



# SAFETY DATA SHEET

## 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

**Product Name:**  
THERMAL CARE R  
**Use of the Substance / Preparation:**  
Animal Feed Ingredient

**Product Code:**  
891200AJ

**Contact Manufacturer:**  
ADM Animal Nutrition™  
1000 North 30th St.  
Quincy, IL 62301  
United States  
Tel. (+1) 217-222-7100 (business hours)

**Emergency response telephone number:**  
Chemtrec 1-800-424-9300 (CCN 1635)

## 2. HAZARDS IDENTIFICATION

### Emergency Overview

May form combustible dust concentrations in air (during processing and handling). Product dust may cause mild, mechanical irritation. May cause an allergic skin reaction. Contains processed grain by-products, which may include peanut and wheat.

**Appearance**  
Tan


**Physical State**  
Solid

**Odor**  
No information available

**Classification according to 29 CFR 1910, amended to conform to the United Nations' Globally Harmonized System of Classification and Labelling of Chemicals (GHS):**

Skin Sensitization	Category 1
OSHA Defined Hazard(s)	Combustible Dust

### OSHA / GHS Label Elements

GHS Hazard Pictogram(s):	Note: The OSHA combustible dust hazard class does not have an assigned pictogram. 
Signal Word:	Warning
Hazard Statement(s):	May form combustible dust concentrations in air. H317 May cause an allergic skin reaction
<b>Prevention Precautionary Statements:</b> Avoid breathing dust/mist. Contaminated work clothing must not be allowed out of the workplace. Wear protective gloves.	
<b>Response Precautionary Statements:</b> If on skin: Wash with plenty of water and soap. If skin irritation or rash occurs: Get medical advice/attention. Specific treatment: See section 4 of the SDS. Wash contaminated clothing before reuse.	
<b>Disposal Precautionary Statements:</b> Dispose of contents/container in accordance with all applicable national and local regulations.	

Up to 32.164 % of the mixture consists of ingredient(s) of unknown acute oral toxicity.  
Up to 32.397 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity.  
Up to 32.54 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Chemical nature of the preparation** Mixture.

The following component(s) are considered hazardous in accordance with paragraph (d) of 29 CFR 1910.1200 [OSHA] or require disclosure as an air contaminant.

Chemical Name	CAS-No	Weight %	Substance Hazard Classification
Eugenol	97-53-0	< 1.0%	Eye Irrit. 2. Skin Sens. 1.
Cinnamaldehyde	104-55-2	< 1.0%	Acute Tox. 4. Skin Irrit. 2. Eye Irrit. 2. Skin Sens. 1.

*Components which are not considered to be health hazards under paragraph (d) of 29 CFR §1910.1200 (HCS 2012) or SOR/2015-17 (WHMIS 2015) are not required to be disclosed. Components may be present which contribute to a potential combustible dust hazard, but are not disclosed since they do not pose health hazards. If additional composition information is needed, please consult with your ADM sales or technical contact. Where a single SDS is used for similar mixtures or in cases of a batch-to-batch variability, OSHA guidance allows for the use of concentration ranges. [Directive: CPL 02-02-079]*

### 4. FIRST AID MEASURES

**Description of first aid measures**

**Eye Contact** Rinse thoroughly with plenty of water, also under the eyelids.

**Skin Contact** Wash off with warm water and soap. If skin irritation persists, call a physician.

**Inhalation** Move to fresh air.

**Ingestion** Clean mouth with water and afterwards drink plenty of water.

**General Advice** When symptoms persist or in all cases of doubt seek medical advice. Contains processed grain by-products, which may include peanut and wheat.

**Most important symptoms and affects, both acute and delayed**

**Eyes** Contact with eyes may cause mechanical irritation.

**Skin** Product dust may cause mild, mechanical irritation. May cause sensitization by skin contact. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.

**Inhalation** Dust may cause irritation of respiratory tract.

**Ingestion** Health injuries are not known or expected under normal use. The product is not expected to produce ill effects when blended into animal feed in the recommended quantities.

**Indication of any immediate medical attention and special treatment needed**

**Notes to Physician** Special forms of treatment and immediate medical attention are not specified. Treat Symptomatically.

### 5. FIRE-FIGHTING MEASURES

**Flammable Properties**

As with most organic solids, combustion is possible at elevated temperatures or by contact with an ignition source. Fine dust dispersed in air may ignite. Risk of ignition followed by flame propagation or secondary explosions should be prevented by avoiding accumulation of dust, e.g. on floors and ledges.

**Extinguishing media**

**Suitable Extinguishing Media** Water. Foam. Carbon dioxide (CO<sub>2</sub>) Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable Extinguishing Media** None known.

**Special hazards arising from the substance or mixture**

**Hazardous Combustion Products** Carbon oxides, Nitrogen oxides (NO<sub>x</sub>), Acrolein.

**Specific Hazards Arising from the Chemical** None known.

**Sensitivity to mechanical impact** No information available.

**Sensitivity to static discharge** Yes. (as dust).

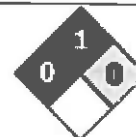
**Advice for fire-fighters**

**Protective Equipment and Precautions for Firefighters** As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

**NFPA**

Health 0  
Flammability 1

Stability and Reactivity 0  
Physical hazard None known



**6. ACCIDENTAL RELEASE MEASURES**

**Personal Precautions, Protective Equipment, and Emergency Procedures**

Use appropriate personal protective equipment. Avoid dust formation and accumulation.

**Environmental Precautions**

Prevent further leakage or spillage if safe to do so.

**Methods and Materials for Containment and Cleaning Up**

Sweep up or vacuum up using spark-free earthed vacuum cleaner.

**7. HANDLING AND STORAGE**

**Handling**

Ensure adequate ventilation. Avoid dust formation in confined areas. Fine dust dispersed in air may ignite. Keep away from open flames, hot surfaces and sources of ignition. Refer to NFPA 61, "Standard for the Prevention of Fires and Dust Explosions in Agricultural and Food Processing Facilities".

**Storage**

Store in a cool, dry, hygienic situation, whether in bulk silos, tote bags or paper sacks. Keep containers dry and tightly closed to avoid moisture absorption and contamination.

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

**Exposure Limits**

Where exposure limits have not been established for specific components of this material, please observe the OSHA and ACGIH established limits for particulates not otherwise classified (PNOC). OSHA PEL: [15 mg/m<sup>3</sup> (total dust) 8-hr TWA], [5 mg/m<sup>3</sup> (respirable) 8-hr TWA]. ACGIH TLV: [10 mg/m<sup>3</sup> (inhalable) 8-hr TWA], [3 mg/m<sup>3</sup> (respirable) 8-hr TWA].

**Appropriate Engineering Controls**

Ensure adequate ventilation, especially in confined areas. Apply technical measures to comply with the occupational exposure limits. However it is the duty of the user to verify this and follow given exposure limits at the workplace.

**General Hygiene Considerations**

Handle in accordance with good industrial hygiene and safety practice.

**Personal Protective Equipment**

**Eye/face Protection.**

If exposed to airborne dust, safety goggles are recommended.

**Skin and Body Protection**

Also take into consideration the specific local conditions under which the product is used. Long sleeved clothing and protective gloves are recommended.

**Respiratory Protection**

If exposed to airborne dust, use appropriate NIOSH approved (or equivalent) respiratory protection. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Appropriate respiratory protection should be selected by a qualified person and should be based upon a risk assessment of the work activities and exposure levels.



**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Appearance</b>	Tan
<b>Physical State</b>	Solid
<b>Odor</b>	No information available
<b>Odor Threshold</b>	No information available
<b>pH</b>	No information available
<b>Flash Point</b>	Not applicable (solid)

<b>Autoignition Temperature</b>	No information available
<b>Boiling point</b>	Not applicable (solid)
<b>Melting/Freezing Point</b>	No information available
<b>Decomposition temperature</b>	No information available
<b>Oxidizing Properties</b>	No information available
<b>Flammability Limits In Air</b>	No information available
<b>Solubility(ies)</b>	No information available
<b>Evaporation Rate</b>	Not applicable (solid)
<b>Vapor Pressure</b>	Not applicable (solid)
<b>Vapor Density</b>	Not applicable (solid)
<b>Relative Density</b>	No information available
<b>Viscosity (kinematic)</b>	No information available
<b>Partition Coefficient (n-octanol/water)</b>	No information available

## 10. STABILITY AND REACTIVITY

**Reactivity** Stable under recommended use and storage conditions.

**Stability** Stable under normal conditions.

**Possibility of Hazardous Reactions** None under normal processing.

**Conditions to Avoid** Heat, flames and sparks. Avoid dust formation.

**Incompatible Materials** No materials to be especially mentioned.

**Hazardous Decomposition Products** Thermal decomposition may lead to release of, Carbon oxides, Nitrogen oxides (NOx), Acrolein.

## 11. TOXICOLOGICAL INFORMATION

### Information on toxicological effects

<b>Acute toxicity</b>	Based on available data, no evidence of acute toxicity. (Classification is based on available literature data for the significant mixture components). The product is not expected to produce ill effects when blended into animal feed in the recommended quantities.
<b>Skin corrosion/irritation</b>	Based on available data, not, or only slightly irritating. (Classification is based on available literature data for the significant mixture components).
<b>Serious eye damage/eye irritation</b>	Based on available data, no evidence of serious eye damage / irritation. (Classification is based on available literature data for the significant mixture components).
<b>Respiratory or skin sensitisation</b>	Skin Sensitizer, Cat. 1: May cause an allergic skin reaction. (Classification is based on available literature data for the significant mixture components).
<b>Germ cell mutagenicity</b>	Not classified. Not expected to be mutagenic. None of the significant input ingredients of this mixture have been identified as being mutagenic.
<b>Carcinogenicity</b>	Based on available data, no evidence of carcinogenicity. No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen.
<b>Reproductive toxicity</b>	Not classified. Not expected to be toxic to reproduction. None of the significant input ingredients of this mixture have been identified as being toxic to reproduction.
<b>STOT - single exposure</b>	Not classified. No evidence of toxicity. None of the significant input ingredients of this mixture have been identified as a STOT SE hazard.
<b>STOT - repeated exposure</b>	Not classified. No evidence of toxicity. None of the significant input ingredients of this mixture have been identified as a STOT RE hazard.
<b>Aspiration hazard</b>	Based on available data, no known aspiration hazard. (Classification is based on available literature data for the significant mixture components).

### Potential health effects

**Eyes**

**Skin**

**Inhalation**

**Ingestion**

Contact with eyes may cause mechanical irritation.

Product dust may cause mild, mechanical irritation. May cause sensitization by skin contact. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.

Dust may cause irritation of respiratory tract.

Health injuries are not known or expected under normal use. The product is not expected to produce ill effects when blended into animal feed in the recommended quantities.

<b>12. ECOLOGICAL INFORMATION</b>
-----------------------------------

**Ecotoxicity**

Not classified for aquatic toxicity. This product has not been evaluated for eco-toxicological effects.

<b>13. DISPOSAL CONSIDERATIONS</b>
------------------------------------

Whenever possible, as rules and regulations allow, please recycle or manage materials to minimize waste.

**Waste Disposal Methods**

Dispose of in compliance with the laws and regulations pertaining to this product in your jurisdiction.

**Contaminated Packaging**

Empty containers should be taken for local recycling, recovery or waste disposal.

<b>14. TRANSPORT INFORMATION</b>
----------------------------------

**Domestic transport regulations (USA)**

DOT Not regulated.

<b>15. REGULATORY INFORMATION</b>
-----------------------------------

**International Inventories**

As animal feed, this product is exempted from the following inventories: U.S.A. (TSCA).

**USA****Federal Regulations****SARA 311/312 Hazardous Categorization**

Acute Health Hazard	No
Chronic Health Hazard	Yes
Fire Hazard	Yes (when in the form of combustible dust)
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product is not known to contain chemicals at levels which are subject to the reporting requirements of the Act or regulations contained in 40 CFR 372.

**CERCLA/SARA 103-302**

Sections 103-302 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (CERCLA/SARA). This product is not known to contain chemicals at levels which are expected to be subject to the reporting requirements of the Act or regulations contained in 40 CFR 103-302.

**State Regulations****State Right-to-Know**

This product may contain one or more ingredient(s) which are subject to state right to know laws. Please contact your sales representative for ingredient details if needed.

<b>16. OTHER INFORMATION</b>
------------------------------

<b>Prepared By:</b>	ADM Animal Nutrition™
<b>Revision Date:</b>	03-Jun-2016
<b>Revision Number:</b>	1.04
<b>Reason for revision:</b>	Implementation into software system.

**Literature References:**

When available, hazard classifications for unreacted ingredients are obtained from supplier Safety Data Sheets.

Additional literature sources may include:

- CSST Répertoire toxicologique: 2015 WHMIS classification of chemical substances (<http://www.csst.qc.ca/en/prevention/reptox/Pages/list-whmis-2015-a.aspx>)
- European Chemicals Agency (<http://echa.europa.eu>)
- International Programme on Chemical Safety (IPCS) INCHEM website, which is provided in cooperation with the Canadian Centre for Occupational Health and Safety (CCOHS) (<http://www.inchem.org>)
- TOXNET HSDB: a database of the National Library of Medicine's TOXNET system (<http://toxnet.nlm.nih.gov>)

**Abbreviations and acronyms**

A1 - Known Human Carcinogen  
A2 - Suspected Human Carcinogen  
A3 - Animal Carcinogen  
ACGIH TLV - American Conference of Governmental Industrial Hygienists Threshold Limit Values  
CAS - Chemical Abstract Service  
Ceiling - Ceiling Limit Value: Concentrations that should never be exceeded at any given time (instantaneous)  
Delisted - Substances Delisted from Report on Carcinogens  
DNEL - Derived No Effect Level  
DOT - U.S. Department of Transportation  
GHS - Globally Harmonized System of Classification and Labelling of Chemicals  
Group 1 - Carcinogenic to Humans  
Group 2A - Probably Carcinogenic to Humans  
Group 2B - Possibly Carcinogenic to Humans  
IARC - International Agency for Research on Cancer  
IDLH - Immediately Dangerous to Life or Health  
Known - Known Carcinogen  
LC50 - Lethal concentration that produces fatalities in 50% of a given test population  
LD50 - Median lethal dose of a given test population  
NFPA - National Fire Protection Association  
NIOSH - National Institute of Occupational Safety and Health  
NOAEL - No Observed Adverse Effect Level  
NTP - National Toxicology Program  
OECD - Organisation for Economic Co-operation and Development  
OSHA - Occupational Safety & Health Administration  
OSHA PEL - Occupational Safety and Health Administration Permissible Exposure Limits  
PNEC - Predicted No-Effect Concentration  
Present - Carcinogen or potential carcinogen to be identified under OSHA's Hazard Communication Standard  
Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen  
Skin notation - Potential for cutaneous absorption  
STEL - Short Term Exposure Limit: Concentrations that should not be exceeded except for short periods of time ( usually 15-minutes)  
STOT - Specific Target Organ Toxicity  
STV - Short Term Value (same as STEL)  
TSCA - Toxic Substances Control Act, Section 8(b) Inventory (USA)  
TWA - Time Weighted Average: Average concentration that should not be exceeded during a work day (usually 8-hours)  
Under Consideration - Under Consideration by the National Toxicology Program

**The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.**

End of sheet