

SECTION 1: IDENTIFICATION**1.1 Product Identifier**

Product Name: Lonseal Lonsealer
 Product Code(s): ZSEAL

1.2 Other Means of Identification

Not applicable

1.3 Recommended Use and Restrictions on Use

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)

1.4 Details of the Supplier of the Safety Data Sheet

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

1.5 Emergency Phone Number

24 Hour Emergency Phone Number(s): INFOTRAC – U.S. & Canada: 1-800-535-5053
 International: 1-352-353-3500

SECTION 2: HAZARD 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.
	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	109-99-9	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 16.

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 a POISON CENTER or doctor/physician if you feel unwell.

Eyes: Rinse opened eye for several minutes under running water. Then consult a doctor/physician.

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/physician in case of symptoms.

Skin: Instantly wash with soap and water and rinse thoroughly. If skin irritation continues, consult a doctor/physician.

4.2 Most Important Symptoms/Effects, Acute and Delayed

May cause drowsiness or dizziness.

4.3 Indication of Immediate Medical Attention and Special Treatment Needed

Symptomatic treatment.

SECTION 5: FIRE-FIGHTING MEASURES

5.1 Suitable Extinguishing Media

Carbon dioxide (CO₂), extinguishing powder, or water spray/fog. Fight larger fires with water spray/fog or alcohol-resistant foam.

Unsuitable extinguishing media (for safety reasons): Water with a full water jet.

5.2 Specific Hazards Arising from the Substance or Mixture

Hazardous Decomposition: Carbon monoxide (CO), carbon dioxide (CO₂), and hydrogen chloride (HCl). Can form explosive vapor-air mixtures.

5.3 Special Protective Actions for Fire-Fighters

Wear self-contained breathing apparatus.

Cool closed containers exposed to fire by spraying them with water. Collect contaminated fire-fighting water separately. Do not allow run off water and contaminants from fire-fighting to enter drains or water ways. 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 (PPE).

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 (acid binders, diatomite, sand, sawdust, universal binders). 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 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 fires: 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 contained in 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.

Min./Max. Storage Temperature: 0 – 30 °C (32 – 86 °F)

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control Parameters

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

Components with critical values that require monitoring at the workplace:

Component	Source	STEL	LTEL
Tetrahydrofuran	IOELV	300 mg/m ³ ; 100 ppm	150 mg/m ³ ; 50 ppm (skin)
	WEL	300 mg/m ³ ; 100 ppm	150 mg/m ³ ; 50 ppm (skin)

DNELs:

Component	Type	Exposure	Value
Tetrahydrofuran	Dermal	Long-Term Exposure – Systemic Effects	25 mg/kg bw/d (worker)
		Inhalation	Acute/Short-Term Exposure – Local Effects
	Oral	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)
		Long-Term Exposure – Systemic Effects	15 mg/kg bw/d (general population)

PNECs:

Component	Value
Tetrahydrofuran	4.32 mg/L (Aqua – Freshwater)
	21.6 mg/L (Aqua – Intermittent Releases)
	0.432 mg/L (Aqua – Marine Water)
	23.3 mg/kg (Sediment – Freshwater)
	2.33 mg/kg (Sediment – Marine Water)
	4.6 mg/L (Sewage Treatment Plant)
	2.13 mg/kg (Soil)

8.2 Appropriate Engineering Controls

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.

8.3 Individual Protection Measures, Including Personal Protective Equipment

Eye Protection: Safety glasses.

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

Skin Protection: Solvent resistant gloves (THF). The glove material has to be impermeable and resistant to the product/substance/preparation. Selection of the glove material should take into consideration the penetrating times, rates of diffusion, and degradation. Protective work clothing. Body protection must be chosen depending on activity and possible exposure.

Material of Gloves: The selection of 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.

Penetration Time of Glove Material: The exact break through 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: Butyl rubber, fluorocarbon rubber, and nitrile rubber.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Liquid
Color:	Colorless
Odor:	Ether-like
Melting Point/Freezing Point:	<-45 °C (-49 °F)
Boiling Point [or Initial Boiling Point and Range]:	65 °C (149 °F) [THF]
Flammability:	Not applicable
Lower Explosion Limit:	1.5% (THF)
Upper Explosion Limit:	12.0% (THF)
Flash Point:	-21 °C (-5.8 °F) [DIN 51755]
Auto-Ignition Temperature:	230 °C (446 °F) [THF]
Decomposition Temperature:	Not determined
pH:	Not applicable
Kinematic Viscosity:	Not determined
Solubility (in water):	Partly miscible
Partition Coefficient (n-octanol/water):	Not determined
Vapor Pressure:	173 hPa @ 20 °C (68 °F) [THF]
Density [or Relative Density]:	0.9 – 1.0 g/mL @ 20 °C (68 °F)
Relative Vapor Density (Air = 1):	2.5 @ 20 °C (68 °F) [THF]
Particle Characteristics:	Not noted by mfg.
Odor Threshold:	No data available
Self-flammability:	Product is not self-igniting
Oxidizing Properties:	Not classified as oxidizing
Evaporation Rate:	Not determined
Dynamic Viscosity:	40 – 1000 mPa @ 20 °C (68 °F)
Solvent Separation Test:	Not determined
Organic Solvents:	75 – 95%

Danger of Explosion: May form explosive peroxides. Product is not explosive. However, formation of explosive air/vapor mixtures is possible.

SECTION IO: STABILITY AND REACTIVITY

10.1 Reactivity

See §10.3.

10.2 Chemical Stability

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

Avoid impact, friction, heat, sparks, and electrostatic charges.

10.5 Incompatible Materials

Alkaline materials, strong oxidizing agents, and oxygen.

10.6 Hazardous Decomposition Products

Hydrogen chloride (HCl), carbon monoxide (CO), and carbon dioxide (CO₂)

SECTION II : TOXICOLOGICAL INFORMATION

Acute Toxicity:

Harmful if swallowed.

Tetrahydrofuran	LD50 Dermal, Rat > 2000 mg/kg
	LC50/4h Inhalation, Rat > 14.7 mg/L
	LD50 Oral, Rat = 1650 mg/kg

Primary Irritant Effect:

Skin corrosion/irritation: Long or repeated contact can defat skin and may cause dermatitis

Serious eye damage/irritation: Causes serious eye irritation

Inhalation: May cause respiratory irritation

Respiratory or skin sensitization: Based on available data, the classification criteria are not met

Subacute to chronic toxicity: May cause drowsiness or dizziness

Additional Toxicological Information: Inhalation of concentrated vapors may lead to anesthesia-like conditions and headache, dizziness, etc.

Sensitization: No sensitizing effect known.

CMR Effects: Limited evidence of carcinogenic effect.

Germ Cell Mutagenicity: Based on available data, the classification criteria are not met.

Carcinogenicity: Suspected of causing cancer.

Reproductive Toxicity: Based on available data, the classification criteria are not met.

Reproductive Carcinogenicity: In long-term experiments in rats and mice with high concentrations (600 and 1800 ppm), tumors were observed (NTP, USA, 1998). Since genotoxicity plays no or at most a minor part, the German MAK-Commission has classified THF as Category 4, which means no contribution to human cancer risk by THF is expected, provided the maximum allowable concentrations are observed.

Reproductive Mutagenicity: There is no evidence of mutagenicity or a genotoxic potential on the basis of in vitro and in vivo studies.

Toxicity for Reproduction: There is no evidence of adverse effects on reproduction on the basis of studies in mice and rats. No indication of adverse developmental effects in animal tests with non-toxic parental doses. Therefore there is no reason to fear damage to the embryo or fetus when the maximum allowable concentrations are observed. See §8.1.

STOT-SE: May cause respiratory irritation. May cause drowsiness or dizziness.

STOT-RE: Based on available data, the classification criteria are not met.

Aspiration Hazard: Based on available data, the classification criteria are not met.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Aquatic Ecotoxicity

Component	LC50 fish (96h)	EC50 daphnia (48h)	NOEC (8d)	NOEC (33d)
Tetrahydrofuran	P. promelas >100.00 mg/L	D. magna >100 mg/L	Algae >100 mg/L	P. promelas >100 mg/L

12.2 Persistence and Degradability

A part of the component 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

Do not allow undiluted product or large quantities of it to reach ground water, water bodies, or sewage system.

Water Hazard Class 1 (Self-Assessment): Slightly hazardous for water

Results of PBT and vPvB Assessment: Not applicable

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Disposal Methods

Dispose of in accordance with all applicable federal, state, and local regulations. Consult authorities before disposal.

SECTION 14: TRANSPORT INFORMATION

	DOT/ADR	IMO/IMDG	ICAO/IATA
UN Number:	UN1133	UN1133	UN1133
UN Proper Shipping Name:	Adhesives, Special provision 640D	Adhesives, Special provision 640D	Adhesives, Special provision 640D
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

**Transport in bulk according to
Annex II of MARPOL73/78 and
the IBC Code:** n/a

Special Precautions for the User:

Warning: Flammable liquids

Kemler Number: 33

EMS Number: F-E, S-D

ADR/DOT:

Limited Quantities (LQ): 5L
Transport Category: 2
Tunnel Restriction Code: D/E

Transport/Additional Information: Transport by post may be prohibited or restricted.

SECTION 15: REGULATORY INFORMATION**Information about Limitation of Use:**

Employment restrictions concerning pregnant or lactating women must be observed. Employment restrictions concerning young persons must be observed. Employment restrictions concerning women of child-bearing age must be observed.

Decree to Be Applied in Case of Technical Fault: Quantity limits according to "EC Seveso Directive" should be observed.

Chemical Safety Assessment: A chemical safety assessment has not been carried out.

SECTION 16: OTHER INFORMATION

Full Text of GHS Hazard Statements from Section 3:

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.

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 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 local laws. Conditions of use are beyond Lonseal's 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	Accord européen relatif au transport international de marchandises Dangereuses par Route (European agreement for the international carriage of Dangerous goods by Road)
Asp.	Aspiration
ATE	Acute Toxicity Estimate
bw	Body Weight
Carc.	Carcinogenicity
CAS	Chemical Abstracts Service
CFR	Code of Federal Regulations
CLP	Classification, Labeling, and Packaging
CMR	Carcinogenicity, Mutagenicity, and Toxicity for Reproduction
CNS	Central Nervous System
cSt	Centistokes
d	Day(s)
Dam.	Damage
DIN	Deutsches Institut für Normung (German Institute for Standardization)
DNEL	Derived No Effect Level
DOT	Department of Transportation
EC	European Commission
EC0	Effective Concentration for 0% of Test Population
EC10	Effective Concentration for 10% of Test Population
EC50	Effective Concentration for 50% of Test Population
EC90	Effective Concentration for 90% of Test Population
EC100	Effective Concentration for 100% 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
EU	European Union
Flam.	Flammable
g	Gram(s)
GHS	Globally Harmonized System
h	Hour(s)
Haz.	Hazard
HMIS	Hazardous Materials Identification System
hPa	Hectopascal(s)
hr.	Hour(s)
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IBC	Intermediate Bulk Container
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods
IMO	International Maritime Organization
IOELV	Indicative Occupational Exposure Limit Values
Irrit.	Irritation
IUCLID	International Uniform Chemical Information Database
kg	Kilogram(s)
L	Liter(s)
lbs.	pounds
LC50	Lethal Concentration for 50% of Test Population
LC100	Lethal Concentration for 100% of Test Population
LD50	Lethal Dose for 50% of Test Population
Liq.	Liquid
LOEC	Lowest Observed Effect Concentration
LTEL	Long-Term Exposure Limit
m	Meter(s)
MAK	Maximale Arbeitsplatz-Konzentration (Maximum Workplace Concentration)
MARPOL	Maritime Pollution
mfg.	Manufacturer
mg	Milligram(s)
mL	Milliliter(s)
mPa	Millipascal(s)
Muta.	Germ Cell Mutagenicity
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
n.o.s.	Not Otherwise Specified
OEL	Occupational Exposure Limits
OSHA	Occupational Safety and Health Administration
Pa	Pascal(s)
PBT	Persistent Bioaccumulative and Toxic
PEL	Permissible Exposure Limit
PNEC	Predicted No Effect Concentration
PPE	Personal Protective Equipment
ppm	Parts Per Million
PVC	Polyvinyl Chloride
Repr.	Reproductive
Respir.	Respiratory
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	Tagliabue Closed Cup
THF	Tetrahydrofuran
TLV	Threshold Limit Value
Tox.	Toxicity
TWA	Time Weighted Average
UN	United Nations
US	United States
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.
8.5.2019	SDS formatting updated. Minor grammar and typo corrections. Revised to match most recent SDS provided by the manufacturer.
2.18.2020	Minor typo corrections.
3.13.2020	Minor formatting change to table in Section 12. Updated abbreviations list under Section 16.