignificant 1=Slight 2=Moderate 3=High 4=Extreme

HMIS Rating

Health	2
Flammability	1
Physical Hazard	0

0=Minimal 1=Slight 2=Moderate 3=Serious 4=Severe *=Chronic Health Hazard

EFP Material Science LLC's method of hazard communication is comprised of Product Labels and Material Safety Data Sheets. HMIS and NFPA ratings are provided by Bayer material science LLC as a customer service.

Contact Person:	Product Safety Department
Telephone:	800-625-9577
MSDS number:	42952
Version Date:	03/2008
Report Version:	1.5

For Additions Information:

Contact: MSDS Coordinator-
Enhanced Flooring Products
During business hours, Center-800-625-9577

NOTICE

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Do not use ingredient information and/or ingredient percentages in this MSDS as a product specification. For product specification information refer to a Product Specification Sheet and/or a Certificate of Analysis. These can be obtained from your local Enhanced Flooring Products sales office.

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END OF MSDS

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