



Safety Data Sheet

acc. to 29 CFR 1910.1200 App D

Adam's Graphene Glass Coating

Version number: GHS 5.0
Replaces version of: 2024-04-03 (GHS 4)

Revision: 2024-11-22

SECTION 1: Identification

1.1 Product identifier

Trade name **Adam's Graphene Glass Coating**
ADP328-01

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses Glass coating
Professional use
Industrial use

HS code 3208.90.00.

1.3 Details of the supplier of the safety data sheet

Adam's Polishes Inc.
8225 North Valley Hwy.
Thornton CO 80221
720-484-5059

tips@adamspolishes.com
www.adamspolishes.com

1.4 Emergency telephone number

Emergency information service USA 1.800.535.5053, INTL 1.352.323.3500
24 hour emergency number

SECTION 2: Hazard(s) identification

2.1 Classification of the substance or mixture

Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

Section	Hazard class	Hazard class and category	Hazard statement
A.3	serious eye damage/eye irritation	Eye Irrit. 2	H319
A.6	carcinogenicity	Carc. 2	H351
A.8D	specific target organ toxicity - single exposure (narcotic effects, drowsiness)	STOT SE 3	H336
B.6	flammable liquid	Flam. Liq. 2	H225

For full text of abbreviations: see SECTION 16.

The most important adverse physicochemical, human health and environmental effects

The product is combustible and can be ignited by potential ignition sources. The mixture contains a substance that was identified as a PBT (persistent, bioaccumulative and toxic). The mixture contains a substance that was identified as vPvB (very persistent and very bioaccumulative).

Additional information

Contains a PBT-/vPvB-substance at a concentration of $\geq 0.1\%$.



Safety Data Sheet

acc. to 29 CFR 1910.1200 App D

Adam's Graphene Glass Coating

Version number: GHS 5.0
Replaces version of: 2024-04-03 (GHS 4)

Revision: 2024-11-22

2.2 Label elements

Labelling acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

- Signal word danger

- Pictograms

GHS02, GHS07,
GHS08



- Hazard statements

H225 Highly flammable liquid and vapor.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.
H351 Suspected of causing cancer.

- Precautionary statements

P202 Do not handle until all safety precautions have been read and understood.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P240 Ground/bond container and receiving equipment.
P241 Use explosion-proof electrical/ventilating/lighting equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P261 Avoid breathing dust/fume/gas/mist/vapors/spray.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340 If inhaled: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312 Call a poison center/doctor if you feel unwell.
P370+P378 In case of fire: Use sand, carbon dioxide or powder extinguisher to extinguish.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P403+P235 Store in a well-ventilated place. Keep cool.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- Hazardous ingredients for labelling propan-2-ol, parachlorobenzotrifluoride

2.3 Other hazards

Results of PBT and vPvB assessment

Contains a PBT-substance at a concentration of $\geq 0.1\%$. Contains a vPvB-substance at a concentration of $\geq 0.1\%$.

Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) in a concentration of $\geq 0.1\%$.

SECTION 3: Composition/information on ingredients

3.1 Substances

Not relevant (mixture)



Safety Data Sheet

acc. to 29 CFR 1910.1200 App D

Adam's Graphene Glass Coating

Version number: GHS 5.0
Replaces version of: 2024-04-03 (GHS 4)

Revision: 2024-11-22

3.2 Mixtures

Description of the mixture

Hazardous ingredients acc. to GHS			
Name of substance	Identifier	Wt%	Classification acc. to GHS
propan-2-ol	CAS No 67-63-0	60 - < 80	Eye Irrit. 2 / H319 STOT SE 3 / H336 Flam. Liq. 2 / H225
decamethylcyclopentasiloxane	CAS No 541-02-6	10 - < 30	Flam. Liq. 4 / H227
decamethyltetrasiloxane	CAS No 141-62-8	1 - < 5	Flam. Liq. 3 / H226
parachlorobenzotrifluoride	CAS No 98-56-6	0.1 - < 1	Skin Sens. 1B / H317 Carc. 2 / H351 Flam. Liq. 3 / H226

Remarks

For full text of abbreviations: see SECTION 16. Exact percentage of ingredients is withheld as a trade secret.

SECTION 4: First-aid measures

4.1 Description of first-aid measures

General notes

Do not leave affected person unattended. Remove victim out of the danger area. Keep affected person warm, still and covered. Take off immediately all contaminated clothing. In all cases of doubt, or when symptoms persist, seek medical advice. In case of unconsciousness place person in the recovery position. Never give anything by mouth.

Following inhalation

If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. Provide fresh air.

Following skin contact

Wash with plenty of soap and water.

Following eye contact

Remove contact lenses, if present and easy to do. Continue rinsing.

Following ingestion

Rinse mouth with water (only if the person is conscious). Do NOT induce vomiting.

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media

Water spray, BC-powder, Carbon dioxide (CO₂)

5.2 Special hazards arising from the substance or mixture

none In case of insufficient ventilation and/or in use, may form flammable/explosive vapor-air mixture. Solvent vapors are heavier than air and may spread along floors. Places which are not ventilated, e.g. unventilated below ground level areas such as trenches, conduits and shafts, are particularly prone to the presence of flammable substances or mixtures.

Hazardous combustion products

Carbon monoxide (CO), Carbon dioxide (CO₂)



Safety Data Sheet

acc. to 29 CFR 1910.1200 App D

Adam's Graphene Glass Coating

Version number: GHS 5.0
Replaces version of: 2024-04-03 (GHS 4)

Revision: 2024-11-22

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Coordinate firefighting measures to the fire surroundings. Do not allow firefighting water to enter drains or water courses. Collect contaminated firefighting water separately. Fight fire with normal precautions from a reasonable distance.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Remove persons to safety.

For emergency responders

Wear breathing apparatus if exposed to vapors/dust/aerosols/gases.

6.2 Environmental precautions

If substance has entered a water course or sewer, inform the responsible authority.

6.3 Methods and material for containment and cleaning up

Advice on how to contain a spill

Covering of drains

Advice on how to clean up a spill

Wipe up with absorbent material (e.g. cloth, fleece). Collect spillage: sawdust, kieselgur (diatomite), sand, universal binder

Appropriate containment techniques

Use of adsorbent materials.

Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Recommendations

- Measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation. Avoidance of ignition sources. Keep away from sources of ignition - No smoking. Take precautionary measures against static discharge. Use only in well-ventilated areas. Due to danger of explosion, prevent leakage of vapours into cellars, flues and ditches. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting/equipment. Use only non-sparking tools.

- Specific notes/details

Places which are not ventilated, e.g. unventilated below ground level areas such as trenches, conduits and shafts, are particularly prone to the presence of flammable substances or mixtures. Vapors are heavier than air, spread along floors and form explosive mixtures with air. Vapors may form explosive mixtures with air.

Advice on general occupational hygiene

Wash hands after use. Do not eat, drink and smoke in work areas. Remove contaminated clothing and protective equipment before entering eating areas. Never keep food or drink in the vicinity of chemicals. Never place chemicals in containers that are normally used for food or drink. Keep away from food, drink and animal feedingstuffs.



Safety Data Sheet

acc. to 29 CFR 1910.1200 App D

Adam's Graphene Glass Coating

Version number: GHS 5.0
Replaces version of: 2024-04-03 (GHS 4)

Revision: 2024-11-22

7.2 Conditions for safe storage, including any incompatibilities

Managing of associated risks

- Explosive atmospheres

Keep container tightly closed and in a well-ventilated place. Use local and general ventilation. Keep cool. Protect from sunlight.

- Flammability hazards

Keep away from sources of ignition - No smoking. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharge. Protect from sunlight.

- Ventilation requirements

Use local and general ventilation. Ground/bond container and receiving equipment.

- Packaging compatibilities

Only packagings which are approved (e.g. acc. to the Dangerous Goods Regulations) may be used.

7.3 Specific end use(s)

See section 16 for a general overview.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values (Workplace Exposure Limits)											
Country	Name of agent	CAS No	Identifier	TWA [ppm]	TWA [mg/m ³]	STEL [ppm]	STEL [mg/m ³]	Ceiling-C [ppm]	Ceiling-C [mg/m ³]	Notation	Source
US	2-propanol	67-63-0	TLV®	200		400					ACGIH® 2019
US	isopropyl alcohol	67-63-0	PEL (CA)	400	980	500	1,225				Cal/OSHA PEL
US	isopropyl alcohol	67-63-0	REL	400 (10 h)	980 (10 h)	500	1,225				NIOSH REL
US	isopropyl alcohol	67-63-0	PEL	400	980						29 CFR 1910.1000

Notation

Ceiling-C ceiling value is a limit value above which exposure should not occur

STEL short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)

TWA time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified)

Biological limit values						
Country	Name of agent	Parameter	Notation	Identifier	Value	Source
US	isopropanol	acetone		BEI®	40 mg/l	ACGIH® 2019



Safety Data Sheet

acc. to 29 CFR 1910.1200 App D

Adam's Graphene Glass Coating

Version number: GHS 5.0
Replaces version of: 2024-04-03 (GHS 4)

Revision: 2024-11-22

Relevant DNELs of components						
Name of substance	CAS No	End-point	Threshold level	Protection goal, route of exposure	Used in	Exposure time
propan-2-ol	67-63-0	DNEL	500 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
propan-2-ol	67-63-0	DNEL	888 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
decamethylcyclopentasiloxane	541-02-6	DNEL	97 mg/m ³	human, inhalatory	worker (industry)	acute - systemic effects
decamethylcyclopentasiloxane	541-02-6	DNEL	24 mg/m ³	human, inhalatory	worker (industry)	acute - local effects
decamethylcyclopentasiloxane	541-02-6	DNEL	97 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
decamethylcyclopentasiloxane	541-02-6	DNEL	24 mg/m ³	human, inhalatory	worker (industry)	chronic - local effects
decamethyltetrasiloxane	141-62-8	DNEL	102 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
decamethyltetrasiloxane	141-62-8	DNEL	102 mg/m ³	human, inhalatory	worker (industry)	acute - systemic effects
decamethyltetrasiloxane	141-62-8	DNEL	1,449 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
decamethyltetrasiloxane	141-62-8	DNEL	1,449 mg/kg bw/day	human, dermal	worker (industry)	acute - systemic effects
parachlorobenzotrifluoride	98-56-6	DNEL	1 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
parachlorobenzotrifluoride	98-56-6	DNEL	0.4 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
parachlorobenzotrifluoride	98-56-6	DNEL	18 µg/cm ²	human, dermal	worker (industry)	acute - local effects

Relevant PNECs of components						
Name of substance	CAS No	End-point	Threshold level	Organism	Environmental compartment	Exposure time
propan-2-ol	67-63-0	PNEC	141 mg/l	aquatic organisms	freshwater	short-term (single instance)
propan-2-ol	67-63-0	PNEC	141 mg/l	aquatic organisms	marine water	short-term (single instance)
propan-2-ol	67-63-0	PNEC	2,251 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
propan-2-ol	67-63-0	PNEC	552 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
propan-2-ol	67-63-0	PNEC	552 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
propan-2-ol	67-63-0	PNEC	28 mg/kg	terrestrial organisms	soil	short-term (single instance)



Safety Data Sheet

acc. to 29 CFR 1910.1200 App D

Adam's Graphene Glass Coating

Version number: GHS 5.0
Replaces version of: 2024-04-03 (GHS 4)

Revision: 2024-11-22

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Name of substance	CAS No	End-point	Threshold level	Organism	Environmental compartment	Exposure time
decamethylcyclopentasiloxane	541-02-6	PNEC	10 mg/l	microorganisms	sewage treatment plant (STP)	short-term (single instance)
decamethylcyclopentasiloxane	541-02-6	PNEC	11 mg/kg	benthic organisms	sediment	short-term (single instance)
decamethylcyclopentasiloxane	541-02-6	PNEC	13 mg/kg	(top) predators	water	short-term (single instance)
decamethylcyclopentasiloxane	541-02-6	PNEC	1.1 mg/kg	pelagic organisms	sediment	short-term (single instance)
decamethylcyclopentasiloxane	541-02-6	PNEC	1.2 µg/l	aquatic organisms	freshwater	short-term (single instance)
decamethylcyclopentasiloxane	541-02-6	PNEC	0.12 µg/l	aquatic organisms	marine water	short-term (single instance)
decamethylcyclopentasiloxane	541-02-6	PNEC	10 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
decamethylcyclopentasiloxane	541-02-6	PNEC	11 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
decamethylcyclopentasiloxane	541-02-6	PNEC	1.1 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
decamethylcyclopentasiloxane	541-02-6	PNEC	2.5 mg/kg	terrestrial organisms	soil	short-term (single instance)
decamethyltetrasiloxane	141-62-8	PNEC	1 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
decamethyltetrasiloxane	141-62-8	PNEC	6.1 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
decamethyltetrasiloxane	141-62-8	PNEC	3.8 mg/kg	terrestrial organisms	soil	short-term (single instance)
decamethyltetrasiloxane	141-62-8	PNEC	0.61 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
parachlorobenzotrifluoride	98-56-6	PNEC	2 µg/l	aquatic organisms	freshwater	short-term (single instance)
parachlorobenzotrifluoride	98-56-6	PNEC	0.2 µg/l	aquatic organisms	marine water	short-term (single instance)
parachlorobenzotrifluoride	98-56-6	PNEC	0.032 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
parachlorobenzotrifluoride	98-56-6	PNEC	0.022 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
parachlorobenzotrifluoride	98-56-6	PNEC	0.002 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
parachlorobenzotrifluoride	98-56-6	PNEC	0.026 mg/kg	terrestrial organisms	soil	short-term (single instance)

8.2 Exposure controls

Appropriate engineering controls

General ventilation.



Safety Data Sheet

acc. to 29 CFR 1910.1200 App D

Adam's Graphene Glass Coating

Version number: GHS 5.0
Replaces version of: 2024-04-03 (GHS 4)

Revision: 2024-11-22

Individual protection measures (personal protective equipment)

Eye/face protection

Wear eye/face protection.

Skin protection

- Hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. Check leak-tightness/impermeability prior to use. In the case of wanting to use the gloves again, clean them before taking off and air them well. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

- Other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended. Wash hands thoroughly after handling.

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

Environmental exposure controls

Use appropriate container to avoid environmental contamination. Keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state	liquid
Color	smoke
Particle	not relevant (liquid)
Odor	like alcohols

Other safety parameters

pH (value)	not determined
Melting point/freezing point	not determined
Initial boiling point and boiling range	>65 °C at 1 atm
Flash point	18 °C at 101 kPa
Evaporation rate	Not determined
Flammability (solid, gas)	not relevant, (fluid)
Vapor pressure	73 Pa at 25 °C
Density	not determined
Vapor density	this information is not available
Relative density	Information on this property is not available



Safety Data Sheet

acc. to 29 CFR 1910.1200 App D

Adam's Graphene Glass Coating

Version number: GHS 5.0
Replaces version of: 2024-04-03 (GHS 4)

Revision: 2024-11-22

Solubility(ies)	not determined
Partition coefficient	
- n-octanol/water (log KOW)	this information is not available
Auto-ignition temperature	241 °C (auto-ignition temperature (liquids and gases))
Viscosity	not determined
Explosive properties	none
Oxidizing properties	none
Temperature class (USA, acc. to NEC 500)	T2C (maximum permissible surface temperature on the equipment: 230°C)

SECTION 10: Stability and reactivity

10.1 Reactivity

Concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials". The mixture contains reactive substance(s). Risk of ignition.

If heated:

Risk of ignition

10.2 Chemical stability

See below "Conditions to avoid".

10.3 Possibility of hazardous reactions

No known hazardous reactions.

10.4 Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Hints to prevent fire or explosion

Use explosion-proof electrical/ventilating/lighting/equipment. Use only non-sparking tools. Take precautionary measures against static discharge.

10.5 Incompatible materials

Oxidizers

10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Test data are not available for the complete mixture.

Classification procedure

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

Acute toxicity

Shall not be classified as acutely toxic.



Safety Data Sheet

acc. to 29 CFR 1910.1200 App D

Adam's Graphene Glass Coating

Version number: GHS 5.0
Replaces version of: 2024-04-03 (GHS 4)

Revision: 2024-11-22

Acute toxicity of components

Name of substance	CAS No	Exposure route	Endpoint	Value	Species
decamethylcyclpentasiloxane	541-02-6	oral	LD50	>5,000 mg/kg	rat
decamethylcyclpentasiloxane	541-02-6	inhalation: dust/mist	LC50	8.7 mg/l/4h	rat
decamethylcyclpentasiloxane	541-02-6	dermal	LD50	>2,000 mg/kg	rabbit
parachlorobenzotrifluoride	98-56-6	oral	LD50	5,546 mg/kg	rat
parachlorobenzotrifluoride	98-56-6	inhalation: dust/mist	LC50	>32 mg/l/4h	rat
parachlorobenzotrifluoride	98-56-6	dermal	LD50	>3,300 mg/kg	rabbit

Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

Serious eye damage/eye irritation

Causes serious eye irritation.

Respiratory or skin sensitization

Contains parachlorobenzotrifluoride. May produce an allergic reaction.

Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

Carcinogenicity

Suspected of causing cancer.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans

Name of substance	CAS No	Classification	Remarks	Number
propan-2-ol	67-63-0	3		
parachlorobenzotrifluoride	98-56-6	2B		

Legend

- 2B Possibly carcinogenic to humans
3 Not classifiable as to carcinogenicity in humans

Reproductive toxicity

Shall not be classified as a reproductive toxicant.

Specific target organ toxicity - single exposure

May cause drowsiness or dizziness.

Specific target organ toxicity - repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

SECTION 12: Ecological information

12.1 Toxicity

Very toxic to aquatic life with long lasting effects.



Safety Data Sheet

acc. to 29 CFR 1910.1200 App D

Adam's Graphene Glass Coating

Version number: GHS 5.0
Replaces version of: 2024-04-03 (GHS 4)

Revision: 2024-11-22

Aquatic toxicity (acute) of components

Name of substance	CAS No	Endpoint	Value	Species	Exposure time
propan-2-ol	67-63-0	LC50	10,000 mg/l	fish	96 h
decamethylcyclopentasiloxane	541-02-6	LC50	>16 µg/l	fish	96 h
decamethylcyclopentasiloxane	541-02-6	EC50	>2.9 µg/l	aquatic invertebrates	48 h
parachlorobenzotrifluoride	98-56-6	LC50	3 mg/l	fish	48 h
parachlorobenzotrifluoride	98-56-6	ErC50	>0.41 mg/l	algae	72 h
parachlorobenzotrifluoride	98-56-6	EC50	>0.41 mg/l	algae	72 h

Aquatic toxicity (chronic) of components

Name of substance	CAS No	Endpoint	Value	Species	Exposure time
decamethylcyclopentasiloxane	541-02-6	LC50	>16 µg/l	fish	14 d
decamethylcyclopentasiloxane	541-02-6	EC50	>15 µg/l	aquatic invertebrates	21 d
parachlorobenzotrifluoride	98-56-6	LC50	6.5 mg/l	fish	24 h
parachlorobenzotrifluoride	98-56-6	EC50	242 mg/l	microorganisms	30 min

12.2 Persistence and degradability

Data are not available.

12.3 Bioaccumulative potential

Data are not available.

12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

Contains a PBT-substance at a concentration of $\geq 0.1\%$. Contains a vPvB-substance at a concentration of $\geq 0.1\%$.

12.6 Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) in a concentration of $\geq 0.1\%$.

12.7 Other adverse effects

Data are not available.



Safety Data Sheet

acc. to 29 CFR 1910.1200 App D

Adam's Graphene Glass Coating

Version number: GHS 5.0
Replaces version of: 2024-04-03 (GHS 4)

Revision: 2024-11-22

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Waste treatment-relevant information

Solvent reclamation/regeneration.

Sewage disposal-relevant information

Do not empty into drains. Avoid release to the environment. Refer to special instructions/safety data sheets.

Waste treatment of containers/packages

Only packagings which are approved (e.g. acc. to DOT) may be used. Completely emptied packages can be recycled. Handle contaminated packages in the same way as the substance itself.

Remarks

Please consider the relevant national or regional provisions. Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities.

SECTION 14: Transport information

14.1 UN number

DOT	UN 1993
IMDG-Code	UN 1993
ICAO-TI	UN 1993

14.2 UN proper shipping name

DOT	Flammable liquid, n.o.s.
IMDG-Code	FLAMMABLE LIQUID, N.O.S.
ICAO-TI	Flammable liquid, n.o.s.
Technical name (hazardous ingredients)	propan-2-ol, acetic acid, glacial

14.3 Transport hazard class(es)

DOT	3
IMDG-Code	3
ICAO-TI	3

14.4 Packing group

DOT	II
IMDG-Code	II
ICAO-TI	II

14.5 Environmental hazards

Environmentally hazardous substance (aquatic environment)	hazardous to the aquatic environment decamethylcyclopentasiloxane
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14.6 Special precautions for user

There is no additional information.

14.7 Transport in bulk according to IMO instruments

The cargo is not intended to be carried in bulk.



Safety Data Sheet

acc. to 29 CFR 1910.1200 App D



Adam's Graphene Glass Coating

Version number: GHS 5.0
Replaces version of: 2024-04-03 (GHS 4)



Revision: 2024-11-22

Information for each of the UN Model Regulations


Transport of dangerous goods by road or rail (49 CFR US DOT)

Particulars in the shipper's declaration	UN1993, Flammable liquid, n.o.s., (contains: propan-2-ol, acetic acid, glacial), 3, II, environmentally hazardous
Reportable quantity (RQ)	6,472,492 lbs (2,938,511 kg) (acetic acid, glacial)
Danger label(s)	3, fish and tree
 	
Environmental hazards	YES (hazardous to the aquatic environment)
Special provisions (SP)	IB2, T7, TP1, TP8, TP28
ERG No	128

International Maritime Dangerous Goods Code (IMDG)

Marine pollutant	YES (hazardous to the aquatic environment) (decamethylcyclopentasiloxane)
Danger label(s)	3, fish and tree
 	
Special provisions (SP)	274
Excepted quantities (EQ)	E2
Limited quantities (LQ)	1 L
EmS	F-E, <u>S-E</u>
Stowage category	B

International Civil Aviation Organization (ICAO-IATA/DGR)

Environmental hazards	YES (hazardous to the aquatic environment)
Danger label(s)	3
	
Special provisions (SP)	A3
Excepted quantities (EQ)	E2
Limited quantities (LQ)	1 L



Safety Data Sheet

acc. to 29 CFR 1910.1200 App D

Adam's Graphene Glass Coating

Version number: GHS 5.0
Replaces version of: 2024-04-03 (GHS 4)

Revision: 2024-11-22

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations specific for the product in question

National regulations (United States)

Superfund Amendment and Reauthorization Act (SARA TITLE III)

- The List of Extremely Hazardous Substances and Their Threshold Planning Quantities (EPCRA Section 302, 304)

none of the ingredients are listed

- Specific Toxic Chemical Listings (EPCRA Section 313)

Toxics Release Inventory: Specific Toxic Chemical Listings			
Name of substance	CAS No	Remarks	Effective date
propan-2-ol	67-63-0	only persons who manufacture by the strong acid process are subject, supplier notification not required	1986-12-31

Clean Air Act

none of the ingredients are listed

Right to Know Hazardous Substance List

Cleaning Product Right to Know Act Substance List (CA-RTK)			
Name of substance	CAS No	Functionality	Authoritative Lists
propan-2-ol	67-63-0	alcohols	OEHHA RELs
decamethylcyclopentasiloxane	541-02-6	solvents	Canada PBiTs CECBP - Priority Chemicals EC PBTs
polydimethylsiloxane	63148-62-9	surface modifier	
alkylmethyl silicone	17955-88-3	shine agent	
parachlorobenzotrifluoride	98-56-6	solvents	
acetic acid, glacial	64-19-7	pH adjusting agent	
polyurea silazane	2649792-57-2	refractory resin	

- Toxic or Hazardous Substance List (MA-TURA)

Name of substance	CAS No	DEP CODE	PBT / HHS / LHS	PBT / HHS Threshold	De Minimis Concentration Threshold
propan-2-ol	67-63-0				1.0 %



Safety Data Sheet

acc. to 29 CFR 1910.1200 App D

Adam's Graphene Glass Coating

Version number: GHS 5.0
Replaces version of: 2024-04-03 (GHS 4)

Revision: 2024-11-22

- Hazardous Substances List (MN-ERTK)

Name of substance	CAS No	References	Remarks
propan-2-ol	67-63-0	A, N, O	

Legend

- A American Conference of Governmental Industrial Hygienists (ACGIH), "Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices for 1992-93", available from ACGIH
- N National Institute for Occupational Safety and Health (NIOSH), "Recommendations for Occupational Safety and Health Standards," August 1988, available from NIOSH, Publications Dissemination Office, Division of Standards Development and Technology Transfer
- O Occupational Safety and Health Administration (OSHA), Safety and Health Standards, Code of Federal Regulations, title 29, part 1910, subpart Z, "Toxic and Hazardous Substances, 1990." General information: Minnesota Department of Labor and Industry, Occupational Safety and Health Division

- Hazardous Substance List (NJ-RTK)

Name of substance	CAS No	Remarks	Classifications
propan-2-ol	67-63-0		F3

Legend

- F3 Flammable - Third Degree

- Hazardous Substance List (Chapter 323) (PA-RTK)

Name acc. to inventory	CAS No	Classification
2-PROPANOL	67-63-0	E

Legend

- E Environmental hazard

- Hazardous Substance List (RI-RTK)

Name of substance	CAS No	References
propan-2-ol	67-63-0	T, F

Legend

- F Flammability (NFPA®)
- T Toxicity (ACGIH®)

California Environmental Protection Agency (Cal/EPA): Proposition 65 - Safe Drinking Water and Toxic Enforcement Act of 1987

Proposition 65 List of chemicals				
Name acc. to inventory	CAS No	Wt%	Remarks	Type of the toxicity
p-chloro- α,α,α -trifluorotoluene (para-Chlorobenzotrifluoride, PCBTF)	98-56-6	0.19		cancer

VOC content

- Regulated Volatile Organic Compounds (VOC-EPA) 70 %
- Regulated Volatile Organic Compounds (VOC-Cal ARB) 70 %



Safety Data Sheet

acc. to 29 CFR 1910.1200 App D

Adam's Graphene Glass Coating

Version number: GHS 5.0
Replaces version of: 2024-04-03 (GHS 4)

Revision: 2024-11-22

Industry or sector specific available guidance(s)

NPCA-HMIS® III

Hazardous Materials Identification System. American Coatings Association.

Category	Rating	Description
Chronic	*	chronic (long-term) health effects may result from repeated overexposure
Health	2	temporary or minor injury may occur
Flammability	3	material that can be ignited under almost all ambient temperature conditions
Physical hazard	0	material that is normally stable, even under fire conditions, and will not react with water, polymerize, decompose, condense, or self-react. Non-explosive
Personal protection	-	

Chronic: chronic hazard
Flammability: flammability hazards
Health: health hazard
Personal protection: personal protective equipment (PPE) for normal use
Physical hazard: reactivity

NFPA® 704

National Fire Protection Association: Standard System for the Identification of the Hazards of Materials for Emergency Response (United States).

Category	Degree of hazard	Description
Flammability	3	material that can be ignited under almost all ambient temperature conditions
Health	0	material that, under emergency conditions, would offer no hazard beyond that of ordinary combustible material
Instability	0	material that is normally stable, even under fire conditions
Special hazard		

National inventories

Country	Inventory	Status
CA	DSL	not all ingredients are listed
CA	NDSL	not all ingredients are listed
EU	REACH Reg.	not all ingredients are listed
US	TSCA	all ingredients are listed or exempt from listing
AU	AIIC	not all ingredients are listed
CN	IECSC	not all ingredients are listed
EU	ECSI	not all ingredients are listed
JP	CSCL-ENCS	not all ingredients are listed
JP	ISHA-ENCS	not all ingredients are listed
KR	KECI	not all ingredients are listed
MX	INSQ	not all ingredients are listed
NZ	NZIoC	not all ingredients are listed



Safety Data Sheet

acc. to 29 CFR 1910.1200 App D

Adam's Graphene Glass Coating

Version number: GHS 5.0
Replaces version of: 2024-04-03 (GHS 4)

Revision: 2024-11-22

Country	Inventory	Status
PH	PICCS	not all ingredients are listed
TR	CICR	not all ingredients are listed
TW	TCSI	not all ingredients are listed
VN	NCI	not all ingredients are listed

Legend

AIIC	Australian Inventory of Industrial Chemicals
CICR	Chemical Inventory and Control Regulation
CSCL-ENCS	List of Existing and New Chemical Substances (CSCL-ENCS)
DSL	Domestic Substances List (DSL)
ECSI	EC Substance Inventory (EINECS, ELINCS, NLP)
IECSC	Inventory of Existing Chemical Substances Produced or Imported in China
INSQ	National Inventory of Chemical Substances
ISHA-ENCS	Inventory of Existing and New Chemical Substances (ISHA-ENCS)
KECI	Korea Existing Chemicals Inventory
NCI	National Chemical Inventory
NDSL	Non-domestic Substances List (NDSL)
NZIoC	New Zealand Inventory of Chemicals
PICCS	Philippine Inventory of Chemicals and Chemical Substances (PICCS)
REACH Reg.	REACH registered substances
TCSI	Taiwan Chemical Substance Inventory
TSCA	Toxic Substance Control Act

Additional information

The contained substances are listed in the following national inventories:
DSL/NDSL (Canada)

15.2 Chemical Safety Assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information, including date of preparation or last revision

Indication of changes (revised safety data sheet)

Alignment to regulation: Globally Harmonized System of Classification and Labelling of Chemicals ("Purple book").
Restructuring: section 9, section 14

Section	Former entry (text/value)	Actual entry (text/value)	Safety-relevant
1.1	Trade name: Adam's Graphene Glass Coating	Trade name: Adam's Graphene Glass CoatingADP328-01	yes
3.2		Hazardous ingredients acc. to GHS: change in the listing (table)	yes
3.2	Remarks: For full text of abbreviations: see SECTION 16.	Remarks: For full text of abbreviations: see SECTION 16. Exact percentage of ingredients is withheld as a trade secret.	yes
9.1	Density: 0.82 g/ml	Density: not determined	yes
9.1		Relative density: Information on this property is not available	yes



Safety Data Sheet

acc. to 29 CFR 1910.1200 App D

Adam's Graphene Glass Coating

Version number: GHS 5.0
Replaces version of: 2024-04-03 (GHS 4)

Revision: 2024-11-22

Section	Former entry (text/value)	Actual entry (text/value)	Safety-relevant
11.1		Acute toxicity of components: change in the listing (table)	yes
14.2	Technical name (hazardous ingredients): propan-2-ol, Cyclosilazanes, di-Me, Me Hydrogen, polymers with di-Me, Me hydrogen silazanes, and 2,4-TDI	Technical name (hazardous ingredients): propan-2-ol, acetic acid, glacial	yes
14.7	Particulars in the shipper's declaration: UN1993, Flammable liquid, n.o.s., (contains: pro- pan-2-ol, Cyclosilazanes, di-Me, Me Hydrogen, polymers with di-Me, Me hydrogen silazanes, and 2,4-TDI), 3, II, environmentally hazardous	Particulars in the shipper's declaration: UN1993, Flammable liquid, n.o.s., (contains: pro- pan-2-ol, acetic acid, glacial), 3, II, environmentally hazardous	yes
15.1		Cleaning Product Right to Know Act Substance List (CA-RTK): change in the listing (table)	yes
15.1		Proposition 65 List of chemicals: change in the listing (table)	yes
15.1		Additional information: The contained substances are listed in the following national inventories: DSL/NDSL (Canada)	yes
16		Abbreviations and acronyms: change in the listing (table)	yes

Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
29 CFR 1910.1000	29 CFR 1910.1000, Tables Z-1, Z-2, Z-3 - Occupational Safety and Health Standards: Toxic and Hazardous Substances (permissible exposure limits)
49 CFR US DOT	49 CFR U.S. Department of Transportation
ACGIH®	American Conference of Governmental Industrial Hygienists
ACGIH® 2019	From ACGIH®, 2019 TLVs® and BEIs® Book. Copyright 2019. Reprinted with permission. Information on the proper use of the TLVs® and BEIs®: http://www.acgih.org/tlv-bei-guidelines/policies-procedures-presentations/tlv-bei-position-statement
Cal/OSHA PEL	California Division of Occupational Safety and Health (Cal/OSHA): Permissible Exposure Limits (PELs)
Cal ARB	California Air Resources Board
Carc.	Carcinogenicity
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
Ceiling-C	Ceiling value
DEP CODE	Department of Environmental Protection Code
DGR	Dangerous Goods Regulations (see IATA/DGR)
DNEL	Derived No-Effect Level
DOT	Department of Transportation (USA)
EC50	Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval
ED	Endocrine disruptor



Safety Data Sheet

acc. to 29 CFR 1910.1200 App D

Adam's Graphene Glass Coating

Version number: GHS 5.0
Replaces version of: 2024-04-03 (GHS 4)

Revision: 2024-11-22

Abbr.	Descriptions of used abbreviations
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
EmS	Emergency Schedule
EPA	Environmental Protection Agency. An agency of the federal government of the United States charged with protecting human health and the environment
ErC50	≡ EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control
ERG No	Emergency Response Guidebook - Number
Eye Dam.	Seriously damaging to the eye
Eye Irrit.	Irritant to the eye
Flam. Liq.	Flammable liquid
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
HHS	Higher hazard substance
HS	Harmonized Commodity Description and Coding System (Harmonized System, drawn up by the World Customs Organisation)
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
ICAO	International Civil Aviation Organization
ICAO-TI	Technical instructions for the safe transport of dangerous goods by air
IMDG	International Maritime Dangerous Goods Code
IMDG-Code	International Maritime Dangerous Goods Code
LC50	Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval
LD50	Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval
LHS	Lower hazard substance
NFPA®	National Fire Protection Association (United States)
NIOSH REL	National Institute for Occupational Safety and Health (NIOSH): Recommended Exposure Limits (RELs)
NLP	No-Longer Polymer
NPCA-HMIS® III	National Paint and Coatings Association: Hazardous Materials Identification System - HMIS® III, Third Edition
OSHA	Occupational Safety and Health Administration (United States)
PBT	Persistent, Bioaccumulative and Toxic
PEL	Permissible exposure limit
PNEC	Predicted No-Effect Concentration
ppm	Parts per million
RTECS	Registry of Toxic Effects of Chemical Substances (database of NIOSH with toxicological information)
Skin Sens.	Skin sensitization
STEL	Short-term exposure limit



Safety Data Sheet

acc. to 29 CFR 1910.1200 App D

Adam's Graphene Glass Coating

Version number: GHS 5.0
Replaces version of: 2024-04-03 (GHS 4)

Revision: 2024-11-22

Abbr.	Descriptions of used abbreviations
STOT SE	Specific target organ toxicity - single exposure
TLV®	Threshold Limit Values
TWA	Time-weighted average
VOC	Volatile Organic Compounds
vPvB	Very Persistent and very Bioaccumulative

Key literature references and sources for data

OSHA Hazard Communication Standard (HCS), 29 CFR 1910.1200.

Transport of dangerous goods by road or rail (49 CFR US DOT). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

Classification procedure

Physical and chemical properties: The classification is based on tested mixture.

Health hazards, Environmental hazards: The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

List of relevant phrases (code and full text as stated in section 2 and 3)

Code	Text
H225	Highly flammable liquid and vapor.
H226	Flammable liquid and vapor.
H227	Combustible liquid.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
H351	Suspected of causing cancer.

Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.