MATERIAL SAFETY DATA SHEET 82V TITAN SCHWARZ A3F

Version Number 1.1 Revision Date 06/14/2012 Page 1 of 8 Print Date 8/26/2012

1. PRODUCT AND COMPANY IDENTIFICATION

POLYONE CORPORATION 33587 Walker Road, Avon Lake, OH 44012

| Telephone Emergency telephone | : | 1 (440) 930-1000 or 1 (866) POLYONE CHEMTREC 1-800-424-9300 (24hrs for spill, leak, fire, exposure or accident). |
|----------------------------------|---|--|
| Product name | : | 82V TITAN SCHWARZ A3F |
| Product code | : | CC10164825 |
| Chemical Name | : | Mixture |
| CAS-No. | : | Mixture |
| Product Use | : | Industrial Applications |

2. COMPOSITION/INFORMATION ON REGULATED INGREDIENTS

| Components | CAS-No. | Weight percent |
|--|------------|----------------|
| 1,6-Hexanediamine, N,N'-bis(2,2,6,6- tetramethyl-4-piperidinyl)-,polymer with 2,4,6-trichloro-1,3,5-triazine, reaction products | 70624-18-9 | 1 - 5 |
| 2,4,8,10-Tetraoxa-3,9- diphosphaspiro[5.5]undecane, 3,9-bis[2,4- bis(1,1-dimethylethyl)phenoxy]- | 26741-53-7 | 1 - 5 |
| Carbon black | 1333-86-4 | 1 - 5 |
| Iron oxide | 1309-37-1 | 1 - 5 |
| Titanium dioxide | 13463-67-7 | 1 - 5 |

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

This mixture has not been evaluated as a whole. Information provided on the health effects of this product is based on individual components. All ingredients are bound and potential for hazardous exposure as shipped is minimal. However, some vapors 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.

POTENTIAL HEALTH EFFECTS

Routes of Exposure:

: Inhalation, Ingestion, Skin contact

Acute exposure

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MATERIAL SAFETY DATA SHEET 82V TITAN SCHWARZ A3F

| sion Date 06/14/2012 | Page 2 Print Date 8/26/2 |
|---|--|
| | |
| Inhalation | : Resin particles, like other inert materials, can be mechanically irritating. |
| Ingestion | : May be harmful if swallowed. |
| Eyes | : Resin particles, like other inert materials, are mechanically irritating to |
| Skin | eyes. : Experience shows no unusual dermatitis hazard from routine handling |
| Chronic exposure | : Refer to Section 11 for Toxicological Information. |
| | |
| Medical Conditions Aggravated by Exposure: | : None known. |
| | 4. FIRST AID MEASURES |
| Inhalation | : Move to fresh air in case of accidental inhalation of fumes from overheating or combustion. When symptoms persist or in all cases o doubt seek medical advice. |
| Ingestion | : Do not induce vomiting without medical advice. When symptoms persist or in all cases of doubt seek medical advice. |
| Eyes | : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If eye irritation persists, seek medical attention. |
| Skin | : Wash off with soap and plenty of water. If skin irritation persists seek medical attention. |
| | 5. FIRE-FIGHTING MEASURES |
| Flash point | : not applicable |
| Flammable Limits | |
| Upper explosion limit | : not applicable |
| Lower explosion limit | : not applicable |
| Autoignition temperature | : not applicable |
| Suitable extinguishing media | : Carbon dioxide blanket, Water spray, Dry powder, Foam. |
| Special Fire Fighting | : Fullface self-contained breathing apparatus (SCBA) used in positive |
| Procedures | pressure mode should be worn to prevent inhalation of airborne |
| I 1 P' /P 1 ' | contaminants. |
| Unusual Fire/Explosion Hazards | : Carbon dioxide (CO2), carbon monoxide (CO), oxides of nitrogen (NOx), other hazardous materials, and smoke are all possible. |
| | 6. ACCIDENTAL RELEASE MEASURES |
| Personal precautions | : Wear appropriate personal protection during cleanup, such as impervious gloves, boots and coveralls. |
| Environmental precautions | : Should not be released into the environment. The product should not |

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MATERIAL SAFETY DATA SHEET **82V TITAN SCHWARZ A3F**

| sion Date 06/14/2012 | Page 2 Print Date 8/26/ |
|-----------------------------------|---|
| | be allowed to enter drains, water courses or the soil. |
| Methods for cleaning up | : Clean up promptly by sweeping or vacuum. Package all material in plastic, cardboard or metal containers for disposal. Refer to Section 13 of this MSDS for proper disposal methods. |
| | 7. HANDLING AND STORAGE |
| Handling | : Take measures to prevent the build up of electrostatic charge. Heat only in areas with appropriate exhaust ventilation. |
| Storage | : Keep containers dry and tightly closed to avoid moisture absorption and contamination. Keep in a dry, cool place. |
| 8. EX | POSURE 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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MATERIAL SAFETY DATA SHEET **82V TITAN SCHWARZ A3F**

Version Number 1.1 Revision Date 06/14/2012 Page 4 of 8 Print Date 8/26/2012

| Components | Value | Exposure time | Exposure type | List: |
|------------------|-----------|--------------------------------------|----------------------|----------|
| Carbon black | 3.5 mg/m3 | Recommended exposure limit (REL): | | NIOSH |
| | 0.1 mg/m3 | Recommended exposure limit (REL): | | NIOSH |
| | 3.5 mg/m3 | PEL: | | OSHA Z1 |
| | 3.5 mg/m3 | Time Weighted Average (TWA): | | OSHA Z1A |
| | 3.5 mg/m3 | Time Weighted Average (TWA): | | MX OEL |
| | 7 mg/m3 | Short Term Exposure Limit (STEL): | | MX OEL |
| | 3 mg/m3 | Time Weighted Average (TWA): | Inhalable fraction. | ACGIH |
| Iron oxide | 10 mg/m3 | PEL: | Fume. | OSHA Z1 |
| | 5 mg/m3 | Time Weighted Average (TWA): | as Fe | MX OEL |
| | 10 mg/m3 | Short Term Exposure Limit (STEL): | as Fe | MX OEL |
| | 5 mg/m3 | Time Weighted Average (TWA): | Respirable fraction. | ACGIH |
| Titanium dioxide | 10 mg/m3 | Time Weighted Average (TWA): | | ACGIH |
| | 15 mg/m3 | PEL: | Total dust. | OSHA Z1 |
| | 10 mg/m3 | Time Weighted Average (TWA): | Total dust. | OSHA Z1A |
| | 10 mg/m3 | Time Weighted Average (TWA): | as Ti | MX OEL |
| | 20 mg/m3 | Short Term Exposure Limit (STEL): | as Ti | MX OEL |

9. PHYSICAL AND CHEMICAL PROPERTIES

- Form Appearance Colour Odour Melting point/range Boiling Point: Water solubility
- solid
 pellets
 BLACK
 very faint
 Not determined
 not applicable
 insoluble

Evaporation rate Specific Gravity Bulk density Vapour pressure Vapour density pH

- Not applicableNot determinedNot established
- : not applicable

:

- not applicable
- : not applicable
- **10. STABILITY AND REACTIVITY**

| • | |
|---|---|
| • | |
| | |
| | |
| | : |

Stable

: Will not occur.

Hazardous Polymerization

Conditions to avoid

: Keep away from oxidizing agents and open flame. To avoid thermal decomposition, do not overheat.

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MATERIAL SAFETY DATA SHEET **82V TITAN SCHWARZ A3F**

Version Number 1.1 Revision Date 06/14/2012 Page 5 of 8 Print Date 8/26/2012

| Incompatible Materials | : | Incompatible with strong acids and oxidizing agents. |
|----------------------------------|---|--|
| Hazardous decomposition products | : | Carbon dioxide (CO2), carbon monoxide (CO), oxides of nitrogen (NOx), other hazardous materials, and smoke are all possible. |

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 |
|------------|-----------------------------|------------------|------------------------------|
| 70624-18-9 | 1,6-Hexanediamine, N,N'- | Irritant | Eyes, Skin, Respiratory |
| | bis(2,2,6,6-tetramethyl-4- | | system. |
| | piperidinyl)-,polymer with | | |
| | 2,4,6-trichloro-1,3,5- | | |
| | triazine, reaction products | | |
| 26741-53-7 | 2,4,8,10-Tetraoxa-3,9- | Toxic | Refer to LC50 / LD50 Data on |
| | diphosphaspiro[5.5]undeca | | MSDS |
| | ne, 3,9-bis[2,4-bis(1,1- | | |
| | dimethylethyl)phenoxy]- | | |
| 1333-86-4 | Carbon black | Systemic effects | Eyes, Respiratory system. |
| 1309-37-1 | Iron oxide | Systemic effects | Respiratory system. |
| 13463-67-7 | Titanium dioxide | Systemic effects | 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 |
|------------|-----------------------------|-------------|---------------|---------|
| 70624-18-9 | 1,6-Hexanediamine, N,N'- | Oral LD50 | > 2,000 mg/kg | rat |
| | bis(2,2,6,6-tetramethyl-4- | Dermal LD50 | > 3,000 mg/kg | rat |
| | piperidinyl)-,polymer with | | | |
| | 2,4,6-trichloro-1,3,5- | | | |
| | triazine, reaction products | | | |
| 26741-53-7 | 2,4,8,10-Tetraoxa-3,9- | LC50 | > 2 gm/m3 | rat |
| | diphosphaspiro[5.5]undeca | Oral LD50 | 5,580 mg/kg | rat |
| | ne, 3,9-bis[2,4-bis(1,1- | Dermal LD50 | > 200 mg/kg | rabbit |
| | dimethylethyl)phenoxy]- | | | |
| 1333-86-4 | Carbon black | Oral LD50 | >15,400 mg/kg | rat |
| | | Dermal LD50 | > 3 gm/kg | rabbit |

Carcinogenicity

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

| CAS-No. | Chemical Name | OSHA | IARC | NTP |
|------------|------------------|------|------|-----|
| 13463-67-7 | Titanium dioxide | no | 2B | no |

MATERIAL SAFETY DATA SHEET 82V TITAN SCHWARZ A3F

Version Number 1.1 Revision Date 06/14/2012

Page 6 of 8 Print Date 8/26/2012

IARC Carcinogen Classifications:

1 - The component is carcinogenic to humans.

2A - The component is probably carcinogenic to humans.

2B - The component is possibly carcinogenic to humans.

NTP Carcinogen Classifications:

1 - The component is known to be a human carcinogen.

2 - The component is reasonably anticipated to be a human carcinogen.

Additional Health Hazard Information:

Carbon black 1333-86-4 Carcinogenicity: Many inhalation toxicologists believe that the tumor response observed in the referenced rat studies is species specific and does not correlate to human exposure. However, the IARC evaluation in Monograph Volume 65, issued in April 1996 concluded that, "There is sufficient evidence in experimental animals for the carcinogenicity of carbon black". Based on this evaluation, along with their evaluation of inadequate evidence of carcinogenicity in humans, IARC's overall evaluation is that "Carbon Black is possibly carcinogenic to humans (Group 2B). The IARC 2B listing only pertains to airborne, unbound carbon black particles of respirable size. Carbon Black has not been listed as a carcinogen by the National Toxicology Program (NTP) or the Occupational Safety and Health Administration (OSHA). The National Institute of Occupational Safety and Health (NIOSH) criteria document on carbon black recommends that only carbon black with PAH (polynuclear aromatic hydrocarbon) levels greater than 0.1% be considered suspect carcinogens.

| Persistence and degradability | : Not readily biodegradable. |
|-------------------------------|---|
| Environmental Toxicity | : Chemicals are not readily available as they are bound within the polymer matrix. |
| Bioaccumulation Potential | : Chemicals are not readily available as they are bound within the polymer matrix. |
| Additional advice | : no data available |
| | 13. DISPOSAL CONSIDERATIONS |
| Product | : Like most thermoplastic plastics the product can be recycled. Where possible recycling is preferred to disposal or incineration. The generator of waste material has the responsibility for proper waste classification, transportation and disposal in accordance with applicable federal, state/provincial and local regulations. |
| Contaminated packaging | : Recycling is preferred when possible. The generator of waste material has the responsibility for proper waste classification, transportation and disposal in accordance with applicable federal, state/provincial and local regulations. |
| | 14. TRANSPORT INFORMATION |

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MATERIAL SAFETY DATA SHEET 82V TITAN SCHWARZ A3F

Version Number 1.1 Revision Date 06/14/2012

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Page 7 of 8 Print Date 8/26/2012

| U.S. DOT Classification | : Not regulated for | or transportation. | | | | | |
|----------------------------------|-----------------------------------|---------------------------|------------------------|-------------------------|--|--|--|
| ICAO/IATA | : Refer to specific | c regulation. | | | | | |
| IMO/IMDG (maritime) | : Refer to specific | c regulation. | | | | | |
| | 15. REGULATOR | Y INFORMATI | ON | | | | |
| US Regulations: | | | | | | | |
| OSHA Status | : Classified as ha | zardous based on | components. | | | | |
| TSCA Status | : All components TSCA Inventor | s of this product a y. | re listed on or exe | mpt from the | | | |
| US. EPA CERCLA Hazardous | Substances (40 CFR 2 | 302) | | | | | |
| not applicable | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| California Proposition 65 | : Not applicable | | | | | | |
| SARA Title III Section 302 Ext | remely Hazardous Su | ibstance | | | | | |
| Unless specific chemicals are ic | lentified under this se | ction, this product | t is Not Applicabl | e under this regulation | | | |
| - | | - | | - | | | |
| SARA Title III Section 313 Tox | tic Chemicals: | | | | | | |
| Unless specific chemicals are id | | ction this product | tis Not Applicabl | e under this regulation | | | |
| Canadian Regulations: | | enon, uno produce | in iter inpriouor | | | | |
| - | | | | | | | |
| National Pollutant Relea | se inventory (INPRI) | CAS-No. | Weight | NPRI ID# | | | |
| Rutile, antimony chromium b | uff | 68186-90-3 | percent 0.10 - 1.00 | | | | |
| | | | | | | | |
| WHMIS Classification | WHMIS Classification : D1B | | | | | | |
| WHMIS Ingredient Disc | losure List | | | | | | |
| CAS-No. | | | | | | | |
| CAD-NO. | | | | | | | |
| | | | | | | | |
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MATERIAL SAFETY DATA SHEET 82V TITAN SCHWARZ A3F

Version Number 1.1 Revision Date 06/14/2012 Page 8 of 8 Print Date *8/26/2012*

| 1333-86-4 1309-37-1 | | |
|------------------------|---|--|
| DSL | : | All components of this product are on the Canadian Domestic Substances List (DSL) or are exempt. |
| National Inventories: | | |
| Australia AICS | : | Listed |
| China IECS | : | Listed |
| Europe EINECS | : | Listed |
| Japan ENCS | : | Not determined |
| Korea KECI | : | Not determined |
| Philippines PICCS | : | Not determined |
| 16. OTHER INFORMATION | | |

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.