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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

- Trade name

DAPCO™ 18-4F FIREWALL SEALANT, PART A

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

Uses of the Substance/Mixture

Sealant

1.3 Details of the supplier of the safety data sheet

Company

Solvay Specialty Chemicals Asia Pacific Pte. Ltd. 1, Biopolis Drive #05-01/06, Amnios, Singapore 138622. Tel: +65 62911921

E-mail address

manager.sds@solvay.com

1.4 Emergency telephone number

+84 28 4458 2388 [CareChem 24] MULTI LINGUAL EMERGENCY NUMBER (24/7) Europe/Latin America/Africa: +44 1235 239 670 (UK) Middle East/Africa speaking Arabic: +44 1235 239 671 (UK) Asia Pacific: +65 3158 1074 (Singapore)

China: 400 120 6011 (toll-free, access from China only)

North America: +1 800 424 9300

Disclaimer

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SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Government decree No. 108/2008/ND-CP detailing and guiding a number of articles of the law on chemicals, circular No. 04/2012/TT-BCT of the ministry of trade and industry: Regulation on classification and labelling of chemicals (GHS 2009)

Specific target organ toxicity - repeated exposure Category 1

H372: Causes damage to organs through prolonged or repeated exposure if inhaled. (Lungs), Inhalation

2.2 Label elements

Government decree No. 108/2008/ND-CP detailing and guiding a number of articles of the law on chemicals, circular No. 04/2012/TT-BCT of the ministry of trade and industry: Regulation on classification and labelling of chemicals (GHS 2009)

Hazardous products which must be listed on the label

CAS-No. 14808-60-7

Quartz

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Pictogram



Signal word

- Danger

Hazard statements

- H372 Causes damage to organs (Lungs) through prolonged or repeated exposure if inhaled.

Precautionary statements

General

- None

Prevention

P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.

P264 Wash skin thoroughly after handling.

- P270 Do not eat, drink or smoke when using this product.

Response

- P314 Get medical advice/ attention if you feel unwell.

<u>Storage</u>

- Not applicable

Disposal

- P501 Dispose of contents/ container to an approved waste disposal plant.

2.3 Other hazards which do not result in classification

- NOTE: Heating to temperatures above 150 C in the presence of air may result in the release of formaldehyde - see MSDS for further details.

SECTION 3: Composition/information on ingredients

3.1 Substance

- Not applicable, this product is a mixture.

3.2 Mixture

- Chemical nature Mixture of polysiloxanes and fillers

Information on Components and Impurities

Chemical name	CAS-No.	Identification number	GHS Classification	Concentrati on [%]
Quartz	14808-60-7	Not applicable	Specific target organ toxicity - repeated exposure, Category 1; H372 (Lungs)	27 - 43
Polysiloxanes,di-Me, vinyl group-terminated	68083-19-2	Not applicable	Flammable liquids, Category 4; H227	10 - 30
Calcium carbonate	471-34-1	Not applicable	Not classified	7 - 13
Synthetic amorphous silica	112945-52-5	Not applicable	Not classified	1 - 5

For the full text of the H-Statements mentioned in this Section, see Section 16.

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SECTION 4: First aid measures

4.1 Description of first aid measures

In case of inhalation

- Quickly move the person away from the contaminated area. Make the affected person rest.
- Immediate medical attention is required.
- Show this sheet to the doctor.
- Be prepared to provide first aid or medical support if necessary.

In case of skin contact

- Wash off immediately with plenty of water for at least 15 minutes.
- Use appropriate protective equipment when treating a contaminated person.
- Always obtain medical attention.
- Show this sheet to the doctor.
- Be prepared to provide first aid or medical support if necessary.

In case of eye contact

- Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
- Keep eye wide open while rinsing.
- Show this sheet to the doctor.
- Always obtain medical advice, even if there are no symptoms.
- Be prepared to provide first aid or medical support if necessary.

In case of ingestion

- Do NOT induce vomiting.
- Immediate medical attention is required.
- Show this sheet to the doctor.
- Do not give anything to drink.
- Be prepared to provide first aid or medical support if necessary.

4.2 Most important symptoms and effects, both acute and delayed

Effects

- Serious effects on health may appear after prolonged or repeated exposure.
- The effects will depend on target organs.

Symptoms

- Symptoms will depend on the target organs.

Effects

- Under certain conditions, this product may generate formaldehyde as a by-product of oxidative thermal decomposition. Formaldehyde is listed as a potential human carcinogen by IARC, OSHA, and ACGIH.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician

- Immediate medical attention is required.
- Treat symptomatically.
- Contact a poison control center.
- Keep under medical supervision for at least 48 hours.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

- Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

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5.2 Special hazards arising from the substance or mixture

- Under fire conditions:
- Will burn
- On combustion, toxic gases are released.

5.3 Advice for firefighters

Special protective equipment for firefighters

- In the event of fire, wear self-contained breathing apparatus.
- Personal protective equipment comprising: suitable protective gloves, safety goggles and protective clothing
- For further information refer to section 8 "Exposure controls/personal protection".

Specific fire fighting methods

- Do not use a solid water stream as it may scatter and spread fire.

Further information

- Standard procedure for chemical fires.
- Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
- Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

- Where exposure level is not known, wear approved, positive pressure, self-contained respirator.
- Where exposure level is known, wear approved respirator suitable for level of exposure.
- For further information refer to section 8 "Exposure controls/personal protection".

6.2 Environmental precautions

- Prevent further leakage or spillage if safe to do so.
- Contain the spilled material by bunding.
- Do not let product enter drains.
- Do not allow uncontrolled discharge of product into the environment.

6.3 Methods and materials for containment and cleaning up

- Stop leak if safe to do so.
- Avoid dust formation.
- Sweep up and shovel into suitable containers for disposal.
- Keep in properly labelled containers.
- Keep in suitable, closed containers for disposal.
- After cleaning, flush away traces with water.
- Recover the cleaning water for subsequent disposal.
- Decontaminate tools, equipment and personal protective equipment in a segregated area.
- Dispose of in accordance with local regulations.
- Never return spills in original containers for re-use.

6.4 Reference to other sections

- 7. HANDLING AND STORAGE
- 8. EXPOSURE CONTROLS/PERSONAL PROTECTION
- 13. DISPOSAL CONSIDERATIONS

SECTION 7: Handling and storage

7.1 Precautions for safe handling

- Under certain conditions, this product may generate formaldehyde as a by-product of oxidative thermal

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decomposition. Formaldehyde is listed as a potential human carcinogen by IARC, OSHA, and ACGIH.

- Avoid exceeding the given occupational exposure limits (see section 8).

Hygiene measures

- Handle in accordance with good industrial hygiene and safety practice.
- Wash hands before breaks and at the end of workday.
- When using do not eat, drink or smoke.
- Eye wash bottles or eye wash stations in compliance with applicable standards.
- Keep away from food and drink.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

- Store in dry, well-ventilated premises at room temperature.

7.3 Specific end use(s)

- Contact your supplier for additional information

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Components with national occupational exposure limits

Components	Value type	Value	Basis
Calcium carbonate	TWA	10 mg/m3	Vietnam. Occupational Exposure Limits
		L	
	Expressed as :Calcium carbonate		

Components with other occupational exposure limits

Components	Value type	Value	Basis	
Quartz	TWA	0.025 mg/m3	USA. ACGIH Threshold Limit Values (TLV)	
	Form of expos	Form of exposure : Respirable particulate matter Expressed as :Silica		
Synthetic amorphous silica	TWA	4 mg/m3	Solvay Acceptable Exposure Limit	
-,				

8.2 Exposure controls

Control measures

Engineering measures

- Provide appropriate exhaust ventilation at places where dust is formed.
- Apply technical measures to comply with the occupational exposure limits.

Individual protection measures

Respiratory protection

- Self-contained breathing apparatus in confined spaces/insufficient oxygen/in case of large uncontrolled emissions/in all circumstances when the mask and cartridge do not give adequate protection.
- Use only respiratory protection that conforms to international/ national standards.
- Respirator with a particle filter (EN 143)
- P3 filter

Hand protection

- Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact).

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- Impervious gloves

Eye protection

- Dust proof goggles, if dusty.

Skin and body protection

- Dust impervious protective suit
- Change working clothes after each workshift.
- Contaminated work clothing should not be allowed out of the workplace.

Hygiene measures

- Handle in accordance with good industrial hygiene and safety practice.
- Wash hands before breaks and at the end of workday.
- When using do not eat, drink or smoke.
- Eye wash bottles or eye wash stations in compliance with applicable standards.
- Keep away from food and drink.

Environmental exposure controls

- Dispose of rinse water in accordance with local and national regulations.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

<u>Appearance</u> <u>Form</u>: paste

Physical state: solid

Colour:

green

<u>Odour</u> slight

characteristic

Odour Threshold No data available

Molecular weight Mixture

pH Not applicable

Melting point/freezing point Melting point/range:

Not applicable

Initial boiling point and boiling range Boiling point/boiling range:

Not applicable

<u>Flash point</u> Not applicable

Evaporation rate (Butylacetate = 1) Not applicable

Flammability (solid, gas) No data available

Flammability (liquids) No data available

<u>Flammability/Explosive limit</u> <u>Lower flammability/explosion limit:</u>

Type: Lower explosion limit

Not applicable

<u>Upper flammability/explosion limit:</u>
Type: Upper flammability limit

Not applicable

Auto-ignition temperature Not applicable

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Vapour pressure No data available

Vapour density Not applicable

Density 1.3 g/cm3

Relative density No data available

Solubility No data available

<u>Partition coefficient: n-octanol/water</u> Not applicable

Decomposition temperature No data available

Self-Accelerating decomposition

temperature (SADT)

Not applicable

<u>Viscosity</u> No data available

Explosive properties No data available

Oxidizing properties Not considered as oxidizing

9.2 Other information

<u>Surface tension</u> Not applicable

Peroxides The substance or mixture is not classified as organic peroxide.

SECTION 10: Stability and reactivity

10.1 Reactivity

- Not classified as a reactivity hazard.

10.2 Chemical stability

- Stable under normal conditions.

10.3 Possibility of hazardous reactions

polymerisation

- Hazardous polymerisation does not occur.

10.4 Conditions to avoid

- None known.

10.5 Incompatible materials

- Acids
- Oxidizing agents
- Ammonium salts
- Hydrogen
- Mercury

10.6 Hazardous decomposition products

- Chlorine
- Formaldehyde
- Carbon oxides
- Silicon dioxide
- Thermal decomposition can lead to release of toxic and corrosive gases.

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SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Acute oral toxicity Not classified as hazardous for acute oral toxicity according to GHS.

According to the available data on the components. According to the classification criteria for mixtures. Unpublished reports and/or published data.

Acute inhalation toxicity Not classified as hazardous for acute inhalation toxicity according to GHS.

According to the available data on the components. According to the classification criteria for mixtures. Unpublished reports and/or published data.

Acute dermal toxicity Not classified as hazardous for acute dermal toxicity according to GHS.

According to the available data on the components. According to the classification criteria for mixtures. Unpublished reports and/or published data.

Acute toxicity (other routes of

administration)

Not applicable

<u>Skin corrosion/irritation</u> Not classified as irritating to skin

According to the available data on the components. According to the classification criteria for mixtures. Unpublished reports and/or published data.

<u>Serious eye damage/eye irritation</u> Not classified as irritating to eyes

According to the available data on the components. According to the classification criteria for mixtures. Unpublished reports and/or published data.

Respiratory or skin sensitisationDoes not cause skin sensitisation.

According to the available data on the components. According to the classification criteria for mixtures. Unpublished reports and/or published data.

Does not cause respiratory sensitisation.

According to the available data on the components. According to the classification criteria for mixtures. Unpublished reports and/or published data.

<u>Mutagenicity</u>

Genotoxicity in vitro Product is not considered to be genotoxic

According to the available data on the components. According to the classification criteria for mixtures. Unpublished reports and/or published data.

Genotoxicity in vivo Product is not considered to be genotoxic

According to the available data on the components. According to the classification criteria for mixtures. Unpublished reports and/or published data.

<u>Carcinogenicity</u> The product is not considered to be carcinogenic.

According to the available data on the components. According to the classification criteria for mixtures. Unpublished reports and/or published data.

Toxicity for reproduction and development

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Toxicity to reproduction/FertilityThe product is not considered to affect fertility.,According to the available data on

the components.

According to the classification criteria for mixtures. Unpublished reports and/or published data.

Developmental Toxicity/Teratogenicity The product is not considered to be toxic for development., According to the

available data on the components.

According to the classification criteria for mixtures. Unpublished reports and/or published data.

STOT

STOT - single exposure The substance or mixture is not classified as specific target organ toxicant, single

exposure according to GHS criteria.

According to the available data on the components. According to the classification criteria for mixtures. Unpublished reports and/or published data.

STOT - repeated exposure Exposure routes: Inhalation

Target Organs: Lungs

The substance or mixture is classified as specific target organ toxicant, repeated

exposure, category 1 according to GHS criteria. According to the available data on the components. According to the classification criteria for mixtures. Unpublished reports and/or published data.

The product itself has not been tested.

Neurological effects

Synthetic amorphous silica No neurotoxic effects observed.

Experience with human exposure

Experience with human exposure : Inhalation

No data is available on the product itself.

Experience with human exposure: Skin contact

No data is available on the product itself.

Experience with human exposure: Eye contact

No data is available on the product itself.

Experience with human exposure: Ingestion

No data is available on the product itself.

Aspiration toxicity No aspiration toxicity classification, According to the available data on the

components. According to the classification criteria for mixtures.

Components with workplace control parameters

For information related to Occupational Exposure Limits, please refer to section 8.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic Compartment

Acute toxicity to fishThe product itself has not been tested.

Acute toxicity to daphnia and other

aquatic invertebrates

The product itself has not been tested.

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Toxicity to aquatic plantsThe product itself has not been tested.

Toxicity to microorganisms The product itself has not been tested.

Chronic toxicity to fishThe product itself has not been tested.

Chronic toxicity to daphnia and other aquatic invertebrates

The product itself has not been tested.

Sediment compartment

Toxicity to benthic organisms The product itself has not been tested.

Terrestrial Compartment

Toxicity to soil dwelling organisms The product itself has not been tested.

Toxicity to terrestrial plants The product itself has not been tested.

Toxicity to above ground organisms The product itself has not been tested.

12.2 Persistence and degradability

Abiotic degradation

Stability in water Conclusion is not possible for a mixture as a whole.

Photodegradation Conclusion is not possible for a mixture as a whole.

Other Physico-Chemical reactions Conclusion is not possible for a mixture as a whole.

Physical- and photo-chemical elimination

Physico-chemical removability Conclusion is not possible for a mixture as a whole.

Biodegradation

Biodegradability As (bio)degradability is not relevant for mixtures, all the components of the

mixture were assessed individually (rapid degradability assessment available

below).

Ratio BOD/COD Conclusion is not possible for a mixture as a whole.

Ratio BOD/ThOD Conclusion is not possible for a mixture as a whole.

Biochemical Oxygen Demand (BOD) Conclusion is not possible for a mixture as a whole.

Dissolved organic carbon (DOC) Conclusion is not possible for a mixture as a whole.

Chemical Oxygen Demand (COD) Conclusion is not possible for a mixture as a whole.

Adsorbed organic bound halogens

(AOX)

Conclusion is not possible for a mixture as a whole.

<u>Degradability assessment</u> Conclusion is not possible due to incomplete or heterogeneous data on the

components

Unpublished reports Published data

12.3 Bioaccumulative potential

Partition coefficient: n-

octanol/water

Conclusion is not possible for a mixture as a whole.

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Bioconcentration factor (BCF)As bioaccumulation is not relevant for mixtures, all the components of the mixture

were assessed individually.

At least one of the components is considered to be potentially bioaccumulable.

Unpublished reports Published data

12.4 Mobility in soil

Adsorption potential (Koc) Conclusion is not possible for a mixture as a whole.

Known distribution to environmental compartments

Conclusion is not possible due to incomplete or heterogeneous data on the

components

12.5 Results of PBT and vPvB assessment This mixture contains no substance considered to be persistent, bioaccumulating

and toxic (PBT).

This mixture contains no substance considered to be very persistent and very

bioaccumulating (vPvB).

According to the available data on the components

12.6 Other adverse effects

Ecotoxicity assessment

Short-term (acute) aquatic hazard No acute environmental hazard identified

According to the available data on the components. According to the classification criteria for mixtures. Unpublished reports and/or published data.

Long-term (chronic) aquatic hazard No chronic environmental hazard identified.

According to the available data on the components. According to the classification criteria for mixtures. Unpublished reports and/or published data.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product Disposal

The Company encourages the recycle, recovery and reuse of materials, where permitted. If disposal is necessary, The Company recommends that organic materials, especially when classified as hazardous waste, be disposed of by thermal treatment or incineration at approved facilities. All local and national regulations should be followed.

SECTION 14: Transport information

Inland waterway transport (ADN)

not regulated

ADR

not regulated

RID

not regulated

IMDG

not regulated

IATA

not regulated

Note: The above regulatory prescriptions are those valid on the date of publication of this sheet. Given the possible evolution of transport regulations for hazardous materials, it would be advisable to check their validity with your sales office.

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SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Local regulations

No data available

Notification status

Inventory Information	Status
United States TSCA Inventory	- All substances listed as active on the TSCA inventory
Canadian Domestic Substances List (DSL)	- Listed on Inventory
Australia Inventory of Chemical Substances (AICS)	- Listed on Inventory
Japan. CSCL - Inventory of Existing and New Chemical Substances	- Listed on Inventory
Korea. Korean Existing Chemicals Inventory (KECI)	- Listed on Inventory
China. Inventory of Existing Chemical Substances in China (IECSC)	- Listed on Inventory
Philippines Inventory of Chemicals and Chemical Substances (PICCS)	- Listed on Inventory
Taiwan Chemical Substance Inventory (TCSI)	- Listed on Inventory
New Zealand. Inventory of Chemical Substances	All components are listed on the NZIOC inventory. The HSNO status of the product has not been assessed.
EU. European Registration, Evaluation, Authorisation and Restriction of Chemical (REACH)	- When purchased from a Solvay legal entity based in the EEA ("European Economic Area"), this product is compliant with the registration provisions of the REACH Regulation (EC) No. 1907/2006 as all its components are either excluded, exempt, and/or registered. When purchased from a legal entity outside of the EEA, please contact your local representative for additional information.

SECTION 16: Other information

Full text of H-Statements

- H227 Combustible liquid.

- H372 Causes damage to organs through prolonged or repeated exposure if inhaled.

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

SAEL Solvay Acceptable Exposure Limit
 TWA 8-hour, time-weighted average

- ADR: European Agreement on International Carriage of Dangerous Goods by Road.
- ADN: European Agreement on the International Carriage of Dangerous Goods by Inland Waterways.
- RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.
- IATA: International Air Transport Association.
- ICAO-TI: Technical Instructions for Safe Transport of Dangerous Goods by Air.
- IMDG: International Maritime Dangerous Goods.
- TWA: Time weighted average

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- ATE: Estimated value of acute toxicity
- EC: European Community number
- CAS: Chemical Abstracts Service.
- LD50: Substance that causes 50% (half) death in the test animals group (Median Fatal Dose).
- LC50: Substance concentration causing 50% (half) death in the test animals group.
- EC50: Effective Concentration of the substance causing the maximum of 50%.
- PBT: Persistent, Bioaccumulative and Toxic substance.
- vPvB: Very Persistent and Very Bioaccumulative.
- GHS/CLP/SEA: Classification, labeling, packaging regulation
- DNEL: Derived No Effect Level
- PNEC: Predicted No Effect Concentration
- STOT: Specific Target Organ Toxicity

Not all acronyms listed above are referenced in this SDS.

Further information

Distribute new edition to clients

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. Such information is only given as a guidance to help the user handle, use, process, store, transport, dispose and release the product in satisfactory safety conditions and is not to be considered as a warranty or quality specification. It should be used in conjunction with technical sheets but do not replace them. Thus, the information only relates to the designated specific product and may not be applicable if such product is used in combination with other materials or in any other manufacturing process, unless otherwise specifically indicated. It does not release the user from ensuring he is in conformity with all regulations linked to its activity.



