




SECTION 1: IDENTIFICATION

- 1.1 Product identifier:** 5010103 - KLEENLINE LAUNDRY DETERGENT
Other means of identification:
Item Number (1.5 Gal.): KL-LADET1.5
- 1.2 Recommended use of the chemical and restrictions on use:**
Relevant uses (Consumer use):
- Detergent for cleaning clothes
Relevant uses (Professional users):
- Detergent for cleaning clothes
Relevant Use (Professional):
Liquid Laundry Detergent
Uses advised against:
- All uses not specified in this section or in section 7.3
- 1.3 Name, U.S. address, and U.S. telephone number of the chemical manufacturer, importer, or other responsible party:**
BradyPLUS
7055 Lindell Road
89118 Las Vegas - NV - United States
Phone: (877) 788-PLUS
BradyPLUS.com
- 1.4 Emergency phone number:** CHEMTREC: 01-800-424-9300

SECTION 2: HAZARD(S) IDENTIFICATION

- 2.1 Classification of the substance or mixture:**
29 CFR 1910.1200:
Classification of the chemical in accordance with paragraph (d)(1)(i) of §1910.1200
Acute Tox. 4: Acute toxicity if swallowed, Category 4, H302
Eye Dam. 1: Serious eye damage, Category 1, H318
Flam. Liq. 3: Flammable liquids, Category 3, H226
Skin Irrit. 2: Skin irritation, Category 2, H315
- 2.2 Label elements:**
29 CFR 1910.1200:
Danger
- 
- Hazard statements:**
Acute Tox. 4: H302 - Harmful if swallowed.
Eye Dam. 1: H318 - Causes serious eye damage.
Flam. Liq. 3: H226 - Flammable liquid and vapour.
Skin Irrit. 2: H315 - Causes skin irritation.
- Precautionary statements:**
P101: If medical advice is needed, have product container or label at hand.
P102: Keep out of reach of children.
P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P264: Wash thoroughly after use.
P280: Wear protective gloves/protective clothing/eye protection/protective footwear.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P370+P378: In case of fire: Use Foam extinguisher (AB), Dry Chemical Powder (ABC) Fire Extinguisher, Carbon dioxide extinguisher (BC) to extinguish.
P501: Dispose of the contents/containers according to the local, state and federal regulations.
- Substances that contribute to the classification**
Alcohols, C6-12, ethoxylated; Alcohols, C10-16, ethoxylated

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SECTION 2: HAZARD(S) IDENTIFICATION (continued)

Additional labeling:



WARNING

Keep out of the reach of children

This product can expose you to chemicals including N, N-dimethylformamide, which is [are] known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

Federal Hazardous Substances Act (FHSA) >> Irritant (dermal)

May irritate skin. Do not get on skin or clothing. Keep out of reach of children.

FIRST AID TREATMENT

If on skin, rinse well with water. If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse.

Contains : Alcohols, C6-12, ethoxylated; Alcohols, C10-16, ethoxylated.

Federal Hazardous Substances Act (FHSA) >> Flammable

Flammable. Vapors May Cause Flash Fire. Prevent buildup of vapors—open all windows and doors—use only with cross-ventilation. Keep away from heat, sparks, and open flame. Do not smoke, extinguish all flames and pilot lights, and turn off stoves, heaters, electric motors, and other sources of ignition during use and until all vapors are gone. Close container after use. Keep out of the reach of children.

2.3 Hazards not otherwise classified (HNOC):

Non-applicable

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances:

Non-applicable

3.2 Mixtures:

Chemical description: Miscellaneous products

Components:

Remaining components are non-hazardous and/or present at amounts below reportable limits. The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret in accordance with paragraph (i) of §1910.1200. Therefore, in accordance with Appendix D to § 1910.1200, the product contains:

Identification	Chemical name/Classification	Concentration
CAS: 68439-45-2	Alcohols, C6-12, ethoxylated Acute Tox. 4: H302; Eye Dam. 1: H318 - Danger	50 - <75%
CAS: 68002-97-1	Alcohols, C10-16, ethoxylated Acute Tox. 4: H302; Eye Dam. 1: H318; Skin Irrit. 2: H315 - Danger	10 - <25%
CAS: 7732-18-5	Water	2.5 - <10%
CAS: 67-63-0	propan-2-ol Eye Irrit. 2A: H319; Flam. Liq. 2: H225; STOT SE 3: H336 - Danger	2.5 - <10%
CAS: 27344-41-8	Disodium 2,2'-([1,1'-biphenyl]-4,4'-diyldivynylene)bis(benzenesulphonate) Eye Irrit. 2A: H319 - Warning	<1%
CAS: 4368-56-3	C.I. Acid Blue 62 Eye Irrit. 2A: H319 - Warning	<1%
CAS: 68-12-2	N, N-dimethylformamide Acute Tox. 4: H312+H332; Carc. 2: H351; Eye Irrit. 2A: H319; Flam. Liq. 4: H227; Repr. 1B: H360 - Danger	<1%

To obtain more information on the hazards of the substances consult sections 11, 12 and 16.

SECTION 4: FIRST-AID MEASURES

4.1 Description of necessary measures:

The symptoms resulting from intoxication can appear after exposure, therefore, in case of doubt, seek medical attention for direct exposure to the chemical product or persistent discomfort, showing the SDS of this product.

By inhalation:

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SECTION 4: FIRST-AID MEASURES (continued)

This product is not classified as hazardous through inhalation, however, it is recommended in case of intoxication symptoms to remove the person affected from the area of exposure, provide clean air and keep at rest. Request medical attention if symptoms persist.

By skin contact:

Remove contaminated clothing and footwear, rinse skin or shower the person affected if appropriate with plenty of cold water and neutral soap. In serious cases see a doctor. If the product causes burns or freezing, clothing should not be removed as this could worsen the injury caused if it is stuck to the skin. If blisters form on the skin, these should never be burst as this will increase the risk of infection.

By eye contact:

Rinse eyes thoroughly with lukewarm water for at least 15 minutes. Do not allow the person affected to rub or close their eyes. If the injured person uses contact lenses, these should be removed unless they are stuck to the eyes, as this could cause further damage. In all cases, after cleaning, a doctor should be consulted as quickly as possible with the SDS of the product.

By ingestion/aspiration:

Request medical assistance immediately, showing the SDS of this product. Do not induce vomiting, but if it does happen keep the head down to avoid aspiration. In the case of loss of consciousness do not administer anything orally unless supervised by a doctor. Rinse out the mouth and throat, as they may have been affected during ingestion. Keep the person affected at rest.

4.2 Most important symptoms/effects, acute and delayed:

Acute and delayed effects are indicated in sections 2 and 11.

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

Non-applicable

SECTION 5: FIRE-FIGHTING MEASURES

5.1 Suitable (and unsuitable) extinguishing media:

Suitable extinguishing media:

Foam extinguisher (AB), Dry Chemical Powder (ABC) Fire Extinguisher, Carbon dioxide extinguisher (BC)

Unsuitable extinguishing media:

Water jet

5.2 Specific hazards arising from the chemical:

As a result of combustion or thermal decomposition reactive sub-products are created that can become highly toxic and, consequently, can present a serious health risk.

5.3 Special protective equipment and precautions for fire-fighters:

Depending on the magnitude of the fire it may be necessary to use full protective clothing and Self Contained Breathing Apparatus. Minimum emergency facilities and equipment should be available (fire blankets, portable first aid kit,...)

Additional provisions:

As in any fire, prevent human exposure to fire, smoke, fumes or products of combustion. Only properly trained personnel should be involved in firefighting. Evacuate nonessential personnel from the fire area. Destroy any source of ignition. In case of fire, refrigerate the storage containers and tanks for products susceptible to inflammation. Avoid spillage of the products used to extinguish the fire into an aqueous medium.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures:

For non-emergency personnel:

Isolate leaks provided that there is no additional risk for the people performing this task. Evacuate the area and keep out those without protection. Personal protection equipment must be used against potential contact with the spilt product (See section 8). Above all prevent the formation of any vapour-air flammable mixtures, through either ventilation or the use of an inert medium. Remove any source of ignition. Eliminate electrostatic charges by interconnecting all the conductive surfaces on which static electricity could form, and also ensuring that all surfaces are connected to the ground.

For emergency responders:

Wear protective equipment. Keep unprotected persons away. See section 8.

6.2 Environmental precautions:

This product is not classified as hazardous to the environment. Keep product away from drains, surface and underground water.

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SECTION 6: ACCIDENTAL RELEASE MEASURES (continued)

6.3 Methods and materials for containment and cleaning up:

For accidental releases in excess of reportable quantities (RQ) (Table 302.4), refer to 40 CFR 302 for detailed instructions concerning reporting requirements and notify the National Response Center (800) 424-8802.

Prevent the entrance of product in drains, sewers or watercourses. Absorb the spill using sand or inert absorbent and move it to a safe place. Do not absorb in sawdust or other combustible absorbents. Collect the product in appropriate containers and manage it according to current legislation.

Spillages in water or sea:

Small spillages:

Contain spillage using barriers or similar equipment. Use suitable absorbents for collection and treat the waste in accordance with current regulations.

Large spillages:

If possible, contain spillage in open water using barriers or similar equipment. If this is not possible, try to control its spread and collect the product with suitable mechanical means. Always consult experts before using dispersants and make sure you have the necessary approvals if they are to be used. Treat the waste according to current regulations.

6.4 Reference to other sections:

See sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling:

A.- General precautions for safe use

Comply with the current standards 29 CFR 1910 Occupational Safety and Health Standards. Keep containers hermetically sealed. Control spills and residues, destroying them with safe methods (section 6). Avoid leakages from the container. Maintain order and cleanliness where dangerous products are used.

B.- Technical recommendations for the prevention of fires and explosions

Because the product is a flammable liquid, storage should meet the requirement of 29 CFR 1910.106, Flammable and Combustible Liquids Code. Transfer in well ventilated areas, preferably through localized extraction. Fully control sources of ignition (mobile phones, sparks,...) and ventilate during cleaning operations. Avoid the existence of dangerous atmospheres inside containers, applying inertization systems where possible. Transfer at a slow speed to avoid the creation of electrostatic charges. Against the possibility of electrostatic charges: ensure a perfect equipotential connection, always use groundings, do not wear work clothes made of acrylic fibres, preferably wearing cotton clothing and conductive footwear. Comply with the essential security requirements for equipment and systems and with the minimum requirements for protecting the security and health of workers. Consult section 10 for conditions and materials that should be avoided.

C.- Technical recommendations on general occupational hygiene

Do not eat or drink during the process, washing hands afterwards with suitable cleaning products.

D.- Technical recommendations to prevent environmental risks

It is recommended to have absorbent material available at close proximity to the product (See subsection 6.3)

7.2 Conditions for safe storage, including any incompatibilities:

A.- Specific storage requirements

Minimum Temp.: 41 °F

Maximum Temp.: 86 °F

Maximum time: 12 Months

B.- General conditions for storage

Avoid sources of heat, radiation, static electricity and contact with food. For additional information see subsection 10.5

7.3 Specific end use(s):

Except for the instructions already specified it is not necessary to provide any special recommendation regarding the uses of this product.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters:

Substances whose occupational exposure limits have to be assessed in the workplace:

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000):

Identification	Occupational exposure limits		
	propan-2-ol CAS: 67-63-0	8-hour TWA PEL	400 ppm
	Ceiling Values - TWA PEL		
N, N-dimethylformamide ⁽¹⁾ CAS: 68-12-2	8-hour TWA PEL	10 ppm	30 mg/m ³
	Ceiling Values - TWA PEL		

US. ACGIH Threshold Limit Values (2022):

Identification	Occupational exposure limits		
	propan-2-ol CAS: 67-63-0	TLV-TWA	200 ppm
	TLV-STEL	400 ppm	
N, N-dimethylformamide ⁽¹⁾ CAS: 68-12-2	TLV-TWA	5 ppm	
	TLV-STEL		

CALIFORNIA- TABLE AC-1 PERMISSIBLE EXPOSURE LIMITS FOR CHEMICAL CONTAMINANTS:

Identification	Occupational exposure limits		
	propan-2-ol CAS: 67-63-0	PEL	400 ppm
	STEL	500 ppm	1225 mg/m ³
N, N-dimethylformamide ⁽¹⁾ CAS: 68-12-2	PEL	10 ppm	30 mg/m ³
	STEL		

NIOSH: Immediately Dangerous To Life or Health (IDLH) Values:

Identification	Occupational exposure limits		
	propan-2-ol CAS: 67-63-0	TWA	
	IDLH Value	2000 ppm	
N, N-dimethylformamide ⁽¹⁾ CAS: 68-12-2	TWA		
	IDLH Value	500 ppm	

⁽¹⁾ Skin

Biological limit values:

Biological Exposure Indices (BEIs®) - ACGIH

Identification	BEIs®	Determinant	Sampling Time
propan-2-ol CAS: 67-63-0	40 mg/L	Acetone in urine	End of shift at end of workweek
N, N-dimethylformamide CAS: 68-12-2	30 mg/L	N-Acetyl-S-(N-methylcarbamoyl) cysteine in urine	End of shift at end of workweek

8.2 Appropriate engineering controls:

A.- Individual protection measures, such as personal protective equipment

As a preventative measure it is recommended to use basic Personal Protection Equipment. For more information on Personal Protection Equipment (storage, use, cleaning, maintenance, class of protection,...) consult the information leaflet provided by the manufacturer. For more information see subsection 7.1. All information contained herein is a recommendation, the information on clothing performance must be combined with professional judgment, and a clear understanding of the clothing application, to provide the best protection to the worker. All chemical protective clothing use must be based on a hazard assessment to determine the risks for exposure to chemicals and other hazards. Conduct hazard assessments in accordance with 29 CFR 1910.132.

B.- Respiratory protection

If the working conditions and/or safety measures adopted do not allow keeping the airborne concentration of the product below the exposure limits (if any) or at acceptable levels (if no exposure limits exist), suitable respiratory protection equipment chosen by a qualified professional should be used.

C.- Specific protection for the hands

Pictogram	PPE	Remarks
Mandatory hand protection	Protective gloves against minor risks	Replace gloves in case of any sign of damage. For prolonged periods of exposure to the product for professional /industrial users, we recommend using chemical protection gloves. Use gloves in accordance with manufacturer's use limitations and OSHA standard 1910.138 (29CFR)

As the product is a mixture of several substances, the resistance of the glove material can not be calculated in advance with total reliability and has therefore to be checked prior to the application.

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

D.- Eye and face protection

Pictogram	PPE	Remarks
 Mandatory face protection	Panoramic glasses against splash/projections.	Clean daily and disinfect periodically according to the manufacturer's instructions. Use if there is a risk of splashing. Use this PPE in accordance with manufacturer's use limitations and OSHA standard 1910.133 (29CFR)

E.- Bodily protection

Pictogram	PPE	Remarks
	Work clothing	Replace before any evidence of deterioration.
	Anti-slip work shoes	Replace before any evidence of deterioration.

F.- Additional emergency measures

It is advised to implement additional emergency equipments in workplaces that are particularly exposed to the product or in situations where risk assessments highlight the necessity of such equipments.

Emergency measure	Standards	Emergency measure	Standards
 Emergency shower	ANSI Z358-1 ISO 3864-1:2011, ISO 3864-4:2011	 Eyewash stations	DIN 12 899 ISO 3864-1:2011, ISO 3864-4:2011

Environmental exposure controls:

To comply with environmental protection regulations, it is recommended to prevent any spillage of the product and its container. For more detailed information, please refer to subsection 7.1.D.

40 CFR Part 59 (VOC):

V.O.C.(weight-percent): 3.96 % weight
V.O.C. at 68 °F: Non-applicable

California Air Resources Board (CARB) - VOC Regulatory:

V.O.C.(weight-percent): 3.96 % weight
V.O.C. at 68 °F: Non-applicable

South Coast Air Quality Management District (AQMD) - VOC Regulatory:

V.O.C.(weight-percent): 3.96 % weight
V.O.C. at 68 °F: Non-applicable

Ozone Transport Commission (OTC) Rules - VOC Regulatory:

V.O.C.(weight-percent): 3.96 % weight
V.O.C. at 68 °F: Non-applicable

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties:

For complete information see the product datasheet.

Appearance:

Physical state at 68 °F: Liquid
Appearance: Fluid
Color: Indigo

*Non-applicable due to the nature of the product, not providing information property of its hazards.

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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (continued)

Odor:	Pleasant
Volatility:	
Boiling point at atmospheric pressure:	201 °F
Vapour pressure at 68 °F:	2652 Pa
Vapour pressure at 122 °F:	13835.06 Pa (13.84 kPa)
Evaporation rate at 68 °F:	Non-applicable *
Product description:	
Density at 68 °F:	Non-applicable *
Relative density at 68 °F:	Non-applicable *
Dynamic viscosity at 68 °F:	Non-applicable *
Kinematic viscosity at 68 °F:	Non-applicable *
Kinematic viscosity at 104 °F:	Non-applicable *
Concentration:	Non-applicable *
pH:	6.33 - 8.33
Vapour density at 68 °F:	Non-applicable *
Partition coefficient n-octanol/water 68 °F:	Non-applicable *
Solubility in water at 68 °F:	Non-applicable *
Solubility properties:	Non-applicable *
Decomposition temperature:	Non-applicable *
Melting point/freezing point:	Non-applicable *
Flammability:	
Flash Point:	85 °F
Flammability (solid, gas):	Non-applicable *
Autoignition temperature:	750 °F
Lower flammability limit:	Non-applicable *
Upper flammability limit:	Non-applicable *
Particle characteristics:	
Median equivalent diameter:	Non-applicable *

9.2 Other information:

Information with regard to physical hazard classes:

Explosive properties:	Non-applicable *
Oxidising properties:	Non-applicable *
Corrosive to metals:	Non-applicable *
Heat of combustion:	Non-applicable *
Aerosols-total percentage (by mass) of flammable components:	Non-applicable *

Other safety characteristics:

Surface tension at 68 °F:	Non-applicable *
Refraction index:	Non-applicable *
MIR (Maximum Incremental Reactivity):	0.02

*Non-applicable due to the nature of the product, not providing information property of its hazards.

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity:

No hazardous reactions are expected because the product is stable under recommended storage conditions. See section 7 from Safety Data Sheet.

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SECTION 10: STABILITY AND REACTIVITY (continued)

10.2 Chemical stability:

Chemically stable under the indicated conditions of storage, handling and use.

10.3 Possibility of hazardous reactions:

Under the specified conditions, hazardous reactions that lead to excessive temperatures or pressure are not expected.

10.4 Conditions to avoid:

Applicable for handling and storage at room temperature:

Shock and friction	Contact with air	Increase in temperature	Sunlight	Humidity
Not applicable	Not applicable	Risk of combustion	Avoid direct impact	Not applicable

10.5 Incompatible materials:

Acids	Water	Oxidising materials	Combustible materials	Others
Avoid strong acids	Not applicable	Avoid direct impact	Not applicable	Avoid alkalis or strong bases

10.6 Hazardous decomposition products:

See subsection 10.3, 10.4 and 10.5 to find out the specific decomposition products. Depending on the decomposition conditions, complex mixtures of chemical substances can be released: carbon dioxide (CO₂), carbon monoxide and other organic compounds.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects:

The experimental information related to the toxicological properties of the product itself is not available

Dangerous health implications:

In case of exposure that is repetitive, prolonged or at concentrations higher than recommended by the occupational exposure limits, it may result in adverse effects on health depending on the means of exposure:

A- Ingestion (acute effect):

- Acute toxicity: The consumption of a considerable dose can cause irritation in the throat, abdominal pain, nausea and vomiting.
- Corrosivity/Irritability: The consumption of a considerable dose can cause irritation in the throat, abdominal pain, nausea and vomiting.

B- Inhalation (acute effect):

- Acute toxicity : Based on available data, the classification criteria are not met. However, it contains substances classified as hazardous for inhalation. For more information see section 3.
- Corrosivity/Irritability: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

C- Contact with the skin and the eyes (acute effect):

- Contact with the skin: Produces skin inflammation.
- Contact with the eyes: Produces serious eye damage after contact.

D- CMR effects (carcinogenicity, mutagenicity and toxicity to reproduction):

- Carcinogenicity: Based on available data, the classification criteria are not met, however, it contains substances classified as dangerous with carcinogenic effects. For more information see section 3.
IARC: propan-2-ol (3: Not classifiable as to its carcinogenicity to humans); N, N-dimethylformamide (2A: Probably carcinogenic to humans)
- Mutagenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.
- Reproductive toxicity: Based on available data, the classification criteria are not met. However, it does contain substances classified as hazardous for this effect. For more information see section 3.

E- Sensitizing effects:

- Respiratory: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous with sensitising effects. For more information see section 3.
- Skin: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

F- Specific target organ toxicity (STOT) - single exposure:

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SECTION 11: TOXICOLOGICAL INFORMATION (continued)

Based on available data, the classification criteria are not met. However, it contains substances classified as hazardous for inhalation. For more information see section 3.

G- Specific target organ toxicity (STOT)-repeated exposure:

- Specific target organ toxicity (STOT)-repeated exposure: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.
- Skin: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

H- Aspiration hazard:

Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

Other information:

Non-applicable

Specific toxicology information on the substances:

Identification	Acute toxicity		Genus
	LD50 oral	LD50 dermal	
Alcohols, C6-12, ethoxylated CAS: 68439-45-2	500 mg/kg		Rat
Alcohols, C10-16, ethoxylated CAS: 68002-97-1	1200 mg/kg		Rat
propan-2-ol CAS: 67-63-0	>5840 mg/kg		Rat
	>13900 mg/kg		Rabbit
	>25 mg/L (6 h)		Rat
N, N-dimethylformamide CAS: 68-12-2	3010 mg/kg		Rat

SECTION 12: ECOLOGICAL INFORMATION

The experimental information related to the eco-toxicological properties of the product itself is not available

Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

12.1 Ecotoxicity (aquatic and terrestrial, where available):

Acute toxicity:

Identification	Concentration		Species	Genus
	LC50	EC50		
propan-2-ol CAS: 67-63-0	9640 mg/L (96 h)		Pimephales promelas	Fish
	10000 mg/L (24 h)		Daphnia magna	Crustacean
	Non-applicable			
N, N-dimethylformamide CAS: 68-12-2	10400 mg/L (96 h)		Pimephales promelas	Fish
	15700 mg/L (48 h)		Daphnia magna	Crustacean
	Non-applicable			

Chronic toxicity:

Identification	Concentration		Species	Genus
	NOEC			
N, N-dimethylformamide CAS: 68-12-2	102 mg/L		Oryzias latipes	Fish
	1500 mg/L		Daphnia magna	Crustacean

12.2 Persistence and degradability:

Substance-specific information:

Identification	Degradability		Biodegradability	
	BOD5	COD	Concentration	Period
propan-2-ol CAS: 67-63-0	1.19 g O2/g	2.23 g O2/g	100 mg/L	14 days
	0.53		% Biodegradable	86 %

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SECTION 12: ECOLOGICAL INFORMATION (continued)

12.3 Bioaccumulative potential:

Substance-specific information:

Identification	Bioaccumulation potential	
	BCF	Pow Log
propan-2-ol CAS: 67-63-0	3	0.05
	Potential	Low
	BCF	3
N, N-dimethylformamide CAS: 68-12-2	-1.01	Low
	Potential	Low
	BCF	3

12.4 Mobility in soil:

Identification	Absorption/desorption		Volatility	
	Koc	Surface tension	Henry	Conclusion
propan-2-ol CAS: 67-63-0	1.5	2.24E-2 N/m (77 °F)	8.207E-1 Pa·m ³ /mol	Yes
	Very High	Moist soil	Yes	Yes
	7	3.443E-2 N/m (77 °F)	7.488E-3 Pa·m ³ /mol	Non-applicable
N, N-dimethylformamide CAS: 68-12-2	Very High	Moist soil	Non-applicable	Non-applicable
	3.443E-2 N/m (77 °F)	Moist soil	Non-applicable	Non-applicable
	Moist soil	Non-applicable	Non-applicable	Non-applicable

12.5 Results of PBT and vPvB assessment:

Non-applicable

12.6 Other adverse effects:

Not described

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Disposal methods:

The next characteristic per RCRA could apply to the unused product if it becomes a waste material: Ignitability. The next EPA hazardous waste number could apply: D001.

Wastes generated by normal household activities (e.g., routine house and yard maintenance) are excluded from the definition of hazardous waste (Title 40 of the Code of Federal Regulations Part 261.4)

Waste management (disposal and evaluation):

Follow RCRA framework and EPA regulation for to ensure that hazardous waste is managed safely and properly. Waste should not be disposed of to drains. Remind, It is the responsibility of the waste generator to evaluate whether his wastes are hazardous by characteristics or listing. See section 6 for further information about Accidental release measures.

Regulations related to waste management:

Legislation related to waste management:

40 CFR Solid Wastes - Part 239 through 282.

State regulatory requirements for generators may be more stringent than those in the federal program. Be sure to check the state's policies.

SECTION 14: TRANSPORT INFORMATION

Transport of dangerous goods by land:

With regard to 49 CFR on the Transport of Dangerous Goods:



SECTION 14: TRANSPORT INFORMATION (continued)



- 14.1 UN number:** UN1993
- 14.2 UN proper shipping name:** FLAMMABLE LIQUID, N.O.S. (propan-2-ol; N, N-dimethylformamide)
- 14.3 Transport hazard class(es):** 3
Labels: 3
- 14.4 Packing group, if applicable:** III
- 14.5 Marine pollutant:** No
- 14.6 Special precautions which a user needs to be aware of, or needs to comply with, in connection with transport or conveyance either within or outside their premises**
Physico-Chemical properties: see section 9
Limited quantities: 5 L
- 14.7 Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code):** Non-applicable

Transport of dangerous goods by sea:

With regard to IMDG 42-24:



- 14.1 UN number:** UN1993
- 14.2 UN proper shipping name:** FLAMMABLE LIQUID, N.O.S. (propan-2-ol; N, N-dimethylformamide)
- 14.3 Transport hazard class(es):** 3
Labels: 3
- 14.4 Packing group, if applicable:** III
- 14.5 Marine pollutant:** No
- 14.6 Special precautions which a user needs to be aware of, or needs to comply with, in connection with transport or conveyance either within or outside their premises**
Special regulations: 274, 223, 955
EmS Codes: F-E, S-E
Physico-Chemical properties: see section 9
Limited quantities: 5 L
Segregation group: Non-applicable
- 14.7 Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code):** Non-applicable

Transport of dangerous goods by air:

With regard to IATA/ICAO 2025:



- 14.1 UN number:** UN1993
- 14.2 UN proper shipping name:** FLAMMABLE LIQUID, N.O.S. (propan-2-ol; N, N-dimethylformamide)
- 14.3 Transport hazard class(es):** 3
Labels: 3
- 14.4 Packing group, if applicable:** III
- 14.5 Marine pollutant:** No
- 14.6 Special precautions which a user needs to be aware of, or needs to comply with, in connection with transport or conveyance either within or outside their premises**
Physico-Chemical properties: see section 9
- 14.7 Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code):** Non-applicable

SECTION 15: REGULATORY INFORMATION

15.1 Safety, health and environmental regulations specific for the product in question:



SECTION 15: REGULATORY INFORMATION (continued)

- CALIFORNIA LABOR CODE - The Hazardous Substances List: *propan-2-ol (67-63-0)* ; *N, N-dimethylformamide (68-12-2)*
- California Proposition 65 (the Safe Drinking Water and Toxic Enforcement Act of 1986) - Birth defects or other reproductive harm: Non-applicable
- California Proposition 65 (the Safe Drinking Water and Toxic Enforcement Act of 1986) - Cancer: *N, N-dimethylformamide (68-12-2)*
- CANADA-Domestic Substances List (DSL): *Water (7732-18-5)* ; *Alcohols, C6-12, ethoxylated (68439-45-2)* ; *Alcohols, C10-16, ethoxylated (68002-97-1)* ; *propan-2-ol (67-63-0)* ; *N, N-dimethylformamide (68-12-2)* ; *Disodium 2,2'-([1,1'-biphenyl]-4,4'-diyldivinylen)bis(benzenesulphonate) (27344-41-8)* ; *C.I.Acid Blue 62 (4368-56-3)*
- CANADA-Non-Domestic Substances List (NDSL): Non-applicable
- Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) - Reportable Quantities: *N, N-dimethylformamide (68-12-2)* - 100 lb
- Hazardous Air Pollutants (Clean Air Act): *N, N-dimethylformamide (68-12-2)*
- Massachusetts RTK - Substance List: *propan-2-ol (67-63-0)* ; *N, N-dimethylformamide (68-12-2)*
- Minnesota - Hazardous substances ERTK: *propan-2-ol (67-63-0)* ; *N, N-dimethylformamide (68-12-2)*
- New Jersey Worker and Community Right-to-Know Act: *propan-2-ol (67-63-0)* ; *N, N-dimethylformamide (68-12-2)*
- New York RTK - Substance list: *propan-2-ol (67-63-0)* ; *N, N-dimethylformamide (68-12-2)*
- NTP (National Toxicology Program): Non-applicable
- OSHA Specifically Regulated Substances (29 CFR 1910.1001-1096): Non-applicable
- Pennsylvania Worker and Community Right-to-Know Law: *N, N-dimethylformamide (68-12-2)*
- Protective Action Criteria (PAC) with AEGLs, ERPGs, & TEELs: *propan-2-ol (67-63-0)* ; *N, N-dimethylformamide (68-12-2)* ; *Disodium 2,2'-([1,1'-biphenyl]-4,4'-diyldivinylen)bis(benzenesulphonate) (27344-41-8)*
- Rhode Island - Hazardous substances RTK: *N, N-dimethylformamide (68-12-2)*
- SB-258 Cleaning Product Right to Know Act : *propan-2-ol (67-63-0)* ; *N, N-dimethylformamide (68-12-2)*
- The Toxic Substances Control Act (TSCA) : *Water (7732-18-5)* ; *Alcohols, C6-12, ethoxylated (68439-45-2)* ; *Alcohols, C10-16, ethoxylated (68002-97-1)* ; *propan-2-ol (67-63-0)* ; *N, N-dimethylformamide (68-12-2)* ; *Disodium 2,2'-([1,1'-biphenyl]-4,4'-diyldivinylen)bis(benzenesulphonate) (27344-41-8)* ; *C.I.Acid Blue 62 (4368-56-3)*
- Toxic chemical release reporting under EPCRA section 313 (40 CFR Part 372): *propan-2-ol (67-63-0)* ; *N, N-dimethylformamide (68-12-2)*

Specific provisions in terms of protecting people or the environment:

It is recommended to use the information provided in this safety data sheet as a foundation for conducting workplace-specific risk assessments. These assessments will help establish the appropriate risk prevention measures for handling, using, storing, and disposing of this product.

Other legislation:

Take into consideration other applicable federal, state, and local laws and local regulations.

Other information:

All ingredients in formula are on TSCA Inventory list.

SECTION 16: OTHER INFORMATION

Legislation related to safety data sheets:

This safety data sheet has been designed in accordance with Appendix d to §1910.1200 - Safety data sheets

Texts of the legislative phrases mentioned in section 2:

- H318: Causes serious eye damage.
- H315: Causes skin irritation.
- H302: Harmful if swallowed.
- H226: Flammable liquid and vapour.

Texts of the legislative phrases mentioned in section 3:

The phrases indicated do not refer to the product itself; they are present merely for informative purposes and refer to the individual components which appear in section 3

29 CFR 1910.1200:

- Acute Tox. 4: H302 - Harmful if swallowed.
- Acute Tox. 4: H312+H332 - Harmful in contact with skin or if inhaled.
- Carc. 2: H351 - Suspected of causing cancer.
- Eye Dam. 1: H318 - Causes serious eye damage.
- Eye Irrit. 2A: H319 - Causes serious eye irritation.
- Flam. Liq. 2: H225 - Highly flammable liquid and vapour.
- Flam. Liq. 4: H227 - Combustible liquid.
- Repr. 1B: H360 - May damage fertility or the unborn child.
- Skin Irrit. 2: H315 - Causes skin irritation.
- STOT SE 3: H336 - May cause drowsiness or dizziness.

- CONTINUED ON NEXT PAGE -



SECTION 16: OTHER INFORMATION (continued)

Advice related to training:

According to 29 CFR 1910. 1200, training on chemical hazards is necessary for employees using this product. This training will facilitate their understanding and interpretation of the safety data sheet, as well as the product label.

Principal bibliographical sources:

Occupational Safety & Health Administration (OSHA).

Abbreviations and acronyms:

IMDG: International maritime dangerous goods code

IATA: International Air Transport Association

ICAO: International Civil Aviation Organisation

COD: Chemical Oxygen Demand

BOD5: 5-day biochemical oxygen demand

BCF: Bioconcentration factor

LD50: Lethal Dose 50

CL50: Lethal Concentration 50

EC50: Effective concentration 50

Log-POW: Octanol-water partition coefficient

Koc: Partition coefficient of organic carbon

IARC: International Agency for Research on Cancer

NFPA:

Health Hazards: 3

Flammability Hazards: 3

Instability Hazards: 0

Special Hazards: Non-applicable



Date of compilation: 10/8/2025

Information in this Safety Data Sheet (SDS) is based on sources other than direct test data and is given in good faith. No warranty is expressed or implied. We believe that the information is current as of the date of this SDS. The use of this information, the conditions, the methods of handling, storage, use and disposal of the product are not within the control of the manufacturer and distributor, therefore it is the user's responsibility and obligation to determine the conditions of the safe use of this product and to ensure that its activities comply with all laws and regulations.

END OF SAFETY DATA SHEET