



Safety Data Sheet

Issue Date 23-Jul-2015

Revision Date 23-Jul-2015

Revision Number 5

1. IDENTIFICATION

Product identifier

Product Code G350-1232A
Product Name TANK ARMOR BLUE

Other means of identification

Common Name SERIES 350 PART A

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

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)

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A
Skin sensitization	Category 1A
Germ cell mutagenicity	Category 1B
Carcinogenicity	Category 1B

Label elements

EMERGENCY OVERVIEW

Danger

Hazard statements

Causes skin irritation
Causes serious eye irritation
May cause an allergic skin reaction
May cause genetic defects
May cause cancer

**Appearance** blue**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
 Avoid breathing dust/fume/gas/mist/vapors/spray
 Contaminated work clothing should not be allowed out of the workplace
 Wear protective gloves

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
 Take off contaminated clothing and wash before reuse
 If skin irritation or rash occurs: Get medical advice/attention

Storage

Store locked up
 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 swallowed
 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).
 SEE SAFETY DATA SHEET
 Respirable crystalline silica (quartz) can cause silicosis, a fibrosis (scarring) of the lungs
 Acute Toxicity 8.5002805 % of the mixture consists of ingredient(s) of unknown toxicity.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-No	Weight-%
EPOXY RESIN (LER)	25085-99-8	30 - 60%
EPOXY RESIN	28064-14-4	30 - 60%
CRYSTALLINE SILICA (QUARTZ)	14808-60-7	10 - 30%
TALC (RESPIRABLE DUST)	14807-96-6	1 - 10%
AROMATIC PETROLEUM DISTILLATE	64742-95-6	0.1 - 1%
TITANIUM DIOXIDE (TOTAL DUST)	13463-67-7	0.1 - 1%
WHITE SPIRITS	-	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. If symptoms persist, call a physician.
Skin contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If symptoms persist, call a physician.
Inhalation	Remove to fresh air. Oxygen or artificial respiration if needed.
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 No information available.

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 dioxide. Hydrocarbons.

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. Acids. Bases. Amines.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters**Exposure guidelines**

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH
CRYSTALLINE SILICA (QUARTZ) 14808-60-7	TWA: 0.025 mg/m ³	TWA: 0.1 mg/m ³	50 mg/m ³
TALC (RESPIRABLE DUST) 14807-96-6	TWA: 2 mg/m ³	TWA: 2 mg/m ³	1000 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
WHITE SPIRITS	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.

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	blue	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		Literary Reference
Boiling point / boiling range	72 °C / 162 °F	No information available
Flash point		No information available
Evaporation rate		No data available
Flammability (solid, gas)		
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	1.45631	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		
Kinematic viscosity		
Dynamic viscosity		No data available

Other Information

Density	12.1456 lbs/gal
Volatile organic compounds (VOC) content	0.19312 lbs/gal
Total volatiles weight percent	1.59 %
Total volatiles volume percent	2.67 %

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

Strong oxidizing agents, Acids, Bases, Amines

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 dioxide. 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	Irritating to skin.
Ingestion	Harmful if swallowed.

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
CRYSTALLINE SILICA (QUARTZ) 14808-60-7	= 500 mg/kg (Rat)		
AROMATIC PETROLEUM DISTILLATE 64742-95-6	= 8400 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	= 3400 ppm (Rat) 4 h
TITANIUM DIOXIDE (TOTAL DUST) 13463-67-7	> 10000 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

Chronic Toxicity NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. Cancer hazard. Contains crystalline silica which can cause cancer. (Risk of cancer depends on duration and level of exposure).

Sensitization**Mutagenicity****Carcinogenicity**

May cause sensitization of susceptible persons.

May cause genetic defects.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	ACGIH	IARC	NTP	OSHA
CRYSTALLINE SILICA (QUARTZ) 14808-60-7	A2	Group 1	Known	X
TALC (RESPIRABLE DUST) 14807-96-6		Group 3		
TITANIUM DIOXIDE (TOTAL DUST) 13463-67-7		Group 2B		X

Reproductive effects**STOT - single exposure****STOT - repeated exposure****Target organ effects****Aspiration hazard**

No information available.

No information available

No information available

Central Vascular System (CVS), Eyes, respiratory system.

No information available.

Acute Toxicity

8.5002805 % of the mixture consists of ingredient(s) of unknown toxicity.

12. ECOLOGICAL INFORMATION**Ecotoxicity**

Toxic to aquatic life with long lasting effects

25.94229 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

Component	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
TALC (RESPIRABLE DUST) 14807-96-6		100: 96 h Brachydanio rerio g/L LC50 semi-static	

AROMATIC PETROLEUM DISTILLATE 64742-95-6		9.22: 96 h Oncorhynchus mykiss mg/L LC50	6.14: 48 h Daphnia magna mg/L EC50
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Persistence and degradability

No information available.

Bioaccumulation

No information available.

Mobility in Environmental Media**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**Proper Shipping Name**

paint in oil Not regulated

IATA**Proper Shipping Name**

Not regulated

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/NDSL	Complies
EINECS/ELINCS	Does not comply
ENCS	Does not comply
IECSC	Does not comply
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):

United States of America

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any 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

CERCLA

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
CRYSTALLINE SILICA (QUARTZ) - 14808-60-7	Carcinogen
TITANIUM DIOXIDE (TOTAL DUST) - 13463-67-7	Carcinogen

California SCAQMD Rule 443

Contains Photochemically Reactive Solvent

State Right-to-Know

Component	New Jersey	Massachusetts	Pennsylvania
CRYSTALLINE SILICA (QUARTZ) 14808-60-7	X	X	X
TALC (RESPIRABLE DUST) 14807-96-6	X	X	X
TITANIUM DIOXIDE (TOTAL DUST) 13463-67-7	X	X	X
WHITE SPIRITS	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	

Prepared By

Revision Date

Revision Summary

9 4 5 7 10 8 11 14 15

Tnemec Regulatory Dept: 816-474-3400

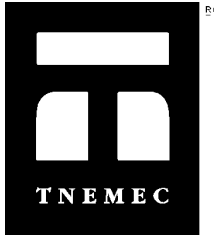
23-Jul-2015

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 or 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 MSDS



Safety Data Sheet

Issue Date No data available

Revision Date 26-Feb-2015

Revision Number 6

1. IDENTIFICATION

Product identifier

Product Code G350-0350B
Product Name GLASS ARMOR 500 ACTIVATOR

Other means of identification

Common Name SERIES 350, PART B
UN/ID no. 3066

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

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 - Inhalation (Dusts/Mists)	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 1B
Reproductive Toxicity	Category 2
Specific target organ toxicity (repeated exposure)	Category 1
Corrosive to Metals	Category 1

Label elements

EMERGENCY OVERVIEW

Danger

Hazard statements

Harmful if swallowed
 Harmful if inhaled
 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 through prolonged or repeated exposure
 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
 Use only outdoors or in a well-ventilated area
 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
 Call a POISON CENTER or doctor/physician if you feel unwell
 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 in contact with skin

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

9.2650305 % of the mixture consists of ingredient(s) of unknown toxicity.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-No	Weight-%
CRYSTALLINE SILICA (QUARTZ)	14808-60-7	10 - 30%
DIETHYLENE TRIAMINE	111-40-0	10 - 30%
BENZYL ALCOHOL	100-51-6	10 - 30%
1,2-CYLCHEXANEDIAMINE	694-83-7	10 - 30%
TITANIUM DIOXIDE (TOTAL DUST)	13463-67-7	1 - 10%
MODIFIED ALIPHATIC AMINE	90-72-2	1 - 10%
PROPRIETARY	-	1 - 10%
HEXAMETHYLENEDIAMINE	124-09-4	1 - 10%
AROMATIC PETROLEUM DISTILLATE	64742-95-6	0.1 - 1%
WHITE SPIRITS	-	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. If symptoms persist, call a physician.
Skin contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If symptoms persist, call a physician.
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 (CO₂). 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. Hydrocarbons. Aldehydes. Nitrogen oxides (NOx).

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. Acids. Bases.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH
CRYSTALLINE SILICA (QUARTZ) 14808-60-7	TWA: 0.025 mg/m ³	TWA: 0.1 mg/m ³	50 mg/m ³
DIETHYLENE TRIAMINE 111-40-0	TWA: 1 ppm Skin	TWA: 1 ppm TWA: 4 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

HEXAMETHYLENEDIAMINE 124-09-4	TWA: 0.5 ppm	-	
WHITE SPIRITS	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.

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	amine
Appearance	amber	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 / 162 °F		
Flash point		Not applicable	
Evaporation rate		No data available	
Flammability (solid, gas)		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	1.43383	g/cm ³	
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	8920 centipoises		
Other Information			
Density	11.95815 lbs/gal		

Volatile organic compounds (VOC) content 0.37309 lbs/gal
Total volatiles weight percent 3.12 %
Total volatiles volume percent 4.75 %

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

Strong oxidizing agents, 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. Nitrogen oxides (NOx).

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.
Ingestion	Harmful if swallowed.

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
CRYSTALLINE SILICA (QUARTZ) 14808-60-7	= 500 mg/kg (Rat)		
DIETHYLENE TRIAMINE 111-40-0	= 1080 mg/kg (Rat)	= 672 mg/kg (Rabbit)	= 70 mg/L (Rat) 4 h
BENZYL ALCOHOL 100-51-6	= 1230 mg/kg (Rat)	= 2 g/kg (Rabbit)	= 8.8 mg/L (Rat) 4 h
1,2-CYLCHEXANEDIAMINE 694-83-7	= 4556 mg/kg (Rat)		
TITANIUM DIOXIDE (TOTAL DUST) 13463-67-7	> 10000 mg/kg (Rat)		
MODIFIED ALIPHATIC AMINE 90-72-2	= 1000 mg/kg (Rat)	= 1280 mg/kg (Rat)	
HEXAMETHYLENEDIAMINE 124-09-4	= 750 mg/kg (Rat)	= 1110 mg/kg (Rabbit)	
AROMATIC PETROLEUM DISTILLATE 64742-95-6	= 8400 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	= 3400 ppm (Rat) 4 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

Corrosivity May be corrosive to metals.
Chronic Toxicity NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. 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.

Component	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 Suspected of damaging fertility or the unborn child.
STOT - single exposure No information available
STOT - repeated exposure Causes damage to organs through prolonged or repeated exposure
Target organ effects Central Vascular System (CVS), Eyes, Lungs, respiratory system, Skin.
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 9.2650305 % of the mixture consists of ingredient(s) of unknown toxicity.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Harmful to aquatic life with long lasting effects

37.20021 % of the mixture consists of components(s) of unknown hazards to the aquatic environment

Component	Toxicity to algae	Toxicity to fish	Toxicity to daphnia
DIETHYLENE TRIAMINE 111-40-0	1164: 72 h Pseudokirchneriella subcapitata mg/L EC50 592: 96 h Desmodosmus subspicatus mg/L EC50 345.6: 96 h Pseudokirchneriella subcapitata mg/L EC50	1014: 96 h Poecilia reticulata mg/L LC50 semi-static 248: 96 h Poecilia reticulata mg/L LC50 static 430: 96 h Leuciscus idus mg/L LC50 semi-static	37: 24 h Daphnia magna mg/L EC50 16: 48 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
HEXAMETHYLENEDIAMINE 124-09-4	15: 72 h Pseudokirchneriella subcapitata mg/L EC50 14.8: 96 h Pseudokirchneriella subcapitata mg/L EC50	62: 96 h Leuciscus idus mg/L LC50 static 56: 96 h Lepomis macrochirus mg/L LC50 static 1825: 96 h Pimephales promelas mg/L LC50 static	23.4: 48 h Daphnia magna mg/L EC50
AROMATIC PETROLEUM DISTILLATE 64742-95-6		9.22: 96 h Oncorhynchus mykiss mg/L LC50	6.14: 48 h Daphnia magna mg/L EC50

Persistence and degradability

No information available.

Bioaccumulation

No information available.

Mobility in Environmental Media

Component	log Pow
DIETHYLENE TRIAMINE 111-40-0	-1.3
BENZYL ALCOHOL 100-51-6	1.1
1,2-CYLCHEXANEDIAMINE 694-83-7	0.09
MODIFIED ALIPHATIC AMINE 90-72-2	0.219
HEXAMETHYLENEDIAMINE 124-09-4	0.02

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	CAWAST
DIETHYLENE TRIAMINE 111-40-0	Toxic
HEXAMETHYLENEDIAMINE 124-09-4	Toxic

14. TRANSPORT INFORMATION

DOT

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

IATA

UN/ID no. 3066
 Proper Shipping Name paint
 Hazard Class 8
 Packing Group II
 ERG Code 855

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/NDSL Complies
 EINECS/ELINCS Complies
 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/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):

United States of America

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any 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

CERCLA

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
CRYSTALLINE SILICA (QUARTZ) - 14808-60-7	Carcinogen
TITANIUM DIOXIDE (TOTAL DUST) - 13463-67-7	Carcinogen

California SCAQMD Rule 443

Contains Photochemically Reactive Solvent

State Right-to-Know

Component	New Jersey	Massachusetts	Pennsylvania
CRYSTALLINE SILICA (QUARTZ) 14808-60-7	X	X	X
DIETHYLENE TRIAMINE 111-40-0	X	X	X
BENZYL ALCOHOL 100-51-6		X	X
TITANIUM DIOXIDE (TOTAL DUST) 13463-67-7	X	X	X
HEXAMETHYLENEDIAMINE 124-09-4	X	X	
WHITE SPIRITS	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	

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Revision Summary
9 4 5 7 10 8 11 14 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 MSDS