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SAFETY DATA SHEET

Safety Data Sheet according to regulation (EC) No 1907/2006 & 1272/2008 and amendments

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND THE COMPANY/UNDERTAKING

Product Identifier: **PHENODUR® PR 285/55IB/B phenolic resins**
Product Description: Phenolic resin

RELEVANT IDENTIFIED USES OF THE SUBSTANCE OR MIXTURE AND USES ADVISED AGAINST

Intended/Recommended Use: Binder

DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

Company: Cytec Industries Inc., Five Garret Mountain Plaza, Woodland Park, New Jersey 07424, USA. For Product Information call 1-800/652-6013. Outside the USA and Canada call +1-973/357-3193 or your local Cytec contact point. E-mail: custinfo@cytec.com

Local Contact Information: Cytec Industries Inc. Adenbury Way LL 139UZ Wrexham (UK) +44/1/97.866.5200

EMERGENCY PHONE (24 hours/day) - For emergency involving spill, leak, fire, exposure or accident call:
Asia Pacific:
Australia - +61-3-9663-2130 or 1800-033-111
China (PRC) - +86 10 5100 3039 (Carechem24 China)
New Guinea - +61-3-9663-2130
New Zealand - +61-3-9663-2130 or 0800-734-607
All Others - +65 3158 1074 (Carechem24 Singapore)
Canada: +1-905-356-8310 (Cytec Welland, Canada plant)
Europe/Africa/Middle East (Carechem24 UK):
Europe, Middle East, Africa, Israel - +44 (0) 1235 239 670
Middle East, Africa (Arabic speaking countries) - +44 (0) 1235 239 671
Latin America:
Brazil - 0800 0111 767 (SOS Cotec)
Chile - +56-2-247-3600 (CITUC QUIMICO)
All Others - +52-376-73 74122 (Cytec Atequiza, Mexico plant)
USA: +1-703-527-3887 or 1-800-424-9300 (CHEMTREC #CCN6083)

2. HAZARDS IDENTIFICATION

CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

Classification according to Regulation (EC) No 1272/2008 and amendments

2. HAZARDS IDENTIFICATION

Flammable Liquid Hazard Category 3
Skin Corrosion / Irritation Hazard Category 2
Serious Eye Damage / Eye Irritation Hazard Category 1
Specific Target Organ Toxicity (STOT) - Single Exposure Hazard Category 3

Classification according to EU Directives 67/548/EEC or 1999/45/EC
Xi - Irritant

R10 - Flammable.
R41 - Risk of serious damage to eyes.
R67 - Vapours may cause drowsiness and dizziness.
R37/38 - Irritating to respiratory system and skin.

LABEL ELEMENTS

Signal Word
Danger

Hazard Statements
H226 - Flammable liquid and vapour.
H336 - May cause drowsiness or dizziness.
H335 - May cause respiratory irritation.
H315 - Causes skin irritation.
H318 - Causes serious eye damage.
EUH208 - Contains formaldehyde. May produce an allergic reaction.

Precautionary Statements
Precautionary statements on the label will be reduced as indicated in Regulation (EC) No 1272/2008, Article 28.

P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P240 - Ground/bond container and receiving equipment.
P241 - Use explosion-proof electrical/ventilating/lighting/equipment.
P242 - Use only non-sparking tools.
P243 - Take precautionary measures against static discharge.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.
P271 - Use only outdoors or in a well-ventilated area.
P264 - Wash face, hands and any exposed skin thoroughly after handling.
P303 + P361 + P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P370 + P378 - In case of fire: Use CO2, dry chemical, or foam for extinction.
P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P321 - Specific treatment (see supplemental first aid instructions on this label).
P362 - Take off contaminated clothing and wash before reuse.
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 - Immediately call a POISON CENTER or doctor/physician.
P403 + P235 - Store in a well-ventilated place. Keep cool.
P403 + P233 - Store in a well-ventilated place. Keep container tightly closed.
P405 - Store locked up.
P501 - Dispose of contents/container in accordance with local and national regulations.

OTHER HAZARDS
Polymerisation may occur from excessive heat, contamination or exposure to direct sunlight.

RESULTS OF PBT AND vPvB ASSESSMENT
Not determined

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance, Mixture or Article? Mixture

Component / CAS No.	%	EC-No	REACH Registration Number	Classification	Classification according to Regulation (EC) No 1272/2008 (CLP)
Isobutanol 78-83-1	25 - 30	201-148-0	Not available	R10 Xi; R37/38 R41 R67	Flam. Liq. 3 (H226) STOT SE 3 (H335) STOT SE 3 (H336) Skin Irrit. 2 (H315) Eye Dam. 1 (H318)
Formaldehyde 50-00-0	< 0.2	200-001-8	01-2119488953-20	Carc. Cat. 3; R40 T; 23/24/25 C; R34 R43	Carc. 2 (H351) B D Acute Tox. 3 (H301) B D Acute Tox. 3 (H311) B D Acute Tox. 3 (H331) B D Skin Corr. 1B (H314) B D Skin Sens. 1 (H317) B D
Butanol 71-36-3	10 - 15	200-751-6	01-2119484630-38	R10 Xn; R22 Xi; R37/38 R41 R67	Flam. Liq. 3 (H226) Acute Tox. 4 (H302) STOT SE 3 (H335) STOT SE 3 (H336) Skin Irrit. 2 (H315) Eye Dam. 1 (H318)

See Section 16 for full text of R and H phrases.

4. FIRST AID MEASURES

DESCRIPTION OF FIRST AID MEASURES

Eye Contact:
Rinse immediately with plenty of water for at least 15 minutes. Obtain medical attention immediately.

Skin Contact:
Remove contaminated clothing and shoes without delay. Wash immediately with plenty of water. Do not reuse contaminated clothing without laundering. Get medical attention if pain or irritation persists after washing or if signs and symptoms of overexposure appear.

Ingestion:
If swallowed, call a physician immediately. Only induce vomiting at the instruction of a physician. Never give anything by mouth to an unconscious person.

Inhalation:
Remove to fresh air. If breathing is difficult, give oxygen. Obtain medical advice if there are persistent symptoms.

MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

None known

INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDS

Not applicable

5. FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA

Suitable Extinguishing Media:
Use water spray, alcohol foam, carbon dioxide or dry chemical to extinguish fires. Water stream may be ineffective.

SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE

Keep containers cool by spraying with water if exposed to fire.

ADVICE FOR FIREFIGHTERS

Protective Equipment:
Firefighters, and others exposed, wear self-contained breathing apparatus. Wear full firefighting protective clothing. See MSDS Section 8 (Exposure Controls/Personal Protection).

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6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:
Where exposure level is not known, wear approved, positive pressure, self-contained respirator. Where exposure level is known, wear approved respirator suitable for level of exposure. In addition to the protective clothing/equipment in Section 8 (Exposure Controls/Personal Protection), wear impermeable boots.

Environmental Precautions:
None known

Methods and material for containment and cleaning up:
Cover spills with some inert absorbent material; sweep up and place in a waste disposal container. Flush spill area with water. Remove sources of ignition.

References to other sections:
See Sections 8 and 13 for additional information.

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7. HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING

Precautionary Measures: Do not get in eyes. Avoid contact with skin and clothing. Avoid breathing vapor. Keep away from heat, sparks and flame. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling.

Special Handling Statements: Provide good ventilation of working area (local exhaust ventilation if necessary). During processing and handling of the product, comply with the indicative occupational exposure limit values. Containers must be bonded and grounded when pouring or transferring material.

Conditions for safe storage, including any incompatibilities:
Areas containing this material should have fire safe practices and electrical equipment in accordance with applicable regulations and/or guidelines. Standards are primarily based on the material`s flashpoint, but may also take into account properties such as miscibility with water or toxicity. All local and national regulations should be followed.
In the Americas, National Fire Protection Association (NFPA) 30: Flammable and Combustible Liquids Code, is a widely used standard. NFPA 30 establishes storage conditions for the following classes of materials: Class I Flammable Liquids, Flashpoint <37.8 °C. Class II Combustible Liquids, 37.8 °C < Flashpoint <60 °C. Class IIIa Combustible Liquids, 60 °C < Flashpoint < 93 °C. Class IIIb Combustible Liquids, Flashpoint > 93 °C. Store in a cool, dry, well ventilated place and keep container tightly closed. Avoid flammable gas mixtures. Take precautionary measures against electrostatic loading - earthing necessary during loading operations. Vapours may form explosive mixtures with air.

Storage Temperature: Store at ~23 °C
Reason: Quality.

VCI Storage Class: 3 A

Specific end use(s):
Refer to Section 1 or Exposure Scenario if applicable.

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8. EXPOSURE CONTROLS / PERSONAL PROTECTION

CONTROL PARAMETERS

50-00-0 Formaldehyde

United Kingdom: WEL (Workplace Exposure Limits)	2 ppm (TWA) 2.5 mg/m^3 (TWA) 2 ppm (STEL) 2.5 mg/m^3 (STEL)
Europe ILV (Indicative Limit Values):	Not established
Other Value:	Not established

71-36-3 Butanol

United Kingdom: WEL (Workplace Exposure Limits)	(skin) 50 ppm (STEL) 154 mg/m^3 (STEL)
Europe ILV (Indicative Limit Values):	Not established
Other Value:	Not established

78-83-1 Isobutanol

United Kingdom: WEL (Workplace Exposure Limits)	50 ppm (TWA) 154 mg/m^3 (TWA) 75 ppm (STEL) 231 mg/m^3 (STEL)
Europe ILV (Indicative Limit Values):	Not established
Other Value:	Not established

EXPOSURE CONTROLS

Engineering Measures:
Utilize a closed system process where feasible.
Where this material is not used in a closed system, good enclosure and local exhaust ventilation should be provided to control exposure.

Respiratory Protection:
Where exposures are below the established exposure limit, no respiratory protection is required.
Where exposures exceed the established exposure limit, use respiratory protection recommended for the material and level of exposure.

Eye protection:
Prevent eye and skin contact.
Provide eye wash fountain and safety shower in close proximity to points of potential exposure.
Wear eye/face protection such as chemical splash proof goggles or face shield.

Skin Protection:
Prevent contamination of skin or clothing when removing protective equipment.
Wear impermeable gloves and suitable protective clothing.

Hand protection:
Nitrile or fluorinated rubber gloves. Consider the porosity and elasticity data of the glove manufacturer and the specific conditons in the work place. Replace gloves immediately when torn or any change in appearance (dimension, colour, flexibility etc) is noticed.

Additional Advice:
Food, beverages, and tobacco products should not be carried, stored, or consumed where this material is in use.
Before eating, drinking, or smoking, wash face and hands thoroughly with soap and water.
It is recommended that a shower be taken after completion of workshift especially if significant contact has occurred. Work clothing should then be laundered prior to reuse. Street clothing should be stored separately from work clothing and protective equipment. Work clothing and shoes should not be taken home.

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9. PHYSICAL AND CHEMICAL PROPERTIES

INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

Colour:	brown
Appearance:	liquid
Odor:	sweet
Odor Threshold:	See Section 8 for exposure limits.
pH:	Not applicable
Melting Point:	Not applicable
Boiling Point:	100 - 200 °C
Flash point:	34 °C DIN EN ISO 1523
Evaporation Rate:	Not available
Flammable Limits (% By Vol):	Lower: 1 Upper: 10(values for solvent)
Vapor Pressure:	10 hPa @ 20 °C (value for solvent)
Vapour density:	Not available
Specific Gravity/Density:	0.99 g/cm³ DIN EN ISO 2811-2 @ 20 °C
Solubility In Water:	Insoluble
Partition coefficient (n-octanol/water):	Not available
Autoignition temperature:	340 °C (value for solvent)
Decomposition Temperature:	>116 °C DTA (Heating rate 3 K/min)
Viscosity (Kinematic):	Not available
Viscosity (Dynamic):	180 - 250 mPa.s @ 23 °C DIN EN ISO 3219

OTHER INFORMATION

Fat Solubility (Solvent-Oil):	Not available
Percent Volatile (% by wt.):	~45-
Solids Content:	~55%
Saturation In Air (% By Vol.):	Not available
Acid Number (mg KOH/g):	Not available
Hydroxyl Value (mg KOH/g):	Not available
Volatile Organic Content (1999/13/EC):	~49.7%

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10. STABILITY AND REACTIVITY

Reactivity: No information available

CHEMICAL STABILITY

Stability: Stable

Conditions To Avoid: Excessively high temperatures and ignition sources. Evolution of flammable mixtures possible in air when heated above flash point and/or during spraying or misting.

POSSIBILITY OF HAZARDOUS REACTIONS

Polymerization: May occur

Conditions To Avoid: Excessive heat.

Incompatible materials: Strong oxidizing agents and acids.

Hazardous Decomposition Products: Formaldehyde
Toxic pyrolysis products
Cresol

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11. TOXICOLOGICAL INFORMATION

INFORMATION ON TOXICOLOGICAL EFFECTS

Likely Routes of Exposure: Oral, Skin, Eyes.

Acute toxicity - oral: Not classified **-** Based on available data and/or professional judgment, the classification criteria are not met.
Acute toxicity - dermal: Not Classified **-** Based on available data and/or professional judgment, the classification criteria are not met.
Acute toxicity - inhalation: Not Classified **-** Based on available data and/or professional judgment, the classification criteria are not met.

Skin corrosion / irritation: Causes skin irritation.
Serious eye damage / eye irritation: Causes serious eye damage.

Respiratory sensitization: Not Classified **-** Based on available data and/or professional judgment, the classification criteria are not met.
Skin sensitization: Not Classified **-** Based on available data and/or professional judgment, the classification criteria are not met.

Carcinogenicity: Not Classified. **-** Based on available data and/or professional judgment, the classification criteria are not met.
Germ cell mutagenicity: Not Classified. **-** Based on available data and/or professional judgment, the classification criteria are not met.
Reproductive toxicity: Not Classified. **-** Based on available data and/or professional judgment, the classification criteria are not met.

Specific target organ toxicity (STOT) - single exposure: May cause drowsiness or dizziness.. May cause respiratory irritation..
Specific target organ toxicity (STOT) - repeated exposure: Not Classified. **-** Based on available data and/or professional judgment, the classification criteria are not met.
Aspiration hazard: Not Classified. **-** Based on available data and/or professional judgment, the classification criteria are not met.

PRODUCT TOXICITY INFORMATION

ACUTE TOXICITY DATA

oral	rat	Acute LD50	>2000 mg/kg
dermal	rabbit	Acute LD50	>2000 mg/kg
inhalation	rat	Acute LC50 4 hr	>5 mg/l

LOCAL EFFECTS ON SKIN AND EYE

Acute Irritation	dermal	irritating
Acute Irritation	eye	Causes serious damage

ALLERGIC SENSITIZATION

Sensitization	Skin	Not sensitizing
Sensitization	respiratory	No data

GENOTOXICITY

Assays for Gene Mutations

Ames Salmonella Assay	No data

OTHER INFORMATION

The product toxicity information above has been estimated.

HAZARDOUS INGREDIENT TOXICITY DATA

Isobutanol has acute oral (rat) and dermal (rabbit) LD50 values of 2.46 g/kg and 2.46 - 3.4 g/kg, respectively. The LC50 (rat) following a 4-hour inhalation exposure is >8000 ppm (24.24 mg/L). Acute overexposure to isobutanol vapor can cause irritation to the eyes (severe), skin (moderate), and mucous membranes, as well as, central nervous system depression. Literature reports that acute oral exposure to isobutanol has produced CNS effects in animals. Direct contact with isobutanol may cause severe eye and mild to moderate skin irritation.

Formaldehyde has oral (rat) and dermal (rabbit) LD50 values of 100 mg/kg and 270 mg/kg, respectively. The LC50 following a 4-hour inhalation exposure to rats is 250-478 ppm (0.31-0.59 mg/l). Irritation of the nose and throat has been observed in people exposed to formaldehyde vapor levels in excess of 1 ppm. Normal breathing may be seriously impaired at levels above 10 ppm and serious lung damage can occur at levels exceeding 50 ppm. Formaldehyde has been reported to cause pulmonary hypersensitivity in some individuals who were exposed to concentrations known to cause irritation; however, no pulmonary sensitization has been demonstrated in laboratory animal studies. Formaldehyde solutions can cause severe eye and moderate skin irritation. Repeated skin exposure to solutions of 2% or more formaldehyde has caused allergic skin reactions. Formaldehyde was found to be weakly mutagenic in a number of in vitro genotoxicity tests and positive in certain in vivo screening tests for mutagenicity. Formaldehyde did not cause birth defects in rats inhaling concentrations up to 10 ppm. However, a study using higher levels did show a slight but statistically significant reduction in male fetal body weight. Lifetime inhalation of formaldehyde vapor at concentrations above 5 ppm for 6 hours per day, caused nasal tumors in laboratory animals. The International Agency for Research on Cancer (IARC) has classified formaldehyde as a Group 1 (known) human carcinogen based on epidemiological evidence linking formaldehyde exposure to the occurrence of nasopharyngeal cancer, a rare type of cancer. IARC also found limited evidence of cancer of the nasal cavity and paranasal sinuses and insufficient evidence for an association between formaldehyde and leukemia. Inhalation caused liver and kidney damage in laboratory animal tests.

Butanol has acute oral (rat) and dermal (rabbit) LD50 values of 0.790 g/kg and 3.4 g/kg, respectively. The inhalation LC50 (rat) value after a 4-hour exposure is 8000 ppm (24.24 mg/L). Acute overexposure to vapors of butanol may cause headache, dizziness, drowsiness, blurred vision and a burning sensation in the eyes. Overexposure to butanol vapors can produce headache and central nervous system depression. Acute ingestion of butanol has caused unconsciousness and coma. Direct contact with butanol may cause severe eye irritation and moderate skin irritation. Butanol has caused effects on the developing embryo/fetus in the presences of material toxicity.

12. ECOLOGICAL INFORMATION

TOXICITY, PERSISTENCE AND DEGRADABILITY, BIOACCUMULATIVE POTENTIAL, MOBILITY IN SOIL, OTHER ADVERSE EFFECTS

This material is not classified as dangerous for the environment.
The ecological assessment for this material is based on an evaluation of its components.

RESULTS OF PBT AND vPvB ASSESSMENT
Not determined

HAZARDOUS INGREDIENT TOXICITY DATA

Component / CAS No.	Toxicity to Algae	Toxicity to Fish	Toxicity to Water Flea
Isobutanol 78-83-1	EC50 = 230 mg/L - Desmodesmus subspicatus (48h)	LC50 1480-1730 mg/L - Lepomis macrochirus (96h) LC50 = 375 mg/L - Pimephales promelas (96h) LC50 1120-1520 mg/L - Oncorhynchus mykiss (96h) LC50 1370-1670 mg/L - Pimephales promelas (96h)	EC50 1070 - 1933 mg/L - Daphnia magna (48h) EC50 = 1300 mg/L - Daphnia magna (48h)
Formaldehyde 50-00-0	Not available	LC50 22.6 - 25.7 mg/L - Pimephales promelas (96h) LC50 100 - 136 mg/L - Oncorhynchus mykiss (96h) LC50 0.032 - 0.226 mL/L - Oncorhynchus mykiss (96h) LC50 23.2 - 29.7 mg/L - Pimephales promelas (96h) LC50 = 1510 µg/L - Lepomis macrochirus (96h) LC50 = 41 mg/L - Brachydanio rerio (96h)	EC50 11.3 - 18 mg/L - Daphnia magna (48h) LC50 = 2 mg/L - Daphnia magna (48h)
Butanol 71-36-3	EC50 > 500 mg/L - Desmodesmus subspicatus (72h) EC50 > 500 mg/L - Desmodesmus subspicatus (96h)	LC50 = 1910000 µg/L - Pimephales promelas (96h) LC50 100000-500000 µg/L - Lepomis macrochirus (96h) LC50 1730-1910 mg/L - Pimephales promelas (96h) LC50 = 1740 mg/L - Pimephales promelas (96h)	EC50 1897 - 2072 mg/L - Daphnia magna (48h) EC50 = 1983 mg/L - Daphnia magna (48h)

13. DISPOSAL CONSIDERATIONS

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

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

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14. TRANSPORT INFORMATION

This section provides basic shipping classification information. Refer to appropriate transportation regulations for specific requirements.

ADR/RID/ADN

Dangerous Goods? X
Proper Shipping Name: Resin solution
Class: 3
UN Number: UN1866
Packing Group: III
Transport Label Required: Flammable liquid
Tunnel restriction code: D/E
Comments: Not intended for shipment by inland waterways in tank vessels.

IMO

Dangerous Goods? X
Proper Shipping Name: Resin solution
Hazard Class: 3
UN Number: UN1866
Packing Group: III
Transport Label Required: Flammable liquid

ICAO / IATA

Dangerous Goods? X
Proper Shipping Name: Resin solution
Hazard Class: 3
Packing Group: III
UN Number: UN1866
Transport Label Required: Flammable liquid

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15. REGULATORY INFORMATION

SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS / LEGISLATION SPECIFIC FOR THE SUBSTANCE OR MIXTURE

Ozone Depleting Substances: Not applicable
Persistent Organic Pollutants: Not applicable

Water Endangering Class (Germany): 1 according to VwVwS, 17.05.1999

Inventory Information

United States (USA):
All components of this product are included on the TSCA Chemical Inventory or are not required to be listed on the TSCA Chemical Inventory.
This product contains a chemical substance that is subject to export notification under Section 12 (b) of the Toxic Substances Control Act, 15 U. S. C. 2601 et. seq. (This requirement applies to exports from the United States only.)
This material is subject to Significant New Use Rule (SNUR) 40 CFR Section 721.5905.

Canada:
One or more components of this product are NOT included on the Canadian Domestic Substances List (DSL).

Australia: All components of this product are included in the Australian Inventory of Chemical Substances (AICS) or are not required to be listed on AICS.

China: All components of this product are included on the Chinese inventory or are not required to be listed on the Chinese inventory.

Japan: All components of this product are included on the Japanese (ENCS) inventory or are not required to be listed on the Japanese inventory.

Korea: All components of this product are included on the Korean (ECL) inventory or are not required to be listed on the Korean inventory.

Philippines: All components of this product are included on the Philippine (PICCS) inventory or are not required to be listed on the Philippine inventory.

CHEMICAL SAFETY ASSESSMENT
No Chemical Safety Assessment has been carried out.

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16. OTHER INFORMATION

Reasons for Issue: New Format

Classification methods include one or more of the following: use of specific product data, read-across data, modeling, professional judgment or a component based evaluation.

Component Risk and Hazard Phrases
Isobutanol
- H226 - Flammable liquid and vapour.
- H315 - Causes skin irritation.
- H318 - Causes serious eye damage.
- H335 - May cause respiratory irritation.
- H336 - May cause drowsiness or dizziness.
- R10 - Flammable.
- R41 - Risk of serious damage to eyes.
- R67 - Vapours may cause drowsiness and dizziness.
- R37/38 - Irritating to respiratory system and skin.

Formaldehyde
- H301 - Toxic if swallowed.
- H311 - Toxic in contact with skin.
- H314 - Causes severe skin burns and eye damage.
- H317 - May cause an allergic skin reaction.
- H331 - Toxic if inhaled.
- H351 - Suspected of causing cancer.
- R34 - Causes burns.
- R40 - Limited evidence of a carcinogenic effect.
- R43 - May cause sensitization by skin contact.
- R23/24/25 - Toxic by inhalation, in contact with skin and if swallowed.

Butanol
- H226 - Flammable liquid and vapour.
- H302 - Harmful if swallowed.
- H315 - Causes skin irritation.
- H318 - Causes serious eye damage.
- H335 - May cause respiratory irritation.
- H336 - May cause drowsiness or dizziness.

R10 - Flammable.
R22 - Harmful if swallowed.
R41 - Risk of serious damage to eyes.
R67 - Vapours may cause drowsiness and dizziness.
R37/38 - Irritating to respiratory system and skin.

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