SECTION 1: IDENTIFICATION

1.1 PRODUCT IDENTIFIER

Product Name: Lonseal Lonsealer
Product Code: ZSEAL

1.2 RELEVANT IDENTIFIED USES AND USES ADVISED AGAINST

Product Use: Sheet vinyl flooring seam sealer (see Technical Data Sheet for additional details)
Product Restrictions: For use with sheet vinyl flooring only (see Technical Data Sheet for additional details)

1.3 DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

Manufactured for: Lonseal, Inc.
Address: 928 E. 238th Street
Carson, CA 90745
(310) 830-7111

24 Hour Emergency Phone Number: INFOTRAC – (800) 535-5053

SECTION 2: HAZARD(S) IDENTIFICATION

2.1 CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

Flammable Liquids, Category 2:	H225	Highly flammable liquid and vapor.
Acute Toxicity, Category 4:	H302	Harmful if swallowed.
Serious Eye Damage/Irritation, Category 2:	H319	Causes serious eye irritation.
Carcinogenicity, Category 2	H351	Suspected of causing cancer.
STOT SE, Category 3:	H335	May cause respiratory irritation.
STOT SE, Category 3:	H336	May cause drowsiness or dizziness.

2.2 LABEL ELEMENTS

Signal Word: DANGER

Hazard Determining Components of Labeling: Tetrahydrofuran

Hazard Statement(s):

H225	Highly flammable liquid and vapor.
H302	Harmful if swallowed.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H351	Suspected of causing cancer.

Precautionary Statement(s):

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P202	Do not handle until all safety precautions have been read and understood.
P210	Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No Smoking.
P233	Keep container tightly closed.
P280	Wear protective gloves and protective clothing.
P312	Call a POISON CENTER or doctor/physician if you feel unwell.

Additional Information:

EUH019	May form explosive peroxides.

2.3 OTHER HAZARDS

Results of PBT and vPvB Assessment: Not applicable.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

This product contains the following substances that present a hazard within the meaning of the relevant State and Federal Hazardous Substances regulations.

Ingredient/Chemical Name	CAS Number	Weight %	Classification*
Tetrahydrofuran	0000109-99-9	75 - 95	Flam. Liq. 2; H225 Acute Tox. 4: H302 Eye Irrit. 2; H319 Carc. 2: H351 STOT SE 3; H335-H336

*The full text of the GHS Hazards Statement may be found in Section 2.

Section 4: First-Aid Measures

4.1 Description of necessary first-aid measures

General: Take affected persons out of danger area and instruct to lie down. Immediately remove any clothing contaminated by the product. Call POISON CENTER or doctor if you feel unwell.
Eyes: If skin irritation continues, consult a doctor.
Ingestion: Rinse out mouth, and then drink plenty of water. Do not induce vomiting; instantly call for medical help.
Inhalation: Supply fresh air; consult doctor in case of symptoms.
Skin: Instantly wash with water and soap, and rinse thoroughly. If skin irritation continues, consult a doctor.

4.2 Most Important Symptoms/Effects, Acute and Delayed

May cause drowsiness and dizziness.

4.3 Indication of Immediate Medical Attention and Special Treatment Needed

Symptomatic treatement.

Section 5: Fire-Fighting Measures

5.1 Suitable Extinguishing Media

Carbon dioxide (CO_2), extinguishing powder, or water spray/fog. Fight larger fires with water spray/fog or alcohol-resistant foam.

5.2 Specific Hazards Arising from the Substance or Mixture

Can be released in case of fire: Carbon monoxide (CO), Carbon dioxide (CO_2), and Hydrogen chloride (HCl). Can form explosive vapor-air mixtures.

5.3 Special Protective Actions for Fire-Fighters

Protective Equipment: Wear self-contained breathing apparatus.
Additional Information: Cool endangered containers with water spray jet. Collect contaminated fire-fighting water separately. It must not enter drains. Dispose of fire debris and contaminated fire-fighting water in accordance with official regulations.

Section 6: Accidental Release Measures

6.1 Personal Precautions, Protective Equipment, and Emergency Procedures

Wear protective clothing. Ensure adequate ventilation. Remove all ignition sources. Avoid contact with skin and eyes.

See Section 8 for information on personal protection equipment.

6.2 Environmental Precautions

Do not allow product to reach sewage system or water bodies. Inform respective authorities in case product reaches water or sewage system.

6.3 Methods and Materials for Containment and Cleaning Up

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Dispose of the material collected according to regulations. Ensure adequate ventilation. Send for recovery or disposal in suitable containers.

Section 7: Handling and Storage

7.1 Precautions for Safe Handling

Ensure good ventilation/exhaustion at the workplace. Ensure good interior ventilation, especially at floor level (fumes are heavier than air). Make sure that all applicable workplace limits are observed. Open and handle container with care. Prevent formation of aerosols. Avoid contact with skin and eyes.

Information about Protection against Explosions and Fire: Fumes can combine with air to form an explosive mixture. Keep ignition sources away – Do not smoke. Protect against electrostatic charges. Use explosion-proof apparatus/fittings and spark-proof tools.

7.2 Conditions for Safe Storage, Including Any Incompatibilities

Store only in the original container. Observe regulations for storage of flammable liquids. Observe all local and national regulations for storage of water polluting products. Store away from foodstuffs. Store container in a well-ventilated position. Store in cool, dry conditions

in well-sealed containers. Protect from overexposure to light. Avoid contact with air/oxygen (formation of peroxide). Store in a locked cabinet and out of the reach of children.

Maximum Storage Temperature: 86 °F (30 °C)
Minimum Storage Temperature: ≥ 32 °F (0 °C)

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 CONTROL PARAMETERS

Ingredient/Chemical Name	CAS Number	Source	Value
Tetrahydrofuran	0000109-99-9	WEL	Short-term value: 300 mg/m^3, 100 ppm Long-term value: 150 mg/m^3, 50 ppm Sk
		IOELV	Short-term value: 300 mg/m^3, 100 ppm Long-term value: 150 mg/m^3, 50 ppm Skin
		DNEL	Long-term exposure – systemic effects: 15 mg/kg bw/d (general population) Long-term exposure – systemic effects: 25 mg/kg bw/d (worker) Acute/Short-term exposure – local effects: 300 mg/m^3 (worker) Acute/Short-term exposure – systemic effects: 300 mg/m^3 (worker) Long-term exposure – local effects: 150 mg/m^3 (worker) Long-term exposure – systemic effects: 62 mg/m^3 (general population); 150 mg/m^3 (worker)
		PNEC	4.32 mg/L [aqua (fresh water)] 21.6 mg/L [aqua (intermittent releases)] 0.432 mg/L [aqua (marine water)] 23.3 mg/kg [sediment (fresh water)] 2.33 mg/kg [sediment (marine water)] 2.13 mg/kg (soil) 4.6 mg/L (sewage treatment plant)

Additional Information: The lists that were valid during the compilation were used as basis.

8.2 APPROPRIATE ENGINEERING CONTROLS

Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and any vapor below occupational exposure limits, suitable respiratory protection must be worn.

8.3 APPROPRIATE PROTECTION MEASURES, INCLUDING PERSONAL PROTECTIVE EQUIPMENT

General: Keep away from foodstuffs, beverages, and food. Instantly remove any contaminated garments. Avoid contact with the eyes and skin. Wash hands during breaks and at the end of the work. Do not eat, drink, or smoke while working. Do not allow to enter drainage system, surface or ground water.

Eye Protection: Safety glasses

Respiratory Protection: In case of brief exposure or low pollution, use breathing filter apparatus. In case of intensive or longer exposure, use breathing apparatus that is independent of circulating air. Recommended filter for short term use: Filter A.

Skin Protection: Hands: The glove material has to be impermeable and resistant to the product/the substance/the preparation. Selection of the glove material on consideration of the penetrations times, rates of diffusion, and the degradation. Solvent resistant gloves (THF). Material of gloves: The selection of the suitable gloves does not only depend on the material, but also on further marks of quality, and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material cannot be calculated in advance, and has therefore to be checked prior to the application. The exact breakthrough time has to be found out by the manufacturer of the protective gloves and has to be observed. As protection from splashes, gloves made of the following materials are suitable: fluorocarbon rubber (Viton) – FKM, nitrile rubber – NBR, butyl rubber – BR.
Body: Protective work clothing. Body protection must be chosen depending on activity and possible exposure.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Liquid; Colorless
Odor:	Ether-like
Odor Threshold:	No data available
pH:	Not applicable
Melting Point/Freezing Point:	< -45 °C/Not noted by mfg.
Initial Boiling Point and Boiling Range:	65 °C (THF)
Flash Point:	-21 °C (DIN 51755)
Evaporation Rate:	Not determined
Flammability (Solid, Gas):	Not applicable

Upper/Lower Flammability or Explosive Limits:	Lower Explosive Limit: 1.5% (THF); Upper Explosive Limit 12.0% (THF)
Vapor Pressure:	173 hPa (THF) at 20 °C
Vapor Density (Air = 1):	2.5 (THF) at 20 °C
Relative Density:	Not determined
Solubility in Water:	Partly miscible
Partition Coefficient (n-octanol/water):	Not determined
Auto-Ignition Temperature:	230 °C (THF)
Decomposition Temperature:	Not determined
Viscosity:	40 – 1000 mPas (dynamic at 20 °C)
Self-flammability:	Product is no self-igniting
Danger or Explosion:	May form explosive peroxides. Product is not explosive. However, formation of explosive air/vapor mixtures is possible.
Density:	0.9 – 1.0 g/mL at 20 °C
Bulk Density:	Not applicable
Solvent Separation Test:	Not determined
Organic Solvents:	75 – 95%

SECTION 10: STABILITY AND REACTIVITY

10.1 REACTIVITY
See Section 10.3

10.2 CHEMICAL STABILITY
Thermal Decomposition/Conditions to Be Avoided: Avoid impact, friction, heat, sparks, or electrostatic charges. No decomposition if used according to specifications.

10.3 POSSIBILITY OF HAZARDOUS REACTIONS
Possible formation of peroxide. Forms explosive gases/fumes.

10.4 CONDITIONS TO AVOID
No further relevant information available.

10.5 INCOMPATIBLE MATERIALS
Alkaline materials, strong oxidizing agents, and oxygen.

10.6 HAZARDOUS DECOMPOSITION PRODUCTS
Carbon monoxide (CO), Carbon dioxide (CO_2), and Hydrogen chloride (HCl).

SECTION 11: TOXICOLOGICAL INFORMATION

Ingredient/Chemical Name	CAS Number	Oral LD50, mg/kg	Dermal LD50, mg/kg	Inhalation LD 50, mg/L/4 hr.
Tetrahydrofuran	0000109-99-9	1,650, Rat	> 2,000, Rat	> 14.7, Rat

Primary Irritant Effect

on the Skin: Long or repeated contact can defat skin and may cause dermatitis.

on the Eye: Causes serious eye irritation.

Inhalation: May cause respiratory irritation.

Sub-acute to Chronic Toxicity: May cause drowsiness or dizziness.

Additional Toxicological Information: The product shows the following dangers according to the calculation method of the General EC Classification Guidelines for Preparations as issued in the latest version: Harmful, Irritant, Inhalation of concentrated vapors may lead to anesthesia-like conditions and headache, dizziness, etc.

Sensitization: No sensitizing effect known.

CMR Effects (Carcinogenicity, Mutagenicity, and Toxicity for Reproduction): Limited evidence of a carcinogenic effect. Carc. 2

SECTION 12: ECOLOGICAL INFORMATION

12.1 TOXICITY

Aquatic Toxicity

Ingredient/Chemical Name	CAS Number	96 hr. LC50 fish, mg/L	48 hr. EC50 crustacea, mg/L	NOEC, mg/L
Tetrahydrofuran	0000109-99-9	> 100, Pimephales promelas	> 100, Daphnia magna	> 100, algae (8 d) > 100, Pimephales promelas (33 d)

12.2 PERSISTENCE AND DEGRADABILITY

A part of the components is biodegradable.

12.3 BIOACCUMULATIVE POTENTIAL

No further relevant information available.

12.4 MOBILITY IN SOIL

No further relevant information available.

12.5 OTHER ADVERSE EFFECTS

Results of PBT and vPvB Assessment: Not applicable

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 DISPOSAL METHODS

Hand over to disposers of hazardous waste. Disposal must be made according to official regulations.

Packaging: Non-contaminated packaging can be treated like household garbage. Packaging that cannot be cleaned must be disposed of in the same manner as the product.

SECTION 14: TRANSPORT INFORMATION

	DOT	IMO/IMDG	ICAO/IATA
UN Number:	UN1133	UN1133	UN1133
UN Proper Shipping Name:	Adhesives, containing a flammable liquid, 3, II	Adhesives, containing a flammable liquid, 3, II	Adhesives, containing a flammable liquid, 3, II
Transport Hazard Class(es):	DOT Hazard Class: 3	IMDG: 3 (sub-class: n/a)	Air Class: 3
Packing Group:	II	II	II
Environmental Hazards:	Marine Pollutant: No		
Special Precautions for User:	Warning: Flammable Liquids.		

SECTION 15: REGULATORY INFORMATION

Information for Limitations of Use: Workers should not be exposed to the hazardous materials contained in this preparation. Exceptions can be made by the authorities in exceptional cases. Employment restrictions concerning pregnant and lactating women must be observed. Employment restrictions concerning young persons must be observed. Employment restrictions concerning women of child-bearing age must be observed.

Water Hazard Class: Water hazard class 1 (Self-assessment): slightly hazardous for water
VOC (EU): 75 – 95%

SECTION 16: OTHER INFORMATION

DISCLAIMER: Reasonable care has been taken in the preparation of this information, but the manufacturer makes no warranty of merchantability or any other warranty, expressed or implied, with respect to this information. This information relates only to the product designated herein, and does not relate to its use in combination with other materials or in any other process. The manufacturer makes no representations and assumes no liability for any direct, incidental, or consequential damages resulting from its use. The information herein is presented in good faith and based upon data from manufacturers and/or technical sources, and is believed to be accurate as of the revision date given. It is the buyer's responsibility to ensure that its activities comply with Federal, State, or provincial and local laws. Conditions of use are beyond our control and therefore users are responsible to verify this data under their own conditions to determine suitability for their purpose. Users of this product must comply with all applicable health and safety laws, regulations, and orders. Users of this product assume all risks of use, handling, and disposal, or from use of the information contained within this document.

General Statements:
Keep out of the reach of children.
For professional or industrial use only.
If you cannot read, or do not understand all directions, cautions, and warnings for this product, DO NOT use.

Abbreviations (may not actually appear within document):

ACGIH	American Conference of Governmental Industrial Hygienists
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
bw	Body Weight
Carc.	Carcinogenicity
CAS	Chemical Abstracts Service
CFR	Code of Federal Regulations
CMR	Carcinogenicity, Mutagenicity, and Toxicity for Reproduction
CNS	Central Nervous System
cSt	centistokes
d	Day
Dam.	Damage
DIN	German Institute for Standardization
DNEL	Derived No Effect Level
DSL	Domestic Substances List
DOT	Department of Transportation
EC	European Commission
EC50	Effective Concentration, for 50% of Test Population
EPA	Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-Know Act
ErC50	Effective Concentration, for 50% of Test Population
ERG	Emergency Response Guidebook
g	grams
GHS	Globally Harmonized System
HMIS	Hazardous Materials Identification System
hr.	hour(s)
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods
IMO	International Maritime Organization
IOELV	Indicative Occupational Exposure Limit Values
Irrit.	Irritation
L	liter(s)
lbs.	pounds
LC50	Lethal Concentration, for 50% of Test Population
LD50	Lethal Dose, for 50% of Test Population
Liq.	Liquid
m	meter(s)
mfg.	Manufacturer
mg	milligram(s)
mL	milliliter
n/a	Not Applicable
NFPA	National Fire Protection Association
NIOSH	National Institute for Occupational Safety and Health
NOEC	No Observed Effect Concentration
NTP	National Toxicology Program
OEL	Occupational Exposure Limits
OSHA	Occupational Safety and Health Administration
Pa	Pascal
PBT	Persistent Bioaccumulative and Toxic
PEL	Permissible Exposure Limit
PNEC	Predicted No Effect Concentration
PPE	Personal Protective Equipment
ppm	Parts Per Million
Repr.	Reproductive Toxicity
Respir.	Respiratory Tract Irritation
RQ	Reportable Quantities
RTK	Right-to-Know
SDS	Safety Data Sheet
Sens.	Sensitization
STEL	Short-Term Exposure Limit
STOT	Specific Target Organ Toxicity
STOT RE	Specific Target Organ Toxicity, Repeat Exposure
STOT SE	Specific Target Organ Toxicity, Single Exposure
TCC	Tag Closed Cup
THF	Tetrahyrdofuran
TLV	Threshold Limit Value
Tox.	Toxicity
TSCA	Toxic Substances Control Act

TWA	Time Weighted Average
vPvB	Very Persistent and very Bioaccumulative
WEL	Workplace Exposure Limit
WHMIS	Workplace Hazardous Materials Information System

Revision History:

6.1.2015	Initial SDS Release. SDS provided by mfg. was incorporated into Lonseal's letterhead/layout. Items contained within Section 16, from "DISCLAIMER" and below, are exclusive to Lonseal's version of the SDS.