SAFETY DATA SHEET



Date of issue/Date of revision20 September 2014Version 1

Section 1. Identification		
Product name	: CHEMSEAL 59	
Product code	: CS59	
Other means of identification	: Not available.	
Product type	: Liquid.	
Relevant identified uses of	f 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.	
Supplier	: Pretreatment and Specialty Products 23000 St. Clair Avenue Euclid, OH 44117	
Emergency telephone number	: (412) 434-4515 (U.S.) (514) 645-1320 (Canada) 01-800-00-21-400 (Mexico)	
Technical Phone Number	: 1-800-627-6015 (PPG PRETREATMENT & SPECIALTY PRODUCTS) 8:00 a.m 5:00 p.m. EST	

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	: ACUTE TOXICITY (inhalation) - Category 4 SKIN CORROSION/IRRITATION - Category 1 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1 CARCINOGENICITY - Category 2 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1
	Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 7.4%
<u>GHS label elements</u> Hazard pictograms	

Product name CHEMSEAL 59

Section 2. Hazards identification

	-
Signal word	: Danger
Hazard statements	 Harmful if inhaled. Causes severe skin burns and eye damage. Suspected of causing cancer. Causes damage to organs through prolonged or repeated exposure.
Precautionary statements	
Prevention	: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Wear protective gloves. Wear eye or face protection. Wear protective clothing. Use only outdoors or in a well-ventilated area. Do not breathe vapor. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling.
Response	 Get medical attention if you feel unwell. IF exposed or concerned: Get medical attention. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or physician. IF SWALLOWED: Immediately call a POISON CENTER or physician. Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. Wash contaminated clothing before reuse. Immediately call a POISON CENTER or physician. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or physician. Apply generous quantities of fresh calcium gluconate gel to all areas. Get immediate medical attention.
Storage	: Store locked up.
Disposal	 Dispose of contents and container in accordance with all local, regional, national and international regulations.
Supplemental label elements	: Add this product only to water. Never add water to this product. Avoid contact with skin and clothing. Wash thoroughly after handling. Emits toxic fumes when heated.
Hazards not otherwise classified	: Oxidising potential : Contact with combustible material may cause fire. Keep away from clothing, incompatible materials and combustible materials. This material increases the risk of fire and may aid combustion. Prolonged or repeated contact may dry skin and cause irritation.

Section 3. Composition/information on ingredients

Substance/mixture	1	Μ
Product name	÷	С

: Mixture

: CHEMSEAL 59

Ingredient name	%	CAS number
2,2',2"-nitrilotriethanol	10 - 30	102-71-6
nitric acid	5 - 10	7697-37-2
dihydrogen hexafluorozirconate(2-)	1 - 5	12021-95-3
2,2'-iminodiethanol	0.1 - 1	111-42-2

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.

United States	Page: 2/14
---------------	------------

Product name CHEMSEAL 59

Section 3. Composition/information on ingredients

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 : 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. 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. Apply generous guantities of fresh calcium gluconate gel to all areas. Get immediate medical attention. If swallowed, seek medical advice immediately and show this container or label. Keep Ingestion ٤. 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	Harmful if inhaled. May give off gas, vapor or dust that is very irritating or corrosive to the respiratory system. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
Skin contact	Causes severe burns. Defatting to the skin.
Ingestion	May cause burns to mouth, throat and stomach.
Over-exposure signs/sympto	<u>ms</u>
Eye contact	Adverse symptoms may include the following: pain watering redness
Inhalation	No specific data.
Skin contact	Adverse symptoms may include the following: pain or irritation redness dryness cracking blistering may occur
Ingestion	Adverse symptoms may include the following: stomach pains
Indication of immediate medic	al attention and special treatment needed, if necessary
Notes to physician	In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
Specific treatments	No specific treatment.
	United States Page: 3/14

Product name CHEMSEAL 59

Section 4. First aid measures

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)

Section 5. Fire-fighting measures

-	
Extinguishing media	
Suitable extinguishing media	: Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media	: None known.
Specific hazards arising from the chemical	: In a fire or if heated, a pressure increase will occur and the container may burst. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back.
Hazardous thermal decomposition products	: Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides halogenated compounds 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.
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. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
For emergency responders	:	If specialised 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).

Product name CHEMSEAL 59

Section 6. Accidental release measures

Methods and materials for containment and cleaning up

Small spill	: Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and
	place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). The spilled material may be neutralized with sodium carbonate, sodium bicarbonate or sodium hydroxide. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling	1
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 vapor or mist. Do not ingest. 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. Keep away from alkalis. Empty containers retain product residue and can be hazardous. Do not reuse container.
Special precautions	: Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Vapors are heavier than air and may spread along floors. Keep away from combustible materials. Add this product only to water. Never add water to this product. Do not get in eyes or on skin or clothing. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator.
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 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. Separate from alkalis. 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. Do not store above the following temperature: 120F / 49C.

= Time Weighted Average

TWA

Product name CHEMSEAL 59

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits		
2,2',2"-nitrilotriethanol	ACGIH TLV (United States, 6/2013).		
	TWA: 5 mg/m ³ 8 hours.		
nitric acid	ACGIH TLV (United States, 6/2013).		
	STEL: 10 mg/m ³ 15 minutes.		
	STEL: 4 ppm 15 minutes.		
	TWA: 5.2 mg/m ³ 8 hours.		
	TWA: 2 ppm 8 hours.		
	OSHA PEL (United States, 2/2013).		
	TWA: 5 mg/m ³ 8 hours.		
	TWA: 2 ppm 8 hours.		
dihydrogen hexafluorozirconate(2-)	ACGIH TLV (United States, 6/2013).		
, , , , , , , , , , , , , , , , , , ,	STEL: 10 mg/m ³ , (as Zr) 15 minutes.		
	TWA: 5 mg/m ³ , (as Zr) 8 hours.		
	OSHA PEL (United States, 2/2013).		
	TWA: 5 mg/m ³ , (as Zr) 8 hours.		
2,2'-iminodiethanol	ACGIH TLV (United States, 6/2013).		
	Absorbed through skin.		
	TWA: 1 mg/m ³ 8 hours. Form: Inhalable		
	fraction and vapor		
Key to abbreviatio			
A = Acceptable Maximum Peak	S = Potential skin absorption		
CGIH = American Conference of Governmental Industrial Hygienists. C = Ceiling Limit	SR = Respiratory sensitization SS = Skin sensitization		
F = Fume	STEL = Short term Exposure limit values		
IPEL = Internal Permissible Exposure Limit	TD = Total dust		
DSHA = Occupational Safety and Health Administration.	TLV = Threshold Limit Value		

- = Occupational Safety and Health Administration. OSHA
 - R = Respirable
 - Ζ = OSHA 29CFR 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. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.
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

Product name CHEMSEAL 59

Section 8. Exposure controls/personal protection

Hygiene measures	: 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.
Eye/face protection Skin protection	: Chemical splash goggles and face shield.
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	
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 a 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

			United States	Page: 7/14
Vapor density	1			
Vapor pressure	3	2.3 kPa (17.5 mm Hg) [room temperature]		
Evaporation rate	3	0.36 (butyl acetate = 1)		
Lower and upper explosive (flammable) limits	1	Not available.		
Flammability (solid, gas)	1	Not available.		
Decomposition temperature	1	Not available.		
Auto-ignition temperature	1	Not available.		
Material supports combustion.	1	Yes.		
Flash point	1	Closed cup: Not applicable.		
Boiling point	3	>37.78°C (>100°F)		
Melting point	1	Not available.		
рН	3	0.5		
Odor threshold	:	Not available.		
Odor	:	Not available.		
Color	:	Not available.		
Physical state	:	Liquid.		
Appearance				

Product name CHEMSEAL 59

Section 9. Physical and chemical properties

	Not available.
Relative density	: 1.1
Density(lbs / gal)	: 9.18
Solubility	: Insoluble in the following materials: cold water.
Partition coefficient: n- octanol/water	: Not available.
Viscosity	: Kinematic (40°C (104°F)): >0.21 cm ² /s (>21 cSt)
Volatility	: 78% (v/v), 72.17% (w/w)
% Solid. (w/w)	: 27.83

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
2,2',2"-nitrilotriethanol 2,2'-iminodiethanol	LD50 Oral LD50 Dermal LD50 Oral	Rat Rabbit Rat	7.39 g/kg 12.2 g/kg 0.71 g/kg	- - -
Conclusion/Summary Irritation/Corrosion Conclusion/Summary	: There are no data available on t	he mixture itself.		
Skin Eyes Respiratory	 There are no data available on the mixture itself. There are no data available on the mixture itself. There are no data available on the mixture itself. 			
Sensitization Conclusion/Summary				

Product name CHEMSEAL 59

Section 11. Toxicological information

Skin	: There a	re no data	available on the mixture itself.	
Respiratory	: There a	re no data	available on the mixture itself.	
<u>Mutagenicity</u>				
Conclusion/Summary	: There a	re no data	available on the mixture itself.	
Carcinogenicity				
Conclusion/Summary	: There a	re no data	available on the mixture itself.	
Classification				
Product/ingredient name	OSHA	IARC	NTP	
2,2',2"-nitrilotriethanol	-	3	-	
2,2'-iminodiethanol	-	2B	-	
Carcinogen Classification	n 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 a	are no data available on the mixture itself.
------------------------------	--

Teratogenicity

Conclusion/Summary : Ther	e are no data available on the mixture itself.
---------------------------	--

Specific target organ toxicity (single exposure)

Name	Category
2,2',2"-nitrilotriethanol	Category 3

Specific target organ toxicity (repeated exposure)

Name	Category
dihydrogen hexafluorozirconate(2-)	Category 2 Category 1 Category 2

Target organs

: Contains material which causes damage to the following organs: bones, teeth. Contains material which may cause damage to the following organs: liver, upper respiratory tract, skin, eye, lens or cornea.

United States

Page: 9/14

Aspiration hazard

Not available.

Information on the likely routes of exposure

Potential acute health effects Eye contact : Causes serious eye damage. Inhalation : Harmful if inhaled. May give off gas, vapor or dust that is very irritating or corrosive to the respiratory system. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure. Skin contact : Causes severe burns. Defatting to the skin. Ingestion : May cause burns to mouth, throat and stomach. Over-exposure signs/symptoms

Product name CHEMSEAL 59

Section 11. Toxicological information

inhalation : No specific data. Skin contact : Adverse symptoms may include the following: pain or irritation : Adverse symptoms may include the following: pain or irritation : Adverse symptoms may include the following: irritation : Adverse symptoms may include the following: cracking bilistering may occur Ingestion : Adverse symptoms may include the following: stormach pains : Delayed and immediate effects and also chronic effects from short and long term exposure Conclusion/Summary : There are no data available on the mixture itself. If splashed in the eyes, the liquid may cause initation and reversible damage. 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. Short term exposure Potential immediate : There are no data available on the mixture itself. effects : Potential delayed effects : There are no data available on the mixture itself. effects : : There are no data available on the mixture itself. effects : : There are no data available on the mixture itself. effects : :	Eye contact	:	Adverse symptoms may include the follo pain	owing:	
Inhalation : No specific data. Skin contact : Adverse symptoms may include the following: pain or irritation redness dryness cracking bilstering may occur Ingestion : Adverse symptoms may include the following: stomach pains Delayed and Immediate effects and also chronic effects from short and long term exposure Conclusion/Summary : There are no data available on the mixture itself. Conclusion/Summary : There are no data available on the mixture itself. Short term exposure Potential immediate Potential immediate : There are no data available on the mixture itself. effects : There are no data available on the mixture itself. effects : There are no data available on the mixture itself. Potential immediate : There are no data available on the mixture itself. effects : There are no data available on the mixture itself. Potential delayed effects : There are no data available on the mixture itself. Potential chronic health effects : There are no data available on the mixture itself. Potential chronic health effects : Causes damage to organs through prolonged or repeated exposure. Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis. General : Causes damage to organs through prolonged or repeated exposure. Prolonged or r					
Skin contact : Adverse symptoms may include the following: pain or irritation redness dryness cracking blistering may occur Ingestion : Adverse symptoms may include the following: stomach pains Delayed and immediate effects and also chronic effects from short and long term exposure Conclusion/Summary : There are no data available on the mixture itself. If splashed in the eyes, the liquid may cause irritation and reversible damage. 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. Short term exposure Potential immediate Potential immediate : There are no data available on the mixture itself. effects effects : There are no data available on the mixture itself. Long term exposure : There are no data available on the mixture itself. Potential immediate : There are no data available on the mixture itself. effects : There are no data available on the mixture itself. Potential delayed effects : There are no data available on the mixture itself. effects : Causes damage to organs through prolonged or repeated exposure. Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis. Carcinogenicity : Suspected of causing					
pain or irritation redness dryness cracking bilistering may occur Ingestion : Adverse symptoms may include the following: stomach pains Delayed and immediate effects and also chronic effects from short and long term exposure Conclusion/Summary : There are no data available on the mixture itself. If splashed in the eyes, the liquid ma cause irritation and reversible damage. 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. Short term exposure Potential immediate Potential immediate : There are no data available on the mixture itself. effects : There are no data available on the mixture itself. Long term exposure : There are no data available on the mixture itself. Potential immediate : There are no data available on the mixture itself. effects : There are no data available on the mixture itself. Potential delayed effects : There are no data available on the mixture itself. Potential delayed effects : There are no data available on the mixture itself. effects : Causes damage to organs through prolonged or repeated exposure. Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis. Carcinogenicity : Suspected of causing c		1	•		
Ingestion : Adverse symptoms may include the following: stomach pains Delayed and immediate effects and also chronic effects from short and long term exposure Conclusion/Summary : There are no data available on the mixture itself. If splashed in the eyes, the liquid ma cause irritation and reversible damage. 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. Short term exposure Potential immediate : There are no data available on the mixture itself. effects : There are no data available on the mixture itself. effects : There are no data available on the mixture itself. effects : There are no data available on the mixture itself. effects : There are no data available on the mixture itself. effects : There are no data available on the mixture itself. Potential delayed effects : There are no data available on the mixture itself. Potential chronic health effects : Causes damage to organs through prolonged or repeated exposure. Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis. Carcinogenicity : Suspected of causing cancer. Risk of cancer depends on duration and level of exposure. Mutagenicity : No known significant effects or critical	Skin contact	:	pain or irritation redness dryness cracking		
Delayed and immediate effects and also chronic effects from short and long term exposure Conclusion/Summary : There are no data available on the mixture itself. If splashed in the eyes, the liquid macause irritation and reversible damage. 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. Short term exposure Potential immediate : There are no data available on the mixture itself. effects Potential delayed effects : There are no data available on the mixture itself. Long term exposure : There are no data available on the mixture itself. Potential delayed effects : There are no data available on the mixture itself. Potential delayed effects : There are no data available on the mixture itself. Potential delayed effects : There are no data available on the mixture itself. Potential delayed effects : There are no data available on the mixture itself. Potential delayed effects : There are no data available on the mixture itself. Potential delayed effects : There are no data available on the mixture itself. Potential delayed effects : There are no data available on the mixture itself. Potential delayed effects : Causes damage to organs through prolonged or repeated exposur	Ingestion	:	Adverse symptoms may include the follo	owing:	
cause irritation and reversible damage. 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. Short term exposure Potential immediate : There are no data available on the mixture itself. effects Potential delayed effects : There are no data available on the mixture itself. Long term exposure Potential immediate : There are no data available on the mixture itself. Potential delayed effects : There are no data available on the mixture itself. Potential delayed effects : There are no data available on the mixture itself. Potential delayed effects : There are no data available on the mixture itself. Potential delayed effects : There are no data available on the mixture itself. Potential chronic health effects : Causes damage to organs through prolonged or repeated exposure. Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis. Carcinogenicity : Suspected of causing cancer. Risk of cancer depends on duration and level of exposure. Mutagenicity : No known significant effects or critical hazards. Teratogenicity : No known significant effects or critical hazards. Fertility effects : No known significant effects or c	Delayed and immediate effect	cts	•	<u>id long term exposure</u>	
Potential immediate : There are no data available on the mixture itself. effects : There are no data available on the mixture itself. Long term exposure : There are no data available on the mixture itself. Potential immediate : There are no data available on the mixture itself. effects : There are no data available on the mixture itself. Potential delayed effects : There are no data available on the mixture itself. Potential chronic health effects : There are no data available on the mixture itself. Potential chronic health effects : Causes damage to organs through prolonged or repeated exposure. Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis. Carcinogenicity : Suspected of causing cancer. Risk of cancer depends on duration and level of exposure. Mutagenicity : No known significant effects or critical hazards. Teratogenicity : No known significant effects or critical hazards. Povelopmental effects : No known significant effects or critical hazards. Fertility effects : No known significant effects or critical hazards. Numerical measures of toxicity : No known significant effects or critical hazards. Numerical measures of toxicity : No known significant effects or critical hazards. Numerical measures of toxici	Conclusion/Summary	:	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,		
effects Potential delayed effects : There are no data available on the mixture itself. Long term exposure Potential immediate : There are no data available on the mixture itself. effects Potential delayed effects : There are no data available on the mixture itself. Potential chronic health effects : There are no data available on the mixture itself. Potential chronic health effects : Causes damage to organs through prolonged or repeated exposure. Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis. Carcinogenicity : Suspected of causing cancer. Risk of cancer depends on duration and level of exposure. Mutagenicity : No known significant effects or critical hazards. Teratogenicity : No known significant effects or critical hazards. Developmental effects : No known significant effects or critical hazards. Fertility effects : No known significant effects or critical hazards. Numerical measures of toxicity : No known significant effects or critical hazards. Numerical measures of toxicity : No known significant effects or critical hazards.	<u>Short term exposure</u>				
Long term exposure Potential immediate : There are no data available on the mixture itself. effects Potential delayed effects : There are no data available on the mixture itself. Potential chronic health effects : Causes damage to organs through prolonged or repeated exposure. Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis. Carcinogenicity : Suspected of causing cancer. Risk of cancer depends on duration and level of exposure. Mutagenicity : No known significant effects or critical hazards. Teratogenicity : No known significant effects or critical hazards. Fertility effects : No known significant effects or critical hazards. Numerical measures of toxicity : No known significant effects or critical hazards. Numerical measures of toxicity : No known significant effects or critical hazards.		:	There are no data available on the mixture itself.		
Potential immediate : There are no data available on the mixture itself. effects Potential delayed effects : There are no data available on the mixture itself. Potential chronic health effects : Causes damage to organs through prolonged or repeated exposure. Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis. Carcinogenicity : Suspected of causing cancer. Risk of cancer depends on duration and level of exposure. Mutagenicity : No known significant effects or critical hazards. Teratogenicity : No known significant effects or critical hazards. Petelopmental effects : No known significant effects or critical hazards. Fertility effects : No known significant effects or critical hazards. Numerical measures of toxicity : No known significant effects or critical hazards. Numerical measures of toxicity : No known significant effects or critical hazards.	Potential delayed effects	1	There are no data available on the mixtu	ure itself.	
effects Potential delayed effects : There are no data available on the mixture itself. Potential chronic health effects General : Causes damage to organs through prolonged or repeated exposure. Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis. Carcinogenicity : Suspected of causing cancer. Risk of cancer depends on duration and level of exposure. Mutagenicity : No known significant effects or critical hazards. Teratogenicity : No known significant effects or critical hazards. Developmental effects : No known significant effects or critical hazards. Fertility effects : No known significant effects or critical hazards. Numerical measures of toxicity : No known significant effects or critical hazards. Numerical measures of toxicity : No known significant effects or critical hazards.	Long term exposure				
Potential chronic health effects General : Causes damage to organs through prolonged or repeated exposure. Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis. Carcinogenicity : Suspected of causing cancer. Risk of cancer depends on duration and level of exposure. Mutagenicity : No known significant effects or critical hazards. Teratogenicity : No known significant effects or critical hazards. Developmental effects : No known significant effects or critical hazards. Fertility effects : No known significant effects or critical hazards. Numerical measures of toxicity : No known significant effects or critical hazards. Numerical measures of toxicity : No known significant effects or critical hazards.		:	There are no data available on the mixtu	ure itself.	
General:Causes damage to organs through prolonged or repeated exposure. Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.Carcinogenicity:Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.Mutagenicity:No known significant effects or critical hazards.Teratogenicity:No known significant effects or critical hazards.Developmental effects:No known significant effects or critical hazards.Fertility effects:No known significant effects or critical hazards.Numerical measures of toxicity:No known significant effects or critical hazards.Acute toxicity estimates:No known significant effects or critical hazards.	Potential delayed effects	:	There are no data available on the mixture itself.		
Carcinogenicity repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis. Carcinogenicity : Suspected of causing cancer. Risk of cancer depends on duration and level of exposure. Mutagenicity : No known significant effects or critical hazards. Teratogenicity : No known significant effects or critical hazards. Developmental effects : No known significant effects or critical hazards. Fertility effects : No known significant effects or critical hazards. Numerical measures of toxicity Acute toxicity estimates					
Mutagenicity : No known significant effects or critical hazards. Teratogenicity : No known significant effects or critical hazards. Developmental effects : No known significant effects or critical hazards. Fertility effects : No known significant effects or critical hazards. Numerical measures of toxicity Acute toxicity estimates	General	:			
Teratogenicity : No known significant effects or critical hazards. Developmental effects : No known significant effects or critical hazards. Fertility effects : No known significant effects or critical hazards. Numerical measures of toxicity Acute toxicity estimates	Carcinogenicity	:			
Developmental effects : No known significant effects or critical hazards. Fertility effects : No known significant effects or critical hazards. Numerical measures of toxicity Acute toxicity estimates		:	0		
Fertility effects : No known significant effects or critical hazards. Numerical measures of toxicity Acute toxicity estimates		1	0		
Numerical measures of toxicity Acute toxicity estimates	· · · · · · · · · · · · · · · · · · ·	1	No known significant effects or critical hazards.		
Acute toxicity estimates					
		<u>ity</u> :			
Route ATE value	Acute toxicity estimates				
	Route			ATE value	

Koule	
Oral	3703.7 mg/kg
Dermal	11111.1 mg/kg
Inhalation (gases)	25925.9 ppm
Inhalation (vapors)	18.52 mg/l
Inhalation (dusts and mists)	18.52 mg/l

United States Page: 10/14

Product name CHEMSEAL 59

Section 12. Ecological information

Toxicity

Not available.

Persistence and degradability

Not available.

Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
2,2',2"-nitrilotriethanol	-1	3.89	low
nitric acid	-0.21	-	low
2,2'-iminodiethanol	-1.43	-	low

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	UN3264	UN3264	UN3264
UN proper shipping name	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (dihydrogen hexafluorozirconate(2-), nitric acid)	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (dihydrogen hexafluorozirconate(2-), nitric acid)	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (dihydrogen hexafluorozirconate(2-), nitric acid)
		Uni	ited States Page: 11/14

Product name CHEMSEAL 59

14. Transport information			
Transport hazard class (es)	8	8	8
Packing group	П		11
Environmental hazards	No.	No.	No.
Marine pollutant substances	Not applicable.	Not applicable.	Not applicable.
Product RQ (lbs)	13591.6	Not applicable.	Not applicable.
RQ substances	(nitric acid, 2,2'- iminodiethanol)	Not applicable.	Not applicable.

DOT	: Package sizes shipped in quantities less than the product reportable quantity are not subject to the
	RQ (reportable quantity) transportation requirements.
IMDG	: The segregation group has been manually assigned based upon product analysis.
ΙΑΤΑ	: 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

Composition/information on in	SARA 302 TPQ SARA 304 RQ
	591.6 lbs / 6170.6 kg [1481.6 gal / 5608.4 L]
U.S. Federal regulations : <u>SARA 302/304</u>	
United States	
Philippines inventory (PICCS)	: All components are listed or exempted.
New Zealand(NZloC)	: All components are listed or exempted.
Korea inventory (KECI)	: All components are listed or exempted.
Japan inventory (ENCS)	: All components are listed or exempted.
Europe inventory (REACH)	: Please contact your supplier for information on the inventory status of this materia
China inventory (IECSC)	: All components are listed or exempted.
Canada inventory(DSL)	: All components are listed or exempted.
Australia inventory (AICS)	: All components are listed or exempted.
United States inventory (TSCA 8t	: All components are listed or exempted.

	SARA 302 TPQ SARA 304 RQ		SARA 302 TPQ		04 RQ
Name	EHS	(lbs)	(gallons)	(lbs)	(gallons)
nitric acid	Yes.	1000	85.7	1000	85.7

SARA 311/312

Product name CHEMSEAL 59

Section 15. Regulatory information

Classification

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

Composition/information on ingredients

Name	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
2,2',2"-nitrilotriethanol	No.	No.	No.	Yes.	No.
nitric acid	Yes.	No.	No.	Yes.	Yes.
dihydrogen hexafluorozirconate(2-)	No.	No.	No.	Yes.	Yes.
2,2'-iminodiethanol	No.	No.	No.	Yes.	Yes.

SARA 313

Supplier notification

Chemical name : nitric acid CAS number Con 7697-37-2 5 -

Concentration 5 - 10

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

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.

Section 16. Other information

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

```
Health : 3 * Flammability : 0 Physical hazards : 1 (*) - 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 Association (U.S.A.)

Health : 3 Flamma	ability : 0 Instability : 1
Date of previous issue	: No previous validation.
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 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) UN = United Nations

United States Page: 13/14

Product name CHEMSEAL 59

Section 16. Other information

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.