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MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT & COMPANY IDENTIFICATION

Product : ACRYLINDO 1204-55
Type : Thermosetting Acrylic Resin

Supplier details:

PT ALKINDO MITRARAYA (AMR)

Jl Gatot Subroto km. 8, Desa Kadu Jaya, Kecamatan Curug

Tangerang 15810 INDONESIA

Phone : +62 - 21 - 59302250 (hunting 10 lines)

Facsimile : +62-21-59302251E-mail : alkindo@alkindo.netWebsite : www.alkindo.net

2. HAZARDS IDENTIFICATION

GHS CLASSIFICATION

Flammable Liquid Hazard Category 3

Skin Corrosion / Irritation Hazard Category 3

Serious Eye Damage / Eye Irritation Hazard Category 2B

Carcinogenicity Hazard Category 2

Target Organ Systemic Toxicant (TOST) - Single Exposure Hazard Category 3

Aquatic Environment Chronic Hazard Category 2

GHS LABELING



GHS SIGNAL WORD

Warning

HAZARD STATEMENTS

Flammable liquid and vapour

Suspected of causing cancer

Causes mild skin irritation

Causes eye irritation

May cause respiratory irritation

May cause drowsiness and dizziness

Toxic to aquatic life with long lasting effects

PRECAUTIONARY STATEMENTS

Prevention

Avoid release to the environment. Keep away from heat, sparks and open flame. - No smoking. Keep container tightly closed. Ground/Bond container and receiving equipment. Use explosion-proof electrical, ventilating, lighting and other equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Wear protective gloves and eye/face protection. Wash hands thoroughly after handling. Obtain



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special instructions before use. Do not handle until all safety precautions have been read and understood. Use only outdoors or in a wellventilated area. Avoid breathing vapors or spray mist.

Response

Collect spillage. IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. IF exposed or concerned: Get medical advice/attention.

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTRE or doctor/physician if you feel unwell. In case of fire, use the following media for extinction: water spray or fog, alcohol foam, carbon dioxide, dry chemical.

Storage

Store in well-ventilated place. Keep cool. Store locked up. Keep container tightly closed.

Disposal

Dispose of contents/container in accordance with local and national regulations.

3. COMPOSITION INFORMATION

CHEMICAL DESCRIPTION

Thermosetting acrylic resin –in solution in butyl cellosolve/pegasol 150.

HAZARDOUS COMPONENTS

Butyl cellosolve 6 - 8 %

CAS No. 111-76-2

Pegasol 150 37 - 39 %

CAS No. 64742-94-5

4. FIRST AID MEASURES

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.

SKIN CONTACT:

Wash immediately with plenty of water and soap.

EYE CONTACT:

Rinse immediately with plenty of water for at least 15 minutes. If effects occur, consult a physician, preferably an ophthalmologist.

INHALATION:

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

5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA:

Water fog or fine spray, dry chemical fire extinguishers, carbon dioxide fire extinguishers, foam. Do not use direct water stream. Straight or direct water streams may not be effective to extinguish fire. Alcohol resistant foams (ATC type) are preferred. General purpose synthetic foams (including AFFF) or protein foams may function, but will be less effective.

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PROTECTIVE EQUIPMENT:

Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, pants, boots, and gloves).

SPECIAL HAZARDS:

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

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS:

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:

Use appropriate containment to avoid environmental contamination. Do not allow to enter drains and water courses. If sewers become contaminated contact Local Water Authority and Police. Should resin enter other waterways inform the Environment Agency.

METHODS FOR CLEANING UP:

Absorb onto sand. Drums leaking near base may be inverted. Remove sources of ignition. Cover spills with some inert absorbent material; sweep up and place in a waste disposal container. Flush spill area with water.

7. HANDLING & STORAGE

HANDLING:

Precautionary Measures: Avoid contact with eyes, skin and clothing. Keep away from heat 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.

STORAGE:

Store in a cool, dry, well ventilated place and keep container tightly closed. Areas containing this material should have firesafe 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. Vapours may form explosive mixtures with air. Minimize sources of ignition, such as static build-up, heat, spark or flame. Store in the following material(s): Carbon steel. Stainless steel. Phenolic lined steel drums. Do not store in: Aluminum. Copper. Galvanized iron. Galvanized steel. See Section 10 for more specific information.

Storage Temperature: Store at 0 - 25 $^{\circ}$ C

Reason: Quality.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING MEASURES:

Ensure adequate ventilation to keep vapor concentrations below occupational exposure limits.

OCCUPATIONAL EXPOSURE LIMITS (EH40):

Butyl cellosolve

20 ppm

 98 mg/m^3



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Pegasol 150 100 ppm

ENGINEERING MEASURES:

Engineering controls are not usually necessary if good hygiene practices are followed.

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:

Wear eye/face protection such as chemical splash proof goggles or face shield.

SKIN PROTECTION:

Avoid skin contact. Wear impermeable gloves and suitable protective clothing. Since this product is absorbed through the skin, care must be taken to prevent skin contact and contamination of clothing.

ADDITIONAL ADVICE:

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.

9. PHYSICAL & CHEMICAL PROPERTIES

Phase : Liquid (25.0 °C)
Appearance, Color : Transparent, yellowish
Odor : Thinner / Solvent – like

Boiling point (760 mmHg) : 130-140°C Water solubility : insoluble

Flash point (°C) : 4.4-6.0 (Tag close cup)

10. STABILITY & REACTIVITY

CONDITIONS TO AVOID:

Heating will cause pressure rise with risk of bursting and subsequent explosion.

HAZARDOUS DECOMPOSITION PRODUCTS:

Thermal decomposition products may include carbon monoxide and carbon dioxide.

11. TOXICOLOGICAL INFORMATION

LABORATORY DATA:

Thermosetting acrylic resin

This product has not been tested for toxicity. It is classified as sensitizing under 88/379/EEC and subsequent amendments.

HAZARDOUS INGREDIENTS TOXICITY:

Butyl cellosolve

The vapour is very toxic to the nose may cause nasal discharge, chest pain, coughing, nausea, dizziness, drowsiness, headache. The liquid is very irritating to the eyes and skin and slightly absorbed through the skin. Accidental ingestion may cause nasal discharge, chest pain, coughing, nausea, dizziness, drowsiness, and headache.



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Pegasol 150

Acute overexposure to petroleum distillate vapors may cause eye and throat irritation. Certain petroleum distillate fractions may produce moderate to severe skin irritation with direct contact. Prolonged repeated exposure to petroleum distillate vapor may cause central nervous system damage as well as heart and blood disorders. The oral LD50 in the rat for various distillates ranges from 4.5 to >25 ml/kg, and the inhalation LC50 in rats is about 15000 ppm. Aspiration of petroleum distillate may cause chemical pneumonitis. Overexposure to vapor may cause dizziness, drowsiness, headache, and nausea.

12. ECOLOGICAL INFORMATION

ASSESSMENT:

If properly handled, this material should not present a serious environmental hazard.

TEST RESULTS:

AMR has not conducted environmental studies on this product. The product does not contain any substance that is classified under EC legislation for environmental effects. Data is available on some of the components.

Butyl cellosolve

BOD5 > 0.5 readily biodegradable

COD

Pegasol 150

BOD5 > 0.5 Readily biodegradable

COD

13. DISPOSAL CONSIDERATIONS

AMR encourages the recycle, recovery, and reuse of materials, where permitted. If disposal is necessary, AMR 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.

14. TRANSPORT INFORMATION

Land Transport

Proper Shipping Name : Resin solution

UNDG Class : 3 UN No : 1866 Packing Group : III

Transport label required : Flammable liquid

HAZCHEM Code : 3[Y]

$Sea\ Transport\ (IMO)$

Proper Shipping Name : Resin solution

IMDG Class : 3 UN Number : UN1866 Packing Group : III

Transport label required : Flammable liquid

Air Transport (ICAO/IATA)

Proper Shipping Name : Resin solution

Hazard Class : 3 Packing Group : III UN : UN1866

Transport Label Required: Flammable liquid

Packing Instruction/Maximum Net Quantity Per Package:

Passenger Aircraft : 309; 60L Cargo Aircraft : 310; 220L



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15. REGULATORY INFORMATION

European Union (EU): All components of this product are included on the European Inventory of Existing Chemical Substances (EINECS) or are not required to be listed on EINECS.

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.

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.

OTHER INFORMATION

RISK PHRASES:

R10 Flammable

R20/21 Harmful by inhalation & in contact with skin

R38 Irritating to skin

SAFETY PHRASES:

S24/25 Avoid contact with skin and eyes

S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical

Advice.

Wear suitable gloves.

Use only in well ventilated areas.

16. OTHER INFORMATION

Whilst every care has been taken in the preparation of this material safety data sheet, the same has been produced from information and data currently available to PT Alkindo Mitraraya at the date hereof; however, PT Alkindo Mitraraya cannot be responsible for any errors or omissions. If in any doubt, please consult PT Alkindo Mitraraya.

Reasons for issue: New Format.