

Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03.

Issue date 02/17/2017

Reviewed on 02/17/2017

1 Identification

- **Product Identifier**
- **Trade name: Hypersolve™**
- **Relevant identified uses of the substance or mixture and uses advised against:**
- **Product Description**
Metal Cleaner, Degreaser & Flux Remover

Product Name	Part No.	Packaging	National Stock No.
Hypersolve™	0338-55	55 Gal Drum	6850-01-450-6160
Hypersolve™	0338-5	5 Gal Pail	6850-01-450-6162
Hypersolve™	0338-1	4 x 1 Gal Case	6850-01-450-6165

- **Details of the Supplier of the Safety Data Sheet:**

- **Manufacturer/Supplier:**

Ecolink
2177A Flintstone Drive
Tucker, GA 30084
www.ecolink.com
800-886-8240 or 770-621-8240 (8–5 EST)

email: info@ecolink.com

- **Emergency telephone number:**

Inside the US: 800-535-5053
Outside the US: 352-323-3500
InfoTrac, 24 hours

2 Hazard(s) Identification

- **Classification of the substance or mixture:**



GHS08 Health hazard

Carc. 2 H351 Suspected of causing cancer.
Repr. 1 H360 May damage fertility or the unborn child.
STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.
Eye Irrit. 2A H319 Causes serious eye irritation.
STOT SE 3 H335-H336 May cause respiratory irritation. May cause drowsiness or dizziness.

- **Label elements:**

- **GHS label elements**

The substance is classified and labeled according to the Globally Harmonized System (GHS).

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· **Hazard pictograms:**



GHS07 GHS08

· **Signal word: Danger**

· **Hazard-determining components of labeling:**

n-Propyl Bromide
1-propanol
1,2-epoxybutane
tert-Butanol

· **Hazard statements:**

H315 Causes skin irritation.
H319 Causes serious eye irritation.
H351 Suspected of causing cancer.
H360 May damage fertility or the unborn child.
H335-H336 May cause respiratory irritation. May cause drowsiness or dizziness.
H373 May cause damage to organs through prolonged or repeated exposure.

· **Precautionary statements:**

P260 Do not breathe dust/fume/gas/mist/vapors/spray.
P261 Avoid breathing dust/fume/gas/mist/vapors/spray.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P264 Wash thoroughly after handling.
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P321 Specific treatment (see supplementary first aid instructions on this Safety Data Sheet).
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312 Call a POISON CENTER/doctor if you feel unwell.
P308+P313 IF exposed or concerned: Get medical advice/attention.
P332+P313 If skin irritation occurs: Get medical advice/attention.
P337+P313 If eye irritation persists: Get medical advice/attention.
P314 Get medical advice/attention if you feel unwell.
P302+P352 IF ON SKIN: Wash with plenty of water.
P362+P364 Take off contaminated clothing and wash it before reuse.
P405 Store locked up.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Unknown acute toxicity:**

0 % of the mixture consists of component(s) of unknown toxicity.

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- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



- **HMIS-ratings (scale 0 - 4)**



- **Hazard(s) not otherwise classified (HNOC):** None known

3 Composition/Information on Ingredients

- **Description:** Mixture of substances listed below with non-hazardous additions.

- **Dangerous Components:**

CAS: 106-94-5 RTECS: TX 4110000	n-Propyl Bromide ⚠ Flam. Liq. 2, H225; ⚠ Carc. 1B, H350; Repr. 1B, H360; STOT RE 2, H373; ⚠ Skin Irrit. 2, H315; Eye Irrit. 2A, H319; STOT SE 3, H335-H336	> 93%
	1-propanol ⚠ Flam. Liq. 2, H225; ⚠ Eye Dam. 1, H318; ⚠ STOT SE 3, H336	< 4%
CAS: 75-65-0 RTECS: EO 1925000	tert-Butanol ⚠ Flam. Liq. 2, H225; ⚠ Acute Tox. 4, H332; Eye Irrit. 2A, H319; STOT SE 3, H335	< 1.5%
CAS: 106-88-7 RTECS: EK 3675000	1,2-epoxybutane ⚠ Flam. Liq. 2, H225; ⚠ Carc. 2, H351; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2A, H319; STOT SE 3, H335	< 1.5%

4 First-Aid Measures

- **Description of first aid measures:**
- **General information:**
Symptoms of poisoning may occur after exposure to dust, fumes or particulates; seek medical attention if feeling unwell.
- **After inhalation:**
Supply fresh air and to be sure to call for a doctor. In case of un-consciousness, place patient securely on side position for transportation. If breathing stops administer artificial respiration immediately and seek medical attention immediately.
- **After skin contact:**
Immediately wash with water and soap and rinse thoroughly, launder contaminated clothing before re-use.

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Trade name: Hypersolve™**· After eye contact:**

Rinse opened eye, including under eyelids, for at least 15 minutes under running water. Remove contact lenses if present and easy to do. If symptoms persist, consult a doctor.

· After swallowing: Rinse mouth, DO NOT induce vomiting, immediately consult a doctor.**· Information for doctor:**

Inadvertent inhalation of vomited material may seriously damage the lungs. The danger of this is greater than the risk of poisoning through absorption. The stomach should only be emptied by a doctor and after the installation of an airway to protect the lungs.

· Most important symptoms and effects, both acute and delayed:

No further relevant information available.

· Indication of any immediate medical attention and special treatment needed:

No further relevant information available.

5 Fire-Fighting Measures

· Extinguishing media:**· Suitable extinguishing agents:**

For small (incipient) fires, use regular foam, water fog, carbon dioxide or dry chemical. For large fires apply water from afar away as possible using very large quantities (flooding) applied as a mist or spray; solid streams of water may be ineffective. Cool affected containers with flooding quantities of water.

· Special hazards arising from the substance or mixture:

Material forms a flammable mixture with air in a narrow flammability range (3.8% – 7.5% by volume). Containers exposed to flame or high heat may explode. In fire, toxic gases may be released. Use water to cool containers exposed to fire.

· Advice for firefighters: Keep fire exposed containers cool with water.**· Protective equipment:**

Wear self-contained breathing apparatus (SCBA) pressure-demand (NIOSH approved or equivalent), and full protective gear to prevent contact with skin and eyes.

6 Accidental Release Measures

· Personal precautions, protective equipment and emergency procedures:

Wear appropriate chemical protection equipment i.e. gloves, face shield, goggles and suitable body protection to prevent contamination of skin, eyes and personal clothing.

· Environmental precautions: Do not allow to enter sewers/surface or ground water.**· Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (i.e. sand, diatomite, acid binders, universal binders, sawdust). Dispose contaminated material as waste according to section 13. Ensure adequate ventilation.

· Reference to other sections:

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

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7 Handling and Storage

- **Handling**
- **Precautions for safe handling:**
Ensure good ventilation/exhaustion at the workplace, avoid breathing fumes, gas, mist, vapors and sprays. Wear protective gloves, goggles and clothing. No eating or smoking in the work area.
- **Information about protection against explosions and fires:**
Keep protective respiratory device available.
- **Conditions for safe storage, including any incompatibilities:**
- **Storage**
- **Requirements to be met by storerooms and receptacles:**
Store in a cool, dry place. Store in a well ventilated place. Keep containers tightly closed.
- **Information about storage in one common storage facility:** *Store locked up.*
- **Further information about storage conditions:** *Keep receptacle tightly sealed.*
- **Specific end use(s):** *No further relevant information available.*

8 Exposure Controls/Personal Protection

- **Additional information about design of technical systems:** *No further data; see section 7.*

- **Control parameters:**

- **Components with occupational exposure limits:**

106-94-5 n-Propyl Bromide

TLV Long-term value: 0.5 mg/m³, 0.1 ppm

1-propanol

PEL Long-term value: 500 mg/m³, 200 ppm

REL Short-term value: 625 mg/m³, 250 ppm
 Long-term value: 500 mg/m³, 200 ppm
 Skin

TLV Long-term value: 246 mg/m³, 100 ppm

75-65-0 tert-Butanol

PEL Long-term value: 300 mg/m³, 100 ppm

REL Short-term value: 450 mg/m³, 150 ppm
 Long-term value: 300 mg/m³, 100 ppm

TLV Long-term value: 303 mg/m³, 100 ppm

106-88-7 1,2-epoxybutane

WEEL Long-term value: 2 ppm

- **Additional information:** *The lists that were valid during the creation of this SDS were used as basis.*

- **Exposure controls:**

Ensure adequate ventilation especially in confined areas, ensure eye wash stations and safety showers are close to work stations.

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- **Personal protective equipment:**
- **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing and wash before reuse. Wash hands before breaks and at the end of work. Store protective clothing separately. Avoid contact with the eyes and skin.
- **Breathing equipment:**
In case of intensive or longer exposure use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).
- **Protection of hands:**



Protective gloves

Use gloves when contact with material may occur. Viton, laminate film, PVA or Silvershield gloves offer the best protection. DO NOT use natural rubber gloves when handling this product. Nitrile, neoprene or butyl gloves offer less protection and should be used for splash protection only.

- **Eye protection:**



Tightly sealed goggles

9 Physical and Chemical Properties

- **Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

Form:	Liquid
Color:	Clear, Water-like
Odor:	Characteristic
Odor threshold:	Not determined.

- **pH-value:** Not determined.

- **Change in condition**

Melting point/Melting range:	-110 °C (-166 °F) (-166 °F)
Boiling point/Boiling range:	71 °C (160 °F) (160 °F)

- **Flash point:** None

- **Flammability (solid, gaseous):** Not applicable.

- **Ignition temperature:** 490 °C (914 °F) (914 °F)

- **Decomposition temperature:** Not determined.

- **Auto igniting:** Not determined.

- **Danger of explosion:** Product does not present an explosion hazard.

- **Explosion limits:**

Lower:	~3.8 Vol %
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Upper:	~7.5 Vol %
· Vapor pressure @ 20 °C (68 °F):	111 mm Hg
· Density @ 20 °C (68 °F):	1.323 g/cm ³ (11.04 lbs/gal) (11.04 lbs/gal)
· Relative density:	Not determined.
· Vapor density:	Not determined.
· Evaporation rate @ 20 °C (68 °F):	~4 (Butyl Acetate = 1)
· Solubility in / Miscibility with:	
Water @ 20 °C (68 °F):	2.5 g/l
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
· Solvent content:	
Organic solvents:	0.0 %
· Other information:	No further relevant information available.

10 Stability and Reactivity

- **Reactivity:** No further relevant information available.
- **Chemical stability:** Stable under normal conditions.
- **Thermal decomposition / conditions to be avoided:**
Extremely high temperatures, contact with incompatible materials.
- **Possibility of hazardous reactions:** Hazardous polymerization does not occur.
- **Conditions to avoid:** Extreme heat, flame and ignition sources.
- **Incompatible materials:**
Will react with alkali, avoid contact with aluminum, tin, zinc, halogenated solvents, strong oxidizers and acids. Certain plastics and rubber.
- **Hazardous decomposition products:**
Oxides of carbon (CO_x), Hydrogen bromide, carbon monoxide, smoke, fumes and/or unburned hydrocarbons.

11 Toxicological Information

- **Information on toxicological effects:**
- **Acute toxicity:**
- **LD/LC50 values that are relevant for classification:**

106-94-5 n-Propyl Bromide		
Inhalative	LC50/4 h	253 mg/l (Rat)
1-propanol		
Oral	LD50	1870 mg/kg (Rat)
Dermal	LD50	5040 mg/kg (Rabbit)

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75-65-0 tert-Butanol

Oral	LD50	3500 mg/kg (Rat)
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106-88-7 1,2-epoxybutane

Oral	LD50	500 mg/kg (Rat)
Dermal	LD50	2100 mg/kg (Rabbit)

- **Primary irritant effect:**
- **On the skin:** Irritant to skin and mucous membranes.
- **On the eye:** Irritating effect.
- **Sensitization:** Sensitization possible through skin contact.
- **Additional toxicological information:**
- **Carcinogenic categories:**
- **IARC (International Agency for Research on Cancer):**
 Group 1 - Carcinogenic to humans
 Group 2A - Probably carcinogenic to humans
 Group 2B - Possibly carcinogenic to humans
 Group 3 - Not classifiable as to its carcinogenicity to humans
 Group 4 - Probably not carcinogenic to humans

106-88-7	1,2-epoxybutane	2B
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· **NTP (National Toxicology Program):**

106-94-5	n-Propyl Bromide	R
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· **OSHA-Ca (Occupational Safety & Health Administration):**

None of the ingredients are listed.

12 Ecological Information

- **Toxicity:** The hazards for the aquatic environment are unknown.
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability:** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential:** No further relevant information available.
- **Mobility in soil:** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
 Do not allow product to reach ground water, water course, dry creek beds or sewage system. Danger to drinking water if even small quantities leak into the ground.
- **Results of PBT and vPvB assessment:**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects:** No further relevant information available.

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13 Disposal Considerations

- **Waste treatment methods:**
- **Recommendation:**

Must not be disposed of together with household garbage. Do not allow product to reach sewage or any water system. HYPERSOLVE liquid is to be disposed of according to local, state, federal and international regulations. Offer surplus and non-recyclable solutions to a licensed disposal company.

- **Uncleaned packagings**
- **Recommendation:**

Disposal must be made according to official regulations. Drums should be re-used, recondition, pressure tested by licensed re-conditioner. Pails should be vented and thoroughly dry prior to crushing and/or recycling.

14 Transport Information

- **UN-Number:**
- **DOT, ADR/ADN, ADN, IMDG, IATA** *Non-Regulated Material*

- **UN proper shipping name:**
- **DOT, ADR/ADN, ADN, IMDG, IATA** *Non-Regulated Material*

- **Transport hazard class(es):**
- **DOT, ADR/ADN, ADN, IMDG, IATA**
- **Class:** *Non-Regulated Material*

- **Packing group:**
- **DOT, ADR/ADN, IMDG, IATA** *Non-Regulated Material*

- **Environmental hazards:** *Not applicable.*

- **Special precautions for user:** *Not applicable.*

- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:** *Not applicable.*

- **Transport/Additional information:**
- **DOT** *DOT Packaging Exceptions (49 CFR 173.xxx): 150
DOT Packaging Non Bulk (49 CFR 173.xxx): 203
DOT Packaging Bulk (49 CFR 173.xxx): 242*

- **UN "Model Regulation":** *Non-Regulated Material*

15 Regulatory Information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture:**
- **SARA (Superfund Amendments and Reauthorization):**

- **Section 355 (extremely hazardous substances):**

None of the ingredients are listed.

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· **Section 313 (Specific toxic chemical listings):**

75-65-0	tert-Butanol
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106-88-7	1,2-epoxybutane
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· **TSCA (Toxic Substances Control Act):**

All ingredients are listed or exempt from listing.

· **California Proposition 65:**

· **Chemicals known to cause cancer:**

None of the ingredients are listed.

· **Chemicals known to cause reproductive toxicity for females:**

106-94-5	n-Propyl Bromide
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· **Chemicals known to cause reproductive toxicity for males:**

106-94-5	n-Propyl Bromide
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· **Chemicals known to cause developmental toxicity:**

106-94-5	n-Propyl Bromide
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· **Carcinogenic categories:**

· **EPA (Environmental Protection Agency):**

None of the ingredients are listed.

· **TLV (Threshold Limit Value established by ACGIH):**

1-propanol		A4
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75-65-0	tert-Butanol	A4
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· **NIOSH-Ca (National Institute for Occupational Safety and Health):**

None of the ingredients are listed.

· **GHS label elements**

The substance is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms:**



GHS07 GHS08

· **Signal word: Danger**

· **Hazard-determining components of labeling:**

n-Propyl Bromide

1-propanol

1,2-epoxybutane

tert-Butanol

· **Hazard statements:**

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H351 Suspected of causing cancer.

H360 May damage fertility or the unborn child.

H335-H336 May cause respiratory irritation. May cause drowsiness or dizziness.

H373 May cause damage to organs through prolonged or repeated exposure.

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- P261 Avoid breathing dust/fume/gas/mist/vapors/spray.
- P271 Use only outdoors or in a well-ventilated area.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P264 Wash thoroughly after handling.
- P201 Obtain special instructions before use.
- P202 Do not handle until all safety precautions have been read and understood.
- P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P321 Specific treatment (see supplementary first aid instructions on this Safety Data Sheet).
- P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- P312 Call a POISON CENTER/doctor if you feel unwell.
- P308+P313 IF exposed or concerned: Get medical advice/attention.
- P332+P313 If skin irritation occurs: Get medical advice/attention.
- P337+P313 If eye irritation persists: Get medical advice/attention.
- P314 Get medical advice/attention if you feel unwell.
- P302+P352 IF ON SKIN: Wash with plenty of water.
- P362+P364 Take off contaminated clothing and wash it before reuse.
- P405 Store locked up.
- P403+P233 Store in a well-ventilated place. Keep container tightly closed.
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

National regulations:

The product is subject to be classified according with the latest version of the regulations on hazardous substances.

Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other Information

The information and recommendations in this safety data sheet are, to the best of our knowledge, accurate as of the date of issue. Nothing herein shall be deemed to create warranty, expressed or implied, and shall not establish a legally valid contractual relationship. It is the responsibility of the user to determine applicability of this information and the suitability of the material or product for any particular purpose.

Date of preparation / last revision: 02/17/2017 / 2

Abbreviations and acronyms:

- ADR: The European Agreement concerning the International Carriage of Dangerous Goods by Road
- ADN: The European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
- IMDG: International Maritime Code for Dangerous Goods
- DOT: US Department of Transportation
- IATA: International Air Transport Association
- ACGIH: American Conference of Governmental Industrial Hygienists
- EINECS: European Inventory of Existing Commercial Chemical Substances
- ELINCS: European List of Notified Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- NFPA: National Fire Protection Association (USA)
- HMIS: Hazardous Materials Identification System (USA)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent
- PBT: Persistent, Bioaccumulative and Toxic

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vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety and Health
OSHA: Occupational Safety & Health Administration
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
Flam. Liq. 2: Flammable liquids – Category 2
Acute Tox. 4: Acute toxicity – Category 4
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
Carc. 1B: Carcinogenicity – Category 1B
Carc. 2: Carcinogenicity – Category 2
Repr. 1: Reproductive toxicity – Category 1
Repr. 1B: Reproductive toxicity – Category 1B
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

US