

SAFETY DATA SHEET

US OSHA Hazard Communication Standard (29 CFR 1910.1200)

Revision date 14-Feb-2025 **Revision Number** 3

1. Identification

Product identifier

Product Name Part B: MetalSet A4

Other means of identification

FG-10B Product Code(s)

None **Synonyms**

Recommended use of the chemical and restrictions on use

Recommended use **Epoxy Adhesive**

No information available Restrictions on use

Details of the supplier of the safety data sheet

Supplier Address

Smooth-On, Inc, 5600 Lower Macungie Rd, Macungie, PA 18062, USA, Phone: +01.610.252.5800, www.smooth-on.com, sds@smooth-on.com

E-mail sds@smooth-on.com

Emergency telephone number

Emergency Telephone Chemtel: US: 1-800.255.3924; International: 1-813.248.0585

2. Hazard(s) identification

Classification

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 1
Skin sensitization	Category 1
Reproductive toxicity	Category 1B

Hazards not otherwise classified (HNOC)

Not applicable

Label elements



Danger

FG-10B Revision date 14-Feb-2025

Hazard statements

H315 - Causes skin irritation

H317 - May cause an allergic skin reaction

H318 - Causes serious eye damage

H360 - May damage fertility or the unborn child

Precautionary Statements - Prevention

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Wear protective gloves/clothing and eye/face protection.

Do not breathe dusts or mists.

Wash face, hands and any exposed skin thoroughly after handling.

Contaminated work clothing must not be allowed out of the workplace.

Precautionary Statements - Response

Immediately call a POISON CENTER or doctor.

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.

IF ON SKIN (or hair): 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 person to fresh air and keep comfortable for breathing.

Immediately call a POISON CENTER or doctor.

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

Precautionary Statements - Storage

Store locked up.

Precautionary Statements - Disposal

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

Other information

May be harmful if swallowed. May be harmful in contact with skin. Toxic to aquatic life with long lasting effects.

3. Composition/information on ingredients

Substance

Not applicable.

Mixture

Chemical name	CAS No.	Weight-%	Trade secret
Fatty acids, C18-unsaturated, dimers, polymers with	68082-29-1	15 - 40	*
tall-oil fatty acids and triethylenetetramine			
Tetraethylenepentamine	112-57-2	1 - 5	*
Titanium dioxide	13463-67-7	1 - 5	*
Triethylenetetramine	112-24-3	1 - 5	*
Diethylenetriamine	111-40-0	0.1 - 1	*
Bisphenol A	80-05-7	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 Immediate medical attention is required. Show this safety data sheet to the doctor in

attendance. IF exposed or concerned: Get medical advice/attention.

Inhalation Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical

attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If breathing is difficult, (trained personnel

should) give oxygen. Delayed pulmonary edema may occur.

Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep

eye wide open while rinsing. Do not rub affected area. Remove contact lenses, if present

and easy to do. Continue rinsing. Get immediate medical attention.

Skin contactWash off immediately with soap and plenty of water while removing all contaminated clothes

and shoes. Get immediate medical attention. May cause an allergic skin reaction.

Ingestion Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious

person. Get immediate medical attention.

Self-protection of the first aider Ensure that medical personnel are aware of the material(s) involved, take precautions to

protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation.

Wear personal protective clothing (see section 8).

Most important symptoms and effects, both acute and delayed

Symptoms Burning sensation. Itching. Rashes. Hives.

Effects of Exposure May cause adverse reproductive effects - such as birth defect, miscarriages, or infertility.

Indication of any immediate medical attention and special treatment needed

Note to physicians Product is a corrosive material. Use of gastric lavage or emesis is contraindicated.

Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. May cause

sensitization in susceptible persons. Treat symptomatically.

5. Fire-fighting measures

surrounding environment.

Large Fire CAUTION: Use of water spray when fighting fire may be inefficient.

Unsuitable extinguishing mediaDo not scatter spilled material with high pressure water streams.

Specific hazards arising from the

chemical

The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating gases and vapors. Product is or contains a sensitizer. May

cause sensitization by skin contact.

Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge Non

Special protective equipment and precautions for fire-fighters

Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear.

Use personal protection equipment.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions Attention! Corrosive material. Avoid contact with skin, eyes or clothing. Ensure adequate

ventilation. Use personal protective equipment as required. Evacuate personnel to safe

areas. Keep people away from and upwind of spill/leak.

Other information Refer to protective measures listed in Sections 7 and 8.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Pick up and transfer to properly labeled containers.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

7. Handling and storage

Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with

skin, eyes or clothing. In case of insufficient ventilation, wear suitable respiratory equipment. Handle product only in closed system or provide appropriate exhaust ventilation. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before

reuse. Remove contaminated clothing and shoes.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from

moisture. Store locked up. Keep out of the reach of children. Store away from other

materials.

8. Exposure controls/personal protection

Control parameters

Exposure Limits The following ingredients are the only ingredients of the product above the cut-off level (or

level that contributes to the hazard classification of the mixture) which have an exposure limit applicable in the region for which this safety data sheet is intended or other recommended limit. At this time, the other relevant constituents have no known exposure

limits from the sources listed here.

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
Titanium dioxide	TWA: 0.2 mg/m ³ nanoscale	TWA: 15 mg/m ³ total dust	IDLH: 5000 mg/m ³
13463-67-7	respirable particulate matter	(vacated) TWA: 10 mg/m ³	TWA: 2.4 mg/m ³ CIB 63 fine
	TWA: 2.5 mg/m ³ finescale	total dust	TWA: 0.3 mg/m ³ CIB 63
	respirable particulate matter		ultrafine, including engineered
			nanoscale
Diethylenetriamine	TWA: 1 ppm	(vacated) TWA: 1 ppm	TWA: 1 ppm
111-40-0	Sk*	(vacated) TWA: 4 mg/m ³	TWA: 4 mg/m ³

Appropriate engineering controls

Engineering controls Showers

Eyewash stations

Ventilation systems.

Individual protection measures, such as personal protective equipment

Tight sealing safety goggles. Face protection shield. Eve/face protection

Hand protection Wear suitable gloves. Impervious gloves.

Skin and body protection Wear suitable protective clothing. Long sleeved clothing. Chemical resistant apron.

Appropriate respiratory protection should be selected and used according to the chemical Respiratory protection nature, hazards and use of this product and safety requirements of the local jurisdiction. If

exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be

required.

General hygiene considerations Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do

> not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product.

9. Physical and chemical properties

Information on basic physical and chemical properties

Physical state Paste / Gel Liquid

Paste **Appearance** White Color

Odor Mild ammonia odor No information available **Odor threshold**

Remarks • Method Property Values

Ha No data available None known pH (as aqueous solution) None known Melting point / freezing point No data available None known Initial boiling point and boiling rangeNo data available None known Flash point > 251.667 °C / 485 °F None known **Evaporation rate** No data available None known **Flammability** No data available None known Flammability Limit in Air None known

Upper flammability or explosive No data available

limits

FG-10B

No data available Lower flammability or explosive

limits

Vapor pressure < 10 mmHg @ 20 °C / 70 °F None known Relative vapor density > 1.0 None known Relative density 1.4 None known Water solubility Insoluble in water None known Solubility(ies) No data available None known **Partition coefficient** No data available None known No data available **Autoignition temperature** None known None known

Decomposition temperature

320,000 centipoise Kinematic viscosity None known **Dynamic viscosity** No data available None known

Other information

No information available **Explosive properties** Oxidizing properties No information available Softening point No information available Molecular weight No information available FG-10B

VOC content
Liquid Density
No information available
No information available
No information available

10. Stability and reactivity

Reactivity No information available.

Chemical stability Stable under normal conditions.

Possibility of hazardous reactions None under normal processing.

Conditions to avoid Exposure to air or moisture over prolonged periods.

Incompatible materials Acids. Bases. Oxidizing agent.

Hazardous decomposition products None known based on information supplied.

11. Toxicological information

Information on likely routes of exposure

Product Information

Inhalation Specific test data for the substance or mixture is not available. Corrosive by inhalation.

(based on components). Inhalation of corrosive fumes/gases may cause coughing, choking, headache, dizziness, and weakness for several hours. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure, and increased heart rate. Inhaled corrosive substances can lead to a toxic edema of the lungs.

Pulmonary edema can be fatal.

Eye contact Specific test data for the substance or mixture is not available. Causes serious eye damage.

(based on components). Corrosive to the eyes and may cause severe damage including

blindness. May cause irreversible damage to eyes.

Skin contact Specific test data for the substance or mixture is not available. Corrosive. (based on

components). Causes burns. May cause sensitization by skin contact. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. May be

harmful in contact with skin.

Ingestion Specific test data for the substance or mixture is not available. Causes burns. (based on

components). Ingestion causes burns of the upper digestive and respiratory tracts. May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking. May cause lung

damage if swallowed. May be fatal if swallowed and enters airways.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms Redness. Burning. May cause blindness. Coughing and/ or wheezing. Itching. Rashes.

Hives.

Acute toxicity .

Numerical measures of toxicity

The following values are calculated based on chapter 3.1 of the GHS document

 ATEmix (oral)
 2,683.50 mg/kg

 ATEmix (dermal)
 2,421.20 mg/kg

ATEmix (inhalation-dust/mist) 9.35 mg/l

Component Information

Component information			
Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Fatty acids, C18-unsaturated, dimers,	-	> 2000 mg/kg (Rat)	-
polymers with tall-oil fatty acids and			
triethylenetetramine			
68082-29-1			
Tetraethylenepentamine	= 3990 mg/kg (Rat)	= 660 μL/kg (Rabbit)	-
112-57-2			
Titanium dioxide	> 10000 mg/kg (Rat)	-	= 5.09 mg/L (Rat) 4 h
13463-67-7			
Triethylenetetramine	= 1716.2 mg/kg (Rat)	= 1720 mg/kg (Rabbit)	-
112-24-3		= 1465.4 mg/kg (Rabbit)	
Diethylenetriamine	= 1080 mg/kg (Rat)	= 672 mg/kg (Rabbit)	= 70 mg/L (Rat)4 h
111-40-0			
Bisphenol A	= 3300 mg/kg (Rat)	= 3000 mg/kg (Rabbit)	> 170 mg/m³ (Rat) 6 h
80-05-7	- -		

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

Skin corrosion/irritation Classification based on data available for ingredients. Causes severe skin burns and eye

damage.

Serious eye damage/eye irritation Classification based on data available for ingredients. Causes serious eye damage. Causes

burns.

Respiratory or skin sensitization May cause an allergic skin reaction.

Germ cell mutagenicity No information available.

Carcinogenicity Contains a known or suspected carcinogen. Classification based on data available for

ingredients. Suspected of causing cancer.

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

Chemical name	ACGIH	IARC	NTP	OSHA
Titanium dioxide	A3	Group 2B	-	X
13463-67-7				

Legend

ACGIH (American Conference of Governmental Industrial Hygienists)

A3 - Animal Carcinogen

IARC (International Agency for Research on Cancer)

Group 2B - Possibly Carcinogenic to Humans

Occupational Safety and Health Administration of the US Department of Labor

X - Present

Reproductive toxicity Classification based on data available for ingredients. May damage fertility or the unborn

child.

STOT - single exposureNo information available.

STOT - repeated exposureNo information available.

Target organ effects Respiratory system, Lungs.

Aspiration hazard No information available.

Other adverse effects No information available.

Interactive effects No information available.

12. Ecological information

Ecotoxicity

Toxic to aquatic life with long lasting effects.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Fatty acids, C18-unsaturated, dimers, polymers with tall-oil fatty acids and triethylenetetramine 68082-29-1	-	LC50: =7.07mg/L (96h, Danio rerio)	-	-
Tetraethylenepentamine 112-57-2	EC50: =2.1mg/L (72h, Pseudokirchneriella subcapitata)	LC50: =420mg/L (96h, Poecilia reticulata)	-	EC50: =24.1mg/L (48h, Daphnia magna)
Triethylenetetramine 112-24-3	EC50: =2.5mg/L (72h, Desmodesmus subspicatus) EC50: =20mg/L (72h, Pseudokirchneriella subcapitata) EC50: =3.7mg/L (96h, Pseudokirchneriella subcapitata)	LC50: =570mg/L (96h, Poecilia reticulata) LC50: =495mg/L (96h, Pimephales promelas)	-	EC50: =31.1mg/L (48h, Daphnia magna)
Diethylenetriamine 111-40-0	EC50: =1164mg/L (72h, Pseudokirchneriella subcapitata) EC50: =345.6mg/L (96h, Pseudokirchneriella subcapitata) EC50: =592mg/L (96h, Desmodesmus subspicatus)	Poecilia reticulata) LC50: =1014mg/L (96h,	-	EC50: =16mg/L (48h, Daphnia magna)
Bisphenol A 80-05-7	EC50: =2.5mg/L (96h, Pseudokirchneriella subcapitata)	LC50: 3.6 - 5.4mg/L (96h, Pimephales promelas) LC50: 4.0 - 5.5mg/L (96h, Pimephales promelas) LC50: =4mg/L (96h, Oncorhynchus mykiss) LC50: =9.9mg/L (96h, Brachydanio rerio)	-	EC50: =10.2mg/L (48h, Daphnia magna) EC50: =3.9mg/L (48h, Daphnia magna) EC50: 9.2 - 11.4mg/L (48h, Daphnia magna)

Persistence and degradability

No information available.

Bioaccumulation

Component Information

Chemical name	Partition coefficient
Tetraethylenepentamine 112-57-2	1
Triethylenetetramine 112-24-3	-1.4
Diethylenetriamine 111-40-0	-1.3
Bisphenol A 80-05-7	3.4

Other adverse effects

No information available.

13. Disposal considerations

Disposal methods

Waste from residues/unused products

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Dispose of in accordance with local regulations. Dispose of waste in accordance with

environmental legislation.

Contaminated packaging

Do not reuse empty containers.

California Hazardous Waste Status

This product contains one or more substances that are listed with the State of California as

a hazardous waste.

14. Transport information

DOT Not regulated

IMDG Not regulated

Not regulated

15. Regulatory information

International Inventories

TSCA Contact supplier for inventory compliance status. **DSL/NDSL** Contact supplier for inventory compliance status. **EINECS/ELINCS** Contact supplier for inventory compliance status. Contact supplier for inventory compliance status. **ENCS** Contact supplier for inventory compliance status. **IECSC** Contact supplier for inventory compliance status. **KECI PICCS** Contact supplier for inventory compliance status. Contact supplier for inventory compliance status. AIIC **NZIoC** Contact supplier for inventory compliance status.

Legend:

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 Chemical Substances/European 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

AIIC - Australian Inventory of Industrial Chemicals

NZIoC - New Zealand Inventory of Chemicals

US Federal Regulations

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 Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals:

Chemical name	California Proposition 65	
Bisphenol A - 80-05-7	Developmental	
	Female Reproductive	

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Tetraethylenepentamine 112-57-2	X	X	X
Titanium dioxide 13463-67-7	X	X	X
Triethylenetetramine 112-24-3	X	X	X
Diethylenetriamine 111-40-0	X	X	X
Bisphenol A 80-05-7	X	X	X
Aluminum oxide (Al2O3) 1344-28-1	X	Х	Х

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. Other information

FG-10B Revision date 14-Feb-2025

NFPA Health hazards 3 Flammability 0 Instability 0 Special hazards - Health hazards 3 Flammability 0 Physical hazards 0 Personal protection X

Chronic Hazard Star Legend *= Chronic Health Hazard

Key or legend to abbreviations and acronyms used in the safety data sheet

Legend

SVHC: Substances of Very High Concern for Authorization:
PBT: Persistent, Bioaccumulative, and Toxic (PBT) Substances
vPvB: Very Persistent and very Bioaccumulative (vPvB) Substances

STOT: Specific Target Organ Toxicity

ATE: Acute Toxicity Estimate LC50: 50% Lethal Concentration

LD50: 50% Lethal Dose

Legend Section 8: Exposure controls/personal protection

TWA TWA (time-weighted average) STEL STEL (Short Term Exposure Limit)

Ceiling Maximum limit value Sk* Skin designation

+ Sensitizers

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR) U.S. Environmental Protection Agency ChemView Database

European Food Safety Authority (EFSA)

Environmental Protection Agency

Acute Exposure Guideline Level(s) (AEGL(s))

U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act

U.S. Environmental Protection Agency High Production Volume Chemicals

Food Research Journal

Hazardous Substance Database

International Uniform Chemical Information Database (IUCLID)

National Institute of Technology and Evaluation (NITE)

Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)

NIOSH (National Institute for Occupational Safety and Health)

National Library of Medicine's ChemID Plus (NLM CIP)

National Library of Medicine's PubMed database (NLM PUBMED)

U.S. National Toxicology Program (NTP)

New Zealand's Chemical Classification and Information Database (CCID)

Organization for Economic Co-operation and Development Environment, Health, and Safety Publications Organization for Economic Co-operation and Development High Production Volume Chemicals Program

Organization for Economic Co-operation and Development Screening Information Data Set

World Health Organization

Revision date 14-Feb-2025

Revision NoteNo information available.

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet



SAFETY DATA SHEET

US OSHA Hazard Communication Standard (29 CFR 1910.1200)

Revision date 14-Feb-2025 **Revision Number** 3

1. Identification

Product identifier

Product Name Part B: MetalSet A4

Other means of identification

FG-10B Product Code(s)

None **Synonyms**

Recommended use of the chemical and restrictions on use

Recommended use **Epoxy Adhesive**

No information available Restrictions on use

Details of the supplier of the safety data sheet

Supplier Address

Smooth-On, Inc, 5600 Lower Macungie Rd, Macungie, PA 18062, USA, Phone: +01.610.252.5800, www.smooth-on.com, sds@smooth-on.com

E-mail sds@smooth-on.com

Emergency telephone number

Emergency Telephone Chemtel: US: 1-800.255.3924; International: 1-813.248.0585

2. Hazard(s) identification

Classification

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 1
Skin sensitization	Category 1
Reproductive toxicity	Category 1B

Hazards not otherwise classified (HNOC)

Not applicable

Label elements



Danger

FG-10B Revision date 14-Feb-2025

Hazard statements

H315 - Causes skin irritation

H317 - May cause an allergic skin reaction

H318 - Causes serious eye damage

H360 - May damage fertility or the unborn child

Precautionary Statements - Prevention

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Wear protective gloves/clothing and eye/face protection.

Do not breathe dusts or mists.

Wash face, hands and any exposed skin thoroughly after handling.

Contaminated work clothing must not be allowed out of the workplace.

Precautionary Statements - Response

Immediately call a POISON CENTER or doctor.

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.

IF ON SKIN (or hair): 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 person to fresh air and keep comfortable for breathing.

Immediately call a POISON CENTER or doctor.

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

Precautionary Statements - Storage

Store locked up.

Precautionary Statements - Disposal

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

Other information

May be harmful if swallowed. May be harmful in contact with skin. Toxic to aquatic life with long lasting effects.

3. Composition/information on ingredients

Substance

Not applicable.

Mixture

Chemical name	CAS No.	Weight-%	Trade secret
Fatty acids, C18-unsaturated, dimers, polymers with	68082-29-1	15 - 40	*
tall-oil fatty acids and triethylenetetramine			
Tetraethylenepentamine	112-57-2	1 - 5	*
Titanium dioxide	13463-67-7	1 - 5	*
Triethylenetetramine	112-24-3	1 - 5	*
Diethylenetriamine	111-40-0	0.1 - 1	*
Bisphenol A	80-05-7	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 Immediate medical attention is required. Show this safety data sheet to the doctor in

attendance. IF exposed or concerned: Get medical advice/attention.

Inhalation Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical

attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If breathing is difficult, (trained personnel

should) give oxygen. Delayed pulmonary edema may occur.

Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep

eye wide open while rinsing. Do not rub affected area. Remove contact lenses, if present

and easy to do. Continue rinsing. Get immediate medical attention.

Skin contactWash off immediately with soap and plenty of water while removing all contaminated clothes

and shoes. Get immediate medical attention. May cause an allergic skin reaction.

Ingestion Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious

person. Get immediate medical attention.

Self-protection of the first aider Ensure that medical personnel are aware of the material(s) involved, take precautions to

protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation.

Wear personal protective clothing (see section 8).

Most important symptoms and effects, both acute and delayed

Symptoms Burning sensation. Itching. Rashes. Hives.

Effects of Exposure May cause adverse reproductive effects - such as birth defect, miscarriages, or infertility.

Indication of any immediate medical attention and special treatment needed

Note to physicians Product is a corrosive material. Use of gastric lavage or emesis is contraindicated.

Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. May cause

sensitization in susceptible persons. Treat symptomatically.

5. Fire-fighting measures

surrounding environment.

Large Fire CAUTION: Use of water spray when fighting fire may be inefficient.

Unsuitable extinguishing mediaDo not scatter spilled material with high pressure water streams.

Specific hazards arising from the

chemical

The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating gases and vapors. Product is or contains a sensitizer. May

cause sensitization by skin contact.

Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge Non

Special protective equipment and precautions for fire-fighters

Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear.

Use personal protection equipment.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions Attention! Corrosive material. Avoid contact with skin, eyes or clothing. Ensure adequate

ventilation. Use personal protective equipment as required. Evacuate personnel to safe

areas. Keep people away from and upwind of spill/leak.

Other information Refer to protective measures listed in Sections 7 and 8.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Pick up and transfer to properly labeled containers.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

7. Handling and storage

Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with

skin, eyes or clothing. In case of insufficient ventilation, wear suitable respiratory equipment. Handle product only in closed system or provide appropriate exhaust ventilation. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before

reuse. Remove contaminated clothing and shoes.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from

moisture. Store locked up. Keep out of the reach of children. Store away from other

materials.

8. Exposure controls/personal protection

Control parameters

Exposure Limits The following ingredients are the only ingredients of the product above the cut-off level (or

level that contributes to the hazard classification of the mixture) which have an exposure limit applicable in the region for which this safety data sheet is intended or other recommended limit. At this time, the other relevant constituents have no known exposure

limits from the sources listed here.

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
Titanium dioxide	TWA: 0.2 mg/m ³ nanoscale	TWA: 15 mg/m ³ total dust	IDLH: 5000 mg/m ³
13463-67-7	respirable particulate matter	(vacated) TWA: 10 mg/m ³	TWA: 2.4 mg/m ³ CIB 63 fine
	TWA: 2.5 mg/m ³ finescale	total dust	TWA: 0.3 mg/m ³ CIB 63
	respirable particulate matter		ultrafine, including engineered
			nanoscale
Diethylenetriamine	TWA: 1 ppm	(vacated) TWA: 1 ppm	TWA: 1 ppm
111-40-0	Sk*	(vacated) TWA: 4 mg/m ³	TWA: 4 mg/m ³

Appropriate engineering controls

Engineering controls Showers

Eyewash stations

Ventilation systems.

Individual protection measures, such as personal protective equipment

Tight sealing safety goggles. Face protection shield. Eve/face protection

Hand protection Wear suitable gloves. Impervious gloves.

Skin and body protection Wear suitable protective clothing. Long sleeved clothing. Chemical resistant apron.

Appropriate respiratory protection should be selected and used according to the chemical Respiratory protection nature, hazards and use of this product and safety requirements of the local jurisdiction. If

exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be

required.

General hygiene considerations Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do

> not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product.

9. Physical and chemical properties

Information on basic physical and chemical properties

Physical state Paste / Gel Liquid

Paste **Appearance** White Color

Odor Mild ammonia odor No information available **Odor threshold**

Remarks • Method Property Values

Ha No data available None known pH (as aqueous solution) None known Melting point / freezing point No data available None known Initial boiling point and boiling rangeNo data available None known Flash point > 251.667 °C / 485 °F None known **Evaporation rate** No data available None known **Flammability** No data available None known Flammability Limit in Air None known

Upper flammability or explosive No data available

limits

FG-10B

No data available Lower flammability or explosive

limits

Vapor pressure < 10 mmHg @ 20 °C / 70 °F None known Relative vapor density > 1.0 None known Relative density 1.4 None known Water solubility Insoluble in water None known Solubility(ies) No data available None known **Partition coefficient** No data available None known No data available **Autoignition temperature** None known None known

Decomposition temperature

320,000 centipoise Kinematic viscosity None known **Dynamic viscosity** No data available None known

Other information

No information available **Explosive properties** Oxidizing properties No information available Softening point No information available Molecular weight No information available FG-10B

VOC content
Liquid Density
No information available
No information available
No information available

10. Stability and reactivity

Reactivity No information available.

Chemical stability Stable under normal conditions.

Possibility of hazardous reactions None under normal processing.

Conditions to avoid Exposure to air or moisture over prolonged periods.

Incompatible materials Acids. Bases. Oxidizing agent.

Hazardous decomposition products None known based on information supplied.

11. Toxicological information

Information on likely routes of exposure

Product Information

Inhalation Specific test data for the substance or mixture is not available. Corrosive by inhalation.

(based on components). Inhalation of corrosive fumes/gases may cause coughing, choking, headache, dizziness, and weakness for several hours. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure, and increased heart rate. Inhaled corrosive substances can lead to a toxic edema of the lungs.

Pulmonary edema can be fatal.

Eye contact Specific test data for the substance or mixture is not available. Causes serious eye damage.

(based on components). Corrosive to the eyes and may cause severe damage including

blindness. May cause irreversible damage to eyes.

Skin contact Specific test data for the substance or mixture is not available. Corrosive. (based on

components). Causes burns. May cause sensitization by skin contact. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. May be

harmful in contact with skin.

Ingestion Specific test data for the substance or mixture is not available. Causes burns. (based on

components). Ingestion causes burns of the upper digestive and respiratory tracts. May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking. May cause lung

damage if swallowed. May be fatal if swallowed and enters airways.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms Redness. Burning. May cause blindness. Coughing and/ or wheezing. Itching. Rashes.

Hives.

Acute toxicity .

Numerical measures of toxicity

The following values are calculated based on chapter 3.1 of the GHS document

 ATEmix (oral)
 2,683.50 mg/kg

 ATEmix (dermal)
 2,421.20 mg/kg

ATEmix (inhalation-dust/mist) 9.35 mg/l

Component Information

Compenent information					
Chemical name	Oral LD50	Dermal LD50	Inhalation LC50		
Fatty acids, C18-unsaturated, dimers,	-	> 2000 mg/kg (Rat)	-		
polymers with tall-oil fatty acids and					
triethylenetetramine					
68082-29-1					
Tetraethylenepentamine	= 3990 mg/kg (Rat)	= 660 μL/kg (Rabbit)	-		
112-57-2					
Titanium dioxide	> 10000 mg/kg (Rat)	-	= 5.09 mg/L (Rat) 4 h		
13463-67-7					
Triethylenetetramine	= 1716.2 mg/kg (Rat)	= 1720 mg/kg (Rabbit)	-		
112-24-3		= 1465.4 mg/kg (Rabbit)			
Diethylenetriamine	= 1080 mg/kg (Rat)	= 672 mg/kg (Rabbit)	= 70 mg/L (Rat)4 h		
111-40-0					
Bisphenol A	= 3300 mg/kg (Rat)	= 3000 mg/kg (Rabbit)	> 170 mg/m³ (Rat) 6 h		
80-05-7	- -				

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

Skin corrosion/irritation Classification based on data available for ingredients. Causes severe skin burns and eye

damage.

Serious eye damage/eye irritation Classification based on data available for ingredients. Causes serious eye damage. Causes

burns.

Respiratory or skin sensitization May cause an allergic skin reaction.

Germ cell mutagenicity No information available.

Carcinogenicity Contains a known or suspected carcinogen. Classification based on data available for

ingredients. Suspected of causing cancer.

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

Chemical name	ACGIH	IARC	NTP	OSHA
Titanium dioxide	A3	Group 2B	-	X
13463-67-7				

Legend

ACGIH (American Conference of Governmental Industrial Hygienists)

A3 - Animal Carcinogen

IARC (International Agency for Research on Cancer)

Group 2B - Possibly Carcinogenic to Humans

Occupational Safety and Health Administration of the US Department of Labor

X - Present

Reproductive toxicity Classification based on data available for ingredients. May damage fertility or the unborn

child.

STOT - single exposureNo information available.

STOT - repeated exposureNo information available.

Target organ effects Respiratory system, Lungs.

Aspiration hazard No information available.

Other adverse effects No information available.

Interactive effects No information available.

12. Ecological information

Ecotoxicity

Toxic to aquatic life with long lasting effects.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Fatty acids, C18-unsaturated, dimers, polymers with tall-oil fatty acids and triethylenetetramine 68082-29-1	-	LC50: =7.07mg/L (96h, Danio rerio)	-	-
Tetraethylenepentamine 112-57-2	EC50: =2.1mg/L (72h, Pseudokirchneriella subcapitata)	LC50: =420mg/L (96h, Poecilia reticulata)	-	EC50: =24.1mg/L (48h, Daphnia magna)
Triethylenetetramine 112-24-3	EC50: =2.5mg/L (72h, Desmodesmus subspicatus) EC50: =20mg/L (72h, Pseudokirchneriella subcapitata) EC50: =3.7mg/L (96h, Pseudokirchneriella subcapitata)	LC50: =570mg/L (96h, Poecilia reticulata) LC50: =495mg/L (96h, Pimephales promelas)	-	EC50: =31.1mg/L (48h, Daphnia magna)
Diethylenetriamine 111-40-0	EC50: =1164mg/L (72h, Pseudokirchneriella subcapitata) EC50: =345.6mg/L (96h, Pseudokirchneriella subcapitata) EC50: =592mg/L (96h, Desmodesmus subspicatus)	Poecilia reticulata) LC50: =1014mg/L (96h,	-	EC50: =16mg/L (48h, Daphnia magna)
Bisphenol A 80-05-7	EC50: =2.5mg/L (96h, Pseudokirchneriella subcapitata)	LC50: 3.6 - 5.4mg/L (96h, Pimephales promelas) LC50: 4.0 - 5.5mg/L (96h, Pimephales promelas) LC50: =4mg/L (96h, Oncorhynchus mykiss) LC50: =9.9mg/L (96h, Brachydanio rerio)	-	EC50: =10.2mg/L (48h, Daphnia magna) EC50: =3.9mg/L (48h, Daphnia magna) EC50: 9.2 - 11.4mg/L (48h, Daphnia magna)

Persistence and degradability

No information available.

Bioaccumulation

Component Information

Chemical name	Partition coefficient
Tetraethylenepentamine 112-57-2	1
Triethylenetetramine 112-24-3	-1.4
Diethylenetriamine 111-40-0	-1.3
Bisphenol A 80-05-7	3.4

Other adverse effects

No information available.

13. Disposal considerations

Disposal methods

Waste from residues/unused products

u

Dispose of in accordance with local regulations. Dispose of waste in accordance with

environmental legislation.

Contaminated packaging

Do not reuse empty containers.

California Hazardous Waste Status

This product contains one or more substances that are listed with the State of California as

a hazardous waste.

14. Transport information

DOT Not regulated

IMDG Not regulated

Not regulated

15. Regulatory information

International Inventories

TSCA Contact supplier for inventory compliance status. **DSL/NDSL** Contact supplier for inventory compliance status. **EINECS/ELINCS** Contact supplier for inventory compliance status. Contact supplier for inventory compliance status. **ENCS** Contact supplier for inventory compliance status. **IECSC** Contact supplier for inventory compliance status. **KECI PICCS** Contact supplier for inventory compliance status. Contact supplier for inventory compliance status. AIIC **NZIoC** Contact supplier for inventory compliance status.

Legend:

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 Chemical Substances/European 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

AIIC - Australian Inventory of Industrial Chemicals

NZIoC - New Zealand Inventory of Chemicals

US Federal Regulations

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 Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals:

Chemical name	California Proposition 65	
Bisphenol A - 80-05-7	Developmental	
	Female Reproductive	

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Tetraethylenepentamine 112-57-2	X	X	X
Titanium dioxide 13463-67-7	X	X	X
Triethylenetetramine 112-24-3	X	X	X
Diethylenetriamine 111-40-0	X	X	X
Bisphenol A 80-05-7	X	X	X
Aluminum oxide (Al2O3) 1344-28-1	Х	Х	Х

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. Other information

FG-10B Revision date 14-Feb-2025

NFPA Health hazards 3 Flammability 0 Instability 0 Special hazards - Health hazards 3 Flammability 0 Physical hazards 0 Personal protection X

Chronic Hazard Star Legend *= Chronic Health Hazard

Key or legend to abbreviations and acronyms used in the safety data sheet

Legend

SVHC: Substances of Very High Concern for Authorization:
PBT: Persistent, Bioaccumulative, and Toxic (PBT) Substances
vPvB: Very Persistent and very Bioaccumulative (vPvB) Substances

STOT: Specific Target Organ Toxicity

ATE: Acute Toxicity Estimate LC50: 50% Lethal Concentration

LD50: 50% Lethal Dose

Legend Section 8: Exposure controls/personal protection

TWA TWA (time-weighted average) STEL STEL (Short Term Exposure Limit)

Ceiling Maximum limit value Sk* Skin designation

Sensitizers

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR) U.S. Environmental Protection Agency ChemView Database

European Food Safety Authority (EFSA)

Environmental Protection Agency

Acute Exposure Guideline Level(s) (AEGL(s))

U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act

U.S. Environmental Protection Agency High Production Volume Chemicals

Food Research Journal

Hazardous Substance Database

International Uniform Chemical Information Database (IUCLID)

National Institute of Technology and Evaluation (NITE)

Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)

NIOSH (National Institute for Occupational Safety and Health)

National Library of Medicine's ChemID Plus (NLM CIP)

National Library of Medicine's PubMed database (NLM PUBMED)

U.S. National Toxicology Program (NTP)

New Zealand's Chemical Classification and Information Database (CCID)

Organization for Economic Co-operation and Development Environment, Health, and Safety Publications Organization for Economic Co-operation and Development High Production Volume Chemicals Program

Organization for Economic Co-operation and Development Screening Information Data Set

World Health Organization

Revision date 14-Feb-2025

Revision Note No information available.

Disclaimer

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End of Safety Data Sheet