MATERIAL SAFETY DATA SHEET 15370NV ECOLUTION SILVER SHIMMER

Version Number 1.1 Revision Date 03/30/2014

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1. PRODUCT AND COMPANY IDENTIFICATION

POLYONE CORPORATION 8155 Cobb Center Drive, Kennesaw, GA 30152

| Telephone Emergency telephone number | : | 1 (440) 930-1000 or 1 (866) POLYONE CHEMTREC 1-800-424-9300 (24hrs for spill, leak, fire, exposure or accident). |
|--|---|--|
| Product name | : | 15370NV ECOLUTION SILVER SHIMMER |
| Product code | : | FO20024739 |
| Chemical Name | : | Mixture |
| CAS-No. | : | Mixture |
| Product Use | : | Industrial Applications |

2. COMPOSITION/INFORMATION ON INGREDIENTS

| Components | CAS-No. | Weight percent |
|--|-------------|----------------|
| Silica, amorphous, fumed, crystal-free | 112945-52-5 | 1 - 5 |
| Aluminum | 7429-90-5 | 5 - 10 |

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

This mixture has not been evaluated as a whole for health effects. Information provided on health effects of this product is based on the individual components. However, some vapors or contaminants may be released upon heating and the end-user (fabricator) must take the necessary precautions (mechanical ventilation, respiratory protection, etc.) to protect employees from exposure. See sections 8 and 11 for special precautions.

POTENTIAL HEALTH EFFECTS

| Routes of Exposure: | : Inhalation, Skin contact, Ingestion |
|----------------------------|--|
| Acute exposure | |
| Inhalation | : Inhalation of airborne droplets may cause irritation of the respiratory tract. |
| Ingestion | : May be harmful if swallowed. |
| Eyes | : May cause eye and skin irritation. |
| Skin | : Experience shows no unusual dermatitis hazard from routine handling. |
| Chronic exposure | : Refer to Section 11 for Toxicological Information. |



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| overheating or combustion. When symptoms persist doubt seek medical advice. Ingestion : Do not induce vomiting without medical advice. W persist or in all cases of doubt seek medical advice. Eyes : Rinse immediately with plenty of water for at least irritation persists, seek medical attention. Skin : Wash off with soap and plenty of water. If skin irrit seek medical attention. Skin : Wash off with soap and plenty of water. If skin irrit seek medical attention. Flash point : no data available Flash point : no data available Flammable Limits : no data available Auto-ignition temperature : Not applicable Suitable extinguishing media : Carbon dioxide blanket, Water spray, Dry powder, I Special Fire Fighting : Fullface self-contained breathing apparatus (SCBA) pressure mode should be worn to prevent inhalation contaminants. Unusual Fire/Explosion : May emit Hydrogen Chloride (HCl) or Carbon Mon fire conditions. Carbon dioxide (CO2), carbon mon oxides of nitrogen (NOx), other hazardous materials all possible. Personal precautions : Wear appropriate personal protection during cleanu impervious gloves, boots and coveralls. Environmental precautions : The product should not | Medical Conditions Aggravated by Exposure: | : None known. |
|--|---|---|
| overheating or combustion. When symptoms persist doubt seek medical advice. Ingestion : Do not induce vomiting without medical advice. W persist or in all cases of doubt seek medical advice. Eyes : Rinse immediately with plenty of water for at least irritation persists, seek medical attention. Skin : Wash off with soap and plenty of water. If skin irrit seek medical attention. Skin : Wash off with soap and plenty of water. If skin irrit seek medical attention. Flash point : no data available Flash point : no data available Flammable Limits : no data available Suitable extinguishing media : no data available Suitable extinguishing media : Carbon dioxide blanket, Water spray, Dry powder, I Special Fire Fighting : Fullface self-contained breathing apparatus (SCBA) pressure mode should be worn to prevent inhalation contaminants. Unusual Fire/Explosion : May emit Hydrogen Chloride (HCI) or Carbon Mon fire conditions. Carbon dioxide (CO2), carbon mon oxides of nitrogen (NOx), other hazardous materials all possible. Personal precautions : Wear appropriate personal protection during cleanu impervious gloves, boots and coveralls. Environmental precautions : The product shou | | 4. FIRST AID MEASURES |
| Eyes : Rinse immediately with plenty of water for at least irritation persists, seek medical attention. Skin : Wash off with soap and plenty of water. If skin irrit seek medical attention. Skin : Wash off with soap and plenty of water. If skin irrit seek medical attention. Flash point : no data available Flammable Limits : no data available Lower explosion limit : no data available Suitable extinguishing media : Carbon dioxide blanket, Water spray, Dry powder, I Special Fire Fighting : Fullface self-contained breathing apparatus (SCBA) pressure mode should be worn to prevent inhalation contaminants. Unusual Fire/Explosion : May emit Hydrogen Chloride (HCl) or Carbon Mon fire conditions. Carbon dioxide (CO2), carbon mon oxides of nitrogen (NOx), other hazardous materials all possible. Personal precautions : Wear appropriate personal protection during cleanul impervious gloves, boots and coveralls. Environmental precautions : The product should not be allowed to enter drains, w the soil. Should not be released into the environment of the environment of the soil. Should not be released into the environment of the soil. Should not be released into the environment of the soil. Should not be released into the environment of the soil. Should not be released into the environment of the soil. Should not be released into the environment of the soil. Should not be allowed to enter drains, w the soil. Should not be released into the environment of the soil. Should not be released into the environm | Inhalation | : Move to fresh air in case of accidental inhalation of fumes from overheating or combustion. When symptoms persist or in all cases of doubt seek medical advice. |
| Skin : Wash off with soap and plenty of water. If skin irritiseek medical attention. Skin : Wash off with soap and plenty of water. If skin irritiseek medical attention. Flash point : no data available Flammable Limits : no data available Upper explosion limit : no data available Auto-ignition temperature : Not applicable Suitable extinguishing media : Carbon dioxide blanket, Water spray, Dry powder, I Special Fire Fighting : Fullface self-contained breathing apparatus (SCBA) procedures : Fullface self-contained breathing apparatus (SCBA) Unusual Fire/Explosion : May emit Hydrogen Chloride (HCl) or Carbon Mon fire conditions. Carbon dioxide (CO2), carbon mon oxides of nitrogen (NOx), other hazardous materials all possible. Personal precautions : Wear appropriate personal protection during cleanu impervious gloves, boots and coveralls. Environmental precautions : The product should not be allowed to enter drains, withe soil. Should not be released into the environmental precautions | Ingestion | : Do not induce vomiting without medical advice. When symptoms persist or in all cases of doubt seek medical advice. |
| seek medical attention. seek medical attention. seek medical attention. Site K medical attention. Flash point Flash available Lower explosion limit Fullface self-contained breathing apparatus (SCBA) pressure mode should be worn to prevent inhalation contaminants. Unusual Fire/Explosion Hazards May emit Hydrogen Chloride (HCl) or Carbon Mon fire conditions. Carbon dioxide (CO2), carbon mon oxides of nitrogen (NOx), other hazardous materials all possible. Personal precautions F Wear appropriate personal protection during cleanu impervious gloves, boots and coveralls. | Eyes | : Rinse immediately with plenty of water for at least 15 minutes. If eye irritation persists, seek medical attention. |
| Flash point : no data available Flammable Limits | Skin | : Wash off with soap and plenty of water. If skin irritation persists seek medical attention. |
| Flammable Limits upper explosion limit : no data available Lower explosion limit : no data available Auto-ignition temperature : Not applicable Suitable extinguishing media : Carbon dioxide blanket, Water spray, Dry powder, I Special Fire Fighting : Fullface self-contained breathing apparatus (SCBA) Procedures : Fullface self-contained breathing apparatus (SCBA) Unusual Fire/Explosion : May emit Hydrogen Chloride (HCl) or Carbon Mon Hazards : May emit Hydrogen Chloride (HCl) or Carbon Mon fire conditions. Carbon dioxide (CO2), carbon mon oxides of nitrogen (NOx), other hazardous materials all possible. : Wear appropriate personal protection during cleanuly impervious gloves, boots and coveralls. Environmental precautions : The product should not be allowed to enter drains, w the soil. Should not be released into the environment | | 5. FIREFIGHTING MEASURES |
| Upper explosion limit Lower explosion limit:no data availableAuto-ignition temperature Suitable extinguishing media:Not applicableSpecial Fire Fighting Procedures:Fullface self-contained breathing apparatus (SCBA) pressure mode should be worn to prevent inhalation contaminants.Unusual Fire/Explosion Hazards:May emit Hydrogen Chloride (HCl) or Carbon Mon fire conditions. Carbon dioxide (CO2), carbon mon oxides of nitrogen (NOx), other hazardous materials all possible.Personal precautions:Wear appropriate personal protection during cleanuly impervious gloves, boots and coveralls.Environmental precautions:The product should not be allowed to enter drains, v the soil. Should not be released into the environment | Flash point | : no data available |
| Personal precautions : Wear appropriate personal protection during cleanup impervious gloves, boots and coveralls. Environmental precautions : The product should not be allowed to enter drains, we the soil. Should not be released into the environment of the soil. Should not be released into the environment of the soil. | Upper explosion limit Lower explosion limit Auto-ignition temperature Suitable extinguishing media Special Fire Fighting Procedures Unusual Fire/Explosion Hazards | no data available Not applicable Carbon dioxide blanket, Water spray, Dry powder, Foam. Fullface self-contained breathing apparatus (SCBA) used in positive pressure mode should be worn to prevent inhalation of airborne contaminants. May emit Hydrogen Chloride (HCl) or Carbon Monoxide (CO) under fire conditions. Carbon dioxide (CO2), carbon monoxide (CO), oxides of nitrogen (NOx), other hazardous materials, and smoke are all possible. |
| Environmental precautions The product should not be allowed to enter drains, w the soil. Should not be released into the environmental precaution | | 6. ACCIDENTAL RELEASE MEASURES |
| the soil. Should not be released into the environment | Personal precautions | : Wear appropriate personal protection during cleanup, such as impervious gloves, boots and coveralls. |
| | Environmental precautions | : The product should not be allowed to enter drains, water courses or the soil. Should not be released into the environment. |
| | Methods for cleaning up | : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Package all material in appropriate container for disposal. |
| 7. HANDLING AND STORAGE | | 7. HANDLING AND STORAGE |



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| Handling | : | Heat only in areas with appropriate exhaust ventilation. Processing fume condensates may contain combustible or toxic residue. Periodically clean hoods, ducts, and other surfaces to minimize accumulation of these materials. |
| Storage | : | Keep containers dry and tightly closed to avoid moisture absorption and contamination. Store in a cool dry place. |
| 8. EXP | OSU | RE CONTROLS/PERSONAL PROTECTION |
| Respiratory protection | : | No personal respiratory protective equipment normally required. |
| Eye/Face Protection | : | Safety glasses with side-shields |
| Hand protection | : | Protective gloves |
| Skin and body protection | : | Long sleeved clothing |
| Additional Protective Measures | : | Safety shoes |
| General Hygiene Considerations | : | Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday. |
| Engineering measures | : | Heat only in areas with appropriate exhaust ventilation. Provide appropriate exhaust ventilation at machinery. |
| Exposure limit(s) | | |



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| Components | Value | Exposure time | Exposure type | List: |
|--|-----------|--------------------------------------|--|----------|
| Aluminum | 1 mg/m3 | Time Weighted Average (TWA): | Respirable fraction. | ACGIH |
| | 10 mg/m3 | Recommended exposure limit (REL): | Total | NIOSH |
| | 5 mg/m3 | Recommended exposure limit (REL): | Respirable. | NIOSH |
| | 5 mg/m3 | Recommended exposure limit (REL): | Welding fume or pyrophoric powder. as Al | NIOSH |
| | 15 mg/m3 | PEL: | Total dust. as Al | OSHA Z1 |
| | 5 mg/m3 | PEL: | Respirable dust. as Al | OSHA Z1 |
| | 15 mg/m3 | Time Weighted Average (TWA): | Total dust. as Al | OSHA Z1A |
| | 5 mg/m3 | Time Weighted Average (TWA): | Respirable dust. as Al | OSHA Z1A |
| | 5 mg/m3 | Time Weighted Average (TWA): | Pyrophoric powder. as Al | OSHA Z1A |
| | 5 mg/m3 | Time Weighted Average (TWA): | Fume. as Al | OSHA Z1A |
| | 5 mg/m3 | Time Weighted Average (TWA): | Welding fume. | MX OEL |
| | 10 mg/m3 | Time Weighted Average (TWA): | Dust. | MX OEL |
| | 5 mg/m3 | Time Weighted Average (TWA): | Pyrophoric powder. | MX OEL |
| Silica, amorphous, fumed, crystal-free | 0.8 mg/m3 | Time Weighted Average (TWA): | | Z3 |
| | 10 mg/m3 | Time Weighted Average (TWA): | Inhalable particulate. | MX OEL |
| | 3 mg/m3 | Time Weighted Average (TWA): | Respirable dust. | MX OEL |

9. PHYSICAL AND CHEMICAL PROPERTIES

Form Appearance Colour Odour Melting point/range Boiling Point: Water solubility liquid
viscous, liquid
GREY
very faint
not applicable
not applicable
immiscible

Evapouration rate Specific Gravity Bulk density Vapour pressure Vapour density pH Not establishedNot determinedNot applicableNot determinedNot determined

: Not applicable

10. STABILITY AND REACTIVITY

Stability

: The product is stable if stored and handled as prescribed.

Hazardous Polymerization

: Will not occur.



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| Conditions to avoid | : | Keep away from oxidizing agents and open flame. To avoid thermal decomposition, do not overheat. |
| Incompatible Materials | : | Incompatible with strong acids and oxidizing agents., Avoid contact with acetal homopolymers and acetal copolymers during processing. |
| Hazardous decomposition products | : | Carbon dioxide (CO2), carbon monoxide (CO), oxides of nitrogen (NOx), hydrogen chloride (HCl), other hazardous materials, and smoke are all possible. Prolonged heating may result in product degradation. As a general rule of thumb, degradation begins to occur after one hour at 177 °C (350 °F), after 10 minutes at 204 °C (400 °F), and within 5 minutes at 232 °C (450 °F). |

11. TOXICOLOGICAL INFORMATION

This mixture has not been evaluated as a whole for health effects. Exposure effects listed are based on existing health data for the individual components which comprise the mixture.

Toxicity Overview

This product contains the following components which in their pure form have the following characteristics:

| CAS-No. | Chemical Name | Effect | Target Organ |
|-------------|--|------------------|---------------------------|
| 112945-52-5 | Silica, amorphous, fumed, crystal-free | Irritant | Eyes, Respiratory system. |
| 7429-90-5 | Aluminum | Irritant | Skin, Respiratory system. |
| | | Systemic effects | Eyes, Skin, Respiratory |
| | | | system. |

LC50 / LD50

This product contains the following components which, in their pure form, have the following toxicity data:

| CAS-No. | Chemical Name | Route | Value | Species |
|-------------|--|-----------|-------------|---------|
| 112945-52-5 | Silica, amorphous, fumed, crystal-free | Oral LD50 | 3,160 mg/kg | rat |

| | 12. ECOLOGICAL INFORMATION |
|-------------------------------|--|
| Persistence and degradability | : Not readily biodegradable. |
| Environmental Toxicity | : Environmental toxicity has not been established for this mixture as a whole. |
| Bioaccumulation Potential | : no data available |
| Additional advice | : no data available |
| | 13. DISPOSAL CONSIDERATIONS |
| Product | : Where possible recycling is preferred to disposal or incineration. The generator of waste material has the responsibility for proper waste |



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|---|--------|---|--------------------------------------|-----------------------|-------------------|
| | | | | | |
| | | classification, transporta applicable federal, state/ | | | |
| Contaminated packaging | : | Recycling is preferred w material has the responsi transportation and dispo- state/provincial and loca | ibility for proper sal in accordance | waste classification, | al, |
| | 1 | 4. TRANSPORT INFO | RMATION | | |
| U.S. DOT Classification | : | Refer to specific regulation | ion. | | |
| ICAO/IATA | : | Refer to specific regulation | ion. | | |
| IMO/IMDG (maritime) | : | Refer to specific regulation | ion. | | |
| | 15 | . REGULATORY INFO | RMATION | | |
| US Regulations: | | | | | |
| OSHA Status | : | Classified as hazardous | based on compon | ents. | |
| TSCA Status | : | All components of this pTSCA Inventory. | product are listed | on or exempt from th | ie |
| US. EPA CERCLA Hazardou | s Sub | stances (40 CFR 302) | | | |
| not applicable | | | | | |
| California Proposition 65 | : | Not applicable | | | |
| SARA Title III Section 302 E | xtrem | ely Hazardous Substance | | | |
| Unless specific chemicals are | identi | fied under this section, thi | is product is Not | Applicable under this | regulati |
| SARA Title III Section 313 T | ovic (| Themicals | | | |
| Unless specific chemicals are | | | is product is Not | Applicable under this | regulati |
| Chemical Name | | | CAS-No. | Weight percent | 1084144 |
| ALUMINUM (FUME OR DOR DUST) | DUST |)ALUMINUM (FUME | 7429-90-5 | 5.00 - 10.00 | |
| | | | | | |
| Canadian Regulations: | | | | | |
| | | | | | |

PolyOne

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| Chemical Name | | | CAS-No. | Weight | NPRI ID# |
|------------------------|-------|-----------------------------------|-----------|------------------------------|------------|
| | | | | percent | |
| Aluminum | | | 7429-90-5 | 5.00 - 10.00 | |
| WHMIS Classification | | D2B | | | |
| withing Classification | • | D2D | | | |
| WHMIS Ingredient Dis | closu | ire List | | | |
| CAS-No. 7429-90-5 | | | | | |
| DSL | : | All components Substances List | | are on the Canadian empt. | n Domestic |
| tional Inventories: | | | | | |
| Australia AICS | : | Not determined | | | |
| China IECS | : | Not determined | | | |
| Europe EINECS | : | Not determined | | | |
| Japan ENCS | : | Not determined | | | |
| Korea KECI | : | Not determined | | | |
| Philippines PICCS | • | Not determined | | | |

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.