SAFETY DATA SHEET

1. Identification

Product identifier	**NuLock, Flange Sealant (4289-04)**
Other means of identification	Not available.
Recommended use	Sealant
Recommended restrictions	None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name	Nu-Calgon
Address	2611 Schuetz Road St. Louis, MO 63043 United States
Telephone	314-469-7000 / 800-554-5499
E-mail	Not available.
Emergency phone number	1-800-424-9300 (CHEMTREC)
Supplier	See above.

2. Hazard identification

Physical hazards	Not classified.	
Health hazards	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 1
	Sensitization, skin	Category 1
	Specific target organ toxicity, single exposure	Category 3 respiratory tract irritation
Environmental hazards	Not classified.	
WHMIS 2015 defined hazards	Not classified	

Label elements

Signal word	Danger
Hazard statement	Causes skin irritation. May cause an allergic skin reaction. Causes serious eye damage. May cause respiratory irritation.

Precautionary statement

Prevention	Use only outdoors or in a well-ventilated area. Contaminated work clothing should not be allowed out of the workplace. Wash thoroughly after handling. Wear protective gloves, protective clothing and eye protection. Avoid breathing mist or vapor.
Response	IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical attention. Specific treatment (see information on this label). Take off contaminated clothing and wash it before reuse. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell.
Storage	Store in a well-ventilated place. Keep container tightly closed. Store locked up.
Disposal	Dispose of container in accordance with local, regional, national and international regulations.

WHMIS 2015: Health Hazard(s) not otherwise classified (HHNOC)	None known
WHMIS 2015: Physical Hazard(s) not otherwise classified (PHNOC)	None known
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information	None.

3. Composition/Information on ingredients

Mixture

Chemical name	Common name and synonyms	CAS number	%
2-oxepanone Polymer With 2-ethyl-2-(hydroxymethyl)-1,3-propanediol And 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane, 2-hydroxyethyl Acrylate-terminated		68987-79-1	45-70*
2-Propenoic acid		79-10-7	1-5*
Acetic acid, 2-phenylhydrazide		114-83-0	0.1-1*
Hydroperoxide, 1-methyl-1-phenylethyl		80-15-9	0.1-1*
Polyethylene glycol methacrylate		25852-47-5	15-40*

All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

Composition comments

US GHS: The exact percentage (concentration) of composition has been withheld as a trade secret in accordance with paragraph (i) of §1910.1200.

*CANADA GHS: The exact percentage (concentration) of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell.

Skin contact

IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical attention. Specific treatment (see information on this label). Take off contaminated clothing and wash it before reuse.

Eye contact

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor.

Ingestion

Rinse mouth. Do not induce vomiting. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Never give anything by mouth if victim is unconscious or is convulsing. Obtain medical attention.

Most important symptoms/effects, acute and delayed

Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. May cause respiratory irritation. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash.

Indication of immediate medical attention and special treatment needed

Provide general supportive measures and treat symptomatically. Symptoms may be delayed.

General information

If you feel unwell, seek medical advice (show the label where possible). Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before reuse. Avoid contact with eyes and skin. Keep out of reach of children.

5. Fire-fighting measures

Suitable extinguishing media

Carbon dioxide. Dry chemical powder. Alcohol foam.

Unsuitable extinguishing media

Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical

During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters

Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire-fighting equipment/instructions

Move containers from fire area if you can do so without risk.

Specific methods

Use standard firefighting procedures and consider the hazards of other involved materials.

General fire hazards

No unusual fire or explosion hazards noted.

Hazardous combustion products

May include and are not limited to: Oxides of carbon. Oxides of nitrogen.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist/vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up	Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground. Do not discharge into lakes, streams, ponds or public waters.

7. Handling and storage

Precautions for safe handling	Avoid contact with eyes, skin, and clothing. Avoid breathing mists or vapors. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. Wash thoroughly after handling. Use good industrial hygiene practices in handling this material. When using do not eat or drink.
Conditions for safe storage, including any incompatibilities	Store locked up. Store in tightly closed container. Keep out of reach of children.

8. Exposure controls/Personal protection

Occupational exposure limits

Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

Components	Type	Value
2-Propenoic acid (CAS 79-10-7)	TWA	5.9 mg/m3
		2 ppm

Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

Components	Type	Value
2-Propenoic acid (CAS 79-10-7)	TWA	2 ppm

Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act)

Components	Type	Value
2-Propenoic acid (CAS 79-10-7)	TWA	2 ppm

Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)

Components	Type	Value
2-Propenoic acid (CAS 79-10-7)	TWA	2 ppm

Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety)

Components	Type	Value
2-Propenoic acid (CAS 79-10-7)	TWA	5.9 mg/m3
		2 ppm

Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21)

Components	Type	Value
2-Propenoic acid (CAS 79-10-7)	15 minute	4 ppm
	8 hour	2 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
2-Propenoic acid (CAS 79-10-7)	TWA	2 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
2-Propenoic acid (CAS 79-10-7)	TWA	6 mg/m3
		2 ppm

US. Workplace Environmental Exposure Level (WEEL) Guides

Components	Type	Value
Hydroperoxide, 1-methyl-1-phenylethyl (CAS 80-15-9)	TWA	6 mg/m3
		1 ppm

Biological limit values No biological exposure limits noted for the ingredient(s).

Exposure guidelines

Canada - Alberta OELs: Skin designation

2-Propenoic acid (CAS 79-10-7) Can be absorbed through the skin.

Canada - British Columbia OELs: Skin designation

2-Propenoic acid (CAS 79-10-7) Can be absorbed through the skin.

Canada - Manitoba OELs: Skin designation

2-Propenoic acid (CAS 79-10-7) Danger of cutaneous absorption

Canada - Ontario OELs: Skin designation

2-Propenoic acid (CAS 79-10-7) Can be absorbed through the skin.

Canada - Quebec OELs: Skin designation

2-Propenoic acid (CAS 79-10-7) Can be absorbed through the skin.

Canada - Saskatchewan OELs: Skin designation

2-Propenoic acid (CAS 79-10-7) Can be absorbed through the skin.

US ACGIH Threshold Limit Values: Skin designation

2-Propenoic acid (CAS 79-10-7) Danger of cutaneous absorption

US NIOSH Pocket Guide to Chemical Hazards: Skin designation

2-Propenoic acid (CAS 79-10-7) Can be absorbed through the skin.

US WEEL Guides: Skin designation

Hydroperoxide, 1-methyl-1-phenylethyl (CAS 80-15-9) Can be absorbed through the skin.

Appropriate engineering controls Good general 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. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields.

Skin protection

Hand protection Impervious gloves. Confirm with reputable supplier first.

Other Wear appropriate chemical resistant clothing. As required by employer code. Use of an impervious apron is recommended.

Respiratory protection Where exposure guideline levels may be exceeded, use an approved NIOSH respirator. Respirator should be selected by and used under the direction of a trained health and safety professional following requirements found in OSHA's respirator standard (29 CFR 1910.134), CAN/CSA-Z94.4 and ANSI's standard for respiratory protection (Z88.2).

Thermal hazards Not applicable.

General hygiene considerations Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace. When using do not eat or drink.

9. Physical and chemical properties

Appearance Liquid

Physical state Liquid.

Form Liquid.

Color Purple

Odor Mild

Odor threshold Not available.

pH Not available.

Melting point/freezing point Not available.

Initial boiling point and boiling range Not available.

Pour point Not available.

Specific gravity Not available.

Partition coefficient (n-octanol/water)	Not available.
Flash point	Not available.
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	Does not sustain combustion.
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.
VOC	0.8 %

10. Stability and reactivity

Reactivity	This product may react with strong acids. This product may react with strong alkalis and oxidizing agents.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Chemical stability	Material is stable under normal conditions.
Conditions to avoid	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Can polymerize exothermically if heated, exposed to air, sunlight or by addition of free radical initiators. Do not mix with other chemicals.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	May include and are not limited to: Oxides of carbon. Oxides of nitrogen.

11. Toxicological information

Routes of exposure	Eye, Skin contact, Inhalation, Ingestion.
Information on likely routes of exposure	
Ingestion	May cause stomach distress, nausea or vomiting.
Inhalation	May cause irritation to the respiratory system. Prolonged inhalation may be harmful.
Skin contact	Causes skin irritation. May cause an allergic skin reaction.
Eye contact	Causes serious eye damage.
Symptoms related to the physical, chemical and toxicological characteristics	Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. May cause respiratory irritation. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash.

Information on toxicological effects

Acute toxicity Not known.

Components	Species	Test Results
2-Propenoic acid (CAS 79-10-7)		
Acute		
Dermal		
LD50	Rabbit	> 2000 mg/kg, 24 Hours, ECHA
Inhalation		
LC50	Rat	> 5.1 mg/L, 4 Hours, ECHA

Components	Species	Test Results
Oral		
LD50	Rat	1000 - 2000 mg/kg, ECHA
Acetic acid, 2-phenylhydrazide (CAS 114-83-0)		
Acute		
Dermal		
LD50	Not available	
Inhalation		
LC50	Not available	
Oral		
LD50	Mouse	270 mg/kg, HSDB
Hydroperoxide, 1-methyl-1-phenylethyl (CAS 80-15-9)		
Acute		
Dermal		
LD50	Rabbit	134 mg/kg, ECHA
Inhalation		
LC50	Mouse	1370 mg/m3, ECHA
Oral		
LD50	Rat	382 mg/kg, ECHA
Polyethylene glycol methacrylate (CAS 25852-47-5)		
Acute		
Dermal		
LD50	Not available	
Inhalation		
LC50	Not available	
Oral		
LD50	Not available	

Skin corrosion/irritation Causes skin irritation.

Exposure minutes Not available.

Erythema value Not available.

Oedema value Not available.

Serious eye damage/eye irritation Causes serious eye damage.

Corneal opacity value Not available.

Iris lesion value Not available.

Conjunctival reddening value Not available.

Conjunctival oedema value Not available.

Recover days Not available.

Respiratory or skin sensitization

Canada - Alberta OELs: Irritant

2-Propenoic acid (CAS 79-10-7) Irritant

Respiratory sensitization Not a respiratory sensitizer.

Skin sensitization May cause an allergic skin reaction.

Mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity See below.

IARC Monographs. Overall Evaluation of Carcinogenicity

2-Propenoic acid (CAS 79-10-7) Volume 19, Supplement 7, Volume 71 - 3 Not classifiable as to carcinogenicity to humans.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)

Not listed.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Teratogenicity Not available.

Specific target organ toxicity - single exposure May cause respiratory irritation.

Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not an aspiration hazard.
Chronic effects	Prolonged inhalation may be harmful.

12. Ecological information

Ecotoxicity See below

Ecotoxicological data

Components		Species	Test Results
2-Propenoic acid (CAS 79-10-7)			
Algae	IC50	Algae	0.17 mg/L, 72 Hours
Crustacea	EC50	Daphnia	270 mg/L, 48 Hours

Persistence and degradability No data is available on the degradability of any ingredients in the mixture.

Bioaccumulative potential

Mobility in soil No data available.

Mobility in general Not available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

Transport of Dangerous Goods (TDG) Proof of Classification Classification Method: Classified as per Part 2, Sections 2.1 – 2.8 of the Transportation of Dangerous Goods Regulations. If applicable, the technical name and the classification of the product will appear below.

U.S. Department of Transportation (DOT)

Not regulated as dangerous goods.

Transportation of Dangerous Goods (TDG - Canada)

Not regulated as dangerous goods.

15. Regulatory information

Canadian federal regulations This product has been classified in accordance with the hazard criteria of the HPR and the SDS contains all the information required by the HPR.

Export Control List (CEPA 1999, Schedule 3)

Not listed.

Greenhouse Gases

Not listed.

Precursor Control Regulations

Not regulated.

WHMIS 2015 Exemptions Not applicable

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

2-Propenoic acid (CAS 79-10-7)	Listed.
Hydroperoxide, 1-methyl-1-phenylethyl (CAS 80-15-9)	Listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance No

SARA 311/312 Hazardous chemical Yes

Classified hazard categories
Skin corrosion or irritation
Serious eye damage or eye irritation
Respiratory or skin sensitization
Specific target organ toxicity (single or repeated exposure)

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
2-Propenoic acid	79-10-7	1-5*

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

2-Propenoic acid (CAS 79-10-7)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

US state regulations See below

US - California Hazardous Substances (Director's): Listed substance

2-Propenoic acid (CAS 79-10-7)	Listed.

US - Illinois Chemical Safety Act: Listed substance

2-Propenoic acid (CAS 79-10-7)
Hydroperoxide, 1-methyl-1-phenylethyl (CAS 80-15-9)

US - Louisiana Spill Reporting: Listed substance

2-Propenoic acid (CAS 79-10-7)	Listed.
Hydroperoxide, 1-methyl-1-phenylethyl (CAS 80-15-9)	Listed.

US - Minnesota Haz Subs: Listed substance

2-Propenoic acid (CAS 79-10-7)	Listed.

US - Texas Effects Screening Levels: Listed substance

2-Propenoic acid (CAS 79-10-7)	Listed.
Acetic acid, 2-phenylhydrazide (CAS 114-83-0)	Listed.
Hydroperoxide, 1-methyl-1-phenylethyl (CAS 80-15-9)	Listed.
Polyethylene glycol methacrylate (CAS 25852-47-5)	Listed.

US. Massachusetts RTK - Substance List

2-Propenoic acid (CAS 79-10-7)
Hydroperoxide, 1-methyl-1-phenylethyl (CAS 80-15-9)

US. New Jersey Worker and Community Right-to-Know Act

2-Propenoic acid (CAS 79-10-7)
Hydroperoxide, 1-methyl-1-phenylethyl (CAS 80-15-9)

US. Pennsylvania Worker and Community Right-to-Know Law

2-Propenoic acid (CAS 79-10-7)
Hydroperoxide, 1-methyl-1-phenylethyl (CAS 80-15-9)

US. Rhode Island RTK

2-Propenoic acid (CAS 79-10-7)
Hydroperoxide, 1-methyl-1-phenylethyl (CAS 80-15-9)

US. California Proposition 65

Not Listed.

Inventory status

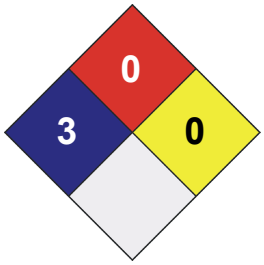
Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

16. Other information

LEGEND	
Severe	4
Serious	3
Moderate	2
Slight	1
Minimal	0

HEALTH	* 3
FLAMMABILITY	0
PHYSICAL HAZARD	0
PERSONAL PROTECTION	X



Disclaimer

The information in the sheet was written based on the best knowledge and experience currently available. Information contained herein was obtained from sources considered technically accurate and reliable. While every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. Since conditions of actual product use are beyond control of the supplier, it is assumed that users of this material have been fully trained according to the requirements of all applicable legislation and regulatory instruments. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries or consequential damages which may result from the use of or reliance on any information contained in this document.

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Further information Not available.

Other information For an updated SDS, please contact the supplier/manufacturer listed on the first page of the document.