SAFETY DATA SHEET



Date of issue/Date of revision 1 September 2016 Version 5.01

Section 1. Identification		
Product name	: FLOCCULANT AGENT	
Product code	: T499	
Other means of identification	: Not available.	
Product type	: Powder.	
Relevant identified uses of	the substance or mixture and uses advised against	
Product use	: Industrial applications.	
Use of the substance/ mixture	: Coating. Paints. Painting-related materials.	
Uses advised against	: Not applicable.	
Manufacturer	: PPG Industries, Inc. One PPG Place, Pittsburgh, PA 15272	
Emergency telephone number	: (412) 434-4515 (U.S.) (514) 645-1320 (Canada) 01-800-00-21-400 (Mexico)	
Technical Phone Number	: 1-800-647-6050	

Section 2. Hazards identification

OSHA/HCS status	: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).		
Classification of the substance or mixture	: COMBUSTIBLE DUSTS SERIOUS EYE DAMAGE - Category 1 CARCINOGENICITY - Category 2		
	Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 50%		
GHS label elements Hazard pictograms			



Signal word

: Danger

Product name FLOCCULANT AGENT

Section 2. Hazards identification

Hazard statements	r form combustible dust conce ises serious eye damage. pected of causing cancer.	ntrations in air.
Precautionary statements		
Prevention		use. Do not handle until all safety precautions have protective gloves. Wear eye or face protection.
Response	•	edical attention. IF IN EYES: Rinse cautiously with ve contact lenses, if present and easy to do. Continue DN CENTER or physician.
Storage	re locked up.	
Disposal	oose of contents and containe rnational regulations.	r in accordance with all local, regional, national and
Supplemental label elements		ep away from heat, sparks, open flames and hot dust accumulation. Emits toxic fumes when heated.
Hazards not otherwise classified		ive mixtures with air. Handling and/or processing of which can cause mechanical irritation of the eyes,

Section 3. Composition/information on ingredients

Substance/mixture	
Product name	

: Mixture : FLOCCULANT AGENT

Ingredient name	%	CAS number
aluminium sulphate	≥20 - ≤48	10043-01-3
carbon black, respirable powder	≥20 - ≤50	1333-86-4
calcium dihydroxide	≥5.0 - <10	1305-62-0

SUB codes represent substances without registered CAS Numbers.

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

If ingestion, irritation, any type of overexposure or symptoms of overexposure occur during or persists after use of this product, contact a POISON CONTROL CENTER, EMERGENCY ROOM OR PHYSICIAN immediately; have Safety Data Sheet information available. Never give anything by mouth to an unconscious or convulsing person. Description of necessary first aid measures

Eye contact	1	Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Seek immediate medical attention.
Inhalation	:	Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.

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Section 4. First aid measures Skin contact : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners. If swallowed, seek medical advice immediately and show this container or label. Keep Ingestion 2 person warm and at rest. Do NOT induce vomiting. Most important symptoms/effects, acute and delayed Potential acute health effects Eye contact : Causes serious eye damage. Inhalation : Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs. Skin contact : No known significant effects or critical hazards. Ingestion : No known significant effects or critical hazards. Over-exposure signs/symptoms Eye contact : Adverse symptoms may include the following: pain watering redness Inhalation : Adverse symptoms may include the following: respiratory tract irritation coughing Skin contact : Adverse symptoms may include the following: pain or irritation redness blistering may occur Ingestion : Adverse symptoms may include the following: stomach pains Indication of immediate medical attention and special treatment needed, if necessary : Treat symptomatically. Contact poison treatment specialist immediately if large Notes to physician quantities have been ingested or inhaled. : No specific treatment. **Specific treatments Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water

before removing it, or wear gloves.

See toxicological information (Section 11)

Product name FLOCCULANT AGENT

Section 5. Fire-fighting measures

Extinguishing media	
Suitable extinguishing media	: Use dry chemical powder.
Unsuitable extinguishing media	: Avoid high pressure media which could cause the formation of a potentially explosible dust-air mixture.
Specific hazards arising from the chemical	: Fine dust clouds may form explosive mixtures with air.
Hazardous thermal decomposition products	: Decomposition products may include the following materials: carbon dioxide carbon monoxide sulfur oxides metal oxide/oxides
Special protective actions for fire-fighters	: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
Special protective equipment for fire-fighters	: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	:	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe dust. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
For emergency responders	:	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
Environmental precautions	:	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Methods and materials for co	ont	ainment and cleaning up
Small spill	;	Move containers from spill area. Use spark-proof tools and explosion-proof equipment.

Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Place spilled material in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.

Product name FLOCCULANT AGENT

Section 6. Accidental release measures

Large spill

: Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Avoid creating dusty conditions and prevent wind dispersal. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures	: Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe dust. Do not ingest. Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Prevent dust accumulation. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Electrical equipment and lighting should be protected to appropriate standards to prevent dust coming into contact with hot surfaces, sparks or other ignition sources. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.
Advice on general occupational hygiene	: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
Conditions for safe storage, including any incompatibilities	: Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

<u>Control parameters</u> <u>Occupational exposure limits</u> Product name FLOCCULANT AGENT

Section 8. Exposure controls/personal protection

Ingredient name	Exposure limits			
aluminium sulphate	ACGIH TLV (United States, 1/2007).			
	TWA: 2 mg/m ³ , (as AI) 8 hours. Form:			
	Soluble			
carbon black, respirable powder	ACGIH TLV (United States, 3/2015).			
	TWA: 3 mg/m ³ 8 hours. Form: Inhalable			
	fraction			
	OSHA PEL (United States, 2/2013).			
	TWA: 3.5 mg/m ³ 8 hours.			
calcium dihydroxide	OSHA PEL (United States, 2/2013).			
-	TWA: 5 mg/m ³ 8 hours. Form: Respirable			
	fraction			
	TWA: 15 mg/m ³ 8 hours. Form: Total dust			
	ACGIH TLV (United States, 3/2015).			
	TWA: 5 mg/m ³ 8 hours.			
Key	y to abbreviations			
A = Acceptable Maximum Peak	S = Potential skin absorption			

А	 Acceptable Maximum Peak 	S	 Potential skin absorption
ACGIH	 American Conference of Governmental Industrial Hygienists. 	SR	 Respiratory sensitization
С	= Ceiling Limit	SS	 Skin sensitization
F	= Fume	STEL	 Short term Exposure limit values
IPEL	 Internal Permissible Exposure Limit 	TD	= Total dust
OSHA	 Occupational Safety and Health Administration. 	TLV	= Threshold Limit Value
R	= Respirable	TWA	 Time Weighted Average
_			

Z = OSHA 29 CFR 1910.1200 Subpart Z - Toxic and Hazardous Substances

Consult local authorities for acceptable exposure limits.

Recommended monitoring procedures	: If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.
Appropriate engineering controls	: Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory

Environmental exposure controls
 Environmental exposure controls
 Environmental exposure controls
 Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures W Hygiene measures W ea Ap W W

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
 Chemical splash goggles and face shield.

Eye/face protection Skin protection

Product name FLOCCULANT AGENT

Section 8. Exposure controls/personal protection

Hand protection	: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.	
Gloves	: For prolonged or repeated handling, use the following type of gloves:	
	Recommended: nitrile rubber, PVC, natural rubber (latex)	
Body protection	: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.	
Other skin protection	Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by specialist before handling this product.	
Respiratory protection	: Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary.	

Section 9. Physical and chemical properties

Appearance

Appearance		
Physical state	Solid.	
Color	White.	
Odor	Not available.	
Odor threshold	Not available.	
рН	Not available.	
Melting point	Not available.	
Boiling point	Not available.	
Flash point	Closed cup: 93.33°C (200°F)	
Material supports combustion.	Yes.	
Auto-ignition temperature	Not available.	
Decomposition temperature	Not available.	
Flammability (solid, gas)	Not available.	
Lower and upper explosive (flammable) limits	Not available.	
Evaporation rate	0 (butyl acetate = 1)	
Vapor pressure	0 kPa (0 mm Hg) [room temperature]	
Vapor density	Not available.	
Relative density	1.22	
Density(Ibs / gal)	10.18	
Bulk Density (g/cm³)	0.85	

United States

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Section 9. Physical and chemical properties

Solubility	: Insoluble in the following materials: cold water.
Partition coefficient: n- octanol/water	: Not available.
Viscosity	: Kinematic (40°C (104°F)): Not applicable.
Volatility	: 0% (v/v), 0% (w/w)
% Solid. (w/w)	: 100

Section 10. Stability and reactivity

Reactivity	: No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	: The product is stable.
Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	: When exposed to high temperatures may produce hazardous decomposition products. Refer to protective measures listed in sections 7 and 8.
Incompatible materials	: Keep away from the following materials to prevent strong exothermic reactions: oxidizing agents, strong alkalis, strong acids.
Hazardous decomposition products	: Decomposition products may include the following materials: carbon monoxide, carbon dioxide, smoke, oxides of nitrogen.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
aluminium sulphate	LD50 Oral	Rat	1930 mg/kg	-
carbon black, respirable	LD50 Dermal	Rabbit	>3 g/kg	-
powder		Det	45400	
aalaium dibudravida	LD50 Oral LD50 Oral	Rat	>15400 mg/kg 7340 mg/kg	-
calcium dihydroxide		Rat	7340 mg/kg	-
Conclusion/Summary	: There are no data available on the	ne mixture itself.		
Irritation/Corrosion				
Conclusion/Summary				
Skin	: There are no data available on the	ne mixture itself.		
Eyes	: There are no data available on the	ne mixture itself.		
Respiratory	: There are no data available on the	ne mixture itself.		
Sensitization				
Conclusion/Summary				
Skin	: There are no data available on the	ne mixture itself.		

Product name FLOCCULANT AGENT

Section 11. Toxicological information : There are no data available on the mixture itself. Respiratory **Mutagenicity** : There are no data available on the mixture itself. **Conclusion/Summary** Carcinogenicity **Conclusion/Summary** : There are no data available on the mixture itself. Classification **Product/ingredient name OSHA** IARC NTP 2B carbon black, respirable _ powder Carcinogen Classification code: IARC: 1, 2A, 2B, 3, 4 NTP: Known to be a human carcinogen; Reasonably anticipated to be a human carcinogen OSHA: + Not listed/not regulated: -**Reproductive toxicity Conclusion/Summary** : There are no data available on the mixture itself. **Teratogenicity** : There are no data available on the mixture itself. **Conclusion/Summary** Specific target organ toxicity (single exposure) Name Category calcium dihydroxide Category 3 Specific target organ toxicity (repeated exposure) Not available. Target organs : Contains material which may cause damage to the following organs: lungs, upper respiratory tract, skin, eye, lens or cornea. Aspiration hazard Not available. Information on the likely routes of exposure Potential acute health effects Eye contact : Causes serious eye damage. Inhalation : Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs. Skin contact : No known significant effects or critical hazards. : No known significant effects or critical hazards. Ingestion Over-exposure signs/symptoms Eye contact : Adverse symptoms may include the following: pain watering redness **United States** Page: 9/13

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Section 11. Toxicological information

Inhalation	:	Adverse symptoms may include the following: respiratory tract irritation coughing		
Skin contact	:	Adverse symptoms may include the following: pain or irritation redness blistering may occur		
Ingestion	1	Adverse symptoms may include the follo stomach pains	owing:	
Delayed and immediate effect	ts i	and also chronic effects from short ar	nd long term exposure	
Conclusion/Summary	:	There are no data available on the mixture itself. Repeated exposure of the eyes to a low level of dust can produce eye irritation. Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation. Ingestion may cause nausea, diarrhea and vomiting. This takes into account, where known, delayed and immediate effects and also chronic effects of components from short-term and long-term exposure by oral, inhalation and dermal routes of exposure and eye contact.		
<u>Short term exposure</u>				
Potential immediate effects	:	There are no data available on the mixture itself.		
Potential delayed effects	:	There are no data available on the mixture itself.		
<u>Long term exposure</u>				
Potential immediate effects	1	There are no data available on the mixture itself.		
Potential delayed effects	1	There are no data available on the mixture itself.		
Potential chronic health effect	cts			
General	1	Repeated or prolonged inhalation of dus	st may lead to chronic respiratory irritation.	
Carcinogenicity	:	Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.		
Mutagenicity	4	No known significant effects or critical hazards.		
Teratogenicity	4	No known significant effects or critical hazards.		
Developmental effects		No known significant effects or critical hazards.		
Fertility effects		No known significant effects or critical h	azards.	
Numerical measures of toxici	ty			
Acute toxicity estimates				
Route			ATE value	
Oral			4386.4 mg/kg	

Section 12. Ecological information

Toxicity

Not available.

Persistence and degradability

Not available.

Product name FLOCCULANT AGENT

Section 12. Ecological information

Bioaccumulative potential

Not available.

Mobility in soil Soil/water partition

coefficient (Koc)

: Not available.

Section 13. Disposal considerations

Disposal methods

: The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees. Section 6. Accidental release measures

14. Transport information

	DOT	IMDG	ΙΑΤΑ
UN number	UN3077	Not regulated.	Not regulated.
UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (aluminium sulphate)	-	-
Transport hazard class (es)	9	-	-
Packing group	Ш	-	-
Environmental hazards	No.	No.	No.
Marine pollutant substances	Not applicable.	Not applicable.	Not applicable.
Product RQ (Ibs)	22727.3	Not applicable.	Not applicable.
RQ substances	(aluminium sulphate)	Not applicable.	Not applicable.

Additional information

Product name FLOCCULANT AGENT

14. Transport information

- **DOT** : The classification of the product is due solely to the presence of one or more US DOT-listed 'Hazardous substances' that are subject to reportable quantity requirements and only applies to shipments of packages greater than, or equal to, the product reportable quantity. Package sizes less than the product reportable quantity are not regulated as hazardous materials.
- **IMDG** : None identified.
- IATA : None identified.

Special precautions for user : Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Section 15. Regulatory information

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United States

United States inventory (TSCA 8b) : All components are listed or exempted.

U.S. Federal regulations

SARA 302/304

SARA 304 RQ : Not applicable.

Composition/information on ingredients

No products were found.

SARA 311/312

Classification

: Fire hazard Immediate (acute) health hazard Delayed (chronic) health hazard

Composition/information on ingredients

Name	hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
aluminium sulphate	No.	No.	No.	Yes.	No.
carbon black, respirable powder	Yes.	No.	No.	No.	Yes.
calcium dihydroxide	No.	No.	No.	Yes.	No.

Additional environmental information is contained on the Environmental Data Sheet for this product, which can be obtained from your PPG representative.

California Prop. 65

WARNING: This product contains a chemical known to the State of California to cause cancer.

Product name FLOCCULANT AGENT

Section 16. Other information

Hazardous Material Information System (U.S.A.)

Health : 3 * Flammability : 1 Physical hazards : 0

(*) - Chronic effects

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Ass	ociation (U.S.A.)
Health : 3 Flamma	ability : 1 Instability : 0
Date of previous issue	: 4/24/2016
Organization that prepared the MSDS	: EHS
Key to abbreviations	: ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IBC = Internediate Bulk Container IMDG = International Maritime Dangerous Goods LogPow = logarithm of the octanol/water partition coefficient MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) UN = United Nations

Indicates information that has changed from previously issued version.

Disclaimer

The information contained in this data sheet is based on present scientific and technical knowledge. The purpose of this information is to draw attention to the health and safety aspects concerning the products supplied by PPG, and to recommend precautionary measures for the storage and handling of the products. No warranty or guarantee is given in respect of the properties of the products. No liability can be accepted for any failure to observe the precautionary measures described in this data sheet or for any misuse of the products.