Bituminous Aluminium Paint (RMB 1)

Section 1. Identification

GHS product identifier : Bituminous Aluminium Paint (RMB 1)

Other means of identification : A single pack bitumen and alkyd based aluminium paint with excellent flow and brilliance.

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

Identified uses : Used as a decorative and protective coating over tar and bitumen based finishes to protect them against ultraviolet degradation.

Supplier's details : Kansai Plascon (Pty) Ltd
P.O. Box 4010
Luipaardsvlei
1743

Emergency phone : (041) 401 1400 (within hours of operation)
Facsimile : (041) 453 4596
National Contact Person : Mr B. Bhugwandin

Section 2. Hazards identification

Classification of the substance or mixture : FLAMMABLE LIQUID - Category 2
SERIOUS EYE DAMAGE/ IRRITATION - Category 2
SKIN CORROSION/ IRRITATION - Category 2
SKIN SENSITIZATION - Category 2
SPECIFIC TARGET ORGAN TOXICITY SINGLE EXPOSURE - Category 3
SPECIFIC TARGET ORGAN TOXICITY REPEATED EXPOSURE - Category 2
ACUTE TOXICITY (DERMAL) - Category 4
ACUTE TOXICITY (INHALATION) - Category 4
ACUTE TOXICITY (ORAL) - Category 5
ASPIRATION HAZARD - Category 1
CARCINOGENICITY - Category 1B
MUTAGENICITY - Category 1B
REPRODUCTIVE TOXICITY (Unborn child) - Category 2
REPRODUCTIVE TOXICITY (Fertility) - Category 2
AQUATIC TOXICITY (CHRONIC) - Category 2
WATER-REACTANT - Category 2

Label elements according to : SANS 10234: 2008

Hazard pictograms :

Signal word : Danger

Hazard statements : H225 - Highly flammable liquid and vapour.
H261 - In contact with water releases flammable gas.
H303 - May be harmful if swallowed.
H304 - May be fatal if swallowed and enters airways.
H312 - Harmful if in contact with skin.
H315 - Causes skin irritation.

H317 - May cause an allergic skin reaction.
H319 - Causes serious eye irritation.
H332 - Harmful if inhaled.
H336 - May cause drowsiness or dizziness.
H340 - May cause genetic defects .
H350 - May cause cancer.
H361 - Suspected of damaging fertility or the unborn child.
H373 - May cause damage to organs through prolonged or repeated exposure.
H411 - Toxic to aquatic life with long-lasting effects.

Precautionary statements

General : P101 - If medical advice is needed, have product container or label at hand.
P102 - Keep out of reach of children.
P103 - Read label before use.

Prevention : P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P223 - Do not allow contact with water.
P240 - Ground and bond container and receiving equipment.
P242 - Use only non-sparking tools.
P243 - Take precautionary measures against static discharge.
P260 - Do not breathe vapor.
P261 - Avoid breathing dust/fumes/gas/mist/vapours/spray.
P262 - Do not get in eyes, on skin, or on clothing.
P263 - Wash contaminated clothing before reuse .
P264 - Wash hands thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P271 - Use only outdoors or in a well-ventilated area.
P272 - Contaminated work clothing should not be allowed out of the workplace.
P273 - Avoid release to the environment.
P280 - Wear protective gloves,protective clothing,eye protection or face protection.
P284 - In case of inadequate ventilation wear respiratory protection.
P231+232 - Handle under inert gas. Protect from moisture.

Response : P312 - Call a POISON CENTER or physician if you feel unwell.
P314 - Get medical advice or attention if you feel unwell.
P362 - Take off contaminated clothing and wash before reuse.
P391 - Collect spillage. Hazourdous to the aquatic environment.
P301+310 - IF SWALLOWED: Immediately call a POISON CENTER or physician.
P301+330+331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+361+353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P333+313 - If skin irritation or a rash occurs: Get medical advice/attention.
P304+340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+351+338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing.
P337+313 - If eye irritation persists get medical advice/attention.
P370+380 - In case of fire: Evacuate area.

Storage : P410 - Protect from sunlight.
P402+404 - Store in a dry place. Store in a closed container.
P403+235 - Store in a well ventilated place. Keep cool.

Disposal P501 - Dispose of contents/containers in accordance with local regulation.
Other hazards which do not
Result in classification : None identified.

Section 3. Composition/information on ingredients

Subtance/mixture : Mixture

Other means of identification : A single pack bitumen and alkyd based aluminium paint with excellent flow and Brilliance.

CAS number/other identifiers

CAS number : Not applicable.

Ingredient name	CAS number	%	SANS 10234 Classification
Toluene	108-88-3	20.0-25.0	Flam. Liq. 2, H225 Acute Tox. 4, H332 Acute Tox. 5, H303 Skin Irrit. 2, H315 Eye Irrit. 2B, H320 Rep. Tox. 2, H361d STOT - SE. 3, H336 STOT- RE. 2, H373 Asp. Haz. 1, H304 Aquatic Chronic. 2, H411
Aluminium powder (stabilized)	7429-90-5	15.0-20.0	Flam. Sol. 1, H228 Water-react. 2, H261
Xylene	1330-20-7	10.0-15.0	Flam. Liq. 3, H226 Acute Tox. 4, H312 Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319
Solvent naphtha (petroleum), light aliph	64742-89-8	10.0-15.0	Asp Tox.1, H304 Mutagen. 1B, H340 Carcin. 1B, H350
Low aromatic White Spirits	64742-82-1	5.0-10.0	Flam. Liq. 3, H226 Asp. Haz. 1, H304 STOT-SE. 3, H336 Aquatic Chronic. 2, H411
Petroleum Resin	68131-77-1	5.0-10.0	Aquatic Chronic. 2, H411 Skin Sens. 1, H317
n-Hexane	110-54-3	<2.00	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Rep. Tox. 2, H361f STOT SE 3, H336 STOT RE 2, H373 Asp. Haz. 1, H304 Aquatic Chronic 2, H411
Ethyl Benzene	100-41-4	<2.00	Flam.Liq.2, H225 Acute.Tox.4, H332

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section. Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation persist.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact : Remove contaminated clothing and shoes. Wash contaminated skin with soap or a recognised skin cleaner and plenty of water. Continue to rinse for at least 10 minutes. Avoid the use of solvents. Get medical attention if symptoms persist. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/ effects, acute and delayed

Potential acute health effects

Eye contact : Causes serious eye irritation.
Inhalation : Harmful if inhaled. May cause drowsiness or dizziness.
Skin contact : Harmful if in contact with skin. Causes skin irritation.
Ingestion : May be harmful if swallowed. May be fatal if swallowed and enters airways.

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include pain or irritation, watering or redness.
Inhalation : Adverse symptoms may include nausea or vomiting, headache, respiratory irritation, drowsiness/fatigue or dizziness/vertigo, reduced fetal weight, increase in fetal deaths or skeletal malformations.
Skin contact : Adverse symptoms may include irritation or redness, reduced fetal weight, increase in fetal deaths or skeletal malformations.
Ingestion : May be fatal if swallowed and enters airways. May cause damage to organs through prolonged or repeated exposure, reduced fetal weight, increase in fetal deaths or skeletal malformations.

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. 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 such as dry powder, CO_2, water spray (fog) or foam. Use fog to cool and control.

Unsuitable extinguishing media : Do not use water jet.

Specific hazards arising from from the chemical : Flammable liquid and vapour. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Runoff to sewer may create fire or explosion hazard. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous thermal decomposition products : Decomposition products may include the following materials
carbon dioxide
carbon monoxide
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. Avoid breathing vapour 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). Water polluting material. May be harmful to the environment if released in large quantities.

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. Use spark-proof tools and explosion-proof equipment. 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). Use spark-proof tools and explosion-proof equipment. 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 : 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. 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 vapour or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. 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 only non-sparking tools. Take precautionary measures against electrostatic discharges.

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. 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 unlabelled containers. Use appropriate containment to avoid environmental contamination. Do not reuse container.

Section 8. Exposure controls/personal protection

Occupational exposure limits

Ingredient name	Exposure limits
Toluene	**OHSA:** LTEL: 100 ppm; 375 mg/m³ STEL: 150 ppm; 560 mg/m³
Aluminium powder (stabilized)	**OHSA:** TWA: OEL-RL: 5 mg/m³. Form: Respirable dust TWA: OEL-RL: 10 mg/m³. Form: Total inhalable dust
Xylene	**OHSA:** TWA: OEL-RL 100 ppm; 435 mg/m³ STEL: OEL-RL 150 ppm; 650 mg/m³
Solvent naphtha (petroleum), light aliph	**OHSA:** TWA: OEL-RL: 100 ppm; 525 mg/m³
Low aromatic White Spirits	**ACGIH (United States).** TWA: 500 ppm; 2000 mg/m³
n-Hexane	**ACGIH (USA):** LTEL: 50 ppm; 176 mg/m³ STEL: OEL-RL: 150 ppm; 528 mg/m
Ethyl Benzene	**OHSA:** TWA: OEL-RL 100 ppm; 435 mg/m³ STEL: OEL-RL 125 ppm; 545 mg/m

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.

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/face protection	: Avoid direct contact. Never touch eyes with dirty hands or gloves. Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts.
Hand protection	: Avoid direct contact. 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.
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	: Avoid direct contact. 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	: Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. 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.

Section 9. Physical and chemical properties

Physical state	: Liquid
Colour	: Opaque
Odor	: No data available
Odor threshold	: No data available
pH	: Not applicable
Melting point	: Not applicable
Boiling point	: No data available
Flash point	: 37 °C
Evaporation rate	: No data available
Flammability (solid, gas)	: No data available
Lower and upper explosive (flammable) limits	: No data available
Vapor pressure	: No data available
Vapor density	: No data available

Relative density	: 0.97 (typical)
Solubility	: Soluble in organic solvents, insoluble in water
Partition coefficient, n-octanol/water	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity (Ford 4 Cup)	: 14 – 16 sec.

Section 10. Stability and reactivity

Reactivity : Inert - no reaction with fire-fighting water.

Chemical stability : Stable under normal conditions.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

Incompatible materials : Any reactive substances – oxidisers in particular.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Acute Toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Toluene	LC50 Inhalation LD50 Oral LD50 Dermal	Rat Rat Rat	20 mg/l >7000 mg/kg >2000 mg/kg	4 hours - -
Aluminium powder (stabilized)	LC50 Inhalation LD50 Oral LD50 Dermal	Rat Rat Rat	> 5 mg/l 2000 mg/kg 2000 mg/kg	- - 4 hours
Xylene	LC50 Inhalation Gas LD50 Oral	Rat Rat	5000 ppm 4300 mg/kg	4 hours -
Solvent naphtha (petroleum), light aliph	LC50 Inhalation LD50 Oral LD50 Dermal	Rat Rat Rat	3400 ppm 8000 mg/kg 4000 mg/kg	4 hours 4 hours 4 hours
Low aromatic White Spirits	LD50 Oral LD50 Dermal LC50 Inhalation LC50 Inhalation	Rat Rat Rat Rat	>5000 mg/kg >5000 mg/kg >20 m/l >5 m/l	- - 4 hours 4 hours
n-Hexane	LC50 Inhalation Gas LD50 Oral	Rat Rat	48000 ppm 15840 mg/kg	4 hours -
Ethyl Benzene	LD50 Dermal	Rabbit	15.433 mg/kg	-

Product/ingredient name	Result	Species	Dose	Exposure
	LD50 Oral	Rat	3500 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Toluene	Skin - Irritation Eyes - Irritation	Rabbit Rabbit	3 12 18 18 16 9	- 24 hours 48 hours 72 hours 4 days 7 days	Mild irritant Non-irritant
Aluminium powder (stabilized)	Eyes - Irritation Skin - Irritation	Rabbit Rabbit	- -	- -	Mild irritant irritant
Xylene	Eyes - Irritant Skin - Irritant	Rabbit Rabbit	- -	87 mg 100 %	Mild irritation Moderate irritation
Solvent naphtha (petroleum), light aliph	Skin - Mild irritant Eye - Mild irritant	Rabbit Rabbit	- Primary Irritation Index: 0.5 <3. Draize score: 6 <15 or less.	- -	Mild irritation Mild Irritation
Ethyl Benzene	Skin - Irritant Eye - Irritant	Rabbit Rabbit	- -	24 hours -	- -

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target Organs
Toluene	Category 3	Not determined	Not determined
Low aromatic White Spirits.	Category 3	Not determined	Not determined
n-Hexane	Category 3	Not determined	Not determined

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target Organs
Toluene	Category 2	Not determined	Not determined
n-Hexane	Category 2	Not determined	Not determined

Aspiration hazard

Name	Result
Toluene	ASPIRATION HAZARD - Category 1
Low aromatic White Spirits.	ASPIRATION HAZARD - Category 1
n-Hexane	ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure : Inhalation, skin and eye contact.

Potential acute health effects

Eye contact : Causes serious eye irritation.
Inhalation : Harmful if inhaled. May cause drowsiness or dizziness.
Skin contact : Harmful if in contact with skin. Causes skin irritation.
Ingestion : May be harmful if swallowed. May be fatal if swallowed and enters airways.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include pain or irritation, watering or redness.

Inhalation : Adverse symptoms may include nausea or vomiting, headache, respiratory irritation, drowsiness/fatigue or dizziness/vertigo, reduced fetal weight, increase in fetal deaths or skeletal malformations.

Skin contact : Adverse symptoms may include irritation or redness, reduced fetal weight, increase in fetal deaths or skeletal malformations.

Ingestion : May be fatal if swallowed and enters airways. May cause damage to organs through prolonged or repeated exposure, reduced fetal weight, increase in fetal deaths or skeletal malformations.

Potential Chronic health effects

General : May cause damage to organs through prolonged or repeated exposure.

Carcinogenicity : May cause cancer. Risk of cancer depends on duration and level of exposure.

Mutagenicity : Suspected of causing genetic defects.

Teratogenicity : Suspected of damaging fertility.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : Suspected of damaging fertility.

Acute toxicity estimates

No data available.

Section 12. Ecological information

Toxicity

Product/Ingredient name	Result	Species	Exposure
Toluene	Acute LC/EC50 8.1 mg/l Fish Acute LC/EC50 6.0 mg/l Aquatic Acute LC/EC50 9.4 mg/l Algae	Salmon Daphnia magna Green algae	96 hours 48 hours 8 hours
Aluminium powder (stabilized)	Acute LC/EC50 ≤ 100 mg/l Fish Acute LC/EC50 ≤ 100 mg/l Aquatic Acute LC/EC50 ≤ 10 mg/l Algae Acute LC/EC50 ≤ 100mg/l Bacteria	Pimephales promelas Daphnia magna Green algae Pseudomonas putida	96 hours 48 hours 8 hours 16 hours
Xylene	Acute LC50 8500 ug/l Aquatic Acute LC50 3300 to 4093 ug/l Fish	Crustaceans - Palaemonetes Pugio Oncorhynchus mykiss - 0.6 g	48 hours 96 hours
Solvent naphtha (petroleum), light aliph	Acute LC/EC50 8.1 mg/l Fish Acute LC/EC50 6 mg/l Aquatic Acute LC/EC50 9.4 mg/l Algae	Salmon Daphnia magna Green algae	96 hours 48 hours 8 hours
Low aromatic White Spirits	Acute LC50 10-100 mg/l Fish Acute EC50 >1-10 mg/l, Aquatic Acute EC50 >1-10 mg/l, Algae	Pimephales promelas Daphnia magna Desmodesmus subspicatus	96 hours 48 hours 72 hours
n-Hexane	Acute LC50 2.5 mg/l Fish Acute EC50 3878 mg/l Aquatic Acute EC50 12840 mg/l Algae Acute EC50 0.3 mg/l Algae	Pimephales promelas Daphnia magna Chlorella vulgaris Skeletoma	96 hours 48 hours 3 hours 8 hours
Ethyl Benzene	Acute LC50 4.2 mg/l Fish Acute EC50 1.8-2.4 mg/l Aquatic Acute EC50 4.9 mg/l Algae	Oncorhynchus mykiss Daphnia magna Skeletonema costatum	96 hours 48 hours 72 hours

Persistence and degradability

Product/Ingredient name	Aquatic half-life	Photolysis	Biodegradability
Toluene	Water solubility: 500 mg/l at 20°C	-	Readily
Xylene	Fresh water <28 days	1 to 2 day(s)	-
Solvent naphtha (petroleum), light aliph.	-	-	Readily
n-Hexane	Fresh water <28 days	< 28 day(s)	Readily
Ethyl Benzene	Fresh water 28 days - 70 – 80%	1 to 2 day(s)	Readily

Bioaccumalitive potential

Product/Ingredient name	LogPow	BCF	Potential
Toluene	-	<100	-
Xylene	3.12	20	Low
Solvent naphtha (petroleum), light aliph.	-	<100	-

Mobility in soil

Soil/ water partition coefficient (K_{OC}) : No data available.

Mobility : No data available.

PBT/vPvB data : P: No data available. B: No data available. T: No data 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. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. 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. 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 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

	Transportation - road - SANS 10228:2012	Transportation- Maritime - IMO/ IMDG	Transportation- Air - IATA
UN number	1263	1263	1263
UN proper shipping name	Paint	Paint	Paint
Transport hazard class(es)	3 	3 	3 
Packing group	II	II	II
Environmental hazards	Environmentally hazardous	Marine pollutant	Environmentally hazardous
Additional information	No data available	**Emergency schedules (EmS)** F-E, S-E	**Passenger and Cargo Aircraft Ltd QTY:** Quantity limitation: 1 L Packaging instructions: Y341 **Passenger and Cargo Aircraft:** Quantity limitation: 5 L Packaging instructions: 353 **Cargo Aircraft Only:** Quantity limitation: 60 L Packaging instructions: 364
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code	No data available	No data available	No data available

Section 15. Regulatory information

Safety, health and environmental regulations specific for the product

: **Relevant information regarding authorization:** Occupational Health and Safety Act 1993 Regulation for Hazardous Chemical Substances.
Relevant information regarding restrictions: None known.
EU regulations: Regulation EC 1272/2008 [EU-GHS/CLP] and EU directives 67/548/EEC or EC 1999/45/EC
Other National regulations: None. Standards used for PPE recommendations in Section 8: NIOSH-National Institute for Occupational Health and Safety (USA) EN 166- European standard which concerns the area of eye protection. EN 374-3 European standards for permeation and penetration. EN 141/EN 143 European standards for gas mixtures to remove specified gases and vapours or combined filters for removing solids, and/or liquid particles and specified gases and vapours.

Section 16. Other information

History

Date of printing : 03/05/2018
Date of previous issue : 30/10/2017
Key to abbreviations : ATE = Acute Toxicity Estimate
BCP Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
$LogP_{ow}$ = 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)
OHSA = Occupational Health and Safety Act, 1993 (South Africa)
RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
UN = United Nations

References : Supplier safety data sheets.

Further information:
This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.
Notice to readers:
Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees.
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