

# SAFETY DATA SHEET

## HARDENING COMPOUND

SDS Revision Date: 05/28/2015



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### 1. PRODUCT AND COMPANY IDENTIFICATION

#### 1.1 Product Identifiers

<b>Product Identity</b>	Hardening Compound
<b>Alternate Names</b>	Cavity Preservative Powder, Mixture

#### 1.2 Relevant identified uses of the substance or mixture and uses advised against

<b>Identified Uses</b>	Preservative Powder, Sundry
<b>Application Method</b>	See Technical Data Sheet

#### 1.3 Details of the supplier of the safety data sheet

<b>Company Name</b>	Hydrol Chemical Company, Inc. 520 Commerce Drive Yeadon, PA 19050
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#### 1.4 Emergency telephone number

<b>CHEMTREC (USA)</b>	(800) 424-9300
<b>Customer Service</b>	
<b>Hydrol Chemical Company, Inc.</b>	(800) 345-8200 (610) 622-3603

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### 2. HAZARDS IDENTIFICATION

#### 2.1 Classification of the substance or mixture

##### GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Acute toxicity 4; H302	Harmful if swallowed.
Acute toxicity 4; H332	Harmful if inhaled.
Skin irritation 2; H315	Causes skin irritation.
Eye damage 1; H318	Causes serious eye damage.
Skin sensitivity 1; H317	May cause an allergic skin reaction.
Carcinogenicity 2; H351	Suspected of causing cancer.
STOT – single exposure 3; H335	May cause respiratory irritation.

#### 2.2 GHS Label elements, including precautionary statements

**Pictogram:**



**Signal word:** Danger

**Hazard statements:**

H302 Harmful if swallowed.  
H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.  
H318 Causes serious eye damage.  
H335 May cause respiratory irritation.  
H351 Suspected of causing cancer.

**Precautionary statements:**

P201 Obtain special instructions before use.  
P202 Do not handle until all safety precautions have been read and understood.  
P261 Avoid breathing dust / fume / gas / mist / vapors / spray.  
P264 Wash thoroughly after handling.  
P270 Do not eat, drink, or smoke when using this product.  
P272 Contaminated work clothing should not be allowed out of the workplace.  
P280 Wear protective gloves / eye protection / face protection.

**Response statements:**

P301+310 IF SWALLOWED: Immediately call a POISON CENTER or doctor / physician.  
P302+352 IF ON SKIN: Wash with plenty of soap and water.  
P305+351+338 IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing.  
P308+313 If exposed or concerned: Get medical advice / attention.  
P321 Specific treatment (see information on this label).  
P330 Rinse mouth.  
P333+313 IF skin irritation or a rash occurs: Get medical advice or attention.  
P363 Wash contaminated clothing before reuse.

**Storage statements:**

P405 Store locked up.

**Disposal statements:**

P501 Dispose of contents / container in accordance with local / national regulations.

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### 3. COMPOSITION / INFORMATION ON INGREDIENTS

This product contains the following substances that present a hazard within the meaning of the relevant State and Federal Hazardous Substances Regulations.

<u>Ingredient / Chemical Designations</u>	<u>Weight %</u>	<u>GHS Classification</u>	<u>Notes</u>
Calcium Sulfate CAS Number: 0007778-18-9	15 – 30		(1)(2)
Potassium Aluminum Sulfate CAS Number: 0010043-67-1	20 – 35		(1)
Benzoic Acid CAS Number: 0000065-85-0	0.1 – 1.0	Skin Irritant 2; H315 Eye Damage 1; H318 STOT RE 1; H372 Acute aquatic toxicity 3; H402	(1)
Diethylene Glycol CAS Number: 0000111-46-6	1.0 – 10	Acute Toxicity 4; H302 STOT RE 2; H373	(1)
Paraformaldehyde CAS Number: 0030525-89-4	0.1 – 1.0	Flammable Solid 2; H228 Acute Toxicity 4; H332 Acute Toxicity 4; H302 Skin Irritant 2; H315 Skin Sensitivity 1; H317 Eye Damage 1; H318 STOT SE 3; H335 Carcinogenicity 2; H351 Acute aquatic toxicity 3; H402	(1)

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- (1) Substance classified with a health or environmental hazard.  
(2) Substance with a workplace exposure limit.

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### 4. FIRST AID MEASURES

#### 4.1 Description of first aid measures

- General:** Move victim to fresh air.  
Call 911 or emergency medical service.  
Give artificial respiration if victim is not breathing.  
Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.  
Administer oxygen if breathing is difficult.  
Remove and isolate contaminated clothing and shoes.  
In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.  
Keep victim warm and quiet.  
Effects of exposure (inhalation, ingestion, or skin contact) to substance may be delayed.  
Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.
- Inhalation:** Move victim to fresh air. If breathing is irregular or stopped, give artificial respiration. If unconscious, place in the recovery position and obtain immediate medical attention.
- Eyes:** Irrigate copiously with clean, fresh water for at least 15 minutes, holding eyelids apart, and seek medical attention.
- Skin:** Remove contaminated clothing. Wash with soap and water.

**Ingestion:** If the person is conscious, induce vomiting immediately by giving two glasses of water and pressing finger down throat. Repeat until vomit is clear, then give milk. Contact a physician immediately.

#### **4.2 Most important symptoms and effects, both acute and delayed**

**Overview** Effects of contact or inhalation may be delayed. Possible cancer hazard. Contains an ingredient which may cause cancer based on animal data.

**Inhalation:** Highly irritating to upper respiratory tract. May cause inflammation of the lining of the nose, throat, and lungs, with bronchial pneumonia and edema possible from extreme irritating exposure.

**Eyes:** Causes severe eye irritation.

**Skin:** Contact with dust can cause reddening and swelling. Prolonged and repeated contact causes a hardening effect. May cause contact allergic dermatitis.

**Ingestion:** Harmful if swallowed.

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### **5. FIRE-FIGHTING MEASURES**

#### **5.1 Extinguishing media**

Dry chemical, foam, carbon dioxide, and water fog.

#### **5.2 Special hazards arising from the substance or mixture**

May form formaldehyde gas, carbon oxides, hydrogen, formic acid, and various hydrocarbons. Incomplete combustion may also produce irritating smoke and toxic or irritating gases or fumes.

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Avoid breathing dust / mist / fume / gas / vapors / spray.

#### **5.3 Advice for fire-fighters**

Wear positive pressure self-contained breathing apparatus (SCBA).

Wear chemical protective clothing that is specifically recommended by the manufacturer. It may provide little or no thermal protection in fire situations ONLY; It is not effective in spill situations where direct contact with the substance is possible.

May cause toxic effects if inhaled or ingested / swallowed.

Contact with substance may cause burns to skin and eyes.

Fire may produce irritating, corrosive, and/or toxic gases.

Runoff from fire control or dilution water may cause pollution.

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### **6. ACCIDENTAL RELEASE MEASURES**

#### **6.1 Personal precautions, protective equipment, and emergency procedures**

Prevent entry into waterways, sewers, basements, or confined areas.

#### **6.2 Environmental precautions**

Do not allow spills to enter drains or watercourses.

Use good personal hygiene practices. Wash hands before eating, drinking, smoking, or use of the toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

### 6.3 Methods and material for containment and cleanup

As an immediate precautionary measure, isolate spill or leak area for at least 25 meters (75 feet) in all directions.  
Keep unauthorized personnel away.  
Stay upwind.  
Keep out of low areas.  
Ventilate closed spaces before entering.  
Clean up solid material carefully. Remove material to a chemical disposal area.

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## 7. HANDLING AND STORAGE

### 7.1 Precautions for safe handling

See Section 2 for further details.

### 7.2 Conditions for safe storage, including any incompatibilities

Handle containers carefully to prevent damage and spillage.  
Incompatible materials: Avoid contact with strong oxidizers / alkalis / mineral acids / phenol / urea.  
See Section 2 for further details.

### 7.3 Specific end use(s)

No data available.

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## 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

### 8.1 Control parameters

<u>Ingredient / Chemical Designations</u>	<u>Exposure</u>	
	<u>Source</u>	<u>Value</u>
Calcium Sulfate CAS Number: 0007778-18-9	OSHA ACGIH NIOSH Supplier	PEL 5 mg/m <sup>3</sup> Respirable Fraction, 15 mg/m <sup>3</sup> Total Dust TWA 10 mg/m <sup>3</sup> Inhalable Fraction PEL 5 mg/m <sup>3</sup> Respirable Fraction, 10 mg/m <sup>3</sup> Total Dust No established limit
Potassium Aluminum Sulfate CAS Number: 0010043-67-1	OSHA ACGIH NIOSH Supplier	No established limit No established limit No established limit No established limit
Benzoic Acid CAS Number: 0000065-85-0	OSHA ACGIH NIOSH Supplier	No established limit No established limit No established limit No established limit
Diethylene Glycol CAS Number: 0000111-46-6	OSHA ACGIH NIOSH Supplier	No established limit No established limit No established limit No established limit
Paraformaldehyde CAS Number: 0030525-89-4	OSHA ACGIH NIOSH Supplier	No established limit No established limit No established limit No established limit

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## Carcinogen Data

<u>Ingredient / Chemical Designations</u>	<u>Source</u>	<u>Value</u>
Calcium Sulfate CAS Number: 0007778-18-9	OSHA NTP IARC	Select Carcinogen: No Known: No; Suspected: No Group 1, 2a, 2b, 3, 4: No
Potassium Aluminum Sulfate CAS Number: 0010043-67-1	OSHA NTP IARC	Select Carcinogen: No Known: No; Suspected: No Group 1, 2a, 2b, 3, 4: No
Benzoic Acid CAS Number: 0000065-85-0	OSHA NTP IARC	Select Carcinogen: No Known: No; Suspected: No Group 1, 2a, 2b, 3, 4: No
Diethylene Glycol CAS Number: 0000111-46-6	OSHA NTP IARC	Select Carcinogen: No Known: No; Suspected: No Group 1, 2a, 2b, 3, 4: No
Paraformaldehyde CAS Number: 0030525-89-4	OSHA NTP IARC	Select Carcinogen: No Known: No; Suspected: No Group 1, 2a, 2b, 3, 4: No

## 8.2 Exposure controls

<b>Respiratory</b>	Not necessary where area is properly ventilated.
<b>Eyes</b>	Wear safety eyewear; safety glasses, goggles, or visors to protect against splashing liquid.
<b>Skin</b>	Wear overalls which cover the body, arms, and legs. Skin should not be exposed. All parts of the body should be washed after contact. Wear PVC, vinyl, nitrile, or latex gloves.
<b>Engineering Controls</b>	Provide adequate ventilation. If the use of local exhaust ventilation is insufficient to maintain vapor levels below occupational exposure limits, suitable respiratory protection must be worn.
<b>Other Work Practices</b>	Use good personal hygiene. Wash hands before eating, drinking, smoking, or toileting. Promptly remove soiled clothing; wash thoroughly before reuse.

See Section 2 Precautionary Statements for further details.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance</b>	White powder
<b>Odor</b>	Pungent
<b>Odor threshold</b>	No data available
<b>pH</b>	N/A
<b>Melting pt. / freezing pt.</b>	No data available
<b>Initial boiling pt. and boiling range</b>	N/A
<b>Flash point (TCC)</b>	> 100C (>212°F)
<b>Evaporation rate (Bu Acetate = 1)</b>	N/A
<b>Flammability (solid, gas)</b>	N/A
<b>Upper/Lower flammability or explosion limits</b>	Lower explosive limit: 7% Upper explosive limit: 73%
<b>Vapor pressure (Pa)</b>	No data available
<b>Vapor density</b>	Greater than 1
<b>Specific gravity</b>	No data available
<b>Solubility in water</b>	No data available
<b>Partition coefficient n-octanol/water (log Pow)</b>	No data available
<b>Auto-ignition temperature (C)</b>	No data available
<b>Decomposition temperature (C)</b>	No data available
<b>Viscosity (cps)</b>	No data available

## 9.2 Other information

No other relevant information.

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## 10. STABILITY AND REACTIVITY

### 10.1 Reactivity

Hazardous polymerization will not occur.

### 10.2 Chemical stability

Stable under recommended storage/handling conditions. May form formic acid and methanol at elevated temperatures.

### 10.3 Possibility of hazardous reactions

No data available.

### 10.4 Conditions to avoid

Avoid heat and open flame.

### 10.5 Incompatible materials

Avoid contact with strong oxidizers, strong alkalis, strong mineral acids, phenol, and urea.

### 10.6 Hazardous decomposition products

May form formaldehyde gas, carbon monoxide and dioxide.

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## 11. TOXICOLOGICAL INFORMATION

### Acute toxicity

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Ingredient / Chemical Designations	Oral LD50 (mg/kg)	Skin LD50 (mg/kg)	Inhalation Vapor LD50 (mg/L/4hr)	Inhalation Dust/Mist LD50 (mg/L/4hr)	Inhalation Gas LD50 (ppm)
Calcium Sulfate CAS Number: 0007778-18-9	No data available	No data available	No data available	No data available	No data available
Potassium Aluminum Sulfate CAS Number: 0010043-67-1	No data available	No data available	No data available	No data available	No data available
Benzoic Acid CAS Number: 0000065-85-0	2,360.00, Rat - Category: N/A	>2,000.00, Rabbit - Category: N/A	No data available	>12.20, Rat - Category: N/A	No data available
Diethylene Glycol CAS Number: 0000111-46-6	500.00, Rat - Category: 4	11,890.00, Rabbit - Category: N/A	No data available	No data available	No data available
Paraformaldehyde CAS Number: 0030525-89-4	592.00, Rat - Category: 4	10,000.00, Rabbit - Category: N/A	No data available	1.10, Rat - Category: 4	No data available

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Item	Category	Hazard
Acute Toxicity (mouth)	4	Harmful if swallowed
Acute Toxicity (skin)	-	N/A
Acute Toxicity (inhalation)	-	Harmful if inhaled
Skin Corrosion / Irritation	2	Causes skin irritation
Eye Damage / Irritation	1	Causes serious eye damage
Sensitization (respiratory)	-	N/A
Sensitization (skin)	1	May cause an allergic reaction
Germ Toxicity	-	N/A
Carcinogenicity	2	Suspected of causing cancer
Reproductive Toxicity	-	N/A
Specific Target Organ Systemic Toxicity (single exposure)	3	May cause respiratory irritation
Specific Target Organ Systemic Toxicity (repeated exposure)	-	N/A
Aspiration Hazard	-	N/A

## 12. ECOLOGICAL INFORMATION

### 12.1 Toxicity

#### Aquatic Ecotoxicity

Ingredient / Chemical Designations	96 hr LC50 Fish (mg/l)	48 hr EC50 Crustacean (mg/l)	ErC50 Algae (mg/l)
Calcium Sulfate CAS Number: 0007778-18-9	1,970.00, Pimephales promelas	No data available	No data available
Potassium Aluminum Sulfate CAS Number: 0010043-67-1	No data available	No data available	No data available
Benzoic Acid CAS Number: 0000065-85-0	44.60, Lepomis macrochirus	860.00, Daphnia magna	>33.10, Pseudokirchneriella subcapitata
Diethylene Glycol CAS Number: 0000111-46-6	75,200.00, Pimephales promelas	84,000.00, Daphnia magna	No data available
Paraformaldehyde CAS Number: 0030525-89-4	No data available	No data available	No data available

### 12.2 Persistence and degradability

No data available

### 12.3 Bioaccumulative potential

No data available

### 12.4 Mobility in soil

No data available

### 12.5 Results of PBT and vPvB assessment

This product contains no PBT/vPvB chemicals

### 12.6 Other adverse effects

No data available



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### 13. DISPOSAL CONSIDERATIONS

#### 13.1 Waste treatment methods

Do not allow into drains or water courses. Wastes and emptied containers should be disposed of in accordance with regulations enacted under the Control of Pollution Act and the Environmental Protection Act.

Using information supplied within this SDS, advice should be obtained from the Waste Regulation Authority whether any special local municipal waste regulations apply.

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### 14. TRANSPORTATION INFORMATION

#### 14.1 Transport Classes

##### DOT (Domestic Surface Transportation)

##### DOT Proper Shipping

Name: Not Regulated

DOT Shipping Class: N/A

##### IMO / IMDG (Ocean Transportation)

##### IMDG Proper Shipping

Name: Not Regulated

IMDG Hazard Class: N/A

Sub Class: N/A

#### 14.2 Environmental hazards

DOT: N/A

IMDG:

Marine pollutant: N/A

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### 15. REGULATORY INFORMATION

**Overview** The data provided in this section includes select regulations, and is not inclusive of all regulations that may be applicable to this product. All ingredients of this product are listed on the TSCA Inventory, or are not required to be listed.

**WHMIS Classification** D2B E

**US EPA Tier II Hazards**

Fire:	No
Sudden Pressure Release:	No
Reactivity:	No
Immediate Health:	No
Delayed Health:	No

#### EPCRA 311/312 Chemicals and RQ (>0.1%)

Paraformaldehyde (1,000 lbs)  
Benzoic Acid (no data available)  
Diethylene Glycol (no data available)

#### EPCRA 302 Extremely Hazardous (>0.1%)

None listed

#### EPCRA 313 Toxic Chemicals (>0.1%)

None listed

#### Proposition 65 - Carcinogens (>0.1%)

None listed

#### Proposition 65 - Developmental Toxins (>0.0%)

None listed

**Proposition 65 - Female Reproductive Toxins (>0.0%)**

None listed

**Proposition 65 - Male Reproductive Toxins (>0.0%)**

None listed

**NJ RTK Substances (>1.0%)**

Paraformaldehyde

Benzoic Acid

Diethylene Glycol

**PA RTK Substances (>1.0%)**

Paraformaldehyde

Benzoic Acid

Diethylene Glycol

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**16. OTHER INFORMATION**

All information contained herein is based upon data believed to be correct. However, no guarantee, expressed or implied, is made with respect to the information contained within. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to this product. Users of this product must comply with all health and safety laws and regulations applicable.

The full text of the phrases appearing in section 3 is as follows:

- H228 Flammable solid
- H302 Harmful if swallowed
- H315 Causes skin irritation
- H317 May cause an allergic skin reaction
- H318 Causes serious eye damage
- H319 Causes serious eye irritation
- H332 Harmful if inhaled
- H335 May cause respiratory irritation
- H351 Suspected of causing cancer
- H372 Causes damage to organs (lungs) through prolonged or repeated exposure if inhaled
- H373 Causes damage to organs (kidneys) through prolonged or repeated exposure if swallowed
- H402 Harmful to aquatic life

This Safety Data Sheet was prepared using information provided by / obtained by Hydrol Chemical Company, Inc. The information is offered for your consideration and guidance when exposed to the product. Hydrol Chemical Company, Inc. expressly disclaims all expressed or implied warranty and assumes no responsibility for the accuracy or completeness of the data contained herein. The data in this SDS does not apply to use with any other product or in any other process as to the accuracy of and/or sufficiency of such information. This SDS may not be changed or altered in any way without the expressed knowledge and permission of Hydrol Chemical Company, Inc.

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