



Safety Data Sheet

Issue Date 28-Aug-2018

Revision Date 11-Jul-2016

Revision Number 9

1. IDENTIFICATION

Product identifier

Product Code G370-1234A
Product Name TANK ARMOR BLUE

Other means of identification

Common Name SERIES 370, PART A
Synonyms None

Recommended use of the chemical and restrictions on use

Recommended Use industrial paint.
Uses advised against Consumer use, For professional use only. Not for residential use.

Details of the supplier of the safety data sheet

Manufacturer Address

Tnemec Company, Inc. 6800 Corporate Drive, Kansas City, MO
64120-1372 816-474-3400

Distributor

Tnemec Company, Inc. 86 Boul, des Entreprises, Ste. 203,
Boisbriand, Quebec Canada J7G 2T3

Emergency telephone number

Company Phone Number Tnemec Regulatory Dept: 816-474-3400
24 Hour Emergency Phone Number 800-535-5053 (Infotrac)

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

| | |
|--|-------------|
| Acute toxicity - Oral | Category 4 |
| Acute toxicity - Dermal | Category 4 |
| Skin corrosion/irritation | Category 2 |
| Serious eye damage/eye irritation | Category 2A |
| Skin sensitization | Category 1 |
| Carcinogenicity | Category 2 |
| Specific target organ toxicity (repeated exposure) | Category 2 |

Label elements

EMERGENCY OVERVIEW

Hazard statements

Harmful if swallowed
Harmful in contact with skin
Causes skin irritation
Causes serious eye irritation
May cause an allergic skin reaction
Suspected of causing cancer
May cause damage to organs through prolonged or repeated exposure

**Appearance** opaque**Physical state** liquid**Odor** Slight**Precautionary Statements****Prevention**

Obtain special instructions before use
 Do not handle until all safety precautions have been read and understood
 Use personal protective equipment as required
 Wash face, hands and any exposed skin thoroughly after handling
 Do not eat, drink or smoke when using this product
 Contaminated work clothing should not be allowed out of the workplace
 Wear protective gloves
 Do not breathe dust/fume/gas/mist/vapors/spray

Response

IF exposed or concerned: Get medical advice/attention
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 If eye irritation persists: Get medical advice/attention
 IF ON SKIN: Wash with plenty of soap and water
 Call a POISON CENTER or doctor/physician if you feel unwell
 Take off contaminated clothing and wash before reuse
 If skin irritation or rash occurs: Get medical advice/attention
 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
 Rinse mouth

Storage

Store locked up
 Keep away from children

Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)**Other information**

Toxic to aquatic life with long lasting effects
 SEE SAFETY DATA SHEET

Acute Toxicity 91.570459 % of the mixture consists of ingredient(s) of unknown toxicity.

3. COMPOSITION/INFORMATION ON INGREDIENTS

| Chemical name | CAS No | Weight-% |
|---------------------------------------|-------------|-----------|
| EPOXY RESIN (LER) | 25085-99-8 | 60 - 100% |
| FURFURYL ALCOHOL | 98-00-0 | 1 - <10% |
| SYNTHETIC AMORPHOUS PYROGENIC SILICA | 112945-52-5 | 1 - <10% |
| COBALT ALUMINATE BLUE SPINEL | 1345-16-0 | 1 - <10% |
| GAMMA-GLYCIDOXYPROPYLTRIMETHOXYSILANE | 2530-83-8 | 0.1 - <1% |
| METHYL ALCOHOL | - | 0 - <0.1% |

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

Description of first aid measures

| | |
|---|--|
| General advice | If symptoms persist, call a physician. |
| Eye contact | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If eye irritation persists, consult a specialist. |
| Skin contact | Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Call a physician immediately. |
| Inhalation | If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately. |
| Ingestion | If swallowed, do not induce vomiting. Get medical attention immediately. |
| Self-protection of the first aider | Use personal protective equipment. Avoid contact with eyes, skin and clothing. |

Most important symptoms and effects, both acute and delayed

| | |
|---------------------------|------------------------|
| Notes to physician | Treat symptomatically. |
|---------------------------|------------------------|

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Carbon dioxide. Foam. Dry chemical.

Unsuitable extinguishing media Do not use a solid water stream as it may scatter and spread fire.

Specific hazards arising from the chemical

Thermal decomposition can lead to release of irritating gases and vapours In the event of fire and/or explosion do not breathe fumes

Hazardous combustion products Hazardous combustion products may include: A complex mixture of airborne solid and liquid particulates and gases (smoke). Carbon monoxide. Unidentified organic and inorganic compounds. Carbon oxides. Hydrocarbons. Aldehydes. Silicon.

Protective equipment and precautions for firefighters

Use water spray to cool unopened containers. In the event of fire, wear self-contained breathing apparatus. Keep away from heat/sparks/open flames/hot surfaces. MAY CAUSE HEAT AND PRESSURE BUILD-UP IN CLOSED CONTAINERS. Solvent vapors are heavier than air and may spread along floors. Flash back possible over considerable distance.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

| | |
|-----------------------------|--|
| Personal precautions | Avoid contact with eyes, skin and clothing. Use personal protective equipment. Remove all sources of ignition. |
|-----------------------------|--|

Environmental Precautions

| | |
|----------------------------------|---|
| Environmental precautions | Prevent further leakage or spillage if safe to do so. Do not flush into surface water or sanitary sewer system. |
|----------------------------------|---|

Methods and material for containment and cleaning up

| | |
|--------------------------------|--|
| Methods for containment | Remove all sources of ignition. Spills may be collected with inert, absorbent material for proper disposal. Use non-sparking tools, protective gloves, goggles and clothing, adequate ventilation, avoid the breathing of vapors and use respiratory protective devices. Transfer absorbent material to suitable containers for proper disposal. |
|--------------------------------|--|

Methods for cleaning up

If spilled, contain spilled material and remove with inert absorbent. Dispose of contaminated absorbent, container and unused contents in accordance with local, state and federal regulations.

7. HANDLING AND STORAGE

Precautions for safe handling**Handling**

Close container after each use. Avoid contact with eyes, skin and clothing. Do not eat, drink or smoke when using this product. If splashes are likely to occur, wear goggles. Wear protective gloves/clothing. Do not burn, or use a cutting torch on, the empty drum. When used in a mixture, read the labels and safety data sheets of all components. Wash thoroughly after handling.

Conditions for safe storage, including any incompatibilities**Storage**

Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children.

Incompatible products

Strong oxidizing agents. Amines. Acids. Bases.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters**Exposure guidelines**

| Chemical name | ACGIH TLV | OSHA PEL | NIOSH IDLH |
|--|--|---|------------|
| FURFURYL ALCOHOL 98-00-0 | TWA: 0.2 ppm Skin | TWA: 10 ppm TWA: 40 mg/m ³ STEL: 15 ppm STEL: 60 mg/m ³ Skin TWA: 50 ppm TWA: 200 mg/m ³ | 75 ppm |
| COBALT ALUMINATE BLUE SPINEL 1345-16-0 | TWA: 0.02 mg/m ³ TWA: 1 mg/m ³ | - | |
| METHYL ALCOHOL | TWA: 200 ppm Skin STEL: 250 ppm | TWA: 200 ppm TWA: 260 mg/m ³ STEL: 250 ppm STEL: 325 mg/m ³ Skin | 6000 ppm |

Appropriate engineering controls**Engineering measures**

Sufficient ventilation, in volume and pattern, should be provided through both local and general exhaust to keep the air contaminant concentration below current applicable OSHA Permissible Exposure Limits (PEL) and ACGIH's Threshold Limit Values (TLV). Appropriate ventilation should be employed to remove hazardous decomposition products formed during welding or flame cutting operations of surfaces coated with this product.

Individual protection measures, such as personal protective equipment**Eye/face protection**

Use chemical resistant splash type goggles. If splashes are likely to occur, wear face-shield.

Skin and body protection

Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Respiratory protection

Use only with adequate ventilation. Do not breathe vapors, spray mist, or dust. Ensure fresh air entry during application and drying. If you experience eye watering, headache or dizziness or if air monitoring demonstrates vapor/mist or dust levels are above applicable

limits, wear an appropriate, properly fitted respirator (NIOSH/MSHA approved) during and after application. Follow respirator manufacturer's directions for respirator use.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice. Avoid breathing dust created by cutting, sanding, or grinding.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

| | | | |
|-----------------------|--------------------------|-----------------------|--------------------------|
| Physical state | liquid | Odor | Slight |
| Appearance | opaque | Odor threshold | No information available |
| Color | No information available | | |

| <u>Property</u> | <u>Values</u> | <u>Remarks</u> |
|--|-------------------------|-----------------------------|
| pH | | No data available |
| Melting point / freezing point | No data available | No data available |
| Boiling point / boiling range | 72 °C / 162 °F | |
| Flash point | 110 °C / 230.0 °F | |
| Evaporation rate | | Pensky Martens - Closed Cup |
| Flammability (solid, gas) | No data available | No data available |
| Flammability Limit in Air | | No information available |
| Upper flammability limit | 16.3 | approximate |
| Lower flammability limit | 1.8 | |
| Vapor pressure | | No data available |
| Vapor density | | No data available |
| Specific gravity | 1.18217 | g/cm3 |
| Water solubility | Insoluble in cold water | |
| Solubility in other solvents | | No data available |
| Partition coefficient: n-octanol/water | | No data available |
| Autoignition temperature | No data available | No data available |
| Decomposition temperature | | No data available |
| Kinematic viscosity | | No data available |
| Dynamic viscosity | 6000 centipoises | approx |

Other Information

| | |
|---|--------------------------|
| Density | 9.83742 lbs/gal |
| Volatile organic compounds (VOC) content | .563 lbs/gal |
| Total volatiles weight percent | 5.7190 % |
| Total volatiles volume percent | 5.9799 % |
| Bulk density | No information available |

10. STABILITY AND REACTIVITY

Reactivity

No data available

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

None under normal processing.

Conditions to avoid

Heat, flames and sparks. Amines. Contact with water liberates toxic gas.

Incompatible materials

Strong oxidizing agents, Amines, Acids, Bases

Hazardous decomposition products

Hazardous combustion products may include: A complex mixture of airborne solid and liquid particulates and gases (smoke). Carbon monoxide. Unidentified organic and inorganic compounds. Carbon oxides. Hydrocarbons. Aldehydes. Silicon.

11. TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure

| | |
|---------------------|---|
| Inhalation | May cause central nervous system depression with nausea, headache, dizziness, vomiting, and incoordination. May cause irritation. |
| Eye contact | Causes serious eye irritation. |
| Skin contact | Irritating to skin. May cause sensitization by skin contact. |
| Ingestion | Harmful if swallowed. |

| Chemical name | LD50 Oral | LD50 Dermal | LC50 Inhalation |
|--|---|--|---|
| FURFURYL ALCOHOL 98-00-0 | = 110 mg/kg (Rat) = 177 mg/kg (Rat) | = 3825 mg/kg (Rat) = 400 mg/kg (Rabbit) = 657 mg/kg (Rabbit) | = 233 ppm (Rat) 4 h |
| SYNTHETIC AMORPHUS PYROGENIC SILICA 112945-52-5 | = 3160 mg/kg (Rat) | - | - |
| GAMMA-GLYCIDOXYPROPYLTRI METHOXYSILANE 2530-83-8 | = 22600 µL/kg (Rat) = 7.01 g/kg (Rat) | = 3970 µL/kg (Rabbit) | > 5.3 mg/L (Rat) 4 h |
| METHYL ALCOHOL | = 6200 mg/kg (Rat) | = 15800 mg/kg (Rabbit) = 15840 mg/kg (Rabbit) | = 22500 ppm (Rat) 8 h = 64000 ppm (Rat) 4 h |

Information on toxicological effects

Symptoms Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Skin disorders. Irritating to eyes and skin.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Chronic Toxicity May cause cancer. Skin sensitizer.
Sensitization May cause sensitization of susceptible persons.
Mutagenicity No information available.
Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

| Chemical name | ACGIH | IARC | NTP | OSHA |
|---|-------|----------|------------------------|------|
| FURFURYL ALCOHOL 98-00-0 | * | Group 2B | - | X |
| SYNTHETIC AMORPHUS PYROGENIC SILICA 112945-52-5 | | Group 3 | - | |
| COBALT ALUMINATE BLUE SPINEL 1345-16-0 | A3 | Group 2B | Reasonably Anticipated | |

Reproductive effects No information available.
STOT - single exposure No information available
STOT - repeated exposure Causes damage to organs through prolonged or repeated exposure
Target organ effects Central nervous system, Eyes, respiratory system, Skin.
Aspiration hazard No information available.

Acute Toxicity 91.570459 % of the mixture consists of ingredient(s) of unknown toxicity.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Toxic to aquatic life with long lasting effects

3.68416 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

| Chemical name | Toxicity to algae | Toxicity to fish | Toxicity to daphnia |
|---------------------------------|-------------------|--|-----------------------------------|
| EPOXY RESIN (LER) 25085-99-8 | 11 mg/L 72 hr | 2 mg/L 96 hr Oncorhynchus mykiss | 1.8 mg/L 48h |
| FURFURYL ALCOHOL 98-00-0 | | 32: 96 h Pimephales promelas mg/L LC50 static | 328: 24 h Daphnia magna mg/L EC50 |
| METHYL ALCOHOL | | 28200: 96 h Pimephales promelas mg/L LC50 flow-through 100: 96 h Pimephales promelas mg/L LC50 static 18 - 20: 96 h Oncorhynchus mykiss mL/L LC50 static 13500 - 17600: 96 h Lepomis macrochirus mg/L LC50 flow-through 19500 - 20700: 96 h Oncorhynchus mykiss mg/L LC50 flow-through | |

Persistence and degradability

No information available.

Bioaccumulation

No information available.

Mobility in Environmental Media

| Chemical name | log Pow |
|---------------------------------|---------|
| EPOXY RESIN (LER) 25085-99-8 | 3 |
| METHYL ALCOHOL | -0.77 |

Other Adverse Effects

No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal Methods

Keep container tightly closed. If spilled, contain spilled material and remove with inert absorbent. Dispose of contaminated absorbent, container and unused contents in accordance with local, state and federal regulations.

Contaminated packaging

Empty containers should be taken to an approved waste handling site for recycling or disposal.

| Chemical name | RCRA | RCRA - Basis for Listing | RCRA - D Series Wastes | RCRA - U Series Wastes |
|----------------|------|--------------------------------|------------------------|------------------------|
| METHYL ALCOHOL | | Included in waste stream: F039 | | U154 |

| Chemical name | CAWAST |
|---|--------------------|
| COBALT ALUMINATE BLUE SPINEL 1345-16-0 | Toxic |
| METHYL ALCOHOL | Toxic Ignitable |

14. TRANSPORT INFORMATION

DOT

Proper Shipping Name

PAINT & RELATED MATERIAL

Additional information

Call TNEMEC Traffic Department - 816-474-3400 for additional information or other modes of Transportation.

15. REGULATORY INFORMATION

International Inventories

| | |
|---------------|-----------------|
| TSCA | Complies |
| DSL/NDSL | Complies |
| EINECS/ELINCS | Does Not Comply |
| ENCS | Complies |
| IECSC | Complies |
| KECL | Complies |
| PICCS | Complies |
| AICS | Complies |

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

The following chemical(s) are listed as HAP under the U.S. Clean Air Act, Section 12 (40 CFR 61):

| Chemical name | HAPS Data |
|------------------------------|-----------|
| COBALT ALUMINATE BLUE SPINEL | |
| METHYL ALCOHOL | |

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and and Title 40n of the Code of Federal Regulations, Part 372:

| Chemical name | SARA 313 - Threshold Values |
|--|-----------------------------|
| COBALT ALUMINATE BLUE SPINEL - 1345-16-0 | 0.1 |
| METHYL ALCOHOL - | 1.0 |

SARA 311/312 Hazardous**Categorization**

| | |
|-----------------------------------|-----|
| Acute Health Hazard | Yes |
| Chronic Health Hazard | Yes |
| Fire Hazard | No |
| Sudden Release of Pressure Hazard | No |
| Reactive Hazard | No |

| Chemical name | Hazardous Substances RQs | CERCLA EHS RQs | RQ |
|----------------|--------------------------|----------------|--|
| METHYL ALCOHOL | 5000 lb | | RQ 5000 lb final RQ RQ 2270 kg final RQ |

California Prop. 65

WARNING: This product can expose you to the following chemicals which are known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

| Chemical name | California Prop. 65 |
|----------------------------|---------------------|
| FURFURYL ALCOHOL - 98-00-0 | * |
| METHYL ALCOHOL - | Developmental |

California SCAQMD Rule 443

Contains Photochemically Reactive Solvent

State Right-to-Know

| Chemical name | New Jersey | Massachusetts | Pennsylvania |
|---------------------------------|------------|---------------|--------------|
| FURFURYL ALCOHOL 98-00-0 | X | X | X |
| COBALT ALUMINATE BLUE SPINEL | X | | X |

| | | | |
|----------------|---|---|---|
| 1345-16-0 | | | |
| METHYL ALCOHOL | X | X | X |

16. OTHER INFORMATION

NFPA Health 2 Flammability 0 Instability 1 Physical hazard *
HMIS (Hazardous Health 2* Flammability 0 Reactivity 1
Material Information
System)

Prepared By Tnemec Regulatory Dept: 816-474-3400
Revision Date 11-Jul-2016

Revision Summary
 9 4 5 7 10 8 11 14

Disclaimer

For specific information regarding occupational safety and health standards, please refer to the Code of Federal Regulations, Title 29, Part 1910.

To the best of our knowledge, the information contained herein is accurate. However, neither the Tnemec Company or any of its subsidiaries assume any liability whatsoever for the accuracy of completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown health hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards which exist.

End of SDS



Safety Data Sheet

Issue Date 11-Aug-2016

Revision Date 11-Jul-2016

Revision Number 7

1. IDENTIFICATION

Product identifier

Product Code G370-0370B
Product Name TANK ARMOR ACTIVATOR

Other means of identification

Common Name SERIES 370, PART B

Recommended use of the chemical and restrictions on use

Recommended Use industrial paint.
Uses advised against Consumer use, For professional use only. Not for residential use.

Details of the supplier of the safety data sheet

Manufacturer Address

Tnemec Company, Inc. 6800 Corporate Drive, Kansas City, MO
64120-1372 816-474-3400

Distributor

Tnemec Company, Inc. 86 Boul, des Entreprises, Ste. 203,
Boisbriand, Quebec Canada J7G 2T3

Emergency telephone number

Company Phone Number Tnemec Regulatory Dept: 816-474-3400
24 Hour Emergency Phone Number 800-535-5053 (Infotrac)

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

| | |
|--|---------------------------|
| Acute toxicity - Oral | Category 4 |
| Skin corrosion/irritation | Category 1 Sub-category B |
| Serious eye damage/eye irritation | Category 1 |
| Skin sensitization | Category 1 |
| Germ cell mutagenicity | Category 1B |
| Carcinogenicity | Category 1A |
| Reproductive Toxicity | Category 2 |
| Specific target organ toxicity (single exposure) | Category 1 |
| Specific target organ toxicity (repeated exposure) | Category 1 |
| Flammable Liquids | Category 4 |

Label elements

EMERGENCY OVERVIEW

Danger

Hazard statements

Harmful if swallowed
 Causes severe skin burns and eye damage
 May cause an allergic skin reaction
 May cause genetic defects
 May cause cancer
 Suspected of damaging fertility or the unborn child
 Causes damage to organs
 Causes damage to organs through prolonged or repeated exposure
 Combustible liquid
 May be corrosive to metals

**Appearance** opaque**Physical state** liquid**Odor** Slight**Precautionary Statements****Prevention**

Obtain special instructions before use
 Do not handle until all safety precautions have been read and understood
 Use personal protective equipment as required
 Wash face, hands and any exposed skin thoroughly after handling
 Do not eat, drink or smoke when using this product
 Do not breathe dust/fume/gas/mist/vapors/spray
 Contaminated work clothing should not be allowed out of the workplace
 Wear protective gloves
 Keep away from heat/sparks/open flames/hot surfaces. — No smoking

Response

Immediately call a POISON CENTER or doctor/physician
 Specific treatment (see .? on this label)
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 Immediately call a POISON CENTER or doctor/physician
 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
 Wash contaminated clothing before reuse
 If skin irritation or rash occurs: Get medical advice/attention
 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
 Immediately call a POISON CENTER or doctor/physician
 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
 Rinse mouth
 Do NOT induce vomiting
 In case of fire: Use CO₂, dry chemical, or foam for extinction

Storage

Store locked up
 Store in a well-ventilated place. Keep cool

Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)**Other information**

Cancer hazard. Contains crystalline silica which can cause cancer. (Risk of cancer depends on duration and level of exposure).
 Respirable crystalline silica (quartz) can cause silicosis, a fibrosis (scarring) of the lungs

SEE SAFETY DATA SHEET

Acute Toxicity

22.2542482 % of the mixture consists of ingredient(s) of unknown toxicity.

3. COMPOSITION/INFORMATION ON INGREDIENTS

| Component | CAS-No | Weight-% |
|--------------------------------------|-------------|----------|
| FURFURYL ALCOHOL | 98-00-0 | 10 - 30% |
| CRYSTALLINE SILICA (QUARTZ) | 14808-60-7 | 10 - 30% |
| BENZYL ALCOHOL | 100-51-6 | 10 - 30% |
| 1,2-CYCLOHEXANEDIAMINE | 694-83-7 | 1 - 10% |
| TITANIUM DIOXIDE (TOTAL DUST) | 13463-67-7 | 1 - 10% |
| COAL FIRED FLY ASH BI-PRODUCT | 68131-74-8 | 1 - 10% |
| M-XYLENEDIAMINE | 1477-55-0 | 1 - 10% |
| SYNTHETIC AMORPHOUS PYROGENIC SILICA | 112945-52-5 | 1 - 10% |
| SYNTHETIC VITREOUS (SILICATE) FIBRES | 65997-17-3 | 1 - 10% |
| PHENOL (SKIN) | 108-95-2 | 1 - 10% |
| P-P'-ISOPROPYLIDENEDIPHENOL | 80-05-7 | 0.1 - 1% |
| STODDARD SOLVENT (MINERAL SPIRITS) | 8052-41-3 | 0.1 - 1% |
| FATTY ACIDS | 147900-93-4 | 0.1 - 1% |

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

Description of first aid measures

| | |
|---|--|
| General advice | If symptoms persist, call a physician. |
| Eye contact | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Call a physician immediately. |
| Skin contact | Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Call a physician immediately. |
| Inhalation | If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately. |
| Ingestion | If swallowed, do not induce vomiting. Get medical attention immediately. Never give anything by mouth to an unconscious person. |
| Self-protection of the first aider | Use personal protective equipment. Avoid contact with eyes, skin and clothing. |

Most important symptoms and effects, both acute and delayed

Notes to physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Carbon dioxide. Foam. Dry chemical.

Unsuitable extinguishing media Do not use a solid water stream as it may scatter and spread fire.

Specific hazards arising from the chemical

Thermal decomposition can lead to release of irritating gases and vapours In the event of fire and/or explosion do not breathe fumes

Hazardous combustion products Hazardous combustion products may include: A complex mixture of airborne solid and liquid particulates and gases (smoke). Carbon monoxide. Unidentified organic and inorganic compounds. Carbon oxides. Hydrocarbons. Ammonia.

Protective equipment and precautions for firefighters

Use water spray to cool unopened containers. In the event of fire, wear self-contained breathing apparatus. Keep away from heat/sparks/open flames/hot surfaces. MAY CAUSE HEAT AND PRESSURE BUILD-UP IN CLOSED CONTAINERS.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Avoid contact with eyes, skin and clothing. Use personal protective equipment. Remove all sources of ignition.

Environmental Precautions

Environmental precautions Prevent further leakage or spillage if safe to do so. Do not flush into surface water or sanitary sewer system.

Methods and material for containment and cleaning up

Methods for containment Remove all sources of ignition. Spills may be collected with inert, absorbent material for proper disposal. Use non-sparking tools, protective gloves, goggles and clothing, adequate ventilation, avoid the breathing of vapors and use respiratory protective devices. Transfer absorbent material to suitable containers for proper disposal.

Methods for cleaning up If spilled, contain spilled material and remove with inert absorbent. Dispose of contaminated absorbent, container and unused contents in accordance with local, state and federal regulations.

7. HANDLING AND STORAGE

Precautions for safe handling

Handling Close container after each use. Avoid contact with eyes, skin and clothing. Do not eat, drink or smoke when using this product. If splashes are likely to occur, wear goggles. Wear protective gloves/clothing. When used in a mixture, read the labels and safety data sheets of all components. Wash thoroughly after handling.

Conditions for safe storage, including any incompatibilities

Storage Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children.

Incompatible products Strong oxidizing agents. Bases. Acids.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters**Exposure guidelines**

| Component | ACGIH TLV | OSHA PEL | NIOSH IDLH |
|--|-------------------------------------|---|------------------------|
| FURFURYL ALCOHOL 98-00-0 | TWA: 10 ppm Skin STEL: 15 ppm | TWA: 10 ppm TWA: 40 mg/m ³ STEL: 15 ppm STEL: 60 mg/m ³ Skin TWA: 50 ppm TWA: 200 mg/m ³ | 75 ppm |
| CRYSTALLINE SILICA (QUARTZ) 14808-60-7 | TWA: 0.025 mg/m ³ | TWA: 0.1 mg/m ³ | 50 mg/m ³ |
| TITANIUM DIOXIDE (TOTAL DUST) 13463-67-7 | TWA: 10 mg/m ³ | TWA: 10 mg/m ³ TWA: 15 mg/m ³ | 5000 mg/m ³ |

| | | | |
|---|--|---|--|
| COAL FIRED FLY ASH BI-PRODUCT 68131-74-8 | TWA: 1 mg/m ³ | - | 100 mg/m ³ 10 mg/m ³ |
| M-XYLENEDIAMINE 1477-55-0 | Skin Ceiling: 0.1 mg/m ³ | Skin Ceiling: 0.1 mg/m ³ | |
| SYNTHETIC VITREOUS (SILICATE) FIBRES 65997-17-3 | TWA: 1 fiber/cm ³ TWA: 5 mg/m ³ | - | |
| PHENOL (SKIN) 108-95-2 | TWA: 5 ppm Skin | TWA: 5 ppm TWA: 19 mg/m ³ Skin | 250 ppm |
| STODDARD SOLVENT (MINERAL SPIRITS) 8052-41-3 | TWA: 100 ppm | TWA: 100 ppm TWA: 525 mg/m ³ TWA: 500 ppm TWA: 2900 mg/m ³ | 20000 mg/m ³ |

Appropriate engineering controls**Engineering measures**

Sufficient ventilation, in volume and pattern, should be provided through both local and general exhaust to keep the air contaminant concentration below current applicable OSHA Permissible Exposure Limits (PEL) and ACGIH's Threshold Limit Values (TLV). Appropriate ventilation should be employed to remove hazardous decomposition products formed during welding or flame cutting operations of surfaces coated with this product.

Individual protection measures, such as personal protective equipment**Eye/face protection**

Use chemical resistant splash type goggles. If splashes are likely to occur, wear face-shield.

Skin and body protection

Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Respiratory protection

Use only with adequate ventilation. Do not breathe vapors, spray mist, or dust. Ensure fresh air entry during application and drying. If you experience eye watering, headache or dizziness or if air monitoring demonstrates vapor/mist or dust levels are above applicable limits, wear an appropriate, properly fitted respirator (NIOSH/MSHA approved) during and after application. Follow respirator manufacturer's directions for respirator use. Respirable crystalline silica (quartz) can cause silicosis, a fibrosis (scarring) of the lungs.

General hygiene considerations

Handle in accordance with good industrial hygiene and safety practice. Avoid breathing dust created by cutting, sanding, or grinding.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

| | | | |
|---------------------------------------|--------------------------|-----------------------------|--------------------------|
| Physical state | liquid | Odor | Slight |
| Appearance | opaque | Odor threshold | No information available |
| Color | No information available | | |
| Property | Values | Remarks | |
| pH | | No data available | |
| Melting point / freezing point | | No data available | |
| Boiling point / boiling range | 72 °C / 161 °F | | |
| Flash point | 88 °C / 190.0 °F | | |
| Evaporation rate | | Pensky Martens - Closed Cup | |
| Flammability (solid, gas) | | No data available | |
| Flammability Limit in Air | | No information available | |
| Upper flammability limit | 20.7 | approximate | |
| Lower flammability limit | 0.7 | | |
| Vapor pressure | | No data available | |
| Vapor density | | No data available | |

| | | |
|--|-------------------------|-------------------|
| Specific gravity | 1.32763 | g/cm3 |
| Water solubility | Insoluble in cold water | |
| Solubility in other solvents | | No data available |
| Partition coefficient: n-octanol/water | | No data available |
| Autoignition temperature | | No data available |
| Decomposition temperature | | No data available |
| Kinematic viscosity | | No data available |
| Dynamic viscosity | 19000 centipoises | approx |

Other Information

| | |
|--|------------------|
| Density | 11.07247 lbs/gal |
| Volatile organic compounds (VOC) content | 2.1082 lbs/gal |
| Total volatiles weight percent | 19.04 % |
| Total volatiles volume percent | 22.63 % |

10. STABILITY AND REACTIVITY**Reactivity**

No data available

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

None under normal processing.

Conditions to avoid

Heat, flames and sparks. Epoxy constituents.

Incompatible materials

Strong oxidizing agents, Bases, Acids

Hazardous decomposition products

Hazardous combustion products may include: A complex mixture of airborne solid and liquid particulates and gases (smoke). Carbon monoxide. Unidentified organic and inorganic compounds. Carbon oxides. Hydrocarbons. Ammonia.

11. TOXICOLOGICAL INFORMATION**Information on Likely Routes of Exposure**

| | |
|---------------------|---|
| Inhalation | May cause central nervous system depression with nausea, headache, dizziness, vomiting, and incoordination. Respirable crystalline silica (quartz) can cause silicosis, a fibrosis (scarring) of the lungs. |
| Eye contact | Causes serious eye damage. |
| Skin contact | Causes severe skin burns. May cause sensitization by skin contact. |
| Ingestion | Harmful if swallowed. |

| Component | LD50 Oral | LD50 Dermal | LC50 Inhalation |
|---|---|--|------------------------|
| FURFURYL ALCOHOL 98-00-0 | = 110 mg/kg (Rat) = 177 mg/kg (Rat) | = 3825 mg/kg (Rat) = 400 mg/kg (Rabbit) = 657 mg/kg (Rabbit) | = 233 ppm (Rat) 4 h |
| CRYSTALLINE SILICA (QUARTZ) 14808-60-7 | = 500 mg/kg (Rat) | | |
| BENZYL ALCOHOL 100-51-6 | = 1230 mg/kg (Rat) | = 2 g/kg (Rabbit) | = 8.8 mg/L (Rat) 4 h |
| 1,2-CYCLOHEXANEDIAMINE 694-83-7 | = 4556 mg/kg (Rat) | | |

| | | | |
|--|---|------------------------|-------------------------------------|
| TITANIUM DIOXIDE (TOTAL DUST) 13463-67-7 | > 10000 mg/kg (Rat) | | |
| COAL FIRED FLY ASH BI-PRODUCT 68131-74-8 | > 2000 mg/kg (Rat) | | |
| M-XYLENEDIAMINE 1477-55-0 | = 660 mg/kg (Rat) | = 2 g/kg (Rabbit) | = 700 ppm (Rat) 1 h |
| SYNTHETIC AMORPHUS PYROGENIC SILICA 112945-52-5 | = 3160 mg/kg (Rat) | | |
| PHENOL (SKIN) 108-95-2 | = 317 mg/kg (Rat) = 340 mg/kg (Rat) | = 630 mg/kg (Rabbit) | = 316 mg/m ³ (Rat) 4 h |
| P-P'-ISOPROPYLIDENEDIPHENOL 80-05-7 | = 3300 mg/kg (Rat) | = 3 mL/kg (Rabbit) | > 0.17 mg/L (Rat) 6 h |

Information on toxicological effects

Symptoms Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Skin disorders. Irritating to eyes and skin.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Corrosivity Causes severe damage to eyes and skin. May be corrosive to metals.
Chronic Toxicity Cancer hazard. Contains crystalline silica which can cause cancer. (Risk of cancer depends on duration and level of exposure). Skin sensitizer. Substances known to be mutagenic to man. Substances known to impair fertility.
Sensitization May cause sensitization of susceptible persons.
Mutagenicity May cause genetic defects.
Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

| Component | ACGIH | IARC | NTP | OSHA |
|--|-------|----------|-------|------|
| FURFURYL ALCOHOL 98-00-0 | * | | | |
| CRYSTALLINE SILICA (QUARTZ) 14808-60-7 | A2 | Group 1 | Known | X |
| TITANIUM DIOXIDE (TOTAL DUST) 13463-67-7 | | Group 2B | | X |
| COAL FIRED FLY ASH BI-PRODUCT 68131-74-8 | | Group 1 | Known | |
| SYNTHETIC AMORPHUS PYROGENIC SILICA 112945-52-5 | | Group 3 | | |
| SYNTHETIC VITREOUS (SILICATE) FIBRES 65997-17-3 | | Group 3 | | |
| PHENOL (SKIN) 108-95-2 | | Group 3 | | |

Reproductive effects Suspected of damaging fertility or the unborn child.
STOT - single exposure Skin, Eyes, Central Nervous System (CNS)
STOT - repeated exposure Causes damage to organs through prolonged or repeated exposure
Target organ effects Eyes, Lungs, respiratory system, Skin, Central nervous system, kidney, liver, Nasal Cavities.
Aspiration hazard Based on product level data, this product does not meet the requirement to be classified as an aspiration hazard. However, this product contains an ingredient that may cause aspiration if swallowed.

Acute Toxicity 22.2542482 % of the mixture consists of ingredient(s) of unknown toxicity.
The following values are calculated based on chapter 3.1 of the GHS document .

| |
|-----------------------------------|
| 12. ECOLOGICAL INFORMATION |
|-----------------------------------|

Ecotoxicity

43.36731 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

| Component | Toxicity to algae | Toxicity to fish | Toxicity to daphnia |
|--|---|---|---|
| FURFURYL ALCOHOL 98-00-0 | | 32: 96 h Pimephales promelas mg/L LC50 static | 328: 24 h Daphnia magna mg/L EC50 |
| BENZYL ALCOHOL 100-51-6 | 35: 3 h Anabaena variabilis mg/L EC50 | 10: 96 h Lepomis macrochirus mg/L LC50 static 460: 96 h Pimephales promelas mg/L LC50 static | 23: 48 h water flea mg/L EC50 |
| COAL FIRED FLY ASH BI-PRODUCT 68131-74-8 | | | 140 - 2000: 24 h Daphnia magna mg/L EC50 |
| PHENOL (SKIN) 108-95-2 | 0.0188 - 0.1044: 96 h Pseudokirchneriella subcapitata mg/L EC50 static 187 - 279: 72 h Desmodesmus subspicatus mg/L EC50 static 46.42: 96 h Pseudokirchneriella subcapitata mg/L EC50 | 11.9 - 25.3: 96 h Lepomis macrochirus mg/L LC50 flow-through 11.9 - 50.5: 96 h Pimephales promelas mg/L LC50 flow-through 20.5 - 25.6: 96 h Pimephales promelas mg/L LC50 static 23.4 - 36.6: 96 h Oryzias latipes mg/L LC50 static 33.9 - 43.3: 96 h Oryzias latipes mg/L LC50 flow-through 34.09 - 47.64: 96 h Poecilia reticulata mg/L LC50 static 4.23 - 7.49: 96 h Oncorhynchus mykiss mg/L LC50 semi-static 5.0 - 12.0: 96 h Oncorhynchus mykiss mg/L LC50 5.449 - 6.789: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 7.5 - 14: 96 h Oncorhynchus mykiss mg/L LC50 static 0.00175: 96 h Cyprinus carpio mg/L LC50 semi-static 11.5: 96 h Lepomis macrochirus mg/L LC50 semi-static 13.5: 96 h Lepomis macrochirus mg/L LC50 static 27.8: 96 h Brachydanio rerio mg/L LC50 31: 96 h Poecilia reticulata mg/L LC50 semi-static 32: 96 h Pimephales promelas mg/L LC50 | 10.2 - 15.5: 48 h Daphnia magna mg/L EC50 4.24 - 10.7: 48 h Daphnia magna mg/L EC50 Static |
| P-P'-ISOPROPYLIDENEDIPHENO L 80-05-7 | 2.5: 96 h Pseudokirchneriella subcapitata mg/L EC50 | 3.6 - 5.4: 96 h Pimephales promelas mg/L LC50 flow-through 4.0 - 5.5: 96 h Pimephales promelas mg/L LC50 static 4: 96 h Oncorhynchus mykiss mg/L LC50 9.9: 96 h Brachydanio rerio mg/L LC50 static | 9.2 - 11.4: 48 h Daphnia magna mg/L EC50 Static 3.9: 48 h Daphnia magna mg/L EC50 10.2: 48 h Daphnia magna mg/L EC50 |

Persistence and degradability

No information available.

Bioaccumulation

No information available.

Mobility in Environmental Media

| Component | log Pow |
|--|---------|
| BENZYL ALCOHOL 100-51-6 | 1.1 |
| 1,2-CYCLOHEXANEDIAMINE 694-83-7 | 0.09 |
| M-XYLENEDIAMINE 1477-55-0 | 0.18 |
| PHENOL (SKIN) 108-95-2 | 1.47 |
| P-P'-ISOPROPYLIDENEDIPHENOL 80-05-7 | 2.2 |

Other Adverse Effects

No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal Methods Keep container tightly closed. If spilled, contain spilled material and remove with inert absorbent. Dispose of contaminated absorbent, container and unused contents in accordance with local, state and federal regulations.

Contaminated packaging Empty containers should be taken to an approved waste handling site for recycling or disposal.

| Component | RCRA | RCRA - Basis for Listing | RCRA - D Series Wastes | RCRA - U Series Wastes |
|---------------------------|------|---|------------------------|------------------------|
| PHENOL (SKIN) 108-95-2 | U188 | Included in waste streams: F039, K001, K022, K087 Included in waste stream: K060 | | U188 |

| Component | CAWAST |
|---|--------------------|
| COAL FIRED FLY ASH BI-PRODUCT 68131-74-8 | Toxic Corrosive |
| PHENOL (SKIN) 108-95-2 | Toxic Corrosive |

14. TRANSPORT INFORMATION

DOT
Proper Shipping Name PAINT & RELATED MATERIAL

IATA

Additional information Call TNE MEC Traffic Department - 816-474-3400 for additional information or other modes of Transportation.

15. REGULATORY INFORMATION

International Inventories

| | |
|---------------|-----------------|
| TSCA | Complies |
| DSL/NDL | Complies |
| EINECS/ELINCS | Does not comply |
| ENCS | Does not comply |
| IECSC | Complies |
| KECL | Does not comply |
| PICCS | Does not comply |
| AICS | Complies |

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
 DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List
 EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
 ENCS - Japan Existing and New Chemical Substances
 IECSC - China Inventory of Existing Chemical Substances
 KECL - Korean Existing and Evaluated Chemical Substances
 PICCS - Philippines Inventory of Chemicals and Chemical Substances
 AICS - Australian Inventory of Chemical Substances

The following chemical(s) are listed as HAP under the U.S. Clean Air Act, Section 12 (40 CFR 61):

Component
 COAL FIRED FLY ASH BI-PRODUCT
 PHENOL (SKIN)

HAPS Data

United States of America

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40n of the Code of Federal Regulations, Part 372:

| Component | SARA 313 - Threshold Values |
|--|-----------------------------|
| COAL FIRED FLY ASH BI-PRODUCT - 68131-74-8 | 0.1 |
| PHENOL (SKIN) - 108-95-2 | 1.0 |
| P-P'-ISOPROPYLIDENEDIPHENOL - 80-05-7 | 1.0 |

SARA 311/312 Hazardous

Categorization

| | |
|-----------------------------------|-----|
| Acute Health Hazard | Yes |
| Chronic Health Hazard | Yes |
| Fire Hazard | No |
| Sudden Release of Pressure Hazard | No |
| Reactive Hazard | No |

| Component | CWA - Reportable Quantities | CWA - Toxic Pollutants | CWA - Priority Pollutants | CWA - Hazardous Substances |
|--|-----------------------------|------------------------|---------------------------|----------------------------|
| COAL FIRED FLY ASH BI-PRODUCT 68131-74-8 | | X | | |
| PHENOL (SKIN) 108-95-2 | 1000 lb | X | X | X |

CERCLA

| Component | Hazardous Substances RQs | CERCLA EHS RQs | RQ |
|------------------------|--------------------------|----------------|---|
| PHENOL (SKIN) 108-95-2 | 1000 lb | 1000 lb | RQ 1000 lb final RQ RQ 454 kg final RQ |

United States of America

California Prop. 65

WARNING! This product contains a chemical known in the State of California to cause cancer

| Component | California Prop. 65 |
|--|---------------------|
| FURFURYL ALCOHOL - 98-00-0 | * |
| CRYSTALLINE SILICA (QUARTZ) - 14808-60-7 | Carcinogen |
| TITANIUM DIOXIDE (TOTAL DUST) - 13463-67-7 | Carcinogen |
| COAL FIRED FLY ASH BI-PRODUCT - 68131-74-8 | Carcinogen |
| P-P'-ISOPROPYLIDENEDIPHENOL - 80-05-7 | Female Reproductive |

California SCAQMD Rule 443

Contains Photochemically Reactive Solvent

State Right-to-Know

| Component | New Jersey | Massachusetts | Pennsylvania |
|--|------------|---------------|--------------|
| FURFURYL ALCOHOL 98-00-0 | X | X | X |
| CRYSTALLINE SILICA (QUARTZ) 14808-60-7 | X | X | X |
| BENZYL ALCOHOL 100-51-6 | | X | X |
| TITANIUM DIOXIDE (TOTAL DUST) 13463-67-7 | X | X | X |
| COAL FIRED FLY ASH BI-PRODUCT 68131-74-8 | X | | X |
| M-XYLENEDIAMINE 1477-55-0 | X | X | X |
| PHENOL (SKIN) 108-95-2 | X | X | X |

| | | | |
|---|---|---|---|
| P-P'-ISOPROPYLIDENEDIPHENOL 80-05-7 | X | X | X |
| STODDARD SOLVENT (MINERAL SPIRITS) 8052-41-3 | X | X | X |

16. OTHER INFORMATION

NFPA Health 3 Flammability 1 Instability 1 Physical hazard *
HMIS (Hazardous Material Information System) Health 3* Flammability 1 Reactivity 1

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Revision Summary
 9 4 5 7 10 8 11 14

Disclaimer

For specific information regarding occupational safety and health standards, please refer to the Code of Federal Regulations, Title 29, Part 1910.

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End of SDS