Safety Data Sheet

OR411

Section 1 – Identification

GHS product identifier: **OR411**
Other means of identification: Not available.
Product type: Liquid.

Supplier's details:
Oak Ridge Foam & Coating Systems, Inc
575 Commercial Avenue
Green Lake, WI 54941

Email address of person responsible for this SDS: info@oakridgepoly.com

Emergency telephone number (24h/7 day): Chemtrec: (800) 424-9300 or (703) 527-3887

Section 2 – Hazards Identification

OSHA/HCS status: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture:
SKIN CORROSION/IRRITATION – Category 2
SERIOUS EYE DAMAGE/EYE IRRITATION – Category 2A
TOXIC TO REPRODUCTION [Fertility] – Category 1B
TOXIC TO REPRODUCTION [Unborn child] – Category 1B
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) [Respiratory tract irritation] – Category 3

GHS Label Elements
Hazard pictograms:

Signal word: Danger

Hazard Statements:
Causes serious eye irritation.
Causes skin irritation.
May damage fertility or the unborn child.
May cause respiratory irritation.
May cause drowsiness and dizziness.

Precautionary Statements

General: Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.

Prevention: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Wear protective gloves. Wear eye or face protection. Use only outdoors or in a well-ventilated area. Avoid breathing vapor. Wash hands thoroughly after handling.

Response: IF exposed or concerned: Get medical attention. IF INHALED: Remove victim to fresh air and keep at rest in position comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical attention. 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 attention.

Storage: Store locked up.

Disposal: Dispose of contents and container in accordance with all local, regional, national and international regulations.

Hazards not otherwise Classified: Not available.

Section 3 – Hazards Identification

Substance/mixture: Mixture

Other means of identification: Not available.

CAS number/other identifiers

CAS number: Mixture

Product code: 2301004

Ingredient Name	%	CAS Number
n-Methyl-2-Pyrrolidone	60	872-50-4
Dimethuyl Adipate	13.6	627-93-0
Dimethyl Glutarate	13.2	1119-40-0
Dimethyl Succinate	13.2	106-65-0

Occupational exposure limits, if available, are listed in Section 8.

Section 4 – First Aid Measures

Description of necessary first aid measures

Eye contact: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

Inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.

It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Skin contact: Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion: Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. Causes skin 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. Contact with MDI can cause discoloration.

Most important symptoms/effects, acute and delayed

Potential acute health effects:

Eye contact: Causes serious eye irritation.

Inhalation: Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness. May cause respiratory irritation. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Skin contact: Causes skin irritation.

Ingestion: Can cause central nervous system (CNS) depression. Irritating to mouth, throat and stomach.

Over-exposure signs/symptoms

Eye contact: Adverse symptoms may include the following:
Pain or irritation
Watering
Redness

Inhalation: Adverse symptoms may include the following:
Respiratory tract irritation
Coughing
Nausea or vomiting
Headache
Drowsiness/fatigue
Dizziness/vertigo
Unconsciousness
Reduced fetal weight

Increase in fetal deaths
Skeletal malformations

Skin contact: Adverse symptoms may include the following:
Irritation
Redness
Reduced fetal weight
Increase in fetal deaths
Skeletal malformations

Ingestion: Adverse symptoms may include the following:
Reduced fetal weight
Increase in fetal deaths
Skeletal malformations

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician: In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Specific treatments: No specific treatment.

Protection of first-aiders: No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5 – Fire Fighting Measures

Extinguishing media

Suitable extinguishing Media: Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing Media: None Known.

Specific hazards arising from the chemical: In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous thermal decomposition products: Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides

Special protective actions for fire-fighters: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective Equipment for for fire-fighters: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Remark: No additional remark.

Section 6 – Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders: If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For nonemergency personnel".

Environmental precautions: 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 materials for containment and cleaning up

Small spill: Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill: Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7 – Storage and Handling

Precautions for safe handling

Protective measures: Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest.

Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate.

	Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
Advice on general Occupational hygiene:	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
Conditions for safe storage, including any incompatibilities:	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8 – Exposure Controls/Personal Protection

Control parameters

Occupational exposure limits
None.

Appropriate engineering controls:	Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.
Environmental exposure controls:	Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures:	Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
Eye/face protection:	Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin protection

Hand protection:	Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
Body protection:	Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Other skin protection:	Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Respiratory protection:	Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9 – Physical Properties

Physical state:	liquid
Color:	Light
Odor:	Strong
Odor Threshold:	No Data Available
pH:	No Data Available
Melting Point:	May start to solidify at the following temperature: -23°C (-9.4°F) This is based on data for the following ingredient: 1-Mehtyl-2Pyrrolidone.
Boiling Point:	Lowest known value: 195.3°C (383.5°F) (Dimethyl Adipate). Weighted average: 199. 32°C (390.8°F)
Flash Point:	Lowest known value: Open cup: 95.6°C (204.1°F). (n-Methyl-2-Pyrrolidone)
Burning time:	Not applicable.
Burning rate:	Not applicable.
Evaporation Rate:	0.03 (n-Methyl-2-Pyrrolidone) compared with Butyl acetate.
Flammability (solid, gas):	Not available.
Lower and upper explosive (flammable) limits:	Greatest known range: Lower: 1.3% Upper: 9.5% (n-Methyl-2-Pyrrolidone)
Vapor Pressure:	Highest known value: 0.04 kPa (0.3 mm Hg) (at 20°C) (n-Methyl-2-Pyrrolidone)
Vapor Density:	Highest known value: 3.4 (Air=1) (n-Methyl-2-Pyrrolidone)
Relative Density:	Only known value: 1.031 (Water=1) (n-Methyl-2-Pyrrolidone)
Solubility:	Soluble in the following materials: cold water
Solubility in Water:	Not available.
Partition Coefficient: n-octanol/water:	No Data Available
Auto-ignition Temperature:	Lowest known value: 270°C (518°F) (n-Methyl-2-Pyrrolidone)
Decomposition Temperature:	Not available

DADT: Not available
Viscosity: Not available

Section 10 – Stability and Reactivity

Reactivity: No specific test data related to reactivity available for this product or its ingredients.
Chemical stability: The product is stable.
Possibility of hazardous reactions: Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid: No specific data.
Incompatible materials: No specific data.
Hazardous decomposition Products: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11 – Toxicological Information

Information on toxicological effects

Acute toxicity
Not available.

Conclusion/Summary: No additional remark.

Irritation/Corrosion
Not available.

Sensitization
Not available.

Mutagenicity
Not available.

Carcinogenicity
Not available.

Conclusion/Summary: No additional remark.

Reproductive toxicity
Not available.

Teratogenicity
Not available.

Specific target organ toxicity (single exposure)
Not available.

Specific target organ toxicity (repeated exposure)
Not available

Aspiration hazard
Not available

Information on the likely routes of exposure: Not available.

Potential acute health effects

Eye contact:	Causes serious eye irritation.
Inhalation	Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness. May cause respiratory irritation. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
Skin contact:	Causes skin irritation.
Ingestion:	Can cause central nervous system (CNS) depression. Irritating to mouth, throat and stomach.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact:	Adverse symptoms may include the following: Pain or irritation Watering Redness
Inhalation:	Adverse symptoms may include the following: Respiratory tract irritation Coughing Nausea or vomiting Headache Drowsiness/fatigue Dizziness/vertigo Unconsciousness Reduced fetal weight Increase in fetal deaths Skeletal malformations
Skin contact:	Adverse symptoms may include the following: Irritation Redness Reduced fetal weight Increase in fetal deaths Skeletal malformations
Ingestion:	Adverse symptoms may include the following: Reduced fetal weight Increase in fetal deaths Skeletal malformations

Delayed and immediate effects and also chronic effects from short and long-term exposure

Short term exposure

Potential immediate Effects:	Not available.
Potential delayed Effects:	Not available.

Long term exposure

Potential immediate Effects:	Not available
Potential delayed Effects:	Not available

Potential chronic health effects
Not available.

General: No known significant effects or critical hazards.
Carcinogenicity: No known significant effects or critical hazards.
Mutagenicity: No known significant effects or critical hazards.
Teratogenicity: May damage the unborn child.
Development effects: No known significant effects or critical hazards.
Fertility effects: May damage fertility.

Numerical measures of toxicity

Acute toxicity estimates
Not available.

Section 12 – Ecological Information

Toxicity
Not available.

Persistence and degradability
Conclusion/Summary: No additional remark.

Bio accumulative potential
Not available.

Mobility in soil
Soil/water partition Coefficient (Koc): Not available.

Other adverse effects: No known significant effects or critical hazards.

Section 13 – Disposal Consideration

Disposal Method:
The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14 – Transportation Information

	UN number	UN proper Shipping name	Transport hazard class(es)	Packing group	Environmental hazards	Additional Information
Dot Classification	NA1993	Combustible liquid, n.o.s. (n-Methyl-2-Pyrrolidone)	Combustible liquid	III	No.	Not applicable.

Special precautions for user: **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Section 15 – Regulatory Information

U.S. Federal regulations: **TSCA 8(a) CDR Exempt/Partial exemption**: Not determined
United States inventory (TSCA 8b): All components are listed or exempted.

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs): Not listed

Clean Air Act Section 602 Class I Substances: Not listed

Clean Air Act Section 602 Class II Substances: Not listed

DEA List I Chemicals (Precursor Chemicals): Not listed

DEA List II Chemicals (Essential Chemicals): Not listed

SARA 302/304

Composition/information on ingredients:
No products were found.

SARA 304 RQ: Not applicable.

SARA 311/312

Classification: Fire hazard
Immediate (acute) health hazard
Delayed (chronic) health hazard

SARA 313

	Product name	CAS number	%
Form R – Reporting requirements	n-Methyl-2-Pyrrolidone	872-50-4	60

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

California Prop. 65

WARNING: This product contains a chemical know to the State of California to cause birth defects or other reproductive harm.

Ingredient name	Cancer	Reproductive	No Significant risk level	Maximum acceptable dosage level
n-Methyl-2-Pyrrolidone	No.	Yes.	No.	No.

Canada inventory: Not determined.

International regulations

Chemical Weapons Convention List Schedule I Chemicals: Not listed

Chemical Weapons Convention List Schedule II Chemicals: Not listed

Chemical Weapons Convention List Schedule III Chemicals: Not listed

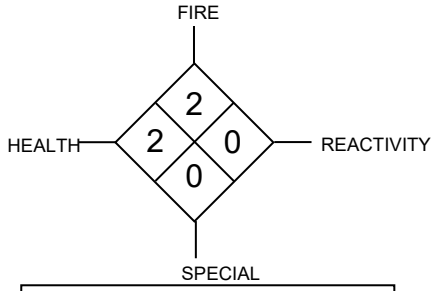
Section 16 – Other Information

Hazardous Material Information System (U.S.A.)

Health	2
Flammability	2
Physical hazards	0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on SDSs under 29 CFR 1910. 1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868. The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.)



HMIS HAZARD RATING
LEAST ---------- 0 SLIGHT ---- 1
MODERATE --- 2 HIGH ------- 3
EXTREME ---- 4

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History

Date of printing:	7/5/2016
Revision Date:	8/18/03; 4/12/12; 5/15/15; 7/5/16
Revision comments:	Added product number and format change 05/18/03; MSDS update 04/12/12; GHS Update 5/15/15
Version:	1
Key to abbreviations:	ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IBC = Intermediate Bulk Container IMDG = International Maritime Dangerous Goods LogPow = logarithm of the octanol/water partition coefficient MARPOL 73/78 = International Convention for the Prevention of Pollution from Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) UN = United Nations
References:	Not available.

Notice to reader:

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.