



# SAFETY DATA SHEET

## 1. Identification

<b>Product identifier</b>	<b>F-86</b>
<b>Other means of identification</b>	Not available.
<b>Recommended use</b>	Flocking agent
<b>Recommended restrictions</b>	None known.
<b>Manufacturer/Importer/Supplier/Distributor information</b>	
<b>Manufacturer</b>	
<b>Company name</b>	Culligan International
<b>Address</b>	9399 W. Higgins Road Suite 1100 Rosemont, IL 60018 United States
<b>Telephone</b>	1-847-430-2800
<b>E-mail</b>	Not available.
<b>Emergency phone number</b>	Not available.
<b>Supplier</b>	Pro Products LLC 6714 Pointe Inverness Way, Suite 220 Fort Wayne, IN 46804-7935 US 260-483-2519 1-800-424-9300 (CHEMTREC)

## 2. Hazard identification

<b>Physical hazards</b>	Not classified.
<b>Health hazards</b>	Not classified.
<b>Environmental hazards</b>	Not classified.
<b>WHMIS 2015 defined hazards</b>	Not classified
<b>Label elements</b>	
<b>Hazard symbol</b>	None.
<b>Signal word</b>	None.
<b>Hazard statement</b>	The mixture does not meet the criteria for classification.
<b>Precautionary statement</b>	
<b>Prevention</b>	Observe good industrial hygiene practices.
<b>Response</b>	Wash hands after handling.
<b>Storage</b>	Store away from incompatible materials.
<b>Disposal</b>	Dispose of waste and residues in accordance with local authority requirements.
<b>WHMIS 2015: Health Hazard(s) not otherwise classified (HHNOC)</b>	None known
<b>WHMIS 2015: Physical Hazard(s) not otherwise classified (PHNOC)</b>	None known
<b>Hazard(s) not otherwise classified (HNOC)</b>	None known.
<b>Supplemental information</b>	Not applicable.

## 3. Composition/Information on ingredients

<b>Mixture</b>	
<b>Composition comments</b>	None by WHMIS/OSHA criteria.

## 4. First-aid measures

<b>Inhalation</b>	If symptoms develop move victim to fresh air. If symptoms persist, obtain medical attention.
<b>Skin contact</b>	Flush with cool water. Wash with soap and water. Obtain medical attention if irritation persists.

<b>Eye contact</b>	Flush with cool water. Remove contact lenses, if applicable, and continue flushing. Obtain medical attention if irritation persists.
<b>Ingestion</b>	Do not induce vomiting. Never give anything by mouth if victim is unconscious or is convulsing. Obtain medical attention.
<b>Most important symptoms/effects, acute and delayed</b>	Direct contact with eyes may cause temporary irritation.
<b>Indication of immediate medical attention and special treatment needed</b>	Symptoms may be delayed.
<b>General information</b>	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.

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## 5. Fire-fighting measures

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<b>Suitable extinguishing media</b>	Water. Dry chemical powder. Carbon dioxide.
<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire.
<b>Specific hazards arising from the chemical</b>	Firefighters should wear a self-contained breathing apparatus.
<b>Special protective equipment and precautions for firefighters</b>	Firefighters should wear full protective clothing including self-contained breathing apparatus.
<b>Fire-fighting equipment/instructions</b>	Move containers from fire area if you can do so without risk.
<b>Specific methods</b>	Use standard firefighting procedures and consider the hazards of other involved materials.
<b>General fire hazards</b>	No unusual fire or explosion hazards noted.
<b>Hazardous combustion products</b>	May include and are not limited to: Oxides of carbon. Oxides of nitrogen. Ammonia. Hydrogen chloride.

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## 6. Accidental release measures

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<b>Personal precautions, protective equipment and emergency procedures</b>	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. Surfaces may become slippery after spillage.
<b>Methods and materials for containment and cleaning up</b>	<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. 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. 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>
<b>Environmental precautions</b>	Prevent entry into waterways, sewers, basements or confined areas.

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## 7. Handling and storage

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<b>Precautions for safe handling</b>	Wash thoroughly after handling. Use good industrial hygiene practices in handling this material. Avoid contact with eyes, skin and clothing. Avoid breathing mist or vapor.
<b>Conditions for safe storage, including any incompatibilities</b>	Store in a closed container away from incompatible materials. Keep out of reach of children.

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## 8. Exposure controls/Personal protection

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<b>Occupational exposure limits</b>	No exposure limits noted for ingredient(s).
<b>Biological limit values</b>	No biological exposure limits noted for the ingredient(s).
<b>Exposure guidelines</b>	

**Canada - Alberta OELs: Skin designation**

Epichlorohydrin (CAS 106-89-8)

Can be absorbed through the skin.

**Canada - British Columbia OELs: Skin designation**

Epichlorohydrin (CAS 106-89-8)

Can be absorbed through the skin.

**Canada - Manitoba OELs: Skin designation**

Epichlorohydrin (CAS 106-89-8) Can be absorbed through the skin.

**Canada - Ontario OELs: Skin designation**

1,3-Dichloro-2-propanol (1,3-DCP) (CAS 96-23-1) Can be absorbed through the skin.

Epichlorohydrin (CAS 106-89-8) Can be absorbed through the skin.

**Canada - Quebec OELs: Skin designation**

Epichlorohydrin (CAS 106-89-8) Can be absorbed through the skin.

**Canada - Saskatchewan OELs: Skin designation**

Epichlorohydrin (CAS 106-89-8) Can be absorbed through the skin.

**US ACGIH Threshold Limit Values: Skin designation**

Epichlorohydrin (CAS 106-89-8) Can be absorbed through the skin.

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

Epichlorohydrin (CAS 106-89-8) Can be absorbed through the skin.

**Appropriate engineering controls** General ventilation normally adequate.**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** As required by employer code.**Respiratory protection** Where exposure guideline levels may be exceeded, use an approved NIOSH respirator.**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.

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**9. Physical and chemical properties**

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<b>Appearance</b>	Liquid
<b>Physical state</b>	Liquid.
<b>Form</b>	Liquid.
<b>Color</b>	Amber
<b>Odor</b>	Slight amine
<b>Odor threshold</b>	Not available.
<b>pH</b>	4 - 7
<b>Melting point/freezing point</b>	Not available.
<b>Initial boiling point and boiling range</b>	212 °F (100 °C)
<b>Pour point</b>	Not available.
<b>Specific gravity</b>	Not available.
<b>Partition coefficient (n-octanol/water)</b>	Not available.
<b>Flash point</b>	> 199.4 °F (> 93.0 °C) Closed Cup
<b>Evaporation rate</b>	Not available.
<b>Flammability (solid, gas)</b>	Not applicable.
<b>Upper/lower flammability or explosive limits</b>	
<b>Flammability limit - lower (%)</b>	Not available.
<b>Flammability limit - upper (%)</b>	Not available.
<b>Explosive limit - lower (%)</b>	Not available.
<b>Explosive limit - upper (%)</b>	Not available.
<b>Vapor pressure</b>	Not available.
<b>Vapor density</b>	Not available.
<b>Relative density</b>	1.1 - 1.2
<b>Solubility(ies)</b>	Complete
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	5000 mPa·s

**Other information**

Percent volatile 50

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**10. Stability and reactivity**

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<b>Reactivity</b>	This product may react with oxidizing agents.
<b>Possibility of hazardous reactions</b>	Hazardous polymerization does not occur.
<b>Chemical stability</b>	Stable under recommended storage conditions.
<b>Conditions to avoid</b>	Do not mix with other chemicals.
<b>Incompatible materials</b>	Oxidizers. Acids. Iron. Copper. Aluminum.
<b>Hazardous decomposition products</b>	May include and are not limited to: Oxides of carbon. Oxides of nitrogen. Ammonia. Hydrogen chloride.

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**11. Toxicological information**

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Routes of exposure Eye, Skin contact, Inhalation, Ingestion.

**Information on likely routes of exposure**

<b>Ingestion</b>	May cause stomach distress, nausea or vomiting.
<b>Inhalation</b>	No adverse effects due to inhalation are expected.
<b>Skin contact</b>	No adverse effects due to skin contact are expected.
<b>Eye contact</b>	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**

<b>Acute toxicity</b>	Not available.
<b>Skin corrosion/irritation</b>	Prolonged skin contact may cause temporary irritation.
<b>Exposure minutes</b>	Not available.
<b>Erythema value</b>	Not available.
<b>Oedema value</b>	Not available.
<b>Serious eye damage/eye irritation</b>	Direct contact with eyes may cause temporary irritation.
<b>Corneal opacity value</b>	Not available.
<b>Iris lesion value</b>	Not available.
<b>Conjunctival reddening value</b>	Not available.
<b>Conjunctival oedema value</b>	Not available.
<b>Recover days</b>	Not available.

**Respiratory or skin sensitization****Canada - Alberta OELs: Irritant**

Glycidol (CAS 556-52-5) Irritant

**Respiratory sensitization** Not available.**Skin sensitization** This product is not expected to cause skin sensitization.**Mutagenicity** Non-hazardous by WHMIS/OSHA criteria.**Carcinogenicity** Not classified or listed by IARC, NTP, OSHA and ACGIH.**ACGIH Carcinogens**

Epichlorohydrin (CAS 106-89-8)	A3 Confirmed animal carcinogen with unknown relevance to humans.
Glycidol (CAS 556-52-5)	A3 Confirmed animal carcinogen with unknown relevance to humans.

**California Proposition 65 - CRT: Listed date/Carcinogenic substance**

1,3-Dichloro-2-propanol (1,3-DCP) (CAS 96-23-1)  
 3-Monochloropropane-1,2-diol (3-MCPD) (CAS 96-24-2)  
 Epichlorohydrin (CAS 106-89-8)  
 Glycidol (CAS 556-52-5)

**Canada - Manitoba OELs: carcinogenicity**

Epichlorohydrin (CAS 106-89-8)	Confirmed animal carcinogen with unknown relevance to humans.
Glycidol (CAS 556-52-5)	Confirmed animal carcinogen with unknown relevance to humans.

**Canada - Quebec OELs: Carcinogen category**

Epichlorohydrin (CAS 106-89-8)

Suspected carcinogenic effect in humans.

**IARC Monographs. Overall Evaluation of Carcinogenicity**

1,3-Dichloro-2-propanol (1,3-DCP) (CAS 96-23-1)

Volume 101 - 2B Possibly carcinogenic to humans.

Epichlorohydrin (CAS 106-89-8)

Volume 11, Supplement 7, Volume 71 - 2A Probably carcinogenic to humans.

Glycidol (CAS 556-52-5)

Volume 77 - 2A Probably carcinogenic to humans.

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)**

Not listed.

**US NTP Report on Carcinogens: Anticipated carcinogen**

Epichlorohydrin (CAS 106-89-8)

Reasonably Anticipated to be a Human Carcinogen.

Glycidol (CAS 556-52-5)

Reasonably Anticipated to be a Human Carcinogen.

<b>Reproductive toxicity</b>	Non-hazardous by WHMIS/OSHA criteria.
<b>Teratogenicity</b>	Non-hazardous by WHMIS/OSHA criteria.
<b>Specific target organ toxicity - single exposure</b>	Not classified.
<b>Specific target organ toxicity - repeated exposure</b>	Not classified.
<b>Aspiration hazard</b>	Not available.
<b>Chronic effects</b>	Non-hazardous by WHMIS/OSHA criteria.

**12. Ecological information**

<b>Ecotoxicity</b>	Not available.
<b>Persistence and degradability</b>	No data is available on the degradability of this product.
<b>Bioaccumulative potential</b>	No data available.
<b>Mobility in soil</b>	No data available.
<b>Mobility in general</b>	Not available.
<b>Other adverse effects</b>	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**

<b>Disposal instructions</b>	Review federal, state/provincial, and local government requirements prior to disposal. Collect and reclaim or dispose in sealed containers at licensed waste disposal site.
<b>Local disposal regulations</b>	Dispose in accordance with all applicable regulations.
<b>Hazardous waste code</b>	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
<b>Waste from residues / unused products</b>	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).
<b>Contaminated packaging</b>	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**

<b>Transport of Dangerous Goods (TDG) Proof of Classification</b>	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.
<b>U.S. Department of Transportation (DOT)</b>	Not regulated as dangerous goods.
<b>Transportation of Dangerous Goods (TDG - Canada)</b>	Not regulated as dangerous goods.

**15. Regulatory information**

<b>Canadian federal regulations</b>	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.	
<b>Canada CEPA Schedule I: Listed substance</b>	Epichlorohydrin (CAS 106-89-8)	Listed.
<b>Canada DSL Challenge Substances: Listed substance</b>	Epichlorohydrin (CAS 106-89-8)	Listed.
<b>Canada SNAc Reporting Requirements: Listed substance/Publication date</b>	Epichlorohydrin (CAS 106-89-8)	07/18/2012 Listed.

**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)**

Epichlorohydrin (CAS 106-89-8) Listed.

**SARA 304 Emergency release notification**

Epichlorohydrin (CAS 106-89-8) 100 LBS

**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** No**SARA 313 (TRI reporting)**

Not regulated.

**Other federal regulations****Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Epichlorohydrin (CAS 106-89-8)

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

Epichlorohydrin (CAS 106-89-8)

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

Epichlorohydrin (CAS 106-89-8) Listed.

Glycidol (CAS 556-52-5) Listed.

**US - Illinois Chemical Safety Act: Listed substance**

Epichlorohydrin (CAS 106-89-8)

**US - Louisiana Spill Reporting: Listed substance**

Epichlorohydrin (CAS 106-89-8) Listed.

**US - Minnesota Haz Subs: Listed substance**

Epichlorohydrin (CAS 106-89-8) Listed.

Glycidol (CAS 556-52-5) Listed.

**US - North Carolina Toxic Air Pollutants: Listed substance**

Epichlorohydrin (CAS 106-89-8)

**US - Texas Effects Screening Levels: Listed substance**

1,2-Ethanediamine, polymer with (chloromethyl)oxirane and N-methylmethanamine (CAS 42751-79-1) Listed.

1,3-Dichloro-2-propanol (1,3-DCP) (CAS 96-23-1) Listed.

Epichlorohydrin (CAS 106-89-8) Listed.

Glycidol (CAS 556-52-5) Listed.

**US. Massachusetts RTK - Substance List**

1,3-Dichloro-2-propanol (1,3-DCP) (CAS 96-23-1)

Epichlorohydrin (CAS 106-89-8)

Glycidol (CAS 556-52-5)

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

1,3-Dichloro-2-propanol (1,3-DCP) (CAS 96-23-1)

Epichlorohydrin (CAS 106-89-8)

Glycidol (CAS 556-52-5)

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

1,3-Dichloro-2-propanol (1,3-DCP) (CAS 96-23-1)

Epichlorohydrin (CAS 106-89-8)

Glycidol (CAS 556-52-5)

**US. Rhode Island RTK**

Epichlorohydrin (CAS 106-89-8)

Glycidol (CAS 556-52-5)

**US. California Proposition 65**



**WARNING:** This product can expose you to chemicals including Epichlorohydrin, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**California Proposition 65 - CRT: Listed date/Carcinogenic substance**

1,3-Dichloro-2-propanol (1,3-DCP) (CAS 96-23-1)	Listed: October 8, 2010
3-Monochloropropane-1,2-diol (3-MCPD) (CAS 96-24-2)	Listed: October 8, 2010
Epichlorohydrin (CAS 106-89-8)	Listed: October 1, 1987
Glycidol (CAS 556-52-5)	Listed: July 1, 1990

**California Proposition 65 - CRT: Listed date/Male reproductive toxin**

Epichlorohydrin (CAS 106-89-8)	Listed: September 1, 1996
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**Inventory status**

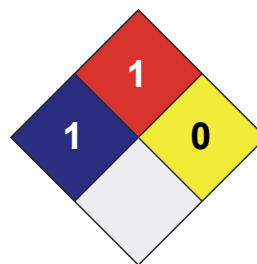
Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*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

<b>HEALTH</b>	/ 1
<b>FLAMMABILITY</b>	1
<b>PHYSICAL HAZARD</b>	0
<b>PERSONAL PROTECTION</b>	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.

**Issue date**

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**Version #**

01

**Effective date**

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**Prepared by**

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

**Further information**

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