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**SECTION 1: Identification of the substance/mixture and of the company/undertaking**

1.1. Product identifier

Trade name: Cistern L

MSDS code: F002025

Chemical description: 50% solution of non- ionic polyols and 50% polymers

1.2. Relevant identified uses of the substance or mixture and uses advised against recommended use:

Industrial uses.

1.3. Details of the supplier of the safety data sheet

Supplier:

Numerator Technologies, Inc. – P.O. Box, Sarasota, FL 34230-U.S.A.

Tel. n° 941 807-5333

Competent person responsible for the safety data sheet:

1.4. Emergency telephone number

Phone n. 941 807-5333

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**SECTION 2: Hazards identification**

2.1. Classification of the substance or mixture

Following GHS and EC regulation criteria 1272/2008 (CLP)

The product is not classified as dangerous according to Regulation EC 1272/2008 (CLP).

Adverse physicochemical, human health and environmental effects:

No other hazards

2.2. Label elements

Symbols:

None

Hazard statements:

None

Precautionary statements:

None

Special Provisions:

None

Special provisions according to Annex XVII of REACH and subsequent amendments:

None

2.3. Other hazards

vPvB Substances: None - PBT Substances: None

Other Hazards:

No other hazards

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**SECTION 3: Composition/information on ingredients**

3.1. Substances

N.A.

3.2. Mixtures

Hazardous components within GHS Classification and the meaning of EEC directive 67/548 and CLP regulation and related classification

No ingredients to be listed.

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**SECTION 4: First aid measures**

4.1. Description of first aid measures

In case of skin contact:

Wash with plenty of water and soap.

In case of eyes contact:

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

In case of Ingestion:

Do not under any circumstances induce vomiting. Seek immediately medical advice.

In case of Inhalation:

Remove casualty to fresh air and keep warm and at rest.

4.2. Most important symptoms and effects, both acute and delayed

Not known.

4.3. Indication of any immediate medical attention and special treatment needed

Treatment:

Not known.

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## SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Water.

Carbon dioxide (CO<sub>2</sub>).

Extinguishing media which must not be used for safety reasons:

Not known.

5.2. Special hazards arising from the substance or mixture

Do not inhale explosion and combustion gases.

5.3. Advice for firefighters

Use suitable breathing apparatus .

Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

Move undamaged containers from immediate hazard area if it can be done safely.

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## SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Wear personal protection equipment.

Remove persons to safety.

See protective measures under point 7 and 8.

6.2. Environmental precautions

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.

Retain contaminated washing water and dispose it.

In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

6.3. Methods and material for containment and cleaning up

Suitable material for taking up: absorbing material, organic, sand

Wash with plenty of water.

6.4. Reference to other sections

See also section 8 and 13

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## SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid contact with skin and eyes, inhalation of vapours and mists.

Do not eat or drink while working.

See also section 8 for recommended protective equipment.

7.2. Conditions for safe storage, including any incompatibilities

Keep away from food, drink and feed.

Instructions as regards storage premises:

Adequate ventilation in working area.

Packaging suggested:

Plastic drums.

7.3. Specific end use(s)

None in particular

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## SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No occupational exposure limit available

DNEL Exposure Limit Values

N.D.

PNEC Exposure Limit Values

N.D.

8.2. Exposure controls

Eye protection:

Use close fitting safety goggles. (ref. EN 166, EN 140, EN175).

Protection for skin:

Use clothing that provides comprehensive protection to the skin, e.g. cotton, rubber, PVC or viton. (ref. EN 340).

Protection for hands:

Chemical-resistant protective gloves (EN 374). When prolonged or frequently repeated contact may occur, a glove is recommended to prevent contact. Examples of preferred glove barrier materials include: Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Polyvinyl chloride ("PVC" or "vinyl"). As general indication we suggest as suitable materials for short-term contact or splashes (recommended: at least protection index 2, corresponding to > 30 minutes permeation time as per EN 374): nitrile rubber (NBR;  $\geq 0.4$  mm thickness) and suitable materials for longer, direct contact (recommended: protection index 6, corresponding to > 480 minutes permeation time as per EN 374): nitrile rubber (NBR;  $\geq 0.4$  mm thickness). This information is based on literature references and on information provided by glove manufacturers, or is derived by analogy with similar substances-mixtures.

Respiratory protection:

Use adequate protective respiratory equipment. (ref. EN 136, EN 140, EN 141, EN 143, EN 149, EN 405).

Thermal Hazards:

None

Environmental exposure controls:

None

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## SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance and colour:	Liquid.
Odour:	Slight.
Odour threshold:	N.D.
pH:	7.0 - 9.5 (as supplied).
Melting point / freezing point:	N.D.
Initial boiling point and boiling range:	approx. 212 °F (approx. 100 °C)
Solid/gas flammability:	N.D.
Upper/lower flammability or explosive limits:	N.D.
Vapour density:	N.D.
Flash point:	> 212 °F (> 100 °C)
Evaporation rate:	N.D.
Vapour pressure:	N.D.
Relative density:	1.2 -1.4
Solubility in water:	Soluble.
Solubility in oil:	N.D.
Partition coefficient (n-octanol/water):	N.D.
Auto-ignition temperature:	N.D.
Decomposition temperature:	N.D.
Viscosity:	N.D.
Explosive properties:	N.D.
Oxidizing properties:	N.D.

9.2. Other information

Miscibility:	N.D.
Fat Solubility:	N.D.
Conductivity:	N.D.
Substance Groups relevant properties	N.D.
Osha Flammability:	None

### SECTION 10: Stability and reactivity

- 10.1. Reactivity  
Stable under normal conditions
- 10.2. Chemical stability  
Stable under normal conditions
- 10.3. Possibility of hazardous reactions  
Stable under normal conditions
- 10.4. Conditions to avoid  
Stable under normal conditions.
- 10.5. Incompatible materials  
Not known.
- 10.6. Hazardous decomposition products  
Not known.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

Toxicological information of the mixture:

a) acute toxicity:

Toxicity Oral Rat LD50 > 2000 mg/kg. - Based on components.

b) skin corrosion/irritation:

Irritation Skin : repeated and prolonged contacts may cause slight irritation.

c) serious eye damage/irritation:

Irritation Eye : repeated and prolonged contacts may cause slight irritation.

Other : N.D.

If not differently specified, the information required in Regulation 453/2010/EC listed below must be considered as N.D.:

- a) acute toxicity;
- b) skin corrosion/irritation;
- c) serious eye damage/irritation;
- d) respiratory or skin sensitisation;
- e) germ cell mutagenicity;
- f) carcinogenicity;
- g) reproductive toxicity;
- h) STOT-single exposure;
- i) STOT-repeated exposure;
- j) aspiration hazard.

CARCINOGENIC: Not Carcinogenic IARC\NTP\OSHA

### SECTION 12: Ecological information

#### 12.1. Toxicity

Ecological information of the mixture:

a) Aquatic acute toxicity:

EC50/LC50 > 100 mg/l - aquatic species (according to the criteria of the CLP Regulation).

#### 12.2. Persistence and degradability

Ecological information of the mixture:

Biodegradability: The water dispersed polymers typically show low biodegradability (< 10%) but they have no environmental concern due to the negligible bioaccumulation (log Pow < 3) and can be easily removed in water treatment plants.

#### 12.3. Bioaccumulative potential

Ecological information of the mixture:

Bioaccumulation: Data not available.

#### 12.4. Mobility in soil

Ecological information of the mixture:

Mobility in soil: Data not available.

#### 12.5. Results of PBT and vPvB assessment

vPvB Substances: None - PBT Substances: None

#### 12.6. Other adverse effects

None

Use according to criteria of good industrial practice, avoiding product dispersion in the environment.

**SECTION 13: Disposal considerations**

- 13.1. Waste treatment methods  
If possible recover the product, otherwise dispose of in authorized landfill or incineration in accordance with local regulation.

**SECTION 14: Transport information**

- 14.1. UN number  
N.A.
- 14.2. UN proper shipping name  
Proper Shipping Name: N.A.
- 14.3. Transport hazard class(es)
  - US DOT: Not regulated
  - Road (ADR): Not regulated
  - Air (ICAO/IATA): Not regulated
  - Sea (IMO/IMDG): Not regulated
- 14.4. Packing group  
N.A.
- 14.5. Environmental hazards  
N.A.
- 14.6. Special precautions for user  
N.A.
- 14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code  
N.A.

**SECTION 15: Regulatory information**

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture  
Dir. 67/548/EEC (Classification, packaging and labelling of dangerous substances). Dir. 99/45/EEC (Classification, packaging and labelling of dangerous preparations). Dir. 98/24/EC (Risks related to chemical agents at work). Dir. 2000/39/EC (Occupational exposure limit values); Dir. 2006/8/CE. Regulation (CE) n. 1907/2006 (REACH).

For non-EU Countries, the Material Safety Data Sheet it is prepared following the main principles of Globally Harmonized System of Classification and Labelling of Chemicals (GHS) which are adopted worldwide.

Refer to other local regulations that may be relevant (i.e. : sanitary control, waste treatment etc.)

- 15.2. Chemical safety assessment  
No

Regulatory information USA:

HMIS INFORMATION		HAZARD INDEX: 4 = SEVERE
HEALTH	1	3 = SERIOUS
FLAMMABILITY	0	2 = MODERATE
REACTIVITY	0	1 = SLIGHT
PERSONAL PROT.	B	0 = MINIMAL

B\* Safety glasses, gloves

n	Name	CAS	TSCA	CERCLA	Sara302	Sara313
0	Polycarboxylic acid,	-	Yes	No	No	No
1	Water	-	Yes	No	No	No

SARA Title III Section 311/312: Non-hazardous.  
State Regulations:

Canadian Regulations: All the ingredients as such or as chemical group are registered in DSL.

Canadian WHMIS Classification: Non-hazardous.

California Proposition 65: Not cited (all components).

### SECTION 16: Other information

N.A. = Not Applicable

N.D. = No Data available

This document was prepared by a competent person who has received appropriate training.

Main bibliographic sources:

TOXNET - Databases on toxicology, hazardous chemicals, environmental health, and toxic releases;

NIOSH - Registry of toxic effects of chemical substances (1983) - Occupational Health

Guidelines for Chemical Hazards (1995) - Pocket Guide to Chemical Hazards (on line)

European Chemical Bureau - ESIS: European chemical Substances Information System;

CESIO - Classification and labelling of anionic, nonionic surfactants (January 2000).

M.Sittig-Handbook of toxic and Hazardous Chemicals and Carcinogens- III Ed.

E.R. Plunkett - Handbook of Industrial Toxicology - III Ed. 1991.

Samson Chem. Pub.-Chemical Safety Sheet working safely with hazardous chemical.

SAX'S Dangerous Properties of Industrial Materials. VIII (1993)

ACGIH "2013 TLVs and BEIs".

ILV "1998/24/EC Directive and subsequent addition".

The product must be stored, handled and used according to criteria of good industrial practice and to regulations in force. This leaflet is offered for your consideration and guidance only. This leaflet complements the Technical Data Sheet but does not replace it. The information herein contained is given to the best of our knowledge at the time of issue.

Due to the several ways in which the product may be used and the possible interaction with variables not depending on or unknown to the supplier, we also cannot accept any liability whatsoever for any loss or damage however arising from the handling and use of our products.

ADR:	European Agreement concerning the International Carriage of Dangerous Goods by Road.
CAS:	Chemical Abstracts Service (division of the American Chemical Society).
CLP:	Classification, Labeling, Packaging.
DNEL:	Derived No Effect Level.
EINECS:	European Inventory of Existing Commercial Chemical Substances.
GefStoffVO:	Ordinance on Hazardous Substances, Germany.
GHS:	Globally Harmonized System of Classification and Labeling of Chemicals.
IATA:	International Air Transport Association.
IATA-DGR:	Dangerous Goods Regulation by the "International Air Transport Association" (IATA).
ICAO:	International Civil Aviation Organization.
ICAO-TI:	Technical Instructions by the "International Civil Aviation Organization" (ICAO).
IMDG:	International Maritime Code for Dangerous Goods.
INCI:	International Nomenclature of Cosmetic Ingredients.
KSt:	Explosion coefficient.
LC50:	Lethal concentration, for 50 percent of test population.
LD50:	Lethal dose, for 50 percent of test population.
LTE:	Long-term exposure.
PNEC:	Predicted No Effect Concentration.
REACH:	Registration Evaluation and Authorization of Chemicals.
RID:	Regulation Concerning the International Transport of Dangerous Goods by Rail.
STE:	Short-term exposure.
STEL:	Short Term Exposure limit.
STOT:	Specific Target Organ Toxicity.

SVHC:	Candidate List of Substances of Very High Concerns.
TLV:	Threshold Limiting Value.
TWATLV:	Threshold Limit Value for the Time Weighted Average 8 hour day. (ACGIH Standard).
WGK:	German Water Hazard Class.
ASTM:	American Society of Testing and Materials.
CBI:	Confidential Business Information
CFR:	Code of Federal Regulations
DOT:	Department of Transportation
EPA:	Environmental Protection Agency
EU:	European Union
FIFRA:	Federal Insecticide, Fungicide and Rodenticide Act
HCS:	Hazard Communication Standard
IARC:	International Agency for Research on Cancer
IUPAC:	International Union of Pure and Applied Chemistry
mg/kg:	Milligram per kilogram
MSDS:	Material Safety Data Sheet
NAFTA:	North American Free Trade Agreement
OSHA:	Occupational Safety and Health Administration
OECD:	The Organization for Economic Cooperation and Development
QSARs:	Quantitative Structure-Activity Relationships
TSCA:	Toxic Substances Control Act
UN:	United Nations
WHMIS:	Workplace Hazardous Materials Information System