# SAFETY DATA SHEET



Date of issue Version 2

30 March 2018

Section 1. Product and company identification

Product name : SIGMAZINC 158 BR BINDER

Product code : 1580034L.39
Other means of identification : Not available.
Product type : Liquid.

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

**Identified uses** 

Coating. Paints. Painting-related materials.

Uses advised against	Reason
Not applicable.	

### Supplier's details:

Supplier : PPG Industrial do Brasil – Tintas e Vernizes Ltda

Via Anhanguera KM 106, Bairro Sao Judas Tadeu

Sumare / SP, Brasil

55 19 2103-6000 (Recepção e Portaria)

e-mail address of person responsible for this SDS

: fispq@ppg.com

**Emergency telephone number** 

: 0800 707 1767 / 0800 707 7022 – Empresa Suatrans Cotec 0800 14 8110 – CEATOX - Centro de Assistência Toxicológica

# Section 2. Hazards identification

Classification of the substance or mixture

: AMMABLE LIQUIDS - Category 3

ACUTE TOXICITY (inhalation) - Category 4

SKIN IRRITATION - Category 3 SERIOUS EYE DAMAGE - Category 1

TOXIC TO REPRODUCTION (Unborn child) - Category 1B

SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) -

Category 3

Target organs : Contains material which causes damage to the following organs: brain.

Contains material which may cause damage to the following organs: blood, kidneys, liver, heart, upper respiratory tract, skin, central nervous system (CNS), eye, lens or

cornea.

Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 46% (Oral), 46% (Dermal), 88.6% (Inhalation)

Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 55.4%

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# Section 2. Hazards identification

### **GHS** label elements

**Hazard pictograms** 









Signal word : Danger

: Mammable liquid and vapor. **Hazard statements** 

Harmful if inhaled.

Causes serious eve damage. Causes mild skin irritation. May damage the unborn child. May cause drowsiness or dizziness.

### **Precautionary statements**

**Prevention** 

: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves. Wear eye or face protection. Wear protective clothing. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use explosion-proof electrical, ventilating, lighting and all material-handling equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Keep container tightly closed. Use only outdoors or in a well-ventilated area. Avoid breathing vapor.

Response

: Fexposed or concerned: Get medical attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. If skin irritation occurs: Get medical attention. 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.

**Storage Disposal** 

- : Store locked up. Store in a well-ventilated place. Keep cool.
- : Dispose of contents and container in accordance with all local, regional, national and

international regulations.

Other hazards which do not result in classification

: Prolonged or repeated contact may dry skin and cause irritation.

# Section 3. Composition/information on ingredients

Substance/mixture : Mixture Other means of

identification

: Not available.

### **CAS** number/other identifiers

**CAS** number : Not applicable.

Ingredient name	%	CAS number
Silicic acid, ethyl ester	30 - <60	11099-06-2
1-methoxy-2-propanol	30 - <60	107-98-2
tetraethyl silicate	5 - <7	78-10-4
2-methylpropan-1-ol	3 - <5	78-83-1
2-methoxypropanol	0.1 - <0.2	1589-47-5

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# Section 3. Composition/information on ingredients

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.

SUB codes represent substances without registered CAS Numbers.

## Section 4. First aid measures

### **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.

**Ingestion**: If swallowed, seek medical advice immediately and show this container or label.

Keep person warm and at rest. Do NOT induce vomiting.

### Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large

quantities have been ingested or inhaled.

**Specific treatments** : No specific treatment.

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

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.

Potential acute health effects

**Eye contact**: Causes serious eye damage.

Inhalation : Harmful if inhaled. Can cause central nervous system (CNS) depression. May

cause drowsiness or dizziness.

Skin contact : Zauses mild skin irritation. Defatting to the skin.

Ingestion : ☑an cause central nervous system (CNS) depression.

See toxicological information (Section 11)

# Section 5. Fire-fighting measures

### **Extinguishing media**

Suitable extinguishing

media

: Use dry chemical, CO2, water spray (fog) or foam.

Unsuitable extinguishing

media

: Do not use water jet.

Specific hazards arising from the chemical

: Mammable liquid and vapor. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with

the risk of a subsequent explosion.

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# Section 5. Fire-fighting measures

Hazardous thermal decomposition products

: Decomposition products may include the following materials: carbon 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 vapor or mist. 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** 

Noid 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 containment and cleaning up

Small spill

: Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. 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. Use spark-proof tools and explosion-proof equipment. 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). 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.

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# Section 7. Handling and storage

# Precautions for safe handling

: Put on appropriate personal protective equipment (see Section 8). 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. Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use non-sparking tools. 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.

# Conditions for safe storage, including any incompatibilities

To not store above the following temperature: 35°C (95°F). 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. See Section 10 for incompatible materials before handling or use.

# Section 8. Exposure controls/personal protection

### **Control parameters**

Occupational exposure limits

Ingredient name	Exposure limits
√methoxy-2-propanol	ACGIH TLV (United States, 3/2017).
• • •	STEL: 369 mg/m³ 15 minutes.
	STEL: 100 ppm 15 minutes.
	TWA: 184 mg/m <sup>3</sup> 8 hours.
	TWA: 50 ppm 8 hours.
tetraethyl silicate	ACGIH TLV (United States, 3/2017).
•	TWA: 85 mg/m <sup>3</sup> 8 hours.
	TWA: 10 ppm 8 hours.
2-methylpropan-1-ol	Minsitry of Labor and Employement
	(Brazil, 11/2001).
	TWA: 115 mg/m³ 8 hours.
	TWA: 40 ppm 8 hours.

# 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.

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# Section 8. Exposure controls/personal protection

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. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

**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**

**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 protection

Skin protection

Hand protection

: Chemical splash goggles and face shield.

: 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: butyl rubber, nitrile rubber

**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. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

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.

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# Section 9. Physical and chemical properties

**Appearance** 

Physical state : Liquid.

Color : Not available.

Odor : Not available.

pH : Not available.

Melting point : Not available.

Boiling point : >37.78°C (>100°F)

Flash point : Closed cup: 28°C (82.4°F)

**Evaporation rate** : Not available.

Material supports

combustion.

: Yes.

Flammability (solid, gas)
Lower and upper explosive

(flammable) limits

Not available.Not available.

(flammable) limits

Vapor pressure: Not available.Vapor density: Not available.

Relative density : 0.98

**Solubility** : Partially soluble in the following materials: cold water.

Water Solubility at room

temperature

: 5 g/l

Partition coefficient: n-

octanol/water

**Viscosity** 

: Not available.

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

: Not available. : < 30 s (ISO 6mm)

# 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.

**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.

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# **Section 11. Toxicological information**

### Information on toxicological effects

### **Acute toxicity**

Product/ingredient name	Result	Species	Dose	Exposure
1/methoxy-2-propanol	LD50 Dermal	Rabbit	13 g/kg	-
	LD50 Oral	Rat	5.2 g/kg	-
tetraethyl silicate	LC50 Inhalation Dusts and mists	Rat	10 to 16 mg/l	4 hours
-	LD50 Dermal	Rabbit	5.878 g/kg	-
	LD50 Oral	Rat	6270 mg/kg	-
2-methylpropan-1-ol	LD50 Dermal	Rabbit	3400 mg/kg	-
	LD50 Oral	Rat	2460 mg/kg	-
2-methoxypropanol	LC50 Inhalation Vapor	Rat	15000 ppm	4 hours
	LD50 Dermal	Rabbit	5660 mg/kg	-
	LD50 Oral	Rat	5.3 g/kg	-

Conclusion/Summary Irritation/Corrosion

: There are no data available on the mixture itself.

Not available.

**Conclusion/Summary** 

Skin: There are no data available on the mixture itself.Eyes: There are no data available on the mixture itself.Respiratory: There are no data available on the mixture itself.

<u>Sensitization</u>

Not available.

**Conclusion/Summary** 

Skin : There are no data available on the mixture itself.

Respiratory : There are no data available on the mixture itself.

Mutagenicity
Not available.

**Conclusion/Summary**: There are no data available on the mixture itself.

Carcinogenicity

Not available.

**Conclusion/Summary**: There are no data available on the mixture itself.

Reproductive toxicity

Not available.

Conclusion/Summary : There are no data available on the mixture itself.

Teratogenicity

Not available.

**Conclusion/Summary**: There are no data available on the mixture itself.

Specific target organ toxicity (single exposure)

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# **Section 11. Toxicological information**

Name	Category	Route of exposure	Target organs
1-methoxy-2-propanol	Category 3		Narcotic effects
tetraethyl silicate	Category 3		Respiratory tract irritation
2-methylpropan-1-ol	Category 3		Respiratory tract irritation and Narcotic effects
2-methoxypropanol	Category 3	Not applicable.	Respiratory tract irritation

### Specific target organ toxicity (repeated exposure)

Not available.

Target organs : Contains material which causes damage to the following organs: brain.

Contains material which may cause damage to the following organs: blood, kidneys, liver, heart, upper respiratory tract, skin, central nervous system (CNS), eye, lens or

cornea.

### **Aspiration hazard**

Name	Result
<b>2</b> -methylpropan-1-ol	ASPIRATION HAZARD - Category 2

Information on the likely routes of exposure

: Not available.

Potential acute health effects

**Eye contact** : Zauses serious eye damage.

Inhalation : Marmful if inhaled. Can cause central nervous system (CNS) depression. May

cause drowsiness or dizziness.

### Symptoms related to the physical, chemical and toxicological characteristics

**Eye contact**: Adverse symptoms may include the following:

pain watering redness

**Inhalation** : Adverse symptoms may include the following:

nausea or vomiting

headache

drowsiness/fatigue dizziness/vertigo unconsciousness reduced fetal weight increase in fetal deaths skeletal malformations

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# Section 11. Toxicological information

Skin contact : Adverse symptoms may include the following:

pain or irritation

redness dryness cracking

blistering may occur reduced fetal weight increase in fetal deaths skeletal malformations

Ingestion Adverse symptoms may include the following:

stomach pains reduced fetal weight increase in fetal deaths skeletal malformations

### 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. Exposure to component solvent vapor concentrations in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness. Solvents may cause some of the above effects by absorption through the skin. There is some evidence that repeated exposure to organic solvent vapors in combination with constant loud noise can cause greater hearing loss than expected from exposure to noise alone. 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 shortterm and long-term exposure by oral, inhalation and dermal routes of exposure and eve contact.

Short term exposure

**Potential immediate** 

effects

: There are no data available on the mixture itself.

Potential delayed effects

Long term exposure

: There are no data available on the mixture itself.

**Potential immediate** 

effects Potential delayed effects

: There are no data available on the mixture itself.

: There are no data available on the mixture itself.

Potential chronic health effects

Not available.

**General** : Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/

or dermatitis.

Carcinogenicity : No known significant effects or critical hazards. **Mutagenicity** : No known significant effects or critical hazards.

**Teratogenicity** : May damage the unborn child.

**Developmental effects** : No known significant effects or critical hazards. **Fertility effects** : No known significant effects or critical hazards.

### **Numerical measures of toxicity**

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# Section 11. Toxicological information

### **Acute toxicity estimates**

Route	ATE value
<b>Ø</b> ral	31270.6 mg/kg
Dermal	43219.5 mg/kg
Inhalation (gases)	9948.7 ppm
Inhalation (vapors)	24.32 mg/l

#### Other information

Repeated exposure to high vapor concentrations may cause irritation of the respiratory system and permanent brain and nervous system damage. Inhalation of vapor/aerosol concentrations above the recommended exposure limits causes headaches, drowsiness and nausea and may lead to unconsciousness or death. Avoid contact with skin and clothing. Wash thoroughly after handling. Emits toxic fumes when heated.

# Section 12. Ecological information

### **Ecotoxicity**

Product/ingredient name	Result	Species	Exposure
, , ,	Acute LC50 23300 mg/l	Daphnia	48 hours
	Acute LC50 >4500 mg/l Fresh water	Fish	96 hours

### Persistence/degradability

Not available.

#### **Bioaccumulative potential**

Product/ingredient name	LogPow	BCF	Potential
2-methylpropan-1-ol	0.76	-	low
2-methoxypropanol	-0.49	-	low

#### **Mobility in soil**

Soil/water partition coefficient (Koc)

: Not available.

#### Other adverse effects

: No known significant effects or critical hazards.

# 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. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind

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# Section 13. Disposal considerations

used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

# **Section 14. Transport information**

	Brazil (ANTT)	IMDG	IATA
UN number	UN1263	UN1263	UN1263
UN proper shipping name	PAINT	PAINT	PAINT
Transport hazard class(es)	3	3	3
Packing group	III	III	III
Environmental hazards	No.	No.	No.
Marine pollutant substances	Not applicable.	Not applicable.	Not applicable.

### **Additional information**

Brazil : None identified.

Risk number : 30

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

Safety, health and environmental regulations specific for the product : No known specific national and/or regional regulations applicable to this product (including its ingredients).

# Section 16. Other information

### **History**

Date of previous issue : 12/15/2013

Version : 2
Prepared by : EHS

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### Section 16. Other information

Key to abbreviations

: ADN = European Provisions concerning the International Carriage of Dangerous

Goods by Inland Waterway

ADR = The European Agreement concerning the International Carriage of

Dangerous Goods by Road ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

IATA = International Air Transport Association 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)

RID = The Regulations concerning the International Carriage of Dangerous Goods by

Rail

UN = United Nations
: ABNT NBR 14725-4

ANTT - National Land Transportation Agency

Indicates information that has changed from previously issued version.

Disclaimer

References

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.

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