



SAFETY DATA SHEET

1. Product and Company Identification

Product identifier	Hardness Solution #3
Other means of identification	Not available
Recommended use	Water Testing Solution
Recommended restrictions	None known.
Manufacturer information	Pro Products LLC 7201 Engle Road Fort Wayne, IN 46804-5875 US Phone: 260-483-2519 Emergency Phone: 1-800-424-9300 (CHEMTREC)
Supplier	See above.

2. Hazards Identification

Physical hazards	Not classified.
Health hazards	Not classified.
Environmental hazards	Not classified.
WHMIS 2015 defined hazards	Not classified
Label elements	
Hazard symbol	None.
Signal word	None.
Hazard statement	The mixture does not meet the criteria for classification.
Precautionary statement	
Prevention	Observe good industrial hygiene practices.
Response	Wash hands after handling.
Storage	Store away from incompatible materials.
Disposal	Dispose of waste and residues in accordance with local authority requirements.
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	Not applicable.

3. Composition/Information on Ingredients

Mixture			
Chemical name	Common name and synonyms	CAS number	%
Glycerol		56-81-5	10 - 30
Composition comments	Non-hazardous by WHMIS/OSHA criteria		

4. First Aid Measures

Inhalation	If symptoms develop move victim to fresh air. If symptoms persist, obtain medical attention.
Skin contact	Flush with cool water. Wash with soap and water. Obtain medical attention if irritation persists.
Eye contact	Flush with cool water. Remove contact lenses, if applicable, and continue flushing. Obtain medical attention if irritation persists.
Ingestion	Do not induce vomiting. Never give anything by mouth if victim is unconscious or is convulsing. Obtain medical attention.
Most important symptoms/effects, acute and delayed	Direct contact with eyes may cause temporary irritation.

Indication of immediate medical attention and special treatment needed

Symptoms may be delayed.

General information

If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Avoid contact with eyes and skin. Wear rubber gloves and safety glasses with side shields. Keep out of reach of children.

5. Fire Fighting Measures

Suitable extinguishing media	Treat for surrounding material.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	Firefighters should wear a self-contained breathing apparatus.
Special protective equipment and precautions for firefighters	Firefighters should wear full protective clothing including self-contained breathing apparatus.
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.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep out of low areas. Keep people away from and upwind of spill/leak. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	<p>Large Spills: Stop leak if you can do so without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Use water spray to reduce vapors or divert vapor cloud drift. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water.</p> <p>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.</p> <p>Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. Prevent entry into waterways, sewers, basements or confined areas. Before attempting clean up, refer to hazard data given above. Small spills may be absorbed with non-reactive absorbent and placed in suitable, covered, labelled containers. Prevent large spills from entering sewers or waterways. Contact emergency services and supplier for advice.</p>
Environmental precautions	Do not discharge into lakes, streams, ponds or public waters.

7. Handling and Storage

Precautions for safe handling	Avoid prolonged exposure. Wash thoroughly after handling. Use good industrial hygiene practices in handling this material. Avoid contact with eyes and skin. When using do not eat or drink. Keep container tightly closed.
Conditions for safe storage, including any incompatibilities	Store in a closed container away from incompatible materials. 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	Form
Glycerol (CAS 56-81-5)	TWA	10 mg/m3	Mist.

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

Components	Type	Value	Form
Glycerol (CAS 56-81-5)	TWA	3 mg/m3 10 mg/m3	Respirable mist. Mist.

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

Components	Type	Value	Form
Glycerol (CAS 56-81-5)	TWA	10 mg/m3	Mist.

Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment)

Components	Type	Value	Form
Glycerol (CAS 56-81-5)	TWA	10 mg/m3	Mist.

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

Components	Type	Value	Form
Glycerol (CAS 56-81-5)	PEL	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.

Biological limit values	No biological exposure limits noted for the ingredient(s).
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.
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	Wash hands before breaks and immediately after handling the product. Handle in accordance with good industrial hygiene and safety practice. When using do not eat or drink.

9. Physical and Chemical Properties

Appearance	Clear
Physical state	Liquid.
Form	Liquid
Color	Colorless
Odor	Odorless
Odor threshold	Not available.
pH	6.5 - 7.5
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.

10. Stability and Reactivity

Reactivity	This product may react with oxidizing agents. This product may react with acids.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Chemical stability	Stable under recommended storage conditions.
Conditions to avoid	Do not mix with other chemicals. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents. Acids. Oxidizers.
Hazardous decomposition products	May include and are not limited to: Oxides of carbon.

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	Prolonged inhalation may be harmful.
Skin contact	May be irritating to the skin.
Eye contact	Direct contact with eyes may cause temporary irritation.
Symptoms related to the physical, chemical and toxicological characteristics	Direct contact with eyes may cause temporary irritation.

Information on toxicological effects

Acute toxicity

Components	Species	Test Results
Glycerol (CAS 56-81-5)		
Acute		
<i>Dermal</i>		
LD50	Guinea pig	45 ml/kg, Days, ECHA
	Rabbit	> 10000 mg/kg, SIGMA ALDRICH 23000 mg/kg, CCOHS
<i>Inhalation</i>		
LC50	Rat	> 570 mg/m ³ , 1 Hours, HSDB > 143 mg/m ³ , 4 Hours, CCOHS 4655 mg.min/l, 7 Hours, ECHA
<i>Oral</i>		
LD50	Guinea pig	> 10000 mg/kg, ECHA
	Mouse	23000 mg/kg, CCOHS 20.8 ml/kg, ECHA
	Rat	> 12600 mg/kg, SIGMA ALDRICH 27200 mg/kg, CCOHS 18300 mg/kg, ECHA

Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation.
Exposure minutes	Not available.
Erythema value	Not available.
Oedema value	Not available.
Serious eye damage/eye irritation	Direct contact with eyes may cause temporary irritation.
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**

Glycerol (CAS 56-81-5) Irritant

Respiratory sensitization Not available.**Skin sensitization** This product is not expected to cause skin sensitization.**Mutagenicity** No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.**Carcinogenicity** Not classified or listed by IARC, NTP, OSHA and ACGIH.**US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

Not listed.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.**Teratogenicity** Non-hazardous by WHMIS/OSHA criteria.**Specific target organ toxicity - single exposure** Not classified.**Specific target organ toxicity - repeated exposure** Not classified.**Aspiration hazard** Not available.**Chronic effects** Prolonged inhalation may be harmful.

12. Ecological Information

Ecotoxicity See below**Ecotoxicological data****Components**

Glycerol (CAS 56-81-5)

Aquatic

Fish

LC50

SpeciesRainbow trout, donaldson trout
(Oncorhynchus mykiss)**Test Results**

51000 - 57000 mg/L, 96 hours

Persistence and degradability No data is available on the degradability of this product.**Bioaccumulative potential** No data available.**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 Review federal, state/provincial, and local government requirements prior to disposal. Collect and reclaim or dispose in sealed containers at licensed waste disposal site.**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** Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

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 NOT known to be 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)

Not listed.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Immediate Hazard - No
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

No

SARA 311/312 Hazardous chemical

No

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

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

Not regulated.

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

Not regulated.

US state regulations

US - Minnesota Haz Subs: Listed substance

Glycerol (CAS 56-81-5) Listed.

US - New Jersey RTK - Substances: Listed substance

Glycerol (CAS 56-81-5)

US - Texas Effects Screening Levels: Listed substance

Glycerol (CAS 56-81-5) Listed.

US. Massachusetts RTK - Substance List

Glycerol (CAS 56-81-5)

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

Not regulated.

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

Glycerol (CAS 56-81-5)

US. Rhode Island RTK

Glycerol (CAS 56-81-5)

US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

Inventory status

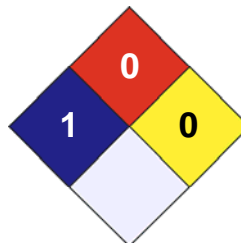
Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*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	/ 1
FLAMMABILITY	0
PHYSICAL HAZARD	0
PERSONAL PROTECTION	X



Disclaimer

The data contained in this material safety data sheet was obtained from sources that were technically accurate, reliable, and state of the art when this document was prepared. If data was unavailable to complete certain sections, the absence of that data is identified in this document. Because the supplier cannot know the exact circumstances during actual use of this product, other hazards, exposure scenarios, disposal considerations, and regulations may apply and it is the responsibility of the user to read and understand the product label and this document before use. Do not use the product for purposes other than those stated in Section 1.

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01

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Prepared by

Dell Tech Laboratories, Ltd. Phone: (519) 858-5021

Other information

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

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