Safety Data Sheet

Issue Date 19-Mar-2019 **Revision Date** 19-Mar-2019 **Revision Number** 8

1. IDENTIFICATION

Product identifier

Product Code G335-1234A
Product Name TANK ARMOR BLUE

Other means of identification

Common Name SERIES 335, 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
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A
Skin sensitization	Category 1

Label elements

EMERGENCY OVERVIEW

WARNING

Hazard statements
Harmful if swallowed
Causes skin irritation
Causes serious eye irritation
May cause an allergic skin reaction

Appearance No information available **Physical state** No information available **Odor** No information available

Precautionary Statements

Prevention

Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Wear protective gloves/protective clothing/eye protection/face protection
Avoid breathing dust/fume/gas/mist/vapors/spray
Contaminated work clothing should not be allowed out of the workplace

Response

Get medical advice/attention if you feel unwell
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
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

Keep away from children

Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

May be harmful by inhalation
If product is in liquid or paste form, physical or health hazards listed related to dust are not considered significant. However, product may contain substances that could be potential hazards if caused to become airborne due to grinding, sanding or other abrasive processes.

Other information

May be harmful in contact with skin
Toxic to aquatic life with long lasting effects
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 16.1263 % of the mixture consists of ingredient(s) of unknown toxicity.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	CAS No.	Weight-%
CRYSTALLINE SILICA (QUARTZ)	14808-60-7	30 - <60%
EPOXY RESIN (LER)	25085-99-8	10 - <30%
SILICON DIOXIDE/ALUMINUM OXIDES	66402-68-4	10 - <30%
EPOXY RESIN	28064-14-4	10 - <30%
COAL FIRED FLY ASH BI-PRODUCT	68131-74-8	1 - <10%
BENZYL ALCOHOL	100-51-6	1 - <10%
SYNTHETIC VITREOUS (SILICATE) FIBRES	65997-17-3	1 - <10%
COBALT ALUMINATE BLUE SPINEL	1345-16-0	0.1 - <1%
EPOXY RESIN (LER)	25068-38-6	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 plenty of water for at least 15 minutes. Remove and wash contaminated clothing before re-use.

Inhalation Remove to fresh air. Oxygen or artificial respiration if needed. Call a physician 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 Water.

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. Aldehydes. Hydrocarbons. Nitrogen oxides (NOx). 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.

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. Bases. Acids. Hypochlorites. Amines. Nitrous acid and other nitrosating agents. Peroxides. copper. Water.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure guidelines .

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
CRYSTALLINE SILICA (QUARTZ) 14808-60-7	TWA: 0.025 mg/m³	TWA: 0.1 mg/m³ TWA: 50 µg/m³	50 mg/m³
SILICON DIOXIDE/ALUMINUM OXIDES 66402-68-4	TWA: 5 mg/m³ TWA: 0.02 mg/m³ TWA: 0.1 mg/m³	Ceiling: 5 mg/m³	500 mg/m³ 25 mg/m³
COAL FIRED FLY ASH BI-PRODUCT 68131-74-8	TWA: 1 mg/m³	-	100 mg/m³ 10 mg/m³
SYNTHETIC VITREOUS (SILICATE) FIBRES 65997-17-3	TWA: 1 fiber/cm3 TWA: 5 mg/m³	-	
COBALT ALUMINATE BLUE SPINEL 1345-16-0	TWA: 0.02 mg/m³ TWA: 1 mg/m³	-	

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	No information available		
Appearance	No information available	**Odor**	No information available
Color	No information available	**Odor threshold**	No information available

Property	**Values**	**Remarks**
pH		No data available
Melting point / freezing point	No data available	No data available
Boiling point / boiling range		
Flash point	162 °C / 288 °F	
Evaporation rate		No data available
Flammability (solid, gas)	No data available	No information available
Flammability Limit in Air		No data available
Upper flammability limit	N/A	
Lower flammability limit	N/A	
Vapor pressure		No data available
Vapor density		No data available
Specific gravity	1.58959	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 information available	No data available
Kinematic viscosity	No information available	No data available
Dynamic viscosity	41000 centipoises	

Other Information

Molecular weight	No information available
Density	13.25717 lbs/gal
Volatile organic compounds (VOC) content	0.03845 lbs/gal
Total volatiles weight percent	0.29 %
Total volatiles volume percent	0.46 %
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
Protect from water.

Incompatible materials
Strong oxidizing agents, Bases, Acids, Hypochlorites, Amines, Nitrous acid and other nitrosating agents, Peroxides, copper, Water

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. Nitrogen oxides (NOx). 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.

Eye contact Severely irritating to eyes.

Skin contact Irritating to skin. May cause sensitization by skin contact.

Ingestion Harmful if swallowed.

Chemical name	LD50 Oral	LD50 Dermal	LC50 Inhalation
COAL FIRED FLY ASH BI-PRODUCT 68131-74-8	> 2000 mg/kg (Rat)	-	-
BENZYL ALCOHOL 100-51-6	= 1230 mg/kg (Rat)	= 2 g/kg (Rabbit)	= 8.8 mg/L (Rat) 4 h
EPOXY RESIN (LER) 25068-38-6	= 11400 mg/kg (Rat)	-	-

Information on toxicological effects

Symptoms Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Skin disorders.

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

Skin corrosion/irritation Irritating to skin. sensitizer.
Eye damage/irritation Irritating to eyes.
Chronic Toxicity Cancer hazard. Contains crystalline silica which can cause cancer. (Risk of cancer depends on duration and level of exposure).
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
CRYSTALLINE SILICA (QUARTZ) 14808-60-7	A2	Group 1	Known	X
COAL FIRED FLY ASH BI-PRODUCT 68131-74-8		Group 1	Known	
SYNTHETIC VITREOUS (SILICATE) FIBRES 65997-17-3		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 No information available
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 16.1263 % of the mixture consists of ingredient(s) of unknown toxicity.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Toxic to aquatic life with long lasting effects

57.20604 % of the mixture consists of components(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
COAL FIRED FLY ASH BI-PRODUCT 68131-74-8	-	-	140 - 2000: 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

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
BENZYL ALCOHOL 100-51-6	1.1

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
SILICON DIOXIDE/ALUMINUM OXIDES 66402-68-4	Toxic
COAL FIRED FLY ASH BI-PRODUCT 68131-74-8	Toxic Corrosive
COBALT ALUMINATE BLUE SPINEL 1345-16-0	Toxic

14. TRANSPORT INFORMATION

DOT

Proper Shipping Name PAINT & RELATED MATERIAL

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

UN/ID no. 3082
Proper Shipping Name Environmentally hazardous substance, liquid, n.o.s, (Epoxy Resin)
Hazard Class 9
Packing Group III

EmS No. F-A, S-F
Marine Pollutant This product contains a chemical which is listed as a marine pollutant according to IMDG/IMO

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	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/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
SILICON DIOXIDE/ALUMINUM OXIDES	
COAL FIRED FLY ASH BI-PRODUCT	
COBALT ALUMINATE BLUE SPINEL	

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
SILICON DIOXIDE/ALUMINUM OXIDES - 66402-68-4	1.0
COAL FIRED FLY ASH BI-PRODUCT - 68131-74-8	1.0 0.1
COBALT ALUMINATE BLUE SPINEL - 1345-16-0	0.1

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	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
SILICON DIOXIDE/ALUMINUM OXIDES 66402-68-4		X		
COAL FIRED FLY ASH BI-PRODUCT 68131-74-8		X		

California Prop. 65

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

Chemical name	California Prop. 65
CRYSTALLINE SILICA (QUARTZ) - 14808-60-7	Carcinogen
COAL FIRED FLY ASH BI-PRODUCT - 68131-74-8	Carcinogen
CRYSTALLINE SILICA (QUARTZ) - 14808-60-7	Carcinogen
METHYL ALCOHOL -	Developmental
ETHYLENE GLYCOL MONOBUTYL ETHER - 111-76-2	Developmental

California SCAQMD Rule 443
Contains Photochemically Reactive Solvent

State Right-to-Know

Chemical name	New Jersey	Massachusetts	Pennsylvania
CRYSTALLINE SILICA (QUARTZ) 14808-60-7	X	X	X
SILICON DIOXIDE/ALUMINUM OXIDES 66402-68-4	X		X
COAL FIRED FLY ASH BI-PRODUCT 68131-74-8	X		X
BENZYL ALCOHOL 100-51-6		X	X
COBALT ALUMINATE BLUE SPINEL 1345-16-0	X		X

16. OTHER INFORMATION

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

Prepared By Tnemec Regulatory Dept: 816-474-3400
Revision Date 19-Mar-2019
Revision Summary
4 5 7 10 8 9 11 14 1 15

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 19-Mar-2019 **Revision Date** 19-Mar-2019 **Revision Number** 7

1. IDENTIFICATION

Product identifier

Product Code G335-0335B
Product Name TANK ARMOR AMINE

Other means of identification

Common Name SERIES 335 PART B
UN/ID no. 3066
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
Skin corrosion/irritation	Category 1 Sub-category A
Serious eye damage/eye irritation	Category 1
Skin sensitization	Category 1
Germ cell mutagenicity	Category 1B
Carcinogenicity	Category 1B
Corrosive to Metals	Category 1

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
May be corrosive to metals

Appearance amber **Physical state** liquid **Odor** amine

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 only in original container

Response
Immediately call a POISON CENTER or doctor/physician
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
Absorb spillage to prevent material damage

Storage
Store locked up
Store in corrosive resistant/metal/plastic container with a resistant inner liner
Keep away from children

Disposal
Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)
If product is in liquid or paste form, physical or health hazards listed related to dust are not considered significant. However, product may contain substances that could be potential hazards if caused to become airborne due to grinding, sanding or other abrasive processes.

Other information
May be harmful if inhaled
Harmful to aquatic life with long lasting effects
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 1.5164 % of the mixture consists of ingredient(s) of unknown toxicity.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	CAS No.	Weight-%

CRYSTALLINE SILICA (QUARTZ)	14808-60-7	30 - <60%
BENZYL ALCOHOL	100-51-6	10 - <30%
TITANIUM DIOXIDE (TOTAL DUST)	13463-67-7	10 - <30%
PROPRIETARY AMINE	-	1 - <10%
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 Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing 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. Immediate medical attention is required.

Inhalation If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

Ingestion Drink 1 or 2 glasses of water to dilute. Do not induce vomiting. Consult a physician or poison control center IMMEDIATELY. Treat symptomatically.

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

Most important symptoms and effects Causes burns to skin and eyes.

Notes to physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media
Carbon dioxide. Dry chemical. alcohol-resistant foam. Dry powder.

Unsuitable extinguishing media No information available.

Specific hazards arising from the chemical
In the event of fire, cool tanks with water spray Thermal decomposition can lead to release of irritating gases and vapours

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. Ammonia. Carbon oxides. Nitric acid, nitrosamine. Hydrocarbons. Oxides of nitrogen.

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Use personal protective equipment. Avoid contact with eyes, skin and clothing. Keep people away from and upwind of spill/leak.

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 Incompatible with oxidizing agents. Acids. Peroxides. Water. Bases.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure guidelines .

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
CRYSTALLINE SILICA (QUARTZ) 14808-60-7	TWA: 0.025 mg/m³	TWA: 0.1 mg/m³ TWA: 50 µg/m³	50 mg/m³
TITANIUM DIOXIDE (TOTAL DUST) 13463-67-7	TWA: 10 mg/m³	TWA: 10 mg/m³ TWA: 15 mg/m³	5000 mg/m³
PROPRIETARY AMINE	Skin Ceiling: 0.1 mg/m³	Skin Ceiling: 0.1 mg/m³	
STODDARD SOLVENT (MINERAL SPIRITS) 8052-41-3	TWA: 100 ppm	TWA: 100 ppm TWA: 525 mg/m³ TWA: 500 ppm TWA: 2900 mg/m³	20000 mg/m³

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		
Appearance	amber	**Odor**	amine
Color	No information available	**Odor threshold**	No information available

Property	**Values**	**Remarks**
pH		No data available
Melting point / freezing point	No data available	No data available
Boiling point / boiling range		
Flash point	No information available	No information available
Evaporation rate		No data available
Flammability (solid, gas)	No data available	No information available
Flammability Limit in Air		No data available
Upper flammability limit	N/A	
Lower flammability limit	N/A	
Vapor pressure		No data available
Vapor density		No data available
Specific gravity	1.73459	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 information available	No data available
Kinematic viscosity	No information available	No data available
Dynamic viscosity	11000 centipoises	

Other Information

Molecular weight	No information available
Density	14.46649 lbs/gal
Volatile organic compounds (VOC) content	0.23725 lbs/gal
Total volatiles weight percent	1.64 %
Total volatiles volume percent	2.8 %
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.

Incompatible materials
Incompatible with oxidizing agents, Acids, Peroxides, Water, 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. Ammonia. Oxides of nitrogen. Carbon oxides. Nitric acid, nitrosamine. Hydrocarbons.

11. TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure

Inhalation May cause central nervous system depression with nausea, headache, dizziness, vomiting, and incoordination.

Eye contact Severely irritating to eyes.

Skin contact Contact causes severe skin irritation and possible burns. May cause sensitization by skin contact.

Ingestion Harmful if swallowed.

Chemical name	LD50 Oral	LD50 Dermal	LC50 Inhalation
BENZYL ALCOHOL 100-51-6	= 1230 mg/kg (Rat)	= 2 g/kg (Rabbit)	= 8.8 mg/L (Rat) 4 h
TITANIUM DIOXIDE (TOTAL DUST) 13463-67-7	> 10000 mg/kg (Rat)	-	-
PROPRIETARY AMINE	= 660 mg/kg (Rat)	= 2 g/kg (Rabbit)	= 700 ppm (Rat) 1 h

Information on toxicological effects

Symptoms Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Skin disorders.

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

Skin corrosion/irritation Causes severe burns. sensitizer.
Eye damage/irritation Risk of serious damage to eyes.
Corrosivity 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).
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.

Chemical name	ACGIH	IARC	NTP	OSHA
CRYSTALLINE SILICA (QUARTZ) 14808-60-7	A2	Group 1	Known	X
TITANIUM DIOXIDE (TOTAL DUST) 13463-67-7		Group 2B	-	X

Reproductive effects No information available.
STOT - single exposure No information available
STOT - repeated exposure No information available
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 1.5164 % of the mixture consists of ingredient(s) of unknown toxicity.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Harmful to aquatic life with long lasting effects

47.0391 % of the mixture consists of components(s) of unknown hazards to the aquatic environment

Chemical name	Toxicity to algae	Toxicity to fish	Toxicity to daphnia
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

Persistence and degradability
No information available.

Bioaccumulation
No information available.

Mobility in Environmental Media

Chemical name	log Pow
BENZYL ALCOHOL 100-51-6	1.1

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.

14. TRANSPORT INFORMATION

DOT

UN/ID no. 3066
Proper Shipping Name PAINT
Hazard Class 8
Packing Group III
Emergency Response Guide Number 153

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

UN/ID no. 3066
Proper Shipping Name PAINT
Hazard Class 8
Packing Group III
EmS No. F-A, S-B

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	Does Not Comply
IECSC	Complies
KECL	Does Not Comply
PICCS	Does Not Comply
AICS	Does Not Comply

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):

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:

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

California Prop. 65

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

Chemical name	California Prop. 65
CRYSTALLINE SILICA (QUARTZ) - 14808-60-7	Carcinogen
TITANIUM DIOXIDE (TOTAL DUST) - 13463-67-7	Carcinogen
AMORPHOUS SILICA - 7631-86-9	Carcinogen
ETHYL ALCOHOL -	Carcinogen Developmental
ETHYLENE GLYCOL MONOBUTYL ETHER - 111-76-2	Developmental

California SCAQMD Rule 443
Contains Photochemically Reactive Solvent

State Right-to-Know

Chemical name	New Jersey	Massachusetts	Pennsylvania
CRYSTALLINE SILICA (QUARTZ) 14808-60-7	X	X	X
BENZYL ALCOHOL 100-51-6		X	X
TITANIUM DIOXIDE (TOTAL	X	X	X

DUST) 13463-67-7			
PROPRIETARY AMINE	X	X	X
STODDARD SOLVENT (MINERAL SPIRITS) 8052-41-3	X	X	X

16. OTHER INFORMATION

NFPA	**Health** 3	**Flammability** 0	**Instability** 1	**Physical hazard** *
HMIS (Hazardous Material Information System)	**Health** 3*	**Flammability** 0	**Reactivity** 1	

Prepared By Tnemec Regulatory Dept: 816-474-3400
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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