



Safety Data Sheet

Issue Date 24-Jan-2019

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Revision Number 9

1. IDENTIFICATION

Product identifier

Product Code G312-1234
Product Name TANK ARMOR BLUE

Other means of identification

Common Name SERIES 312, PART A AND 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
Specific target organ toxicity (repeated exposure)	Category 1
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
Causes damage to organs through prolonged or repeated exposure
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 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 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 27.835 % 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	1 - <10%
BENZYL ALCOHOL	100-51-6	1 - <10%
MODIFIED ALIPHATIC AMINE	-	1 - <10%
TITANIUM DIOXIDE (TOTAL DUST)	13463-67-7	1 - <10%
COAL FIRED FLY ASH BI-PRODUCT	68131-74-8	1 - <10%
PROPRIETARY AMINE	-	1 - <10%

*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 thoroughly with plenty of water for at least 15 minutes. 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.
<u>Most important symptoms and effects, both acute and delayed</u>	
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 In the event of fire, cool tanks with water spray

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. Oxides of nitrogen. Aldehydes. Ammonia. 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. 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 Water. Hypochlorites. Nitrous acid and other nitrosating agents. Strong oxidizing agents. Bases. Acids. copper.

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/m ³	TWA: 0.1 mg/m ³ TWA: 50 µg/m ³	50 mg/m ³
SILICON DIOXIDE/ALUMINUM OXIDES 66402-68-4	TWA: 5 mg/m ³ TWA: 0.02 mg/m ³ TWA: 0.1 mg/m ³	-	25 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
PROPRIETARY AMINE	Skin Ceiling: 0.1 mg/m ³	Skin Ceiling: 0.1 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	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	No information available	Pensky Martens - Closed Cup
Evaporation rate		No data available
Flammability (solid, gas)	No data available	Not applicable
Flammability Limit in Air		No data available
Upper flammability limit	NA	
Lower flammability limit	NA	
Vapor pressure		No data available
Vapor density		No data available
Specific gravity	1.63	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		No data available

Other Information

Density	13.56 lbs/gal
Volatile organic compounds (VOC) content	0.088 lbs/gal
Total volatiles weight percent	0.6501 %
Total volatiles volume percent	1.0450 %
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. Burning produces obnoxious and toxic fumes. Amines. Epoxy constituents. Protect from water.

Incompatible materials

Water, Hypochlorites, Nitrous acid and other nitrosating agents, Strong oxidizing agents, Bases, Acids, copper

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. Oxides of nitrogen. Aldehydes. Ammonia. 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	Avoid contact with eyes. Corrosive to the eyes and may cause severe damage including blindness.
Skin contact	Avoid contact with skin. May cause 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)	-	-
COAL FIRED FLY ASH BI-PRODUCT 68131-74-8	> 2000 mg/kg (Rat)	-	-
PROPRIETARY AMINE	= 660 mg/kg (Rat)	= 2 g/kg (Rabbit)	= 700 ppm (Rat) 1 h

Information on toxicological effects

Symptoms Inhalation of high vapor concentrations may cause symptoms like 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

Irritation Corrosive to eyes. Severe skin irritation.
Corrosivity Causes severe damage to eyes and skin.
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.

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
COAL FIRED FLY ASH BI-PRODUCT 68131-74-8		Group 1	Known	

Reproductive effects	No information available.
STOT - single exposure	May cause disorder and damage to the, Respiratory system, Central Nervous System (CNS), Eyes
STOT - repeated exposure	Causes damage to organs through prolonged or repeated exposure
Target organ effects	Eyes, Lungs, respiratory system, Skin, Central Vascular System (CVS), kidney, liver, Nasal Cavities, Central nervous system.
Aspiration hazard	No information available.
Acute Toxicity	27.835 % of the mixture consists of ingredient(s) of unknown toxicity.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Toxic to aquatic life with long lasting effects

>99 % 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
BENZYL ALCOHOL 100-51-6	35: 3 h Anabaena variabilis mg/L EC50	460: 96 h Pimephales promelas mg/L LC50 static 10: 96 h Lepomis macrochirus 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

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.

US EPA Waste Number

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

California Hazardous Waste Status

Chemical name	CAWAST
SILICON DIOXIDE/ALUMINUM OXIDES 66402-68-4	Toxic
COAL FIRED FLY ASH BI-PRODUCT 68131-74-8	Toxic Corrosive

14. TRANSPORT INFORMATION**DOT**

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

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 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):

Chemical name	HAPS Data
COAL FIRED FLY ASH BI-PRODUCT	

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

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

Clean Water Act

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
TITANIUM DIOXIDE (TOTAL DUST) - 13463-67-7	Carcinogen
COAL FIRED FLY ASH BI-PRODUCT - 68131-74-8	Carcinogen
AMORPHOUS SILICA - 7631-86-9	Carcinogen
CRYSTALLINE SILICA (QUARTZ) - 14808-60-7	Carcinogen
ETHYL ALCOHOL -	Carcinogen
Trade secret -	Developmental
METHYL ALCOHOL -	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
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
PROPRIETARY AMINE	X	X	X

16. OTHER INFORMATION**NFPA**

Health 3

Flammability 1

Instability 0

Physical hazard *

HMIS (Hazardous Material Information System)

Health 3*

Flammability 1

Reactivity 0

Prepared By Tnemec Regulatory Dept: 816-474-3400
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9 5 7 10 11 14 1 13 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