

Certificate SGSNA-COC-003020

The management system of

Unadilla Silo Company, Inc. dba Unalam100 West Rd.
Sidney, NY 13838, United States

has been assessed and certified as meeting the requirements of

Chain-of-CustodyThe company was assessed against the following standards:
FSC-STD-40-004 V2-1 Standard for COC Certification – October 2011

for the products detailed in the scope below:

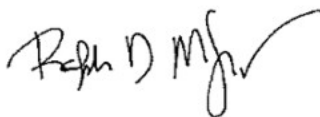
Purchase of FSC 100% and FSC Mix certified lumber; manufacture, erection and sales of FSC 100% and FSC Mix custom (glulam) glue-laminated beams, trusses and arches including some outsourcing for lumber treatment using Transfer System.This certificate is valid from 10 June 2014 until 9 June 2019
and remains valid subject to satisfactory surveillance audits.

Recertification audit due a minimum of 60 days before the expiration date.

Issue 7: 8 August 2016. Certified since June 2009.

SGS Ref # US09/74083

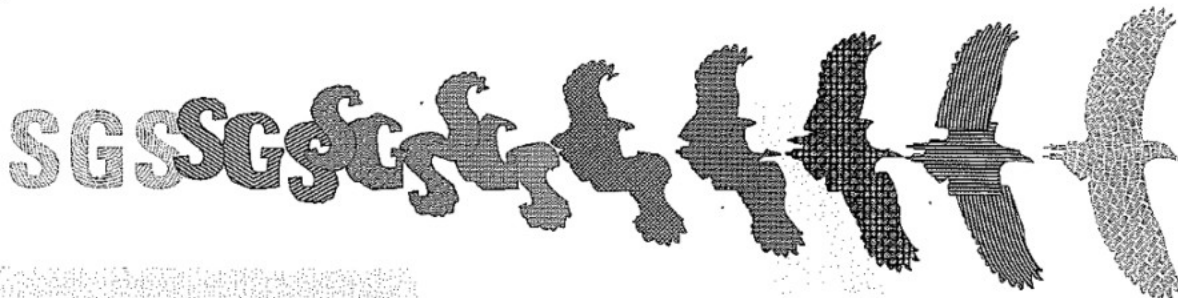
Authorized by

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SGS North America, Inc.
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The validity of this certificate shall be verified on <http://info.fsc.org/>
For the full list of product groups covered by the certificate see <http://info.fsc.org/>
This certificate itself does not constitute evidence that a particular product supplied by the certificate holder is FSC-certified (or FSC Controlled Wood). Products offered, shipped or sold by the certificate holder can only be considered covered by the scope of this certificate when the required FSC claim is clearly stated on invoices and shipping documents

This certificate remains the property of SGS and shall be returned upon request.

Page 1 of 1



This document is issued by the Company subject to its General Conditions of Certification Services accessible at www.sgs.com/terms_and_conditions.htm. Attention is drawn to the limitations of liability, indemnification and jurisdictional issues established therein. The authenticity of this document may be verified at <http://www.sgs.com/en/Our-Company/Certified-Client-Directories/Certified-Client-Directories.aspx>. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SCS Global Services does hereby certify that an independent audit has been completed and conformity to the applicable standard(s) has been confirmed for:

Forest Products Certification Group, LLC

P.O. Box 185, Shoreham, VT 05770, United States

Certified Group Member:

Universal Timber Structures, Inc.

626 West Bridgers St. Auburndale, FL 33823

This group certificate covers the production, distribution, trade, and retail of various wood products including logs, lumber, veneer, millwork, doors, cabinetry, and printed material using the transfer and percentage systems. The certificate also covers the sourcing of reclaimed material, and the sale of FSC Controlled Wood.

The facility(s) are hereby Chain of Custody certified to sell products as:

FSC 100%, FSC Mix, FSC Recycled, FSC Controlled Wood

The assessment has been conducted by Scientific Certification Systems (SCS) in accordance with the rules of the Forest Stewardship Council® A.C. (FSC®).

FSC Standard: FSC-STD-40-003 V2-1; FSC-STD-40-004 V3-0; FSC-STD-50-001 V1-2; FSC-STD-40-007 V2-0

Certificate Code: SCS-COC-003998 - C Trademark License Code: FSC-C109137

CW Code: SCS-CW-003998 - C

Valid from: 28 December 2016 Expiry date: 27 December 2021

This certificate itself does not constitute evidence that a particular product supplied by the certificate holder is FSC-certified (or FSC Controlled Wood where applicable). Products offered, shipped or sold by the certificate holder can only be considered covered by the scope of this certificate when the required FSC claim is clearly stated on sales and delivery documents. The scope of this certificate is considered accurate on the date of issuance. The current validity and scope, including the full list of products, shall be verified on <http://info.fsc.org>. The certificate shall remain the property of SCS, and this certificate and all copies or reproductions of this certificate shall be returned to SCS immediately upon request.



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responsible forestry



SCSglobal
SERVICES

Sarah Harris, Managing Director
SCS Global Services

2000 Powell Street, Ste. 600, Emeryville, CA 94608 USA

48 SAFETY DATA SHEET

LAMINATED BEAM PRODUCTS / GLULAM BEAMS

5-31-2015

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: **Glulam Beams**

CHEMICAL NAME & SYNONYMS: Laminated Beam Products

PRODUCT USE: Construction, remodeling, maintenance, repair

PREPARED BY: Safety Department

SECTION 2: HAZARDS IDENTIFICATION

HMIS

Health 1

Fire Hazard 0

Reactivity 0

Personal Protection – depends on specific use See Section 8

EMERGENCY OVERVIEW: Particles generated by mechanical processes performed on wood. This product generally does not present any emergency conditions. If contacted by strong oxidizers or exposure to temperatures higher than 400 deg f; a fire may occur. The fire smoke may contain chemicals such as carbon monoxide, aldehydes, and other toxic materials. Airborne wood dust mixed with resin dust in high concentrations, may explode when combined with an ignition source.

ROUTES OF ENTRY: Eyes, Skin, Inhalation

POTENTIAL HEALTH EFFECTS

EYES: Wood dust can cause eye irritation.**SKIN:** Prolonged or repeated skin contact with wood dust may cause irritation or dermatitis.**INGESTION:** Wood dust can cause mouth, throat and stomach irritation.**INHALATION:** If wood dust is inhaled, it can cause irritation to nose and throat.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: Wood dust may aggravate pre-existing respiratory conditions or allergies.

CARCINOGENICITY: OSHA: OSHA regulated, formaldehyde gas, potential carcinogen for exposures exceeding 0.5 ppm. NTP: Wood Dust is known to be a carcinogen. Formaldehyde gas, probable human carcinogen. IARC: Monographs – Wood dust, group 1 – carcinogenic to humans. Formaldehyde, group 1 – carcinogenic to humans exceeding 0.5 ppm.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT:	CAS NO.	OSHA PEL-TWA	ACGIH-TLV	PERCENT
Wood/Wood Dust	N/A	15 mg/m3	1 mg/m3	>99
Cured resin solids as dust	N/A	0.75 ppm	0.3 ppm	1-9
Paraffin Wax	8002-74-2	2 mg/m3	2 mg/m3	0-2

This is cured Hexion, see
page 6 correspondence

SECTION 3 NOTES: Note: if PEL or TLV is followed by the letter M, value is Mg/cubic meter.

SECTION 4: FIRST AID MEASURES

EYES: Treat dust in eye as a foreign object. Flush with water to remove dust particles. Seek medical attention if irritation persists.

SKIN: Wash affected area with soap and water. Seek medical help if irritation, rash or dermatitis persists.

INGESTION: N/A

INHALATION: Remove to fresh air. Seek medical help if persistent irritation, severe coughing or breathing difficulties occur.

48 SAFETY DATA SHEET

LAMINATED BEAM PRODUCTS / GLULAM BEAMS

5-31-2015

SECTION: 4 (continued)

NOTES TO PHYSICIANS OR FIRST AID PROVIDERS: Wood dust may aggravate pre-existing respiratory conditions or allergies.

SECTION 5: FIRE-FIGHTING MEASURES

FLAMMABLE LIMITS IN AIR, LEL: N/A

UEL: N/A

Wood and wood dusts are combustible.

AUTOIGNITION TEMPERATURE: Variable

F: 400 to 500

C: 204 to 260

NFPA HAZARD CLASSIFICATION:

RATING: 1

EXTINGUISHING MEDIA: Water, CO2, Sand, Dry chemical extinguisher

SPECIAL FIRE FIGHTING PROCEDURES: SCBA recommended when fighting fire in an enclosed space.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Depending on moisture content and more important, particle diameter, wood dust may explode in the presence of an ignition source. An airborne concentration of 40 grams of dust per cubic meter of air is often used as the lower exposure limit for wood dusts.

NFPA Rating Scale 0-4: Health = 1, Fire = 1, Reactivity = 0

HAZARDOUS DECOMPOSITION PRODUCTS: Fire may result in the release of carbon monoxide, carbon dioxide, aldehydes, oxides of nitrogen, cyanides and other hazardous gases and particles.

SECTION 6: ACCIDENTAL RELEASE MEASURES

ACCIDENTAL RELEASE MEASURES: Wood dust may be vacuumed, swept or shoveled for recovery and disposal. Avoid dusty conditions and provide good ventilation. Use NIOSH/MSHA approved respirator and goggles when adequate ventilation is not possible.

SECTION 7: HANDLING AND STORAGE

HANDLING AND STORAGE: No special handling precautions are required. These products may release small gaseous amounts of formaldehyde in amounts below the health hazard level determined by OSHA. Store in a well ventilated, cool, dry place, away from heat, flames, sparks and other sources of ignition.

OTHER PRECAUTIONS: Store product flat, well supported and kept away from direct ground contact.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Use adequate ventilation; provide local exhaust for dust if available.

VENTILATION: Use adequate ventilation.

RESPIRATORY PROTECTION: Use NIOSH approved respirator when allowable exposure limits may be exceeded.

EYE PROTECTION: Goggles or safety glasses are recommended when machining this product.

SKIN PROTECTION: Cloth, leather or canvas gloves are recommended to prevent mechanical or dermal irritation when handling this product.

OTHER PRACTICES, PROTECTIVE CLOTHING OR EQUIPMENT: After working with this product, and before eating, drinking and use of tobacco products, wash hands and other exposed areas thoroughly. Good personal hygiene should be used. Launder clothing contaminated with sawdust prior to reuse.

48 SAFETY DATA SHEET

LAMINATED BEAM PRODUCTS / GLULAM BEAMS

5-31-2015

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Laminated lumber / Wood

ODOR: Slight resinous and wood odor

PHYSICAL STATE: Solid

pH AS SUPPLIED: N/A

pH (Other): N/A

BOILING POINT: N/A

MELTING POINT: N/A

FREEZING POINT: N/A

VAPOR PRESSURE (mmHg): N/A

VAPOR DENSITY (AIR = 1): N/A

SPECIFIC GRAVITY (H₂O = 1): .40 - .80

EVAPORATION RATE: N/A

SOLUBILITY IN WATER: None

PERCENT SOLIDS BY WEIGHT: 100

SECTION 10: STABILITY AND REACTIVITY

STABILITY: Normally Stable.

CONDITIONS TO AVOID (STABILITY): Avoid open flame and contact with oxidizing agents. Product may ignite at temperatures in excess of 400deg F (204 c)

INCOMPATIBILITY (MATERIAL TO AVOID): Avoid contact with oxidizing agents. Avoid contact with magnesium, aluminum, galvanized metal (zinc), tin, bronze and brass. Elevated temperatures will cause polymerization with evolution of formaldehyde, phenol and/or water.

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: Thermal / thermal-oxidative decomposition can produce irritating or harmful fumes.

HAZARDOUS POLYMERIZATION: Will not occur.

SECTION 11: TOXICOLOGICAL INFORMATION

TOXICOLOGICAL INFORMATION: Wood Dust – Overexposures to wood dust may cause respiratory ailments including bronchitis, breathing impairment, and asthma.

CARCINOGENICITY:

OSHA: OSHA regulated, formaldehyde gas, potential carcinogen for exposures exceeding 0.5 ppm. NTP: Wood Dust is known to be a carcinogen. Formaldehyde gas, probable human carcinogen. IARC: Monographs – Wood dust, group 1 – carcinogenic to humans. Formaldehyde, group 1 – carcinogenic to humans.

SECTION 12: ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION: Keep all foreign out of storm drains as a common practice. This wood product does not pose an ecological hazard when used as intended.

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: If discarded or disposed of in its current form, incineration is preferable. Dry land disposal is acceptable in most states. Dispose of all waste in accordance with federal, state and local regulations.

48 SAFETY DATA SHEET

LAMINATED BEAM PRODUCTS / GLULAM BEAMS

5-31-2015

SECTION 14: TRANSPORT INFORMATION

Not regulated as a hazardous material by the U.S. Department of Transportation.

SECTION 15: REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS

TSCA (TOXIC SUBSTANCE CONTROL ACT): Resin components listed in TSCA inventory.

CERCLA (COMPREHENSIVE RESPONSE COMPENSATION, AND LIABILITY ACT): Formaldehyde CAS#50-00-0

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT): Contains less than 0.1% Formaldehyde.

311/312 HAZARD CATEGORIES: Considered an immediate health hazard, a delayed chronic health hazard but not a fire or sudden release hazard.

313 REPORTABLE INGREDIENTS: Contains less than 0.1% Formaldehyde.

STATE REGULATIONS: California's Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): Title 22 California Code of Regulations requires that a clear and reasonable warning be given before exposure to chemicals listed by the State of California as causing cancer or reproductive toxicity. Formaldehyde and wood dust are on California's list of chemicals known to the State to cause cancer and methanol is on California's list known to the State to cause birth defects or other reproductive harm. In the State of California the following warning is required to be posted in the work areas where wood products are used: ***Prop 65 WARNING: Drilling, sawing, sanding or machining wood products generates wood dust and other substances known to the State of California to cause cancer. Avoid inhaling dust generated from wood products or use a dust mask or other safeguards for personal protection. Wood products emit chemicals known to the State of California to cause birth defects or other reproductive harm.***

Minnesota Statutes 1984 Section 144.495 and 325 F.18 required that all particleboard and medium-density fiberboard sold or used in Minnesota meet the HUD Formaldehyde Emissions Standard, 24 CFR Sections 3280.308 and 3280.406.

New Jersey: Under certain conditions, this product may release free formaldehyde vapors. Formaldehyde is a substance listed on New Jersey's *Environmental Hazardous Substance List*.

Pennsylvania: Under certain conditions, this product may release free formaldehyde vapors. Sawing, sanding or machining this product may generate wood dust. Formaldehyde and certain hardwoods as oak and softwoods are substances that appear on Pennsylvania's *Appendix A Hazardous Substance List*.

INTERNATIONAL REGULATIONS: Canadian Domestic Substance List (DSL) inventory includes Formaldehyde CAS# 50-00-0
WHMIS Ingredient Disclosure List: Formaldehyde CAS#50-00-0, Controlled Product D2A

SECTION 16: OTHER INFORMATION

HMIS Hazard Rating (0- Insignificant, 1- Slight, 2- Moderate, 3- High, 4- Extreme, * = chronic effects)

Health – 1* Flammability - 0 Reactivity - 0 Personal Protective Equipment – Depends on use conditions – see Section 8

DISCLAIMER: Rosboro believes the information contained in this MSDS to be accurate at the time of preparation. Rosboro makes no warranty, either expressed or implied, concerning the accuracy or completeness of the information in this SDS. It is the responsibility of the end user to comply with all government regulations concerning use of this product. It is also the responsibility of the buyer to understand safe methods of storing, handling and disposal of this product.



SAFETY DATA SHEET

FOR INDUSTRIAL USE ONLY

Cascophen(TM) LT-5210J

Section 1. Product and company identification

GHS product identifier : Cascophen(TM) LT-5210J
MSDS Number : 000000104566
Product type : Phenol Formaldehyde Resorcinol Resin
Material uses : Wood Adhesives, Composites, Laminates or Related Board Products

Manufacturer/Supplier/Importer : Hexion Inc.
180 East Broad Street
Columbus, Ohio
43215 USA

Contact person : 4information@hexion.com

Telephone : For additional health and safety or regulatory information, call
1 888 443 9466.

Emergency telephone number : For Emergency Medical Assistance
Call Health & Safety Information Services
1-866-303-6949

For Emergency Transportation Information
CHEMTREC US Domestic (800) 424-9300
CHEMTREC International (703) 527-3887
CANUTEC CA Domestic (613) 996-6666

Part of the CASCO® Brand of Adhesives and Resins from Hexion Inc.

Section 2. Hazards identification

Classification of the substance or mixture : FLAMMABLE LIQUIDS - Category 4
ACUTE TOXICITY:inhalation - Category 4
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A
SKIN SENSITIZATION - Category 1
GERM CELL MUTAGENICITY - Category 2
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE)
[blood system, central nervous system (CNS), eyes] - Category 1
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE)
[Respiratory tract irritation] - Category 3
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) [cardiovascular system, eyes, gastrointestinal tract, heart, kidneys, liver, lungs, skin, spleen, thyroid] - Category 1
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) [thyroid, liver]

Cascophen(TM) LT-5210J

Page:2/16

GHS label elements**Hazard pictograms****Signal word**

: Danger

Hazard statements

: H227 Combustible liquid.
H332 Harmful if inhaled.
H319 Causes serious eye irritation.
H317 May cause an allergic skin reaction.
H341 Suspected of causing genetic defects.
H370 Causes damage to organs: (blood system, central nervous system (CNS), eyes)
H335 May cause respiratory irritation.
H372 Causes damage to organs through prolonged or repeated exposure: (cardiovascular system, eyes, gastrointestinal tract, heart, kidneys, liver, lungs, skin, spleen, thyroid)
H372 Causes damage to organs through prolonged or repeated exposure: (thyroid, liver)

Precautionary statements**General**

: Not applicable.

Prevention

: Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wear protective gloves.
Wear eye or face protection.
Wear protective clothing.
Keep away from flames and hot surfaces. - No smoking.
Use only outdoors or in a well-ventilated area.
Do not breathe vapor.
Do not eat, drink or smoke when using this product.
Wash hands thoroughly after handling.
Contaminated work clothing must not be allowed out of the workplace.

Response

: Get medical attention if you feel unwell.
IF exposed:
Call a POISON CENTER or physician.
IF INHALED:
Remove person to fresh air and keep comfortable for breathing.
Call a POISON CENTER or physician if you feel unwell.
IF ON SKIN:
Wash with plenty of soap and water.
Wash contaminated clothing before reuse.
If skin irritation or rash 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.

Cascophen(TM) LT-5210J

Page:3/16

Store in a well-ventilated place.
Keep cool.

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

Other hazards which do not result in classification : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Will not disclose more, advocate,
see correspondence page 11

Ingredient name	% by weight	CAS number
Phenol	5 - 10	108-95-2
Resorcinol	5 - 10	108-46-3
Ethanol	3 - 5	64-17-5
Sodium Hydroxide	1 - 3	1310-73-2

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

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. If necessary, call a poison center or physician.
- 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.
- Skin contact** : Wash with plenty of soap and 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. If necessary, call a poison center or physician. In the event of any complaints or symptoms, avoid further exposure. 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.

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

- | | | |
|--|---|---|
| Notes to physician | : | Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. |
| Specific treatments | : | No specific treatment. |
| Protection of first aid personnel | : | 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 dry chemical, CO ₂ , water spray (fog) or foam. |
| Unsuitable extinguishing media | : | Do not use water jet. |
| Specific hazards arising from the chemical | : | Combustible liquid. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Runoff to sewer may create fire or explosion hazard. |
| Hazardous thermal decomposition products | : | Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
metal oxide/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. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool. |
| Special protective equipment 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. |

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. Shut off all ignition sources. No flares, smoking or flames in hazard area. 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 specialised 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 non-emergency 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 material 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. Use spark-proof tools and explosion-proof equipment. 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 of SDS). Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 of SDS for emergency contact information and section 13 of SDS for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

- Protective measures :** Put on appropriate personal protective equipment (see section 8 of SDS). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous. Do not reuse container. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Follow US NFPA 30,

Cascophen(TM) LT-5210J

Page:6/16

“Flammable & Combustible Liquids Code,” or other national, state and local codes on safe handling of flammable liquids. Train workers in the recognition and prevention of hazards associated with the storage, handling and transfer of flammable liquids in the plant. Store in an area designated for storage of flammable liquids (See NPFA 30, and OSHA 29 CFR 1910.106)

- 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 original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10 of SDS) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. 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

Ingredient name	Exposure limits
Sodium Hydroxide	<p>ACGIH TLV (1994-09-01) Ceiling, is a limit indicating the maximum concentration of a chemical substances in the breathing zone that should not be exceeded. 2 mg/m³</p> <p>NIOSH REL (1994-06-01) Ceiling, is a limit indicating the maximum concentration of a chemical substances in the breathing zone that should not be exceeded. 2 mg/m³</p> <p>OSHA PEL (1993-06-30) Time Weighted Average (TWA) 2 mg/m³</p>
Ethanol	<p>ACGIH TLV (2008-01-01) Short Term Exposure Limit value for a 15-minute reference period expressed in parts per million or in mg/m³. 1,880 mg/m³ 1,000 ppm</p> <p>OSHA PEL (1993-06-30) Time Weighted Average (TWA) 1,900 mg/m³ 1,000 ppm</p> <p>NIOSH REL (1994-06-01) Time Weighted Average (TWA) 1,900 mg/m³ 1,000 ppm</p>
Phenol	<p>ACGIH TLV (1996-05-18) Time Weighted Average (TWA) 19 mg/m³ 5 ppm</p> <p>OSHA PEL (1993-06-30) Time Weighted Average (TWA) 19 mg/m³ 5 ppm</p> <p>NIOSH REL (1994-06-01) Time Weighted Average (TWA) 19 mg/m³ 5 ppm</p> <p>Ceiling, is a limit indicating the maximum concentration of a</p>

Cascophen(TM) LT-5210J

Page:7/16

	chemical substances in the breathing zone that should not be exceeded. 60 mg/m ³ 15.6 ppm
Resorcinol	NIOSH REL (1994-06-01) Time Weighted Average (TWA) 45 mg/m ³ 10 ppm Short Term Exposure Limit value for a 15-minute reference period expressed in parts per million or in mg/m³. 90 mg/m ³ 20 ppm ACGIH TLV (1996-05-18) Time Weighted Average (TWA) 45 mg/m ³ 10 ppm Short Term Exposure Limit (STEL) 90 mg/m ³ 20 ppm

- Recommended monitoring procedures** :
- If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.
- 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. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.
- 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. Contaminated work clothing should not be allowed out of the workplace. 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

Cascophen(TM) LT-5210J

Page:8/16

	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 and chemical properties

Appearance

Physical state	: Liquid
Color	: Clear, reddish-brown
Odor	: Slight alcoholic
Odor threshold	: Not available
pH	: 9.1 - 9.6 @ 25 °C (77 °F)
Melting point/ Freezing point	: 0 °C (32 °F)
Boiling point	: 102 °C (216 °F)
Flash point	: Pensky-Martens Closed Cup: 67 °C (153 °F) (ASTM D 93)
Burning time	: Not available
Burning rate	: Not available
Evaporation rate	: 0.6 ((n-Butyl acetate=1))
Flammability (solid, gas)	: Not available
Lower and upper explosive (flammable) limits	: Lower: Not available Upper: Not available
Vapor pressure	: 50 mm Hg @ 25 °C (77 °F)
Vapor density	: Not available
Relative density	: 1.1571
Solubility	: Not available
Solubility in water	: Slightly
Partition coefficient: n-octanol/water	: Not available
Auto-ignition temperature	: Not available

Cascophen(TM) LT-5210J

Page:9/16

Decomposition temperature : Not available
SADT : Not available
Viscosity : **Dynamic:** 1,150 - 1,400 cPs (Brookfield)
Kinematic: Not available

Other information

The SDS is not to be used as a specification sheet. For Specific technical information on the product listed above, a sales specification sheet should be obtained from your Hexion representative.

Section 10. Stability and reactivity

Reactivity : Normally stable, but will polymerize at high temperatures with some evolution of heat.

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 : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Strong oxidizer,

Incompatible materials : Reactive or incompatible with the following materials:
oxidizing materials
acids

Hazardous decomposition products : Decomposition products may include the following materials:, carbon monoxide, carbon dioxide, aldehydes (including formaldehyde), oxides of nitrogen, other organic compounds, particulate matter

Section 11. Toxicological information**Information on toxicological effects****Acute toxicity**

Product/ingredient name	Result	Species	Dose	Exposure
Ethanol				
	LD50 Oral	Rat	7,000 mg/kg	-
	LC50 Inhalation	Rat	125 mg/l	4 h
Phenol				
	LD50 Oral	Rat	317 mg/kg	-
	LC50 Inhalation	Rat	0.9 mg/l	8 h
	LD50 Dermal	Rabbit	630 mg/kg	-
Resorcinol				
	LD50 Oral	Rat	301 mg/kg	-
	LD50 Oral	Rat	202 mg/kg	-
	LD50 Dermal	Rabbit	3,360 mg/kg	-

*Cascophen(TM) LT-5210J**Page:10/16*

	LD50 Oral	Rat	> 2,001 mg/kg	-
	LC50 Inhalation	Rat		1 h
	LD50 Dermal	Rabbit	> 2,001 mg/kg	-

Conclusion/Summary : Not available

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Ethanol	Skin - Mild irritant	Rabbit			-
	Skin - Moderate irritant	Rabbit		24 hrs	-
	eyes - Severe irritant	Rabbit			-
	eyes - Mild irritant	Rabbit		24 hrs	-
	eyes - Moderate irritant	Rabbit		0.001 hrs	-
Phenol	Skin - -	Rat	> 4		-
	eyes - Cornea opacity	Rabbit	> 3		-
Resorcinol	Skin - Moderate irritant	Rabbit		24 hrs	-
	Skin - Severe irritant	Rabbit			-
	eyes - Severe irritant	Rabbit			-

Conclusion/Summary

Skin : 16 CFR Part 1500.41 Rabbit Slight Skin Irritant
eyes : 16 CFR Part 1500.42 Rabbit Severe Eye Irritant
Respiratory : Not available

Sensitization

Conclusion/Summary

Skin : Not available
Respiratory : Not available

Mutagenicity

Conclusion/Summary : Not available

Carcinogenicity

Conclusion/Summary : Not available

Reproductive toxicity

*Cascophen(TM) LT-5210J**Page:11/16*

Conclusion/Summary : Not available

Teratogenicity

Conclusion/Summary : Not available

Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
Phenol	Category 1		eyes
Ethanol	Category 3 Category 1		Respiratory tract irritation Narcotic effects central nervous system (CNS)
Sodium Hydroxide	Category 1		respiratory tract
Resorcinol	Category 3 Category 1		Respiratory tract irritation central nervous system (CNS) blood system

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Route of exposure	Target organs
Resorcinol	Category 2 Category 1 Category 2		cardiovascular system thyroid spleen liver kidneys
Phenol	Category 2		gastrointestinal tract kidneys eyes heart lungs liver skin
Ethanol	Category 1		liver

Aspiration hazard

Not available

Information on the likely routes of exposure : Not available

Potential acute health effects

Eye contact : Causes serious eye irritation.
Inhalation : Harmful if inhaled. May cause respiratory irritation.
Skin contact : May cause an allergic skin reaction.
Ingestion : No known significant effects or critical hazards.

Cascophen(TM) LT-5210J

Page:12/16

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
Skin contact	:	Adverse symptoms may include the following: irritation redness
Ingestion	:	No specific data.

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

Conclusion/Summary	:	Not available
General	:	Causes damage to organs through prolonged or repeated exposure: Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
Carcinogenicity	:	No known significant effects or critical hazards.
Mutagenicity	:	Suspected of causing genetic defects.
Teratogenicity	:	No known significant effects or critical hazards.
Developmental effects	:	No known significant effects or critical hazards.
Fertility effects	:	No known significant effects or critical hazards.

Numerical measures of toxicity**Acute toxicity estimates**

Not available

Section 12. Ecological information**Toxicity**

Product/ingredient name	Result	Species	Exposure
ethanol			
	Acute LC50 42,000 µg/l Fresh water	Fish - Rainbow trout,donaldson trout	96 h
	Acute LC50 100 mg/l Fresh water	Fish - Fathead minnow	96 h

Cascophen(TM) LT-5210J

Page:13/16

	Acute EC50 2,000 µg/l Fresh water	Aquatic invertebrates. Water flea	48 h
	Acute EC50 100 mg/l Fresh water	Aquatic invertebrates. Water flea	48 h
	Acute EC50 20,000 mg/l Fresh water	Aquatic plants - Green Flagellate	96 h
	Acute EC50 10,000 mg/l Fresh water	Aquatic plants - Algae	96 h
	Acute EC50 10,000 mg/l Fresh water	Aquatic plants - Diatom	96 h
	Chronic No-observable-effect-concentration 0.375 mg/l Fresh water	Fish - Eastern mosquitofish	84 d
	Chronic No observable effect concentration < 6,300 mg/l Fresh water	Aquatic invertebrates. Water flea	48 h
Phenol			
	Acute LC50 8.9 mg/l Fresh water	Fish - Rainbow trout,donaldson trout	96 h
	Acute No-observable-effect-concentration 0.077 mg/l Fresh water	Fish - Carp	60 d
	Acute EC50 3.1 mg/l Fresh water	Aquatic invertebrates. Water flea	48 h
	Acute No-observable-effect-concentration 0.16 mg/l Fresh water	Aquatic invertebrates. Water flea	16 d
	Acute EC50 61.1 mg/l Fresh water	Aquatic plants - Microalgae	96 h
	Acute EC50 21 mg/l Fresh water	Micro-organism - Soil organisms	24 h
	Chronic No-observable-effect-concentration 2.2 mg/l Fresh water	Aquatic invertebrates. Water flea	2 d
resorcinol			
	Acute LC50 > 100 mg/l Fresh water	Fish - Rainbow trout,donaldson trout	96 h
	Acute LC50 40,000 µg/l Fresh water	Fish - Fathead minnow	96 h
	Acute LC50 100,000 µg/l Fresh water	Aquatic invertebrates. Water flea	48 h

Conclusion/Summary : Not available

Persistence/degradability

Conclusion/Summary : Not available

Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
Ethanol	-0.35	-	low
Phenol	1.5	17.5	low
Resorcinol	0.8	-	low

Mobility in soil

Soil/water partition coefficient (KOC) : Not available

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

Section 13. Disposal considerations

- Disposal methods** :
- 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. Vapour from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

The data provided in this section is for information only and may not be specific to your package size or mode of transport. You will need to apply the appropriate regulations to properly classify your shipment for transportation.

International transport regulations

Regulatory information	UN/NA number	Proper shipping name	Classes/*PG	Reportable Quantity (RQ)
CFR	1993	COMBUSTIBLE LIQUID, N.O.S. (Ethanol)	Class CBL III	Phenol, Resorcinol
TDG		Non-regulated		
IMO/IMDG		Non-regulated		
IATA (Cargo)		Non-regulated		

*PG : Packing group

- 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

United States

Cascophen(TM) LT-5210J

Page:15/16

U.S. Federal regulations : **United States - TSCA 12(b) - Chemical export notification:** None required.
United States - TSCA 5(a)2 - Final significant new use rules: Not listed
United States - TSCA 5(a)2 - Proposed significant new use rules: Listed
 3(2H)-Isothiazolone, 5-chloro-2-methyl- 3(2H)-Isothiazolone, 2-methyl-
United States - TSCA 5(e) - Substances consent order: Not listed
SARA 311/312 Classification - Fire hazard, Immediate (acute) health hazard, Delayed (chronic) health hazard
SARA 311/312 Classification - Immediate (acute) health hazard
SARA 311/312 Classification - Delayed (chronic) health hazard

SARA 313

		Product name	CAS number
Form R - Reporting requirements	:	Phenol	108-95-2
Supplier notification	:	Phenol	108-95-2

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

California Prop. 65: : WARNING: This product contains less than 0.1% of a chemical known to the State of California to cause cancer., WARNING: This product contains less than 1% of a chemical known 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
2-Pentanone, 4-methyl-	Yes.	No.	No.	No.
Methanol	No.	Yes.	No.	No.

United States inventory (TSCA 8b) : All components are listed or exempted.

International regulations

International lists : **Australia inventory (AICS):** Not determined.
Canada inventory: All components are listed or exempted.
Japan inventory: Not determined.
China inventory (IECSC): Not determined.
Korea inventory: Not determined.
New Zealand Inventory (NZIoC): Not determined.
Philippines inventory (PICCS): Not determined.
United States inventory (TSCA 8b): All components are listed or exempted.
Taiwan inventory (CSNN): Not determined.

Section 16. Other information

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

Health	*	2
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Cascophen(TM) LT-5210J

Page:16/16

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 MSDSs 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.

Full text of abbreviated H statements : Not applicable.

History

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Prepared by : Product Safety Stewardship
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)
 RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
 UN = United Nations
References : Not available

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