

**DEVELOPING - SINGLE BATH, PARTIAL STAND AGITATION** this is our recommended method of development. Negatives developed using the partial stand method will show smoother grain, higher acutance (apparent sharpness) and hold more highlight detail, meaning easier printing, than the 'normal' method. The dilutions, mixing and temperatures are the same as for the normal agitation method. Pour in the developer and agitate for the first 60 seconds, then for 10 seconds every 3 minutes. Allow the tank to stand undisturbed between agitations. Starting time is 10.5 minutes. There will be a longer stand time at the end; that is ok. The rest of the procedure is as for normal agitation. As always, we recommend that for ultimate control and results that you perform standard tests to discern your personal film speed and development times. However, Prescysol EF is so forgiving and tolerant that using the makers ISO and following our instructions will yield superb negatives for the vast majority of applications, and far better than any normal developer.

**FOR ANSWERS TO QUESTIONS ON THE USE OF PRESCYSOL EF DEVELOPER, PLEASE CALL US AT 406-754-2891.**

# PHOTOGRAPHERS' FORMULARY INC.

P. O. Box 950 • Condon MT 59826 • 800-922-5255 • FAX 406-754-2896

## PRESCYSOL EF

PRESCYSOL EF is a specially formulated developer unsurpassed in its ability to provide superb negatives with extremely fine grain, the highest available sharpness, smoothly graded tones and delicate and translucent highlights. PRESCYSOL EF is a tanning and staining developer. As the developer is absorbed, the emulsion is tanned, or hardened, and this hardening is variable, being greater in areas of greater exposure. As the emulsion tans, it inhibits the absorption of further amounts of the developing agent, and so development in these highlights areas is restrained. The lower tanning action in the shadow areas allows development to continue and these areas continue to build, producing negatives with rich, deep shadows, beautifully graded mid-tones, and delicate highlights.

Negatives developed in PRESCYSOL EF, particularly using the partial stand method, will yield full speed, exhibit high acutance, and will need considerably less burning-in to areas such as skies. As development proceeds, oxidation and natural by-products of the process stain the emulsion brown, the staining being proportional to the exposure level of the various parts of the negative. The result is a continuously variable mask of printing density across the tonal range of the negative. Further, as the emulsion is stained mostly between the silver grains the effect is to soften the grain and so produce a smoother tonality in large areas such as sky and mist, where grain can normally be such a problem. PRESCYSOL EF is an extremely tolerant developer; films of different make and speed can be developed together at the same time. For example, HP5 400 (120 roll film) and Delta 100 (35mm) despite being of totally different grain structure can be developed together in the same tank for the same time. In fact, the modern tabular grain films (which require closer control of times and temperatures in normal developers and are more susceptible to burned highlights and blocked shadows) will benefit enormously from being developed in PRESCYSOL EF, yielding the fine grain, tone and acutance of which these films are capable.

# PHOTOGRAPHERS' FORMULARY INC.

P. O. Box 950 • Condon MT 59826 • FAX 406-754-2896



10-1175



# Material Safety Data Sheet

|             |               |     |                               |
|-------------|---------------|-----|-------------------------------|
| NFPA        | HMIS          |     | Personal Protective Equipment |
|             | Health Hazard | (3) | <br>See Section 15.           |
| Fire Hazard | (0)           |     |                               |
| Reactivity  | (0)           |     |                               |

|   |  |                                 |                   |
|---|--|---------------------------------|-------------------|
| <b>Section 1. Chemical Product and Company Identification</b> |  |                                 |                   |
| Common Name/<br>Trade Name                                    | Sodium bisulfite   | Code                            | S3700             |
|   |  | CAS#                            | 7631-90-5         |
| Manufacturer  | SPECTRUM CHEMICAL MFG. CORP.<br>14422 SOUTH SAN PEDRO STREET<br>GARDENA, CALIFORNIA 90248-9985 | RTECS                           | VZ2000000         |
|   |  | TSCA                            | On the TSCA list. |
| Commercial Name(s)  | Not available  | CI#                             | Not available.    |
| Synonym   | Not available.   | <b>In case of emergency</b>     |                   |
| Chemical Name   |  | CHEMTREC (24hr) 800-424-9300    |                   |
| Chemical Family   | Not available.   | Emergency phone: (310) 516-8000 |                   |
| Chemical Formula  | NaHSO <sub>3</sub>   |                                 |                   |
| Supplier  | SPECTRUM QUALITY PRODUCTS<br>14422 S. SAN PEDRO STREET<br>GARDENA, CA 90248-9985               |                                 |                   |

|  |                   |                          |                           |                           |             |
|--|-------------------|--------------------------|---------------------------|---------------------------|-------------|
| <b>Section 2. Composition and Information on Ingredients</b> |                   |                          |                           |                           |             |
|  |                   |                          | <i>Exposure Limits</i>    |                           |             |
| Name   | CAS#              | TWA (mg/m <sup>3</sup> ) | STEL (mg/m <sup>3</sup> ) | CEIL (mg/m <sup>3</sup> ) | % by Weight |
| Sodium bisulfite   | 7631-90-5         |                          |                           |                           | 100         |
| Toxicological Data<br>on Ingredients                         | Sodium bisulfite: |                          |                           |                           |             |

|  |   |
|--|---|
| <b>Section 3. Hazards Identification</b> |   |
| Potential Acute Health Effects           | Very dangerous in case of skin contact (irritant), of ingestion. Slightly dangerous to dangerous in case of eye contact (irritant), of inhalation. Very slightly to slightly dangerous in case of skin contact (corrosive, permeator). Corrosive to eyes and skin. The amount of tissue damage depends on length of contact. Eye contact can result in corneal damage or blindness. Skin contact can produce inflammation and blistering. Inhalation of dust will produce irritation to gastro-intestinal or respiratory tract, characterized by burning, sneezing and coughing. Severe over-exposure can produce lung damage, choking, unconsciousness or death. This product may irritate eyes and skin upon contact. |
| Potential Chronic                        | CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. Toxicity of the product to the reproductive system: Not available. Repeated  |

Health  
Effects

exposure of the eyes to a low level of dust can produce eye irritation. Repeated skin exposure can produce local skin destruction, or dermatitis. Repeated inhalation of dust can produce varying degree of respiratory irritation or lung damage.

#### Section 4. First Aid Measures

Eye  
Contact

Check for and remove any contact lenses. IMMEDIATELY flush eyes with running water for at least 15 minutes, keeping eyelids open. COLD water may be used. DO NOT use an eye ointment. Seek medical attention.

Skin  
Contact

If the chemical got onto the clothed portion of the body, remove the contaminated clothes as quickly as possible, protecting your own hands and body. Place the victim under a deluge shower. If the chemical touches the victim's exposed skin, such as the hands: Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to clean folds, crevices, creases and groin. COLD water may be used. If irritation persists, seek medical attention. Wash contaminated clothing before reusing.

Hazardous  
Skin  
Contact

Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek medical attention.

Inhalation

Allow the victim to rest in a well ventilated area. Seek immediate medical attention.

Hazardous  
Inhalation

Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. WARNING: It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Seek immediate medical attention.

Ingestion

DO NOT induce vomiting. Have conscious person drink several glasses of water or milk. Seek immediate medical attention.

Hazardous  
Ingestion

DO NOT induce vomiting. Examine the lips and mouth to ascertain whether the tissues are damaged, a possible indication that the toxic material was ingested; the absence of such signs, however, is not conclusive. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek medical attention.

#### Section 5. Fire and Explosion Data

Flammability of the Product

Non-flammable.

Auto-Ignition Temperature

Not applicable.

Flash Points

Not applicable.

Flammable Limits

Not applicable.

|  |  |
|--|--|
| Products of Combustion                         | Not applicable.  |
| Fire Hazards in Presence of Various Substances | Not applicable.  |
| Explosion in Presence of Various Substances    | Risks of explosion of the product in presence of mechanical impact: Not available.<br>Risks of explosion of the product in presence of static discharge: Not available.<br>No specific information is available in our database regarding the product's risks of explosion in the presence of various materials. |
| Fire Fighting Media and Instructions           | Non-flammable.   |
| Special Remarks on Fire Hazards                | No additional remark.  |
| Special Remarks on Explosion Hazards           | No additional remark.  |

#### Section 6. Accidental Release Measures

|             |  |
|-------------|--|
| Small Spill | Use appropriate tools to put the spilled solid in a convenient waste disposal container.   |
| Large Spill | Corrosive solid. Stop leak if without risk. DO NOT get water inside container. DO NOT touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal. |

#### Section 7. Handling and Storage

|             |  |
|-------------|--|
| Precautions | Keep container dry. DO NOT breathe dust. Never add water to this product. In case of insufficient ventilation, wear suitable respiratory equipment. If you feel unwell, seek medical attention and show the label when possible. Avoid contact with skin and eyes. |
| Storage     | Corrosive materials should be stored in a separate safety storage cabinet or room.   |

#### Section 8. Exposure Controls/Personal Protection

|                      |   |
|----------------------|---|
| Engineering Controls | Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit. |
| Personal Protection  | Splash goggles. Synthetic apron. Vapor and dust respirator. Be sure to use a MSHA/NIOSH approved respirator or equivalent. Gloves (impervious). Wear appropriate respirator when ventilation is inadequate.   |
| Personal             | Splash goggles. Full suit. Vapor and dust respirator. Boots. Gloves. A self contained breathing   |

Protection in  
Case of a  
Large Spill

not be sufficient; consult a specialist BEFORE handling this product.

Exposure  
Limits

TWA: 5 (mg/m ) from ACGIH Consult local authorities for acceptable exposure limits.

*Section 9. Physical and Chemical Properties*

|                               |  |       |                |
|-------------------------------|--|-------|----------------|
| Physical state and appearance | Solid.                                   | Odor  | Not available. |
| Molecular Weight              | 104.07                                   | Taste | Not available. |
| pH (1% soln/water)            | Not available.                           | Color | Not available. |
| Boiling Point                 | Not available.                           |       |                |
| Melting Point                 | Decomposes.                              |       |                |
| Critical Temperature          | Not available.                           |       |                |
| Specific Gravity              | 1.48 (Water = 1)                         |       |                |
| Vapor Pressure                | Not available.                           |       |                |
| Vapor Density                 | Not available.                           |       |                |
| Volatility                    | Not available.                           |       |                |
| Odor Threshold                | Not available.                           |       |                |
| Evaporation rate              | Not available.                           |       |                |
| Viscosity                     | Not available.                           |       |                |
| Water/Oil Dist. Coeff.        | Not available.                           |       |                |
| Ionicity (in Water)           | Not available.                           |       |                |
| Dispersion Properties         | See solubility in water.                 |       |                |
| Solubility                    | Easily soluble in cold water, hot water. |       |                |

*Section 10. Stability and Reactivity Data*

|   |  |
|---|--|
| Stability                               | The product is stable.   |
| Instability Temperature                 | Not available.   |
| Conditions of Instability               | No additional remark.  |
| Incompatibility with Various Substances | No specific information is available in our database regarding the reactivity of this material in presence of various other materials. |
| Corrosivity                             | Non-corrosive in presence of glass.  |
| Special Remarks on Reactivity           | No additional remark.  |
| Special Remarks on Corrosivity          | No additional remark.  |

*Section 11. Toxicological Information*

|                 |                        |
|-----------------|------------------------|
| Routes of Entry | Ingestion, Inhalation. |
|-----------------|------------------------|

Toxicity to Animals Acute oral toxicity (LD50): 2000 mg/kg (Rat).

Chronic Effects on Humans Toxicity of the product to the reproductive system: Not available.

Other Toxic Effects on Humans Very dangerous in case of skin contact (irritant), of ingestion. Slightly dangerous to dangerous in case of eye contact (irritant), of inhalation. Very slightly to slightly dangerous in case of skin contact (corrosive, permeator).

Special Remarks on Toxicity to Animals No additional remark.

Special Remarks on Chronic Effects on Humans No additional remark.

Special Remarks on other Toxic Effects on Humans No additional remark.

#### Section 12. Ecological Information

Ecotoxicity Not available.

BOD5 and COD Not available.

Products of Biodegradation Some metallic oxides.

Toxicity of the Products of Biodegradation The products of degradation are more toxic..

Special Remarks on the Products of Biodegradation No additional remark.

#### Section 13. Disposal Considerations

Waste Disposal Recycle to process, if possible. Consult your local or regional authorities.

#### Section 14. Transport Information

DOT Classification Not a DOT controlled material (United States).

Identification Not applicable (PIN and PG).

Special Provisions for Transport Not applicable.

DOT (Pictograms)

Section 15. Other Regulatory Information and Pictograms

Federal and  
State Regulations

Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires emergency planning based on Threshold Planning Quantities (TPQs) and release reporting based on Reportable Quantities (RQs) in 40 CFR 355 (used for SARA 302, 304, 311 and 312). Components present in this product at a level which could require reporting under the statute are:

NONE

Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires submission of annual report release of toxic chemicals that appear in 40 CFR 372 (used for SARA 313). This information must be included in all MSDSs that are copied and distributed for this material. Components present in this product at a level which could require reporting under the statute are:

NONE

WARNING: This product contains a chemical known to the State of California to cause cancer. Chemical ingredient(s) requiring this warning:

NONE

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm. Chemical ingredient(s) requiring this warning: NONE

Other Classifications

WHMIS (Canada)

DSCL (EEC)



Other Classifications

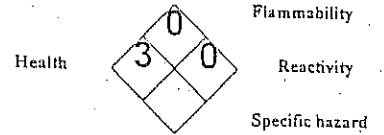
WHMIS (Canada)

DSCL (EEC)

HMS (U.S.A.)

|                     |   |
|---------------------|---|
| Health Hazard       | 1 |
| Fire Hazard         | 0 |
| Reactivity          | 0 |
| Personal Protection |   |

National Fire Protection Association (U.S.A.)



Personal Protective Equipment



Protective Gloves (impervious).



Synthetic apron.



Vapor and dust respirator. Be sure to use a MSHA/NIOSH approved respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.



Splash goggles.

Section 16. Other Information

References Not available.

Catalog Number(s) S1172, S1173

Other Special Considerations No additional remark.

Validated by E. Brull on 12/17/96.

Verified by E. Brull.  
Name

Emergency Phone: Number: 10

Notice to Reader  
Emergency phone: (310)516-8000 Notice to Reader All chemicals may pose unknown hazards and should be used with caution. This Material Safety Data Sheet (MSDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this MSDS. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this MSDS is based on technical data judged to be reliable, Spectrum Chemical Mfg. Corp. assumes no responsibility for the completeness or accuracy of the information contained herein.

10-0340



# Material Safety Data Sheet

|               |   |                               |   |             |   |            |   |                        |
|---------------|---|-------------------------------|---|-------------|---|------------|---|------------------------|
| NFPA          | HMIS  | Personal Protective Equipment |   |             |   |            |   |                        |
|               | <table border="1"> <tr> <td>Health Hazard</td> <td style="text-align: center;">3</td> </tr> <tr> <td>Fire Hazard</td> <td style="text-align: center;">1</td> </tr> <tr> <td>Reactivity</td> <td style="text-align: center;">0</td> </tr> </table> | Health Hazard                 | 3 | Fire Hazard | 1 | Reactivity | 0 | <p>See Section 15.</p> |
| Health Hazard | 3   |                               |   |             |   |            |   |                        |
| Fire Hazard   | 1   |                               |   |             |   |            |   |                        |
| Reactivity    | 0   |                               |   |             |   |            |   |                        |

|  |  |
|--|--|
| <b>Section 1. Chemical Product and Company Identification</b>                                  |  |
| Common Name/<br>Trade Name   | <b>Pyrocatechol</b>  |
| Code   | P4870  |
| CAS#   | 120-80-9   |
| Manufacturer   | SPECTRUM CHEMICAL MFG. CORP.<br>14422 SOUTH SAN PEDRO STREET<br>GARDENA, CALIFORNIA 90248-9985 |
| RTECS  | UX1050000  |
| TSCA   | On the TSCA list.  |
| Commercial Name(s)   | Not available  |
| CI#  | Not available.   |
| Synonym  | 1,2-Benzenediol  |
| Chemical Name  | Catechol   |
| Chemical Family  | Not available.   |
| Chemical Formula   | C6H6O2   |
| Supplier   | SPECTRUM QUALITY PRODUCTS<br>14422 S. SAN PEDRO STREET<br>GARDENA, CA 90248-9985               |
| <b>In case of emergency</b><br>CHEMTREC (24hr) 800-424-9300<br>Emergency phone: (310) 516-8000 |  |

|  |               |                        |              |              |             |
|--|---------------|------------------------|--------------|--------------|-------------|
| <b>Section 2. Composition and Information on Ingredients</b> |               |                        |              |              |             |
|  |               | <i>Exposure Limits</i> |              |              |             |
| Name   | CAS#          | TWA (mg/m3)            | STEL (mg/m3) | CEIL (mg/m3) | % by Weight |
| Pyrocatechol   | 120-80-9      |                        |              |              | 100         |
| Toxicological Data on Ingredients                            | Pyrocatechol: |                        |              |              |             |

|  |  |
|--|--|
| <b>Section 3. Hazards Identification</b> |  |
| Potential Acute Health Effects           | Extremely dangerous in case of skin contact (corrosive, irritant), of eye contact (irritant), of ingestion, of inhalation. Very dangerous in case of skin contact (sensitizer, permeator). Corrosive to eyes and skin. Severe over-exposure can result in death. Can be fatal if inhaled or ingested. This product may irritate eyes and skin upon contact. Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering. |
| Potential Chronic                        | Extremely dangerous in case of skin contact (corrosive, irritant), of eye contact (irritant), of ingestion, of inhalation. Very dangerous in case of skin contact (sensitizer, permeator). <b>CARCINOGENIC</b>   |

**Health Effects**

EFFECTS: Not available. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. The substance is toxic to lungs, mucous membranes. Toxicity of the product to the reproductive system: Not available. Repeated or prolonged exposure to the substance can produce target organs damage. Repeated exposure to an highly toxic material may produce general deterioration of health by an accumulation in one or many human organs. Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation.

**Section 4. First Aid Measures**

|                        |  |
|------------------------|--|
| Eye Contact            | Check for and remove any contact lenses. IMMEDIATELY flush eyes with running water for at least 15 minutes, keeping eyelids open. COLD water may be used. DO NOT use an eye ointment. Seek medical attention.  |
| Skin Contact           | If the chemical got onto the clothed portion of the body, remove the contaminated clothes as quickly as possible, protecting your own hands and body. Place the victim under a deluge shower. If the chemical touches the victim's exposed skin, such as the hands: Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to clean folds, crevices, creases and groin. COLD water may be used. Cover the irritated skin with an emollient. If irritation persists, seek medical attention. Wash contaminated clothing before reusing.   |
| Hazardous Skin Contact | Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.  |
| Inhalation             | Allow the victim to rest in a well ventilated area. Seek immediate medical attention.  |
| Hazardous Inhalation   | Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. WARNING: It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Seek immediate medical attention.   |
| Ingestion              | Remove dentures if any. Watch for an obstruction in the victim's mouth. Remove if possible what is causing the obstruction but do not force fingers or a hard object between the victim's teeth. Have conscious person drink several glasses of water or milk. INDUCE VOMITING by sticking finger in throat. Seek immediate medical attention.   |
| Hazardous Ingestion    | Examine the lips and mouth to ascertain whether the tissues are damaged, a possible indication that the toxic material was ingested; the absence of such signs, however, is not conclusive. Remove dentures if any. Watch for an obstruction in the victim's mouth. Remove if possible what is causing the obstruction but do not force fingers or a hard object between the victim's teeth. If a soft pad can be inserted between the victim's teeth, it will protect the tongue from being bitten. A badly bleeding tongue immensely complicates the patient's problems. Have conscious person drink several glasses of water or milk. INDUCE VOMITING by sticking finger in throat. Lower the head so that the vomit will not reenter the mouth and throat. If convulsions occur, do not restrain the victim, but do remove objects with which he (she) might injure himself (herself) or orient the victim to prevent him (her) from striking fixed heavy objects. If the convulsions cease, turn the victim on the side or face down so that any fluid in the mouth will drain. Seek immediate medical attention. |

**Section 5. Fire and Explosion Data**

|                             |   |
|-----------------------------|---|
| Flammability of the Product | Combustible.  |
| Auto-Ignition Temperature   | Not available.  |
| Flash Points                | CLOSED CUP: 127.22.C (261.F) OPEN CUP: 136.67.C (278.F) |
| Flammable Limits            | Not available.  |

|  |  |
|--|--|
| Products of Combustion                         | These products are carbon oxides (CO, CO2).  |
| Fire Hazards in Presence of Various Substances | No specific information is available in our database regarding the flammability of this product in presence of various materials.  |
| Explosion in Presence of Various Substances    | Risks of explosion of the product in presence of mechanical impact: Not available.<br>Risks of explosion of the product in presence of static discharge: Not available.<br>No specific information is available in our database regarding the product's risks of explosion in the presence of various materials. |
| Fire Fighting Media and Instructions           | SMALL FIRE: Use DRY chemicals, CO2, water spray or foam. LARGE FIRE: Use water spray, fog or foam. DO NOT use water jet.   |
| Special Remarks on Fire Hazards                | No additional remark.  |
| Special Remarks on Explosion Hazards           | No additional remark.  |

#### Section 6. Accidental Release Measures

|             |   |
|-------------|---|
| Small Spill | Use appropriate tools to put the spilled solid in a convenient waste disposal container.  |
| Large Spill | Poisonous solid. Stop leak if without risk. DO NOT get water inside container. DO NOT touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Eliminate all sources of ignition. Call for assistance on disposal. |

#### Section 7. Handling and Storage

|             |  |
|-------------|--|
| Precautions | Keep locked up. Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. DO NOT ingest. DO NOT breathe dust. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. |
| Storage     | Keep container dry. Keep in a cool place. Ground all equipment containing material. Keep container tightly closed. Keep in a cool, well-ventilated place. Highly toxic or infectious materials should be stored in a separate locked safety storage cabinet or room.   |

#### Section 8. Exposure Controls/Personal Protection

|                      |   |
|----------------------|---|
| Engineering Controls | Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit. |
| Personal Protection  | Splash goggles. Lab coat. Dust respirator. Be sure to use a MSHA/NIOSH approved respirator or equivalent. Gloves (impervious). Wear appropriate respirator when ventilation is inadequate.  |
| Personal             | Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus   |

Protection in  
Case of a  
Large Spill

sufficient; consult a specialist BEFORE handling this product.

Exposure  
Limits

TWA: 5 (ppm) TWA: 20 (mg/m ) Consult local authorities for acceptable exposure limits.

*Section 9. Physical and Chemical Properties*

|                               |                          |       |                |
|-------------------------------|--------------------------|-------|----------------|
| Physical state and appearance | Solid.                   | Odor  | Slight.        |
| Molecular Weight              | 110.11                   | Taste | Sweet. Bitter. |
| pH (1% soln/water)            | Not available.           | Color | Colorless.     |
| Boiling Point                 | 245.5.C (473.9.F)        |       |                |
| Melting Point                 | 105.C (221.F)            |       |                |
| Critical Temperature          | Not available.           |       |                |
| Specific Gravity              | 1.344 (Water = 1)        |       |                |
| Vapor Pressure                | Not available.           |       |                |
| Vapor Density                 | 3.79 (Air = 1)           |       |                |
| Volatility                    | Not available.           |       |                |
| Odor Threshold                | Not available.           |       |                |
| Evaporation rate              | Not available.           |       |                |
| Viscosity                     | Not available.           |       |                |
| Water/Oil Dist. Coeff.        | Not available.           |       |                |
| Ionicity (in Water)           | Not available.           |       |                |
| Dispersion Properties         | See solubility in water. |       |                |
| Solubility                    | Soluble in cold water.]  |       |                |

*Section 10. Stability and Reactivity Data*

|   |  |
|---|--|
| Stability                               | The product is stable.   |
| Instability Temperature                 | Not available.   |
| Conditions of Instability               | No additional remark.  |
| Incompatibility with Various Substances | No specific information is available in our database regarding the reactivity of this material in presence of various other materials. |
| Corrosivity                             | Non-corrosive in presence of glass.  |
| Special Remarks on Reactivity           | No additional remark.  |
| Special Remarks on Corrosivity          | No additional remark.  |


*Section 11. Toxicological Information*

|                 |                                      |
|-----------------|--------------------------------------|
| Routes of Entry | Ingestion. Skin contact. Inhalation. |
|-----------------|--------------------------------------|

|  |  |
|--|--|
| Toxicity to Animals                              | Acute oral toxicity (LD50): 210 mg/kg (Guinea pig). Acute dermal toxicity (LD50): 800 mg/kg (Rabbit).  |
| Chronic Effects on Humans                        | The substance is toxic to lungs, mucous membranes. Toxicity of the product to the reproductive system: Not available.  |
| Other Toxic Effects on Humans                    | Extremely dangerous in case of skin contact (corrosive, irritant), of eye contact (irritant), of ingestion, of inhalation. Very dangerous in case of skin contact (sensitizer, permeator). |
| Special Remarks on Toxicity to Animals           | No additional remark.  |
| Special Remarks on Chronic Effects on Humans     | No additional remark.  |
| Special Remarks on other Toxic Effects on Humans | No additional remark.  |

|   |   |
|---|---|
| <i>Section 12. Ecological Information</i>         |   |
| Ecotoxicity                                       | Not available.                              |
| BOD5 and COD                                      | Not available.                              |
| Products of Biodegradation                        | These products are carbon oxides (CO, CO2). |
| Toxicity of the Products of Biodegradation        | The products of degradation are more toxic. |
| Special Remarks on the Products of Biodegradation | No additional remark.                       |

|  |  |
|--|--|
| <i>Section 13. Disposal Considerations</i> |  |
| Waste Disposal                             | Recycle to process, if possible. Consult your local or regional authorities. |

|  |   |
|--|---|
| <i>Section 14. Transport Information</i> |   |
| DOT Classification                       | DOT CLASS 6.1: Poisonous material.  |
| Identification                           | Toxic solid, organic, n.o.s. (Pyrocatechol) UN2811 III                              |
| Special Provisions for Transport         | No additional remark.   |
| DOT (Pictograms)                         |  |

Section 15. Other Regulatory Information and Pictograms

Federal and State Regulations

Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires emergency planning based on Threshold Planning Quantities (TPQs) and release reporting based on Reportable Quantities (RQs) in 40 CFR 355 (used for SARA 302, 304, 311 and 312). Components present in this product at a level which could require reporting under the statute are:

NONE

Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires submission of annual report release of toxic chemicals that appear in 40 CFR 372 (used for SARA 313). This information must be included in all MSDSs that are copied and distributed for this material. Components present in this product at a level which could require reporting under the statute are:

Pyrocatechol

Pensylvania Right-To-Know, Hazardous substance List, Hazardous Substances and Special hazardous Substances on the list must be identified when present in products. Components present in this product at a level which could require reporting under the statute are:

Pyrocatechol

Massachusetts Right-To-Know, Substance List (MSL) Hazardous Substances and Extraordinarily Hazardous Substances on the MSL must be identified when present in products. Components present in this product at a level which could require reporting under the statute are:

Pyrocatechol

Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) requires notification of the National Response Center of release of quantities of Hazardous Substances equal or greater than the reportable quantities (RQs) in 40 CFR 302.4. Components present in this product at a level which could require reporting under the statute are:

Pyrocatechol

WARNING: This product contains a chemical known to the State of California to cause cancer. Chemical ingredient(s) requiring this warning:

NONE

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm. Chemical ingredient(s) requiring this warning: NONE

Other Classifications

WHMIS (Canada)

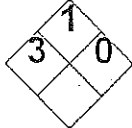
WHMIS CLASS D-1B: Material causing immediate and serious toxic effects (TOXIC).  
WHMIS CLASS D-2B: Material causing other toxic effects (TOXIC).

DSCL (EEC)





R39- Danger of very serious irreversible effects.  
R41- Risk of serious damage to eyes.  
R21/22- Harmful in contact with skin and



|                       |                |   |
|-----------------------|----------------|---|
| Other Classifications | WHMIS (Canada) | WHMIS CLASS D-1B: Material causing immediate and serious toxic effects (TOXIC).<br>WHMIS CLASS D-2B: Material causing other toxic effects (TOXIC).  |
|                       | DSCL (EEC)     | R39- Danger of very serious irreversible effects.<br>R41- Risk of serious damage to eyes.<br>R21/22- Harmful in contact with skin and if swallowed.<br>R26/27/28- Very toxic by inhalation, in contact with skin and if swallowed.<br>R42/43- May cause sensitization by inhalation and skin contact. |

|               |                     |     |   |   |                 |
|---------------|---------------------|-----|---|---|-----------------|
| HMIS (U.S.A.) | Health Hazard       | (2) | National Fire Protection Association (U.S.A.) |  | Flammability    |
|               | Fire Hazard         | (1) |   |   | Reactivity      |
|               | Reactivity          | (0) |   |   | Specific hazard |
|               | Personal Protection | ( ) |   |   | Health          |

|  |  |  |  |  |  |
|--|--|--|--|--|--|
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |

|                               |   |   |
|-------------------------------|---|---|
| Personal Protective Equipment |  | Protective Gloves (impervious).   |
|                               |  | Lab coat.   |
|                               |  | Dust respirator. Be sure to use a MSHA/NIOSH approved respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. |
|                               |  | Splash goggles.   |

Section 16. Other Information

References Not available.

Catalog Number(s) P1455

Other Special Considerations No additional remark.

Validated by E. Brull on 12/17/96.

Verified by E. Brull.  
Name

Emergency Phone: (310)516-8000

Notice to Reader

All chemicals may pose unknown hazards and should be used with caution. This Material Safety Data Sheet (MSDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this MSDS. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this MSDS is based on technical data judged to be reliable, Spectrum Chemical Mfg. Corp. assumes no responsibility for the completeness or accuracy of the information contained herein.

# MATERIAL SAFETY DATA SHEET (M. S. D. S.)

## SECTION – I, CHEMICAL IDENTIFICATION

NAME OF PRODUCT : METOL (p-METHYL AMINOPHENOL SULPHATE)  
CHEMICAL FORMULA :  $\text{HOC}_6\text{H}_4\text{NHCH}_3 \frac{1}{2} \text{H}_2\text{SO}_4$   
CAS NO. : 55-55-0

## SECTION – II, HAZARDS IDENTIFICATION

- TOXIC BY INHALATION, IN CONTACT WITH SKIN AND IF SWALLOWED.
- IRRITATING TO EYES, RESPIRATORY SYSTEM AND SKIN.
- IN CASE OF ACCIDENT OR IF YOU FEEL UNWELL, SEEK MEDICAL ADVICE IMMEDIATELY (SHOW THE LABEL WHERE POSSIBLE).
- IN CASE OF CONTACT WITH EYES, RINSE IMMEDIATELY WITH PLENTY OF WATER AND SEEK MEDICAL ADVICE.
- WEAR SUITABLE PROTECTIVE CLOTHING, GLOVES AND EYE/FACE PROTECTION.

Continue on page....2

(2)

### SECTION – III, FIRST-AID MEASURES

- IN CASE OF CONTACT, IMMEDIATELY FLUSH EYES WITH PLENTY AMOUNTS OF WATER FOR AT LEAST 15 MINUTES.
- IN CASE OF CONTACT, IMMEDIATELY WASH SKIN WITH SOAP AND COPIOUS AMOUNTS OF WATER.
- IF INHALED, REMOVE TO FRESH AIR. IF NOT BREATHING GIVE ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN.
- IF SWALLOWED, WASH OUT MOUTH WITH WATER PROVIDED PERSON IS CONSCIOUS. CALL A PHYSICIAN.
- WASH CONTAMINATED CLOTHING BEFORE REUSE.

### SECTION – IV, FIRE FIGHTING MEASURES

- EXTINGUISHING MEDIA  
WATER SPRAY.  
CARBON DIOXIDE, DRY CHEMICAL POWDER OR APPROPRIATE FOAM.
- SPECIAL FIREFIGHTING PROCEDURES  
WEAR SELF-CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING TO PREVENT CONTACT WITH SKIN AND EYES.
- UNUSUAL FIRE AND EXPLOSIONS HAZARDS  
EMITS TOXIC FUMES UNDER FIRE CONDITIONS.

Continue on page....3

(3)

### SECTION – V, ACCIDENTAL RELEASE MEASURES

- WEAR SELF-CONTAINED BREATHING APPARATUS, RUBBER BOOTS AND HEAVY RUBBER GLOVES.
- SWEEP UP, PLACE IN A BAG AND HOLD FOR WASTE DISPOSAL.
- VENTILATE AREA AND WASH SPILL SITE AFTER MATERIAL PICKUP IS COMPLETE.

### SECTION – VI, SAFE HANDLING / PERSONAL PROTECTION

- WEAR APPROPRIATE RESPIRATOR, CHEMICAL-RESISTANT GLOVES, SAFETY GOGGLES.
- SAFETY SHOWER AND EYE BATH.
- USE ONLY IN A CHEMICAL FUME HOOD.
- DO NOT BREATHE DUST.
- AVOID CONTACT WITH EYES, SKIN AND CLOTHING.
- AVOID PROLONGED OR REPEATED EXPOSURE.
- WASH THOROUGHLY AFTER HANDLING.
- TOXIC.
- IRRITANT.
- POSSIBLE SENSITIZER.
- KEEP TIGHTLY CLOSED.
- PROTECT FROM LIGHT.

### SECTION – VII, PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR : WHITE CRYSTALS, ODORLESS  
PHYSICAL PROPERTIES  
MELTING POINT : 260<sup>0</sup> C (DEC)  
AUTOIGNITION TEMPERATURE : 531<sup>0</sup> C

Continue on page....4

(4)

## SECTION -VIII, STABILITY AND REACTIVITY

- INCOMPATIBILITIES  
ACIDS  
ACIDS CHLORIDES  
ACID ANHYDRIDES  
OXIDIZING AGENTS  
SENSITIVE TO LIGHT

- HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS

THERMAL DECOMPOSITION MAY PRODUCE CARBON MONOXIDE, CARBON DIOXIDE, AND NITROGEN OXIDES.  
SULFUR OXIDES.

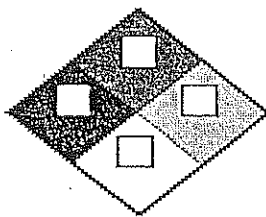
## SECTION -IX, TOXICOLOGICAL INFORMATION

### ACUTE EFFECTS

- HARMFUL IF SWALLOWED, INHALED OR ABSORBED THROUGH SKIN.
- CAUSES EYE AND SKIN IRRITATION.
- MATERIAL IS IRRITATING TO MUCOUS MEMBRANES AND UPPER RESPIRATORY TRACT.
- PROLONGED OR REPEATED EXPOSURE MAY CAUSE ALLERGIC REACTIONS IN CERTAIN SENSITIVE INDIVIDUALS.
- TO THE BEST OF OUR KNOWLEDGE, THE CHEMICAL, PHYSICAL, AND TOXICOLOGICAL PROPERTIES HAVE NOT BEEN THOROUGHLY INVESTIGATED.

## SECTION -X, OTHER INFORMATION

The information submitted is based on our current knowledge and experience. In view of the many factors that may affect processing and application, these data do not relieve processor from the responsibility of carrying out their own tests and experiments, neither do they imply any legally binding assurance of certain properties or of suitability for a specific purpose. It is the responsibility of those to whom we supply our products to ensure that any proprietary rights and existing laws and legislation are observed.



Material Safety Data Sheet  
 May be used to comply with  
 OSHA's Hazard Communication Standard  
 29 CFR 1910.1200 Standard must be  
 Consulted for specific requirements

U.S. Department of Labor  
 Occupational Safety And Health Administration  
 (Non-Mandatory Form)  
 Form Approved  
 OMB No. 1218-0072

|   |  |
|---|--|
| Identity (as used on label and list)<br><b>Glycin</b> CAS# 122-87-2 | Note: Blank spaces are permitted, if any item is not applicable, or no<br>Information is available, the space must be marked to indicate that. |
|---|--|

Section I

|   |  |
|---|--|
| Manufacturer's Name:<br>Photographer's Formulary, Inc.                      | Emergency Telephone Number:<br>800-424-9300                      |
| Address (Number Street, City, State and Zip):<br>Po Box 950 Condon MT 59826 | Telephone Number for Information:<br>406-754-2891 / 800-922-5255 |
|   | Date Prepared:<br>October 19, 2004                               |

Section II – Hazardous Ingredients/Identity Information

| Hazardous components<br>(Specific Chemical Identity: Common Name(s)) | OSHA PEL | ACGIH TLV | Other<br>Limits | %<br>Optional |
|--|----------|-----------|-----------------|---------------|
| Chemical Name or Synonym: N- (P-Hydroxyphenyl) (Glycine)             |          |           |                 |               |
| Chemical Family: Carboic Acid-Alcohol                                |          |           |                 |               |
| Formula: H0C6 H4NHCH2COOH  |          |           |                 |               |
|  |          |           |                 |               |
|  |          |           |                 |               |
|  |          |           |                 |               |
|  |          |           |                 |               |
|  |          |           |                 |               |
|  |          |           |                 |               |
|  |          |           |                 |               |
|  |          |           |                 |               |
|  |          |           |                 |               |

Section III – Physical/Chemical Characteristics:

|  |    |                                     |      |
|--|----|-------------------------------------|------|
| Boiling Point:   | NA | Specific Gravity:                   | NA   |
| Vapor Pressure: (mm Hg)                                  | NA | Melting Point                       | 230° |
| Vapor Density (AIR=1)                                    | NA | Evaporation Rate (Butyl Acetate =1) | NA   |
| Solubility in Water: Sparingly soluble                   |    |                                     |      |
| Appearance and Order: White to off white powder, no odor |    |                                     |      |

Section IV – Fire and Explosion Hazard Data

|  |                   |     |     |
|--|-------------------|-----|-----|
| Flash Point (Method Used)                          | Flammable Limits: | LEL | UEL |
| Extinguishing Media: Water spray, Co2 Dry Chemical |                   |     |     |
| Special Fire Fighting Procedures:                  |                   |     |     |

Section V – Reactivity Data

|           |          |   |                      |
|-----------|----------|---|----------------------|
| Stability | Unstable |   | Conditions to Avoid: |
|           | Stable   | X |                      |

Incompatibility (Materials to Avoid)

|                          |                |   |                      |
|--------------------------|----------------|---|----------------------|
| Hazardous Polymerization | May Occur      |   | Conditions to Avoid: |
|                          | Will Not Occur | X |                      |

Section VI – Health Hazard Data

|   |             |                  |                 |
|---|-------------|------------------|-----------------|
| Route(s) of Entry:  | Inhalation: | Skin:            | Ingestion:      |
| Health Hazards (Acute and Chronic): Prolonged Exposure may be irritating to the skin or eyes. |             |                  |                 |
| Carcinogenicity:  | NTP:        | IASC Monographs: | OSHA Regulated: |
| Signs and symptoms of Exposure  |             |                  |                 |
| Medical Conditions Generally Aggravated by Exposure:  |             |                  |                 |
| Emergency and First Aid Procedures: Wash with soap and warm water.                            |             |                  |                 |
| Eye Contact: Flush eyes with water fro 15 minutes.  |             |                  |                 |

Section VII – Precautions for safe Handling and Use:

|  |
|--|
| Steps to be taken in case Material Is Released or Spilled: Remove all sources of ignition, shovel into dry containers, then flush area with water. |
| Waste Disposal Method: <b>For disposal please contact your local sewer and water authorities</b>   |
| Material may be incinerated or sent to authorized treatment storage disposal facility.   |
| Precautions to be Taken in Handling And Storing:   |
| Other Precautions:   |

Section VIII – Control Measures

|   |                                |          |
|---|--------------------------------|----------|
| Respiratory Protection (Specify Type) Dust Mask                                     |                                |          |
| Ventilation   | Local Exhaust: Yes             | Special: |
|   | Mechanical:                    | Other:   |
| Protective Gloves: Rubber   | Eye Protection: Safety Goggles |          |
| Other Protective Clothing or Equipment: Apron                                       |                                |          |
| Work/ Hygienic Practices: Wash hands, face and all equipment used and counter tops. |                                |          |



10-0920

REPORT NUMBER: 703  
MSDS NO: P21725VS  
MAINFRAME UPLOAD DATE: 07/16/04

UNIVAR USA INC.  
MATERIAL SAFETY DATA SHEET

PAGE: 001  
VERSION: 003

PRODUCT: POTASSIUM BROMIDE

ORDER NO: 226085  
PROD NO : 614395

PHOTOGRAPHERS FORMULARY  
CALL IN ADVANCE TO MEET  
7079 HWY 83 N.  
BOX 89  
CONDON ,MT 59826

UNIVAR USA INC.  
6100 CARILLON POINT , KIRKLAND

(425)889-3400  
, WA 98033

----- EMERGENCY ASSISTANCE -----

FOR EMERGENCY ASSISTANCE INVOLVING CHEMICALS CALL - CHEMTREC  
(800)424-9300

\*\*\*\*\*  
PRODUCT IDENTIFICATION  
\*\*\*\*\*

PRODUCT NAME: POTASSIUM BROMIDE  
MSDS NUMBER: P21725VS  
DATE ISSUED: 11/19/02  
SUPERCEDES: NEW  
ISSUED BY: 006137

REVIEWED DATE: 07/16/2004  
THIS MSDS HAS BEEN REVIEWED ON 07/16/2004, AND IS  
CURRENT AS OF THE DATE ISSUED ABOVE.

MATERIAL SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE & THE COMPANY

CHEMICAL NAME POTASSIUM BROMIDE  
CHEMICAL FORMULA KBR  
MOLECULAR WEIGHT 120.98

TYPE OF PRODUCT AND USE

REPORT NUMBER: 703

MSDS NO: P21725VS

MAINFRAME UPLOAD DATE: 07/16/04

UNIVAR USA INC.  
MATERIAL SAFETY DATA SHEET

PAGE: 002

VERSION: 003

PRODUCT: POTASSIUM BROMIDE

ORDER NO: 226085

PROD NO : 614395

FOR USE IN PHOTOGRAPHIC EMULSIONS AND DEVELOPING SOLUTIONS  
HEAT STABILIZER IN NYLON  
BROMINATING AGENT

COMPANY BROMINE COMPOUNDS LTD.  
P.O.B 180, BEER SHEVA 84101, ISRAEL  
TEL +972-8-6297830

SUPPLIER AMERIBROM, INC.  
2115 LINWOOD AVENUE, FORT LEE, NEW JERSEY 07024-5004  
USA TEL: 201 242 6560

EMERGENCY TELEPHONE CHEMTREC (800)424-9300

## 2. COMPOSITION / INFORMATION ON INGREDIENTS

| COMPONENTS        | WEIGHT % | ACGIH-TLV DATA | OSHA (PEL) DATA |
|-------------------|----------|----------------|-----------------|
| POTASSIUM BROMIDE | 99.5     | NOT DETERMINED | NOT DETERMINED  |

7758-02-3

## 3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW WHITE, ODOURLESS, CRYSTALLINE SOLID  
IRRITANT TO EYES

### POTENTIAL HEALTH EFFECTS:

- EYE CONTACT IRRITANT
- SKIN CONTACT NOT IRRITANT TO INTACT SKIN. SLIGHTLY IRRITANT ON PROLONGED CONTACT TO ABRADED SKIN.
- INHALATION MAY CAUSE IRRITATION TO MUCOUS MEMBRANES AND UPPER RESPIRATORY TRACT.
- INGESTION MAY CAUSE FALLING ASLEEP, MUSCULAR INCOORDINATION AND RESPIRATORY DEPRESSION.

ABDOMINAL PAIN, NAUSEA AND VOMITING.

## 4. FIRST-AID MEASURES

EYE CONTACT HOLDING THE EYELIDS APART, FLUSH EYES PROMPTLY WITH COPIOUS FLOWING WATER FOR AT LEAST 20 MINUTES.

GET MEDICAL ATTENTION IMMEDIATELY.

SKIN CONTACT REMOVE CONTAMINATED CLOTHING. WASH SKIN THOROUGHLY WITH MILD SOAP AND PLENTY OF WATER FOR AT LEAST 15 MINUTES. WASH CLOTHING BEFORE RE-USE.

PRODUCT: POTASSIUM BROMIDE

ORDER NO: 226085

PROD NO : 614395

-----

GET MEDICAL ATTENTION IF IRRITATION OCCURS.

INHALATION IN CASE OF DUST INHALATION OR BREATHING FUMES RELEASED FROM HEATED MATERIAL, REMOVE PERSON TO FRESH AIR.

KEEP HIM QUIET AND WARM. APPLY ARTIFICIAL RESPIRATION IF NECESSARY AND GET MEDICAL ATTENTION IMMEDIATELY.

INGESTION IF SWALLOWED, WASH MOUTH THOROUGHLY WITH PLENTY OF WATER AND GIVE WATER TO DRINK.

GET MEDICAL ATTENTION IMMEDIATELY.

NOTE: NEVER GIVE AN UNCONSCIOUS PERSON ANYTHING TO DRINK.

NOTES TO THE PHYSICIAN IN CASE OF INGESTION INDUCE VOMITING IN ALERT PATIENT. NO SPECIFIC ANTIDOTE. TREAT SYMPTOMATICALLY AND SUPPORTIVELY.

#### 5 FIRE-FIGHTING MEASURES

FLASH POINT NONE

FLAMMABLE/EXPLOSION LIMITS NOT FLAMMABLE

AUTO-IGNITION TEMPERATURE NOT APPLICABLE

SUITABLE EXTINGUISHING MEDIA MATERIAL IS NOT COMBUSTIBLE. USE EXTINGUISHING MEDIA APPROPRIATE TO SURROUNDING FIRE CONDITIONS.

#### FIRE FIGHTING PROCEDURE

COOL CONTAINERS WITH WATER SPRAY. IN CLOSED STORES, PROVIDE FIRE-FIGHTERS WITH SELF-CONTAINED BREATHING APPARATUS IN POSITIVE PRESSURE MODE.

#### UNUSUAL FIRE AND EXPLOSION

HAZARDS WILL DECOMPOSE FROM CA. 800 C RELEASING POISONOUS AND CORROSIVE FUMES OF HBR.

#### 6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS WEAR RESPIRATOR, CHEMICAL SAFETY GOGGLES, RUBBER GLOVES AND BOOTS.

METHODS FOR CLEANING UP SWEEP UP, PLACE IN A BAG AND HOLD FOR WASTE DISPOSAL OR POSSIBLE RE-USE.

AVOID RAISING DUST.

VENTILATE AREA AND WASH SPILL SITE AFTER MATERIAL PICKUP IS COMPLETE.

#### 7. HANDLING AND STORAGE

PRODUCT: POTASSIUM BROMIDE

ORDER NO: 226085

PROD NO : 614395

HANDLING AVOID BODILY CONTACT.  
KEEP CONTAINERS TIGHTLY CLOSED.  
STORAGE HYGROSCOPIC. AVOID EXPOSURE TO MOISTURE.  
STORE IN A DRY, COOL, WELL-VENTILATED AREA AWAY FROM INCOMPATIBLE MATERIALS  
(SEE "MATERIALS TO AVOID").

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

VENTILATION REQUIREMENTS MECHANICAL EXHAUST REQUIRED.  
VENTILATION MUST BE SUFFICIENT TO MAINTAIN TLV-TWA BELOW 10 MG/M3 (ACGIH  
RECOMMENDATION FOR PARTICULATES (INSOLUBLE) NOT OTHERWISE SPECIFIED (PNOS)).

## PERSONAL PROTECTIVE EQUIPMENT:

- RESPIRATORY PROTECTION DUST RESPIRATOR
- HAND PROTECTION PVC GLOVES RUBBER GLOVES
- EYE PROTECTION CHEMICAL SAFETY GOGGLES
- SKIN AND BODY PROTECTION BODY COVERING CLOTHES AND BOOTS

HYGIENE MEASURES SAFETY SHOWER AND EYE BATH SHOULD BE PROVIDED. DO NOT EAT,  
DRINK OR SMOKE UNTIL AFTER-WORK SHOWERING AND CHANGING CLOTHES.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

|                            |  |
|----------------------------|--|
| APPEARANCE                 | WHITE, ODOURLESS, CRYSTALLINE SOLID      |
| MELTING POINT/RANGE        | 734 C                                    |
| BOILING POINT/RANGE        | 1435 C                                   |
| VAPOUR PRESSURE            | 1 MM HG AT 795 C                         |
| VAPOR DENSITY              | NOT APPLICABLE UNDER STANDARD CONDITIONS |
| EVAPORATION RATE (ETHER=1) | NOT APPLICABLE UNDER STANDARD CONDITIONS |

## SOLUBILITY:

- SOLUBILITY IN WATER 65.5 G/100ML AT 20 C
- 102 GR/100ML AT 100 C
- SOLUBILITY IN OTHER SOLVENTS ALCOHOL: 0.142 G/1 00G AT 25 C

SPECIFIC GRAVITY 2.75  
DECOMPOSITION TEMPERATURE FROM CA. 800 C

## 10. STABILITY AND REACTIVITY

STABILITY HYGROSCOPIC.  
STABLE UNDER NORMAL CONDITIONS  
MATERIALS TO AVOID STRONG OXIDANTS  
STRONG ACIDS  
HEAVY METAL SALTS  
REACTS EXPLOSIVELY WITH BROMINE TRIFLUORIDE  
CONDITIONS TO AVOID EXPOSURE TO MOISTURE  
HEATING ABOVE DECOMPOSITION TEMPERATURE

PRODUCT: POTASSIUM BROMIDE

ORDER NO: 226085

PROD NO : 614395

## HAZARDOUS DECOMPOSITION

PRODUCTS HBR

HAZARDOUS POLYMERIZATION WILL NOT OCCUR

## 11. TOXICOLOGICAL INFORMATION

## ACUTE TOXICITY:

- RAT ORAL LD50 > 5000 MG/KG
- EYE IRRITATION (RABBIT) IRRITANT
- DERMAL IRRITATION (RABBIT) NOT IRRITANT

CHRONIC TOXICITY REPEATED SKIN CONTACT MAY CAUSE DERMATITIS. REPEATED ORAL INTAKE OF BROMIDES (>9 MG/KG BODY WEIGHT/DAY) MAY AFFECT THE CENTRAL NERVOUS SYSTEM. WARNING SYMPTOMS INCLUDE MENTAL DULLNESS, SLURRED SPEECH, WEAKENED MEMORY, APATHY, ANOREXIA, CONSTIPATION, DROWSINESS AND LOSS OF SENSITIVITY TO TOUCH AND PAIN.

MUTAGENICITY. NOT MUTAGENIC BY THE AMES TEST

CARCINOGENICITY NOT KNOWN TO BE A CARCINOGEN.

NOT CLASSIFIED BY IARC.

NOT INCLUDED IN NTP 9TH REPORT ON CARCINOGENS.

## 12. ECOLOGICAL INFORMATION

ENVIRONMENTAL FATE KBR IS AN INORGANIC SALT, WHICH FULLY DISSOCIATES IN AQUATIC ENVIRONMENT TO BROMIDE AND POTASSIUM IONS. IT ALSO UNDERGOES DEGRADATION IN SOIL TO BROMIDE ION (NO FURTHER DEGRADATION OR BIODEGRADATION WILL OCCUR).

## AQUATIC TOXICITY

- LC50, FISH 3200 MG/L, 5 DAYS (RAINBOW TROUT)
- 48 HOUR-EC50, DAPHNIA MAGNA >100 MG/L

## AVIAN TOXICITY:

- ORAL LD50, BOBWHITE QUAIL >2500 MG/KG
- DIETARY LC50, BOBWHITE QUAIL 6000 PPM

BIOACCUMULATIVE POTENTIAL BIOACCUMULATION IS NOT LIKELY TO OCCUR SINCE THIS MATERIAL IS HIGHLY SOLUBLE IN WATER.

## 13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL ADD INTO A LARGE VESSEL CONTAINING WATER AND DRAIN INTO SEWER WITH AMPLE WATER. OBSERVE ALL FEDERAL, STATE AND LOCAL ENVIRONMENTAL REGULATIONS WHEN DISPOSING OF THIS MATERIAL.

PRODUCT: POTASSIUM BROMIDE

ORDER NO: 226085  
PROD NO : 614395-----  
14. TRANSPORTATION INFORMATIONDOT NOT REGULATED  
IMO NOT REGULATED  
ICAO/IATA NOT REGULATED

## 15. REGULATORY INFORMATION

USA REPORTED IN THE EPA TSCA INVENTORY

CANADA LISTED IN DSL

EEC NO. 231-830-3  
JAPAN LISTED IN MITI (1-108)

AUSTRALIA LISTED IN AICS

CHINA INVENTORY LISTED

SOUTH KOREA LISTED IN ECL (KE-29079)

SWITZERLAND GIFTKLASSE 3  
PHILIPPINES LISTED IN PICCS

## 16. OTHER INFORMATION

THIS DATA SHEET CONTAINS CHANGES FROM THE PREVIOUS VERSION IN SECTION(S)  
8,15THE HSE POLICY OF DEAD SEA BROMINE GROUP  
DEAD SEA BROMINE GROUP (DSBG) IS THE WORLD'S LARGEST PRODUCER OF ELEMENTAL  
BROMINE AND A RECOGNIZED LEADER IN THE DEVELOPMENT AND SUPPLY OF BROMINE  
COMPOUNDS.DSBG IS COMMITTED TO RESPONSIBLY MANAGE ITS PRODUCTS AT ALL STAGES OF THEIR  
LIFE CYCLE IN ORDER TO PROTECT HUMAN HEALTH AND THE ENVIRONMENT.  
THIS RESPONSIBILITY APPLIES THROUGHOUT DEVELOPMENT, MANUFACTURE,  
TRANSPORTATION, USE, RECYCLE AND DISPOSAL OF DSBG PRODUCTS.

WITHIN THIS FRAMEWORK DSBG IS COMMITTED TO:

- \* COMPLY WITH NATIONAL AND INTERNATIONAL REGULATORY REQUIREMENTS
- \* CONFORM TO THE ISO 14001 AND OHSAS 18001 REQUIREMENTS FOR ENVIRONMENTAL AND OCCUPATIONAL HEALTH & SAFETY MANAGEMENT SYSTEMS AND PERIODICALLY EVALUATE PERFORMANCE AS PART OF THE COMPANY'S EXISTING QUALITY AUDITS SYSTEM
- \* DESIGN PRODUCTS AND PROCESSES WHICH PREVENT RISK TO HEALTH AND THE ENVIRONMENT AT PRODUCTION SITES AND ALONG THE SUPPLY CHAIN
- \* IMPROVE EFFICIENCY IN USE OF ENERGY & NATURAL RESOURCES, PROMOTE RECYCLING AND WASTE MANAGEMENT THROUGH SAFE & ENVIRONMENTALLY SOUND END OF LIFE

REPORT NUMBER: 703

MSDS NO: P21725VS

MAINFRAME UPLOAD DATE: 07/16/04

UNIVAR USA INC.  
MATERIAL SAFETY DATA SHEET

PAGE: 007

VERSION: 003

PRODUCT: POTASSIUM BROMIDE

ORDER NO: 226085  
PROD NO : 614395

-----  
PROGRAMS

- \* WORK FOR CONTINUAL IMPROVEMENT IN HSE PERFORMANCE
- \* REGULARLY ASSESS AND RESPONSIBLY MANAGE HEALTH, SAFETY AND ENVIRONMENTAL RISKS ASSOCIATED WITH PRODUCTS AND PROCESSES
- \* EDUCATE AND TRAIN ALL MANAGERS AND EMPLOYEES TO IMPROVE THEIR HSE PERFORMANCE
- \* DISTRIBUTE UPDATED INFORMATION CONCERNING ITS POLICY AND PRODUCTS TO ITS WORKERS, CUSTOMERS AND OTHER INTERESTED PARTIES THROUGH MATERIAL SAFETY DATA SHEET (MSDS), WORKERS' SAFETY SHEETS AND THROUGH THE DSBG INTERNET SITE
- \* DEVELOP BUSINESS RELATIONSHIPS WITH RESPONSIBLE SUPPLIERS, TRANSPORTERS AND DISTRIBUTORS AND PROVIDE THEM WITH HSE SUPPORT, INFORMATION AND TRAINING
- \* SUPPORT PRODUCT STEWARDSHIP PROGRAMS IN COOPERATION WITH CUSTOMERS, DISTRIBUTORS AND TRANSPORTERS
- \* ALLOCATE THE NECESSARY RESOURCES FOR IMPLEMENTATION OF THIS POLICY

PREPARED BY HSE DIVISION IN ISRAEL

TELEPHONE: +/972-8-6297830

TELEFAX: +/972-8-6297832

WWW.DSBG.COM

END OF SAFETY DATA SHEET

REPORT NUMBER: 703

UNIVAR USA INC.

PAGE: 008

MSDS NO: P21725VS

MATERIAL SAFETY DATA SHEET

MAINFRAME UPLOAD DATE: 07/16/04

VERSION: 003

PRODUCT: POTASSIUM BROMIDE

ORDER NO: 226085

PROD NO : 614395

-----  
-----  
----- FOR ADDITIONAL INFORMATION -----  
-----

CONTACT: MSDS COORDINATOR UNIVAR USA INC.  
DURING BUSINESS HOURS, PACIFIC TIME (425)889-3400

10/28/04 08:52 PRODUCT: 614395 CUST NO: 113365 ORDER NO: 226085

-----  
----- NOTICE -----  
-----

\*\*\*\*\* UNIVAR USA INC("UNIVAR"), EXPRESSLY DISCLAIMS

-----  
----- ALL EXPRESS OR IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A  
-----

PARTICULAR PURPOSE, WITH RESPECT TO THE PRODUCT OR INFORMATION PROVIDED  
-----

HEREIN, AND SHALL UNDER NO CIRCUMSTANCES BE LIABLE FOR INCIDENTAL OR  
-----

CONSEQUENTIAL DAMAGES. \*\*  
-----

DO NOT USE INGREDIENT INFORMATION AND/OR PERCENTAGES IN THIS MSDS AS A  
PRODUCT SPECIFICATION. FOR PRODUCT SPECIFICATION INFORMATION REFER TO A PRODUCT  
SPECIFICATION SHEET AND/OR A CERTIFICATE OF ANALYSIS. THESE CAN BE OBTAINED FROM  
YOUR LOCAL UNIVAR SALES OFFICE.  
-----

ALL INFORMATION APPEARING HEREIN IS BASED UPON DATA OBTAINED FROM THE  
MANUFACTURER AND/OR RECOGNIZED TECHNICAL SOURCES. WHILE THE INFORMATION IS  
BELIEVED TO BE ACCURATE, UNIVAR MAKES NO REPRESENTATIONS AS TO ITS ACCURACY OR  
SUFFICIENCY. CONDITIONS OF USE ARE BEYOND UNIVARS CONTROL AND THEREFORE USERS  
ARE RESPONSIBLE TO VERIFY THIS DATA UNDER THEIR OWN OPERATING CONDITIONS TO  
DETERMINE WHETHER THE PRODUCT IS SUITABLE FOR THEIR PARTICULAR PURPOSES AND THEY  
ASSUME ALL RISKS OF THEIR USE, HANDLING, AND DISPOSAL OF THE PRODUCT, OR FROM  
THE PUBLICATION OR USE OF, OR RELIANCE UPON , INFORMATION CONTAINED HEREIN.  
THIS INFORMATION RELATES ONLY TO THE PRODUCT DESIGNATED HEREIN, AND DOES NOT  
RELATE TO ITS USE IN COMBINATION WITH ANY OTHER MATERIAL OR IN ANY OTHER  
PROCESS.

\* \* \* E N D O F M S D S \* \* \*



10-0940



Gardena, CA

# Material Safety Data Sheet

|               |   |                               |   |             |   |            |   |                        |
|---------------|---|-------------------------------|---|-------------|---|------------|---|------------------------|
| NFPA          | HMIS  | Personal Protective Equipment |   |             |   |            |   |                        |
|               | <table border="1"> <tr> <td>Health Hazard</td> <td style="text-align: center;">3</td> </tr> <tr> <td>Fire Hazard</td> <td style="text-align: center;">0</td> </tr> <tr> <td>Reactivity</td> <td style="text-align: center;">1</td> </tr> </table> | Health Hazard                 | 3 | Fire Hazard | 0 | Reactivity | 1 | <p>See Section 15.</p> |
| Health Hazard | 3   |                               |   |             |   |            |   |                        |
| Fire Hazard   | 0   |                               |   |             |   |            |   |                        |
| Reactivity    | 1   |                               |   |             |   |            |   |                        |

## Section 1. Chemical Product and Company Identification

|                            |  |  |                   |
|----------------------------|--|--|-------------------|
| Common Name/<br>Trade Name | <b>Potassium carbonate</b>   | Code   | P4210             |
| Manufacturer               | SPECTRUM CHEMICAL MFG. CORP.<br>14422 SOUTH SAN PEDRO STREET<br>GARDENA, CALIFORNIA 90248-9985 | CAS#   | 584-08-7          |
| Commercial Name(s)         | Not available  | RTECS  | TS7750000         |
| Synonym                    | Not available.   | TSCA   | On the TSCA list. |
| Chemical Name              | Not available.   | CI#  | Not available.    |
| Chemical Family            | Not available.   | <b>In case of emergency</b><br><b>CHEMTREC (24hr) 800-424-9300</b><br><b>Emergency phone: (310) 516-8000</b> |                   |
| Chemical Formula           | K <sub>2</sub> CO <sub>3</sub>   |  |                   |
| Supplier                   | SPECTRUM QUALITY PRODUCTS<br>14422 S. SAN PEDRO STREET<br>GARDENA, CA 90248-9985               |  |                   |

## Section 2. Composition and Information on Ingredients

| Name                | CAS#     | Exposure Limits          |                           |                           |             |
|---------------------|----------|--------------------------|---------------------------|---------------------------|-------------|
|                     |          | TWA (mg/m <sup>3</sup> ) | STEL (mg/m <sup>3</sup> ) | CEIL (mg/m <sup>3</sup> ) | % by Weight |
| Potassium carbonate | 584-08-7 |                          |                           |                           | 100         |

Toxicological Data  
on Ingredients

Potassium carbonate:  
ORAL (LD50):

Acute: 1870 mg/kg (Rat).

## Section 3. Hazards Identification

**Potential Acute Health Effects** Extremely dangerous in case of skin contact (irritant), of eye contact (irritant). Very dangerous in case of skin contact (corrosive), of ingestion, of inhalation. Corrosive to eyes and skin. This product may irritate eyes and skin upon contact. Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.

**Potential Chronic**

Extremely dangerous in case of skin contact (irritant), of eye contact (irritant). Very dangerous in case of skin contact (corrosive), of ingestion, of inhalation. **CARCINOGENIC EFFECTS: Not**

**Health Effects**

available. **MUTAGENIC EFFECTS:** Not available. **TERATOGENIC EFFECTS:** Not available. The substance is toxic to mucous membranes. Toxicity of the product to the reproductive system: Not available. Repeated or prolonged exposure to the substance can produce target organs damage. Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation.

**Section 4. First Aid Measures**

**Eye Contact**

Check for and remove any contact lenses. DO NOT use an eye ointment. Seek medical attention.

**Skin Contact**

If the chemical got onto the clothed portion of the body, remove the contaminated clothes as quickly as possible, protecting your own hands and body. Place the victim under a deluge shower. If the chemical touches the victim's exposed skin, such as the hands: Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to clean folds, crevices, creases and groin. Cover the irritated skin with an emollient. If irritation persists, seek medical attention. Wash contaminated clothing before reusing.

**Hazardous Skin Contact**

Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek medical attention.

**Inhalation**

Allow the victim to rest in a well ventilated area. Seek immediate medical attention.

**Hazardous Inhalation**

No additional information.

**Ingestion**

Remove dentures if any. Have conscious person drink several glasses of water or milk. INDUCE VOMITING by sticking finger in throat. Lower the head so that the vomit will not reenter the mouth and throat. NEVER give an unconscious person anything to ingest. Seek medical attention.

**Hazardous Ingestion**

No additional information.

**Section 5. Fire and Explosion Data**

**Flammability of the Product** Non-flammable.

**Auto-Ignition Temperature** Not applicable.

**Flash Points** Not applicable.

**Flammable Limits** Not applicable.

Products of Combustion Not applicable.

Fire Hazards in Presence of Various Substances Not applicable.

Explosion in Presence of Various Substances Risks of explosion of the product in presence of mechanical impact: Not available.  
Risks of explosion of the product in presence of static discharge: Not available.  
No specific information is available in our database regarding the product's risks of explosion in the presence of various materials.

Fire Fighting Media and Instructions Non-flammable.

Special Remarks on Fire Hazards No additional remark.

Special Remarks on Explosion Hazards No additional remark.

#### Section 6. Accidental Release Measures

**Small Spill** Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

**Large Spill** Our database contains no additional information in case of a spill and/or a leak of the product. Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.

#### Section 7. Handling and Storage

**Precautions** DO NOT ingest. DO NOT breathe dust. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles as acids, moisture.

**Storage** No specific storage is required. Use shelves or cabinets sturdy enough to bear the weight of the chemicals. Be sure that it is not necessary to strain to reach materials, and that shelves are not overloaded.

#### Section 8. Exposure Controls/Personal Protection

**Engineering Controls** Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

**Personal Protection** Splash goggles. Lab coat. Dust respirator. Be sure to use a MSHA/NIOSH approved respirator or equivalent. Gloves (impervious). Wear appropriate respirator when ventilation is inadequate.

**Personal** Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus

Protection in Case of a Large Spill sufficient; consult a specialist BEFORE handling this product.

Exposure Limits Not available.

**Section 9. Physical and Chemical Properties**

Physical state and appearance Solid. (Powdered solid.)

Odor Odorless.

Molecular Weight 138.21

Taste Not available.

pH (1% soln/water) Not available.

Color White.

Boiling Point Decomposes.

Melting Point 891.C (1635.8.F)

Critical Temperature Not available.

Specific Gravity 2.29 (Water = 1)

Vapor Pressure Not available.

Vapor Density Not available.

Volatility Not available.

Odor Threshold Not available.

Evaporation rate Not available.

Viscosity Not available.

Water/Oil Dist. Coeff. Not available.

Ionicity (in Water) Not available.

Dispersion Properties Not available.

Solubility Not available.

**Section 10. Stability and Reactivity Data**

Stability The product is stable.

Instability Temperature Not available.

Conditions of Instability No additional remark.

Incompatibility with Various Substances Extremely reactive or incompatible with acids. Slightly reactive to reactive with moisture.

Corrosivity Non-corrosive in presence of glass.

Special Remarks on Reactivity No additional remark.

Special Remarks on Corrosivity No additional remark.

**Section 11. Toxicological Information**

Routes of Entry Ingestion, Inhalation.

Toxicity to Animals Acute oral toxicity (LD50): 1870 mg/kg (Rat).

**Chronic Effects on Humans** The substance is toxic to mucous membranes. Toxicity of the product to the reproductive system: Not available.

**Other Toxic Effects on Humans** Extremely dangerous in case of skin contact (irritant), of eye contact (irritant). Very dangerous in case of skin contact (corrosive), of ingestion, of inhalation.

**Special Remarks on Toxicity to Animals** No additional remark.

**Special Remarks on Chronic Effects on Humans** No additional remark.

**Special Remarks on other Toxic Effects on Humans** No additional remark.

**Section 12. Ecological Information**

**Ecotoxicity** Not available.

**BOD5 and COD** Not available.

**Products of Biodegradation** Some metallic oxides.

**Toxicity of the Products of Biodegradation** The product itself and its products of degradation are not toxic.

**Special Remarks on the Products of Biodegradation** No additional remark.

**Section 13. Disposal Considerations**

**Waste Disposal** Recycle to process, if possible. Consult your local or regional authorities.

**Section 14. Transport Information**

**DOT Classification** Not a DOT controlled material (United States).

**Identification** Not applicable (PIN and PG).

**Special Provisions for Transport** Not applicable.

**DOT (Pictograms)**

Section 15. Other Regulatory Information and Pictograms

Federal and State Regulations

Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires emergency planning based on Threshold Planning Quantities (TPQs) and release reporting based on Reportable Quantities (RQs) in 40 CFR 355 (used for SARA 302, 304, 311 and 312). Components present in this product at a level which could require reporting under the statute are:

NONE

Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires submission of annual report release of toxic chemicals that appear in 40 CFR 372 (used for SARA 313). This information must be included in all MSDSs that are copied and distributed for this material. Components present in this product at a level which could require reporting under the statute are:

NONE

Pensylvania Right-To-Know, Hazardous substance List, Hazardous Substances and Special hazardous Substances on the list must be identified when present in products. Components present in this product at a level which could require reporting under the statute are:

NONE

Massachusetts Right-To-Know, Substance List (MSL) Hazardous Substances and Extraordinarily Hazardous Substances on the MSL must be identified when present in products. Components present in this product at a level which could require reporting under the statute are:

NONE

Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) requires notification of the National Response Center of release of quantities of Hazardous Substances equal or greater than the reportable quantities (RQs) in 40 CFR 302.4. Components present in this product at a level which could require reporting under the statute are:

NONE

WARNING: This product contains a chemical known to the State of California to cause cancer. Chemical ingredient(s) requiring this warning:

NONE

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm. Chemical ingredient(s) requiring this warning: NONE

Other Classifications

WHMIS (Canada)

WHMIS CLASS D-2B: Material causing other toxic effects (TOXIC).

DSCL (EEC)

R22- Harmful if ingested.  
R41- Risk of serious damage to eyes.

Other Classifications

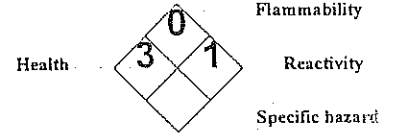
WHMIS (Canada) WHMIS CLASS D-2B: Material causing other toxic effects (TOXIC).

DSCL (EEC) R22- Harmful if ingested.  
R41- Risk of serious damage to eyes.

HMIS (U.S.A.)

|                     |   |
|---------------------|---|
| Health Hazard       | 1 |
| Fire Hazard         | 0 |
| Reactivity          | 1 |
| Personal Protection | 0 |

National Fire Protection Association (U.S.A.)



Personal Protective Equipment



Protective Gloves (impervious).



Lab coat.



Dust respirator. Be sure to use a MSHA/NIOSH approved respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.



Splash goggles.

Section 16. Other Information

References Not available.

Catalog Number(s) P1235, P1236, P1237, P1238, P1240, XX612

Other Special Considerations No additional remark.

Validated by E. Brull on 12/17/96.

Verified by E. Brull.  
Name

Emergency Phone: (310)516-8000

Notice to Reader

All chemicals may pose unknown hazards and should be used with caution. This Material Safety Data Sheet (MSDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this MSDS. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this MSDS is based on technical data judged to be reliable, Spectrum Chemical Mfg. Corp. assumes no responsibility for the completeness or accuracy of the information contained herein.