



1. útgáfa.17.08.2021

Öryggisblað (SDS)

Samkvæmt reglugerð Nr. 888/2015 (EB reglugerð 1907/2006 REACH)

1. Auðkenning efnisins eða blöndunnar og félagsins eða fyrirtækisins

1.1 Vörukenni:	Termin-8[®] Powder		
Vörunúmer:	1134 10050		
1.2 Viðeigandi og tilgreind notkun efnis eða blöndu og notkun sem ráðið er frá:	Sýklaeyðir/rotvarnarefni til nota í tengslum við dýrafóður.		
Viðeigandi notkun	Notið ekki við matvælaframleiðslu.		
Notkun sem ráðið er frá			
1.3 Söluaðili:	N1	Framleiðandi:	Anitox Corporation
	Dalvegur 10-14		1055 Progress Circle
	201 Kópavogur		Lawrenceville, GA, 30043, USA
Sími:	440 1000		00-1-678-376-1055
Netfang:	n1@n1.is		anitox@anitox.com
Veffang:	www.n1.is		www.anitox.com
1.4 Neyðarsímanúmer:	Eitrunarmiðstöð LSH veitir upplýsingar allan sólarhringinn um viðbrögð við slysum með hættuleg efni. Sími 543 2222. Neyðarlínan, lögregla, slökkvilið, sjúkraflutningar; sími 112.		

2. Hættugreining

2.1 Flokkun efnisins eða blöndunnar:

Flokkun skv. reglugerð EB 1272/2008 (CLP):

H301	Eitrað við inntöku	Bráð eit.4
H311	Eitrað í snertingu við húð	Bráð eit.4
H315	Veldur húðertingu	Húðert.2
H317	Getur valdið ofnæmisviðbrögðum í húð	Húðnæm.1
H319	Veldur alvarlegri augnertingu	Augnert.2
H331	Eitrað við innöndun	Bráð eit.4
H335	Getur valdið ertingu í öndunarfærum	SEM-VES 3
H341	Grunað um að valda erfðagöllum	Stökkbr.2
H350	Getur valdið krabbameini	Krabb.1
H371	Getur skaðað líffæri	SEM-EV 2

2.2 Merkingaratriði:

Merking skv. reglugerð EB 1272/2008 (CLP):



Hættumerki

Viðvörunarorð

HÆTTA

Hættusetningar

H301	Eitrað við inntöku
H311	Eitrað í snertingu við húð
H315	Veldur húðertingu
H317	Getur valdið ofnæmisviðbrögðum í húð
H319	Veldur alvarlegri augnertingu
H331	Eitrað við innöndun
H335	Getur valdið ertingu í öndunarfærum
H341	Grunað um að valda erfðagöllum
H350	Getur valdið krabbameini
H371	Getur skaðað líffæri
EUH208	Inniheldur límonen. Getru framkallað ofnæmisviðbrögð.

Varnaðarsetningar

P102	Geymist þar sem börn ná ekki til.
P201	Aflið sérstakra leiðbeininga fyrir notkun.
P202	Nauðsynlegt er að lesa og skilja allar viðvaranir áður en efnið er notað.
P260	Andið ekki að ykkur ryki/reyk/lofttegund/úða/gufu/ýringi.
P264	Þvoið húð vandlega eftir meðhöndlun.
P270	Neytið ekki matar, drykkjar eða tóbaks við notkun þessarar vöru.
P272	Ekki skal farið með vinnuföt af vinnustað hafi þau óhreinkast af efninu.
P280	Notið hlífðarhanska/hlífðarfatnað/aughlífar/andlitshlífar.
P301+P310	EFTIR INNTÖKU: Hringið umsvifalaust í EITRUNARMÍÐSTÖÐ/lækni.
P301+P330	EFTIR INNTÖKU: Skolið munninn.
P304+P340	EFTIR INNÖNDUN: Flytjið viðkomandi í ferskt loft og hafið hann í stellingu sem léttir öndun.
P305+P351+P338	BERIST EFNID Í AUGU: Skolið varlega með vatni í nokkrar mínútur. Fjarlægjið snertilinsur ef það er auðvelt. Skolið áfram.
P308+P311	EF um váhrif eða hugsanleg váhrif er að ræða: Hringið í EITRUNARMÍÐSTÖÐ/lækni.
P333+P337+P313	Ef efnið ertir húð eða útbrot koma fram eða ef augnering er viðvarandi: Leitið lækni.
P361+P364	Farið þegar úr fötum, sem óhreinkast af efninu, og þvoið fyrir næstu notkun.
P403	Geymist á vel loftræstum stað.
P405	Geymist á læstum stað.
P501	Fargið innihaldi/iláti hjá viðurkenndri spilliefnamóttöku.

2.3 Aðrar hættur:

Sjá einnig 11. og 15. lið.



Safety Data Sheet Termin-8® Powder

SECTION 1: IDENTIFICATION OF THE SUBSTANCE OR MIXTURE AND OF THE SUPPLIER

1.1 Product identifier:

Product Name: Termin-8® Powder

Chemical type: Mixture

Chemical form: Granular Solid

1.2 Intended use of the substance or mixture and restrictions on use:

Intended Use: Termin-8® Powder is for use in animal feed and feed materials.

Restrictions on use: Not for use in ingredients for human consumption.

1.3 Details of the suppliers of the safety data sheet:

Company: Anitox Corporation
Address: 1055 Progress Circle
Lawrenceville, GA, 30043, USA
Telephone: +1-678-376-1055
Fax: +1-678-376-1413
E-mail: anitox@anitox.com

Company: Anitox UK Ltd.
Address: 7 Regent Park, Booth Drive, Park Farm
Wellingborough, Northants, NN8 6GR, UK
Telephone: +44-1604-811228 / 01604-811228
Fax: +44-1604-811013 / 01604-811013
E-mail: anitox@anitox.com

1.4 Emergency telephone number:

**For Hazardous Materials [or Dangerous Goods] Incident
Spill, Leak, Fire, Exposure, or Accident**

Call VelocityEHS 24-hour Emergency Phone Number

+1-813-248-0585 or 1-800-255-3924

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

This product is considered a hazardous mixture in accordance with:

- ♦ GHS (Globally Harmonized System of Hazard Classification),
- ♦ CLP (Classification, Labeling and Packaging) Regulation (EC) 1272/2008 and
- ♦ OSHA (Occupational Safety and Health Administration) 29 CFR 1910.1200 Hazard Communication Standard

Hazard Class; Category	Hazard Statements	
	According to GHS and CLP Regulation (EC) 1272/2008	According to OSHA 29 CFR 1910.1200 Appendix C
Acute Oral Toxicity; Category 3	H301	C.4.1
Acute Dermal Toxicity; Category 3	H311	C.4.2
Skin Irritant; Category 2	H315	C.4.4
Skin Sensitization; Category 1	H317	C.4.7
Eye Irritant; Category 2 (OSHA Category 2A)	H319	C.4.5
Acute Inhalation Toxicity; Category 3	H331	C.4.3
Specific Target Organ Toxicity, Single Exposure (Respiratory Irritation); Category 3	H335	C.4.11
Germ Cell Mutagenicity; Category 2	H341	C.4.8
Carcinogenicity; Category 1B	H350	C.4.9
Specific Target Organ Toxicity, Single Exposure; Category 2	H371	C.4.12
* Sensitization – Respiratory; Category 2	not applicable	C.4.6

* In accordance with the U.S. OSHA formaldehyde standard for occupational exposure to formaldehyde, 29 CFR 1910.1048(m)(1)(ii), respiratory sensitization is included in the hazard classification, but is not required by the CLP (EC) 1272/2008 or GHS.

2.2 Label Elements

Hazard Symbols/Pictograms:



Signal word: Danger

Hazard Statements:

H301 + H311 + H331	Toxic if swallowed, in contact with skin or if inhaled.
H315	Causes skin irritation
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H341	Suspected of causing genetic defects
H350	May cause cancer
H371	May cause damage to organs
(OSHA) C.4.6	May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Other Hazards:

EUH208**	Contains D-Limonene. May produce an allergic reaction.
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** Required only by CLP Regulation (EC) No 1272/2008

Precautionary Statements:

Prevention:

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P264	Wash exposed skin thoroughly after handling.
P270	Do not eat, drink, or smoke while using this product.
P271	Use only outdoors or in a well ventilated area.
P272	Contaminated work clothing should not be allowed out of the workplace.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
(OSHA) C.4.6	In case of inadequate ventilation wear respiratory protection.

Response:

P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER/Doctor/Physician.
P301 + P330	IF SWALLOWED: Rinse mouth.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P311	IF exposed or concerned: Call a POISON CENTER/Doctor/Physician.
P333 + P337 + P313	If skin irritation or rash occurs or if eye irritation persists: Get medical advice/attention.
P361 + P364	Take off immediately all contaminated clothing and wash it before reuse.

Storage:

P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.

Disposal:

P501	Dispose of contents/container in accordance with local / regional / national / international regulations.
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SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

This product is a mixture.

★ In accordance with paragraph (i) of 29 CFR Part 1910.1200, the exact composition of Termin-8® Powder is a trade secret and ingredient concentrations are reported as ranges.

Hazardous ingredients				Classification according to Annex VI of CLP Regulation (EC) 1272/2008	
Name of ingredient	CAS Number:	EC Number:	Weight %★	Hazard classification of the Ingredient	Hazard Code
Formaldehyde	50-00-0	200-001-8	15 - 24%	Acute Oral Toxicity; Category 3	H301
				Acute Dermal Toxicity; Category 3	H311
				Skin Corrosion; Category 1B	H314
				Skin sensitization; Category 1	H317
				Acute Inhalation Toxicity; Category 3	H331
				Specific target organ toxicity, Single Exposure (Respiratory Irritation); Category 3	H335
				Germ Cell Mutagenicity; Category 2	H341
Propionic Acid	79-09-4	201-176-3	4 - 14 %	Carcinogenicity; Category 1B	H350
				Skin Corrosion; Category 1B	H314
Methanol	67-56-1	200-659-6	< 10 %	Specific target organ toxicity, Single Exposure (Respiratory Irritation); Category 3	H335
				Flammable Liquid; Category 2	H225
				Acute Oral Toxicity; Category 3	H301
				Acute Dermal Toxicity; Category 3	H311
				Acute Inhalation Toxicity; Category 3	H331
d-Limonene	5989-27-5	227-813-5	< 1 %	Specific target organ toxicity, Single Exposure; Category 1	H370
				Flammable Liquid; Category 3	H226
				Skin Irritation; Category 2	H315
				Skin Sensitization; Category 1	H317
				Aquatic Environmental Hazard – Short-term (Acute); Category 1	H400
Aquatic Environmental Hazard – Long-term (Chronic); Category 1	H410				

SECTION 4: FIRST AID MEASURES

4.1 Description of First Aid Measures:

- Inhalation:** Remove victim to fresh air and keep at rest in a position comfortable for breathing then immediately get medical attention.
- Eye Contact:** Wash eyes immediately with large amounts of water. Remove contact lenses if present and easy to do. Continue rinsing for at least 15 minutes; then immediately get medical attention.
- Skin Contact:** Remove all contaminated clothing immediately. Wash exposed skin with plenty soap and water (or shower). If skin irritation or rash occurs, immediately get medical attention.
- Ingestion:** If the victim is conscious, rinse mouth. Dilute, inactivate, or absorb the ingested formaldehyde by giving milk, activated charcoal, or water. Any organic material will inactivate formaldehyde. Keep affected person warm and at rest. Do NOT induce vomiting. If vomiting occurs, keep head lower than hips. Get medical attention immediately.

4.2 Most important symptoms/effects, acute and delayed:

Acute Effects of Exposure:

- Inhalation:** Highly irritating to the nasal passages and upper respiratory tract. Depending on exposure, may cause burning of the nose and throat, cough, difficulty in breathing or severe respiratory tract injury leading to pneumonia or pulmonary edema. Previously exposed persons may have an allergic respiratory reaction to future exposure.
- Eye Contact:** Vapors can be severely irritating to the eyes, causing a burning sensation and tearing of the eyes. If product is splashed in the eyes, there is risk of serious damage to eyes, injury ranging from severe discomfort to loss of vision.
- Skin Contact:** May be severely irritating to the skin, causing moderate injury: reddening and swelling, drying, cracking, and scaling of the exposed area. Repeated or prolonged contact can cause hardening (tanning). Previously exposed persons may react to future exposure with an allergic eczematous dermatitis or hives.
- Ingestion:** May cause severe irritation and inflammation of mouth, throat, and stomach. Severe stomach pains will follow ingestion and may result in blindness, stupor, nausea, and vomiting leading to severe illness and possibly death, if treatment is not received. Ingestion of dilute formaldehyde solutions (0.03-0.04 percent) may cause discomfort in the stomach and pharynx.

Chronic Effects of Exposure:

- Carcinogenicity:** The ingredient Formaldehyde has the potential to cause cancer in humans. Repeated and prolonged exposure increases the risk. In humans, formaldehyde exposure has been associated with cancers of the lung, nasopharynx and oropharynx, and nasal passages.
- Mutagenicity:** Formaldehyde is genotoxic in several in vitro test systems showing properties of both an initiator and a promoter.
- Toxicity:** Prolonged or repeated exposure to formaldehyde may result in respiratory impairment. Structural changes in the epithelial cells in the human nose have also been observed. Some persons have developed asthma or bronchitis following exposure to formaldehyde.

4.3 Indication of immediate medical attention or special treatment needed:

If exposed or concerned, immediately call a Poison Center, Doctor or Physician. Take this Safety Datasheet to the doctor or physician in attendance. Treat symptomatically.

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media: suitable (and unsuitable):

Suitable extinguishing media:

Use carbon dioxide or dry chemical for small fires; alcohol-type aqueous film-forming foam or water spray for large fires.

Unsuitable extinguishing media:

High volume water jet.

5.2 Special hazards arising from the substance or mixture:

This is a mixture contains flammable ingredients although the mixture itself is not classified as flammable. Combustion may generate: acrid fumes (formaldehyde and carbon oxides).

5.3 Special equipment and precautions for firefighters:

If potential for exposure to vapors or products of combustion exists, wear personal protective equipment, including self-contained breathing apparatus with full face piece operated in pressure demand or other positive pressure mode. Water spray can be used to reduce intensity of flames and to dilute spills to non-flammable mixture. Use water spray to cool fire-exposed structures and vessels.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment, and emergency procedures:

Steps to be taken in case Material is Released or Spilled:

Observe warnings in SECTION 2 of this Safety Data Sheet and on the labels of packaging or container. Wear respirator, face protection, chemical goggles and gloves as indicated in SECTION 8. Avoid eye or skin contact. Ensure supply of fresh air in enclosed rooms. Neutralize acidity with ammonium hydroxide or sodium sulphite. Eliminate ignition sources. Contain spill to minimize contaminated area and facilitate salvage or disposal. Sweep up and place damaged product containers and disposal containers in well-ventilated areas. If fire potential exists, blanket spill with foam or use water spray to disperse vapors.

All clean up and disposal should be carried out in accordance with Federal, State, and Local regulations. If required, State and Local authorities should be notified.

6.2 Environmental precautions:

Avoid release to the environment. Prevent from entering into storm sewers and the immediate environment; especially ditches that lead to natural waterways. In case of large spill, inform local police, water authority and environmental agency.

All clean up and disposal should be carried out in accordance with International, Federal, State, and Local regulations.

6.3 Methods and materials for containment and cleaning up:

Contain all spillages and prevent entry into surface drains. Where possible mix with sand or other inert material to reduce the risk of dust formation and carefully sweep up and transfer to suitable containers for recovery or disposal. Wash site of spillage thoroughly with detergent and water if possible. See SECTION 8 for advice on protective equipment and SECTION 13 for recommendations on disposal.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling:

Handle only under conditions of adequate local ventilation to avoid breathing fumes or vapor. Use correct personal protective equipment. Avoid contact with skin and eyes. Wash thoroughly with soap and water after handling. Do not ingest. Contaminated clothing should be removed and washed before re-use. Comply with relevant worker exposure limits. Use appropriate containment to avoid environmental contamination.

7.2 Conditions for safe storage, including any incompatibilities:

Keep containers tightly closed when not in use. Do not enter storage area unless it is adequately ventilated. Do not store with incompatible materials (see "SECTION 10 – Stability and Reactivity"). Keep away from heat, sparks, and flame. Store locked up.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Occupational Exposure Limit Values (OELs):

Monitoring of the work place should be considered in accordance with your national, regional and state's relevant work place exposure limits for the hazardous ingredients in Termin-8® Powder. Other countries or regions may have different regulations in relation to occupational exposures than those listed below.

United States Occupational Exposure Limit Values (Workplace Exposure Limits) –					
Component (CAS Number)	SOURCE				
	OSHA – Permissible Exposure Limit (PEL)	OSHA – Specifically Regulated Chemicals (Irritant and potential cancer hazard)	ACGIH – Threshold Limit Value (TLV)	NIOSH – Recommended Exposure limit (REL)	NIOSH – Immediately Dangerous to Life and Health (IDLH)
	OSHA: Occupational and Safety Health Administration 29CFR 1910.1048 and 29CFR 1910.1000 table z-1 and z-2		ACGIH: Association Conference of governmental Industrial Hygienists	NIOSH: National Institute for Occupational Safety and Health	
Formaldehyde (50-00-0)	TWA (time weighted average over an 8- hour work shift): 0.75 ppm STEL (Short-term exposure limit for duration of 15 minutes): 2 ppm	Action Level for increased industrial hygiene monitoring and worker surveillance TWA: 0.5 ppm	TWA: 0.1 ppm (0.12 mg/m ³) STEL: 0.3 ppm (0.37 mg/m ³)	0.016 ppm TWA per 8-hour work period 0.1 ppm CEILING for any 15-minute work period.	20 ppm
Methanol (Methyl alcohol) (67-56-1)	TWA: 200 ppm (260 mg/m ³)	none	none	TWA: 200 ppm (260 mg/m ³) STEL (skin): 250 ppm (325 mg/m ³)	6000 ppm
Propionic Acid (79-09-4)	none	none	none	TWA: 10 ppm (30 mg/m ³) STEL: 15 ppm (45 mg/m ³)	none
d-Limonene (5989-27-5)	OSHA, NIOSH or ACGIH Limits: none AIHA (American Industrial Hygiene Association): Workplace Environmental Exposure Limit (WEEL): 30 ppm				

European Union		
Component (CAS Number)	SOURCE	
	SCOEL (Scientific Committee on Occupational Exposure Limits)	IOELV (Indicative Occupational Exposure Limit Values)
Formaldehyde (50-00-0)	SCOEL/REC/125 8-hour TWA: 0.3 ppm (0.369 mg/m ³) STEL: 0.6 ppm (0.738 mg/m ³) BLV (biological limit value): none Additional categorization: SCOEL carcinogen group C (genotoxic carcinogen with a mode of action-based threshold) Notation: Sensitization (Dermal)	8-hour TWA: 2 ppm (2.5 mg/m ³) STEL: 2 ppm (2.5 mg/m ³)
Methanol (Methyl alcohol) (67-56-1)	SCOEL/REC/177 8-hour TWA: 5 ppm (18 mg/m ³) STEL: 10 ppm (37 mg/m ³) BLV: none Additional categorization: none Notation: None	8-hour TWA: 200 ppm (266 mg/m ³) STEL: 250 ppm (333 mg/m ³)
Propionic Acid (79-09-4)	none	8-hour TWA: 10 ppm (31 mg/m ³) STEL: 15 ppm (46 mg/m ³)
d-Limonene (5989-27-5)	none	

8.2 Appropriate engineering controls:

Good ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits.

General or dilution ventilation is frequently insufficient as the sole means of controlling employee exposure. Local ventilation is usually preferred.

Do not allow to enter drinking water supplies, waste water, or soil.

8.3 Personal protective equipment:

A safety shower and eye bath should be readily available.

Eye/face protection: Wear chemical resistant goggles when handling.

Skin protection: Wear impervious clothing and gloves to prevent repeated or prolonged contact.

Inhalation protection: Based on workplace contaminant level and working limits of the respirator, use a respirator approved by NIOSH/MSHA. The following is the minimum recommended equipment for an acceptable level of exposure. (To estimate an acceptable level of exposure, see "SECTION 2 – Hazards Identification", "SECTION 8– Exposure Controls/Personal Protection", and "SECTION 11– Toxicological information".

For Termin-8® Powder emission of hazardous ingredient fumes and vapors; concentration ≥ 1 and ≤ 10 times the acceptable level:

Use air-purifying respirator with full face piece fitted with either cartridge(s) or canister specifically approved for protection against formaldehyde.

For Termin-8® Powder emission of hazardous ingredient fumes and vapors; concentration >10 and <100 times the acceptable level:

Use Type C full face piece supplied air pressure-demand or continuous-flow respirator.

(Higher concentrations next page)

For Termin-8® Powder emission of hazardous ingredient fumes and vapors; concentrations ≥100 times the acceptable level or for unknown concentration (such as in emergencies):

Use positive-pressure self-contained breathing apparatus with full face piece.

For escape:

Use positive-pressure self-contained breathing apparatus with full face piece (chin canister style front or back mounted type) and industrial size canister specifically approved for protection against formaldehyde.

Thermal hazards: Not applicable

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Note: These are typical values and do not constitute a specification.

Physical State	Granular to Powder Solid	
Color	Varies light brown to dark grey	
Odor:	Pungent	
Melting Point at Standard Pressure (101.3kPa)	A granular mixture and not possible to determine	
Boiling point at Standard Pressure (101.3kPa)	A granular mixture and not possible to determine	
Flammability ★	★ Not Flammable because made with Termin-8® Liquid which is not flammable because it did not sustain combustion at either 60.5 °C or 75 °C when tested in accordance with Test L.2; Part II, Section 32.5.2 of the "UN Recommendations on the Transport of Dangerous Goods" and GHS, Note 2 in Chapter 2.6, Section 2.6.2; nor is the solid, powder carrier onto which the Termin-8® Liquid applied, to make this product flammable	
Explosion limits (estimated):	Lower Explosion Limit:	1 % by volume
	Upper Explosion Limit:	5 % by volume
Flash Point (closed cup)	69.7 °C	
Auto ignition temperature (estimated)	Not determined	
Decomposition temperature	Not applicable because this is neither a self reactive mixture, an organic peroxide or other mixture which may decompose.	
pH (25 °C)	Not applicable; this is a solid	
Kinematic viscosity	Not applicable; this is a solid	
Solubility	Partially soluble in water at 25 °C	
Partition coefficient n-octanol/water (log value) (estimated)	Not determined	
Specific Gravity (Relative density based on water at 20 °C)	Approximately 0.785 g/ml (varies since it is granular)	
Vapor pressure (estimated)	< 25 mm Hg	
Relative vapor density (Air = 1) (estimated)	> 1	
Particle characteristics	A fine Granular powder sieve filtered at upper limit of 841 microns	

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity:

Formaldehyde reacts violently with strong oxidizers (hydrogen peroxide, performic acid, perchloric acid in the presence of aniline, potassium permanganate, nitromethane). Reacts with bases (sodium hydroxide, potassium hydroxide, ammonia), and with nitrogen dioxide (explosive reaction around 180° C). Reacts with hydrochloric acid to form highly toxic bis(chloromethyl) ether. Polymerization reaction with phenol may develop sudden destructive pressure.

10.2 Chemical stability:

The formaldehyde in Termin-8® Powder is stabilized with Methanol but at 0° C (32° F) or colder temperatures, the Formaldehyde may self-polymerize to form paraformaldehyde which is a hazardous by-product.

10.3 Possibility of hazardous reactions:

Reacts with hydrochloric acid to form highly toxic bis(chloromethyl) ether.

10.4 Conditions to avoid:

Heat, sparks and flame, incompatible materials (see SECTION 10.5)

10.5 Incompatible materials:

Strong oxidizing agents. Caustic soda, soda ash and other alkalis; sodium, potassium and other alkali metals; amines; acids; oxygen, hydrogen peroxide, and other strong oxidizing agents. The following metals: aluminum, ordinary steel, copper, nickel, and zinc compounds.

10.6 Hazardous decomposition products

Formaldehyde decomposes into Methanol and Carbon monoxide at temperatures above 150°C (302°F). Hazardous formaldehyde vapors are released if burned. Formaldehyde gas, which forms explosive mixtures with air, may be evolved on heating. Although, the formaldehyde in Termin-8® Liquid which is used to make this product is stabilized with Methanol; at 0° C (32° F) or colder temperatures, if this product was placed in water, the Formaldehyde may release into the water, allowing it to self-polymerize to form paraformaldehyde which precipitates.

SECTION 11: TOXICOLOGICAL INFORMATION

Information on toxicological effect

Studies on the toxicity of Termin-8® Powder have not been conducted; however, this product contains formaldehyde, methanol, and propionic acid which have been determined to be toxic. Significant toxicity data on the hazardous components is given below.

Acute Corrosion/Irritation

Dermal (skin):

Formaldehyde: Dose: 2 mg/ 24 hours (rabbit) Effect: Severe
Methanol: Dose: 24 mg / 24 hours (rabbit) Effect: Moderate
Propionic Acid: Dose: 495 mg open irritation (rabbit) Effect: Severe

Dermal (eye):

Formaldehyde: Dose: 750 µg (rabbit) Effect: severe
Methanol: Dose: 40 mg (rabbit) Effect: Moderate
Propionic Acid: Dose: 900 µg (rabbit) Effect: severe

Acute toxicity

Oral LD₅₀:

Formaldehyde: 100 mg/kg (rat)
Methanol: 5628 mg/kg (rat)
Propionic acid: 2600 mg/kg (rat)

Inhalation LC₅₀:

Formaldehyde: 0.48 mg/l/4hr (rat)
Methanol: 64 000 mg/l/4hr (rat)
Propionic Acid: lowest published concentration: 23 mg/m³/24 hours/30days continuous (rat)

Intravenous LD₅₀:

Propionic Acid: 625 mg/kg (mouse) Behavior: Convulsions or effect on seizure threshold

Mutagenicity:

Formaldehyde is mutagenic (mutagenic activity detected in *E. Coli*, *Pseudomonas fluorescens*, and *Saccharomyces cerevisiae*).

Carcinogenicity:

The International Agency for Research on Cancer (IARC) and The National Toxicology Program (NTP) classify formaldehyde as a carcinogen due to cancers of the upper respiratory system and leukemia. OSHA regulates formaldehyde as a potential carcinogen for exposures at or exceeding 0.5 ppm.

Reproduction:

Formaldehyde showed no evidence of reproductive effects in animal studies (mice, rats, and dogs).

SECTION 12: ECOLOGICAL INFORMATION

12.1 Ecological Toxicity (Ecotoxicity)

Studies on the aquatic and terrestrial Ecotoxicity of Termin-8® Powder have not been conducted. Significant ecotoxicity data on the hazardous components is given below.

Formaldehyde

Fish toxicity: LC₅₀ 24.1 mg/l/96hr (Fathead minnow (*Pimephales promelas*))
Daphnia magna toxicity: EC₅₀ 14.6 mg/l/48hr (Water flea, age < 24hrs)

Methanol

Fish toxicity: LC₅₀ 29 400 mg/l/96hr (Fathead minnow (*Pimephales promelas*), 28-29 days old)
Daphnia pulex toxicity: LC₅₀ 19 500mg/L/18hour (Water flea, age < 24hrs)
Green Algae toxicity: 3.01 mg/L for 48 hours (*Pseudokirchneriella subcapitata*, 15000 cells/ml)

Propionic acid

Fish toxicity: LC₅₀: 4740 mg/l/96hr (Fathead minnow (*Pimephales promelas*))
Daphnia magna toxicity: LC₅₀: 130 mg/l/24hr (Water flea)
Amphibian toxicity: LC₅₀: 7345.1 mg/l/96hr (Clawed toad, embryos (*Xenopus laevis*))

d-Limonene

Fish toxicity: LC₅₀: 0.702 mg/l/96hr (Fathead minnow (*Pimephales promelas*), 32-34 days old)
Daphnia magna toxicity: EC₅₀: 0.577 mg/l/48hr (Water flea)

12.2 Persistence and degradability

The organic components are expected to be easily eliminated from water.

12.3 Bioaccumulative potential:

The organic components are not expected to show significant bioaccumulation

12.4 Mobility in soil:

No data available.

12.5 Other adverse effects:

Ingredients are not a PBT (Persistent, Bioaccumulative and Toxic) or vPvB (very Persistent and very Bioaccumulative) substance.

SECTION 13: DISPOSAL CONSIDERATIONS:

Waste treatment (general):

Untreated formaldehyde-containing mixtures and solutions cannot be discarded, poured down the drain and entered into the sewage system or the environment without treatment.

Chemical residues of any hazardous chemical are generally classified as hazardous or special waste, and as such, are covered by regulations which vary according to location.

Dispose of product waste in accordance with all applicable local, regional, national, international regulations. Contact your local waste disposal authority for advice or pass to a licensed chemical disposal company.

Disposal of contaminated product packaging:

Contaminated packaging should be disposed of in accordance with local and statutory requirements using a registered waste disposal contractor. When recovery and recycling is not possible, incineration in a high temperature incinerator is the recommended method of disposal.

SECTION 14: TRANSPORT INFORMATION

Mode of Transport:	Land	Water	Air Transport
	DOT, ADR, RID and ADN	IMDG Code	ICAO – IATA
UN Number	None	None	None
UN Proper Shipping Name	None	None	None
Transport Class (or Classes)	None	None	None
Packing Group	None	None	None
Environmental hazard (Marine Pollutant)	Not an environmental Hazard	Not a Marine Pollutant in accordance with MARPOL 73/78 Annex III – 73/78 and the International Bulk Chemical Code	Not an environmental Hazard
Reportable Quantity	≥ 417 lb or 189 kg of Termin-8® Powder		
Special Instructions	None		

SECTION 15: ADDITIONAL REGULATORY INFORMATION

There may be additional local, regional, or state regulations that are applicable for your site. Confirm your requirements before using Termin-8® Powder.

Safety, health and environmental regulation/legislation specific for the ingredients of Termin-8® Powder:

Federal Regulations (United States):

OSHA Formaldehyde Standard: This product is capable of emitting free formaldehyde and is covered by the OSHA Formaldehyde Standard, 29 CFR 1910.1048.

EPA (Environmental Protection Agency) Statutes:

SARA (Title III of the Superfund Amendments and Reauthorization); also known as
EPCRA (Emergency Planning and Community-Right-to-Know Act) and
CERCLA (Comprehensive Environmental Response, Compensation and Liability Act)
CAA (Clean Air Act)

TSCA (Toxic Substances Control Act)

RCRA (Resource Conservation and Recovery Act)

SARA 311/312 Hazard Categories for Termin-8® Powder (40 CFR Part 370):

Carcinogenicity, Acute Toxicity, Skin Irritant, Specific Organ Toxicity; Single Exposure, Germ Cell Mutagenicity
Respiratory and Skin Sensitization

CERCLA/SARA 302 and 304:

This product, as supplied, contains one or more regulated substances:

Component	CERCLA Hazardous Substance	ARA Section 304 Extremely Hazardous Substance (EHS)	RA Section 302 Extremely Hazardous Substance Threshold Planning Quantity (TPQ)
	Notification requirements in 40 CFR Part 302	Notification requirements in 40 CFR Part 304	Requirements in 40 CFR Part 355
	Reportable Quantity (RQ)		(TPQ)

Formaldehyde 50-00-0	≥ 100 lb (45.4 kg)	≥ 100 lb (45.4 kg)	≥ 500 lb (226.8 kg)
Methanol 67-56-1	≥ 5000 lb (2268 kg)	Not applicable	Not applicable
Propionic acid 79-09-4	≥ 5000 lb (2268 kg)	Not applicable	Not applicable
Calculated RQ for Termin-8® Powder based on Formaldehyde	≥ 417 lb (189 kg) Termin-8® Powder	≥ 417 lb (189 kg) Termin-8® Powder	083 lb (945 kg) Termin-8® Powder

SARA 313 Toxic Components:

Termin-8® Powder contains chemicals which are subject to the reporting requirements of Section 313:

Component	Weight % in product	SARA 313 Threshold Value (de minimis concentration) %
Formaldehyde (50-00-0)	15 -24 %	0.1 %
Methanol (67-56-1)	< 10 %	1.0 %

CAA Accidental Release Management Threshold Quantity (Section 112(r)):

Termin-8® Powder contains formaldehyde regulated by the Clean Air Act.

Termin-8® Powder's Threshold Quantity (TQ) = 62 500 lb (19 439.6 kg) calculated from the formaldehyde component TQ which = 15 000 lbs (28 350 kg)

TSCA Inventory Status: All components listed. We certify that all components are either on the TSCA inventory or qualify for an exemption.

RCRA Hazardous Waste Codes: Formaldehyde: U122 Toxic (non-Acute) Hazardous Waste
Methanol: U154 Toxic (non-Acute) Hazardous Waste

State Regulations (United States):

Right-to-Know: Recipient must communicate all pertinent information herein to employees and customers. The following chemicals associated with the product are subject to the right-to-know regulation in these states: Formaldehyde (50-00-0); California, Connecticut, Florida, Illinois, Louisiana, Massachusetts, Michigan, New Jersey, New York, Pennsylvania, and Rhode Island.

California Proposition 65:



WARNING: Toxic if swallowed, in contact with skin or inhaled. Causes severe skin burns and eye damage. May cause an allergic skin reaction. May cause respiratory irritation. This product can expose you to chemicals including: Formaldehyde (gas), which is known to the State of California to cause cancer and Methanol, which is known to the State of California to cause birth defects. For more information, go to www.P65Warnings.ca.gov

International Regulations:

European Union: This product falls under Regulation (EC) No 1831/2003 of the European Parliament and of the Council of 22 September 2003 on additives for use in animal nutrition (as amended).

Other: Listed on the chemical inventories of the following countries: Australia, Canada, Europe (EINECS), Japan, and Korea.

WHMIS Ingredient Disclosure Listed Components:

WHMIS Classification: Class D, Division 2, Subdivision B.

SECTION 16: OTHER INFORMATION

SDS prepared by Anitox Corporation

Disclaimer:

This information contained herein is accurate to the best of our knowledge. We do not suggest or guarantee that any hazards listed herein are the only ones which exist. Anitox Corp. makes no warranty of any kind, expressed or implied, concerning the safe use of this material in your process or combination with other substances. Effects can be aggravated by other materials and/or this material may aggravate or add to the effects of other materials. This material may be released from gas, liquid, or solid materials made directly or indirectly from it. User has the sole responsibility to determine the suitability of the materials for any use and the manner of use contemplated. User must meet all applicable safety and health standards.

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