1K ETCH PRIMER RED OXIDE (EPP RANGE)

SECTION 1. Identification

GHS product identifier : 1K Etch Primer Red Oxide (EPP Range)

Other means of identification : 1K Etch Primer offers excellent adhesion to mild steel, galvanized steel and aluminium alloys.

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

Identified uses : 1K Etch Primer is designed for application to all types of steel surfaces in mild industrial and commercial environments exposed to inland environmental conditions. It is ideal for use on vehicle chassis & underbody components and other steel substrates.

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

Emergency phone : (011) 951 4500 (within hours of operation)
Facsimile : (011) 955 2841
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 1
SKIN CORROSION/ IRRITATION - Category 1B
SPECIFIC TARGET ORGAN TOXICITY SINGLE EXPOSURE - Category 3
ASPIRATION HAZARD - Category 1
ACUTE TOXICITY (DERMAL) - Category 4
ACUTE TOXICITY (ORAL) - Category 4
ACUTE TOXICITY (INHALATION) - Category 4
REPRODUCTIVE TOXICITY (Unborn child) - Category 2
CARCINOGENICITY - Category 1B
MUTAGENICITY - Category 1B

Label elements according to : SANS 10234: 2008

Hazard pictograms :

Signal word : Danger

Hazard statements : H225 - Highly flammable liquid and vapour.
H304 - May be fatal if swallowed and enters airways.

H302 - Harmful if swallowed.
H312 - Harmful in contact with skin.
H318 - Causes serious eye damage.
H332 - Harmful if inhaled.
H335 - May cause respiratory irritation.
H336 - May cause drowsiness or dizziness.
H340 - May cause genetic defects.
H350 - May cause cancer.
H361d - Suspected of damaging the unborn child.

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.
P233 - Keep container tighly closed .
P240 - Ground/bond container and receiving equipment.
P241 - Use explosion-proof electrical, ventilating, lighting and all material-handling.
P242 - Use only non-sparking tools.
P243 - Take precautionary measures against static discharge.
P260 - Do not breathe 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.
P280 - Wear protective gloves,protective clothing,eye protection or face protection.
P281 - Use personal protective equipment as required.
P284 - In case of inadequate ventilation wear respiratory protection.
P235 + 410 - Keep cool. Protect from sunlight

Response : P312 - Call a POISON CENTER or physician if you feel unwell.
P314 - Get medical advice or attention if you feel unwell.
P331 - Do NOT induce vomiting.
P363 - Wash contaminated clothing before reuse.
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.

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.
P333+313 - If skin irritation or a rash occurs: Get medical advice/attention.
P337+313 - If eye irritation persists get medical advice/attention.
P370+P378 - In case of fire: Use dry powder, CO2, water spray (fog) or foam for extinction.

Storage : P405 - Store locked up.
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 : 1K Etch Primer offers excellent adhesion to mild steel, galvanized steel and aluminium alloys.

CAS number/other identifiers

CAS number : Not applicable.

Ingredient name	CAS number	%	SANS 10234 Classification
Toluene	108-88-3	40.0-45.0	Flam. Liq. 2, H225 Acute Tox. 4, H332 Acute Tox. 5, H303 Skin Irrit. 2, H315 Eye Irrit. 2B, H320 Rep. Tox. 2, H361d
Propan-1-ol	71-23-8	5.0-10.0	Flam. Liq. 2, H225 Eye Irrit. 1, H318 Acute Tox. 4, H302 STOT SE 3, H336
Butan-2-ol	78-92-2	2.0-5.0	Flam. Liq. 3, H226 Eye Irrit. 2, H319 STOT-SE. 3, H335, H336
Solvent naphtha (petroleum), light arom.	64742-95-6	2.0-5.0	Flam. Liq. 3, H226 Asp. Tox. 1, H304 Aquatic Chronic 2, H411 STOT SE 3, H335, H336

Ingredient name	CAS number	%	SANS 10234 Classification
Trizinc bis(orthophosphate)	7779-90-0	2.0-5.0	Aquatic Acute. 1, H400 Aquatic Chronic. 2, H411
n-butanol (dry basis)	71-36-3	2.0-5.0	Flam. Liq. 3, H226 Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Irrit. 1, H318 STOT-SE. 3, H335, H336
Iso-butanol	78-83-1	<2.00	Flam. Liq. 3, H226 Eye Irrit. 1, H318 STOT SE 3, H 335, H336
Xylene	1330-20-7	<2.00	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	<2.00	Asp Tox.1, H304 Mutagen. 1B, H340 Carcin. 1B, H350
Acetone	67-64-1	<2.0	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336

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. Get medical attention if symptoms occur.

Skin contact : Remove contaminated clothing and shoes. Wash contaminated skin with soap or a recognised skin cleaner and plenty of water. 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.

Most important symptoms/ effects, acute and delayed

Potential acute health effects

Eye contact	: Causes serious eye damage.
Inhalation	: Harmful if inhaled. May cause respiratory irritation. May cause drowsiness or dizziness.
Skin contact	: Harmful in contact with skin.
Ingestion	: 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. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

SECTION 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media	: Use an extinguishing agent suitable for the surrounding fire 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. 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).

Methods and materials for containment and cleaning up

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

Large spill : Stop leak if without risk. Move containers from spill area. 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.

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. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. 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. 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:** TWA: OEL-RL 100 ppm; 375 mg/m³ STEL: OEL-RL 150 ppm; 560 mg/m³
Propan-1-ol	**OHSA:** TWA: OEL:RL 200 ppm;500 mg/m³ STEL: OEL:RL 250 ppm; 625 mg/m³
Butan-2-ol	**OHSA:** TWA: OEL:RL 100 ppm;300 mg/m³ STEL: OEL:RL 150 ppm; 450 mg/m³
n-butanol (dry basis)	**OHSA:** STEL: OEL:RL 50 ppm; 150 mg/m³

Ingredient name	Exposure limits
Iso-butanol	**ACGIH (US):** TWA: 50 ppm (8 hour(s)); 152 mg/m³ (8 hour(s)).
Xylene	**OHSA:** TWA: OEL-RL 100 ppm; 435 mg/m³ STEL: OEL-RL 150 ppm; 650 mg/m³
Solvent naphtha (petroleum), light aliph.	**ACGIH (US):** TWA: 100 ppm; 525 mg/m^3
Acetone	**OHSA:** TWA: OEL-RL: 750 ppm; 1780 mg/m³ STEL: OEL-RL: 1500 ppm; 3560 mg/m³

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 : No special ventilation requirements. Good general ventilation should be sufficient to control worker exposure to airborne contaminants. If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

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 : 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	: 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 e.g. in case of insufficient ventilation. 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	: Red Oxide (**EPP 1**); Black (**EPP 2**) & Grey (**EPP 4**)
Odour	: No data available
Odor threshold	: No data available
pH	: No data available
Melting point	: Not applicable
Boiling point	: 112°C
Flash point	: 4°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	: 1.010 – 1.050
Solubility	: Soluble in organic solvent
Partition coefficient,	

n-octanol/water : No data available

Auto-ignition temperature : No data available

Decomposition temperature : No data available

Viscosity : 70 – 75 sec D4 @20°C

SECTION 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

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 : No available data.

Incompatible materials : No available data.

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	LD50 Oral LD50 Dermal LC50 Inhalation	Rat Rabbit Rat	>7000 mg/kg >2000 mg/kg <20 mg/l	- - 4 hours
Propan-1-ol	LCLo Inhalation Vapor LD50 Dermal LD50 Oral LDLo Oral	Rat Rabbit Rat Human-Female	4000 ppm 5040 mg/kg 1870 mg/kg 5700 mg/kg	4 hours - - -
Butan-2-ol	LC50 Inhalation Gas LC50 Inhalation LD50 Oral	Rat Rat Rat	8000 ppm 48500 mg/m^3 2054 mg/kg	4 hours - 4 hours
Trizinc bis(orthophosphate)	LD50 Oral	Rat	> 5000 mg/kg	-
n-butanol (dry basis)	LDLo Subcutaneous - LC50 Inhalation Vapor LD50 Dermal LD50 Oral	Rabbit Rat Rabbit Rat	3 g/kg 24000 mg/m^3 3400 mg/kg 790 mg/kg	- 4 hours - -

Product/ingredient name	Result	Species	Dose	Exposure
Iso-butanol	LC50 Inhalation Vapour LD50 Dermal LD50 Oral	Rat Rabbit Rat	19200 mg/m^3 3400 mg/kg 2460 mg/kg	4 hours - -
Xylene	LD50 Dermal LC50 Inhalation LD50 Oral	Rabbit Rat Rat	<2000 mg/kg <10.0 mg/l >2000 mg/kg	- 4 hours -
Solvent naphtha (petroleum), light aliph.	LD50 Dermal	Rabbit	3000 mg/kg	-
Acetone	LD50 Oral LC50 Inhalation LD50 Dermal	Rat Rat Rabbit	5800 mg/kg >20 mg/l 20000 mg/kg	- 4 hours -

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
n-butanol (dry basis)	Eyes - Irritation Skin - Irritation Skin - Irritation	Rabbit Rabbit Rabbit	- - -	24 hrs. 2 mg 0.005 mL 24 hrs. 20 mg	Severe irritant Severe irritant Moderate irritant
Propan-1-ol	Eyes - Irritation Skin - Irritation Skin - Irritation Skin - Irritation	Rabbit Human Human Human	- - - -	24 hrs. 20 mg 47 hrs. 100 % 24 hrs. 100 % 500 mg	Moderate irritant Mild irritant Mild irritant Mild irritant
Butan-2-ol	Eyes - Irritation Eyes - Irritation Skin - Irritation	Rabbit Rabbit Rabbit	- - -	0.1 mL 24 hrs. 20 mg 24 hrs. 20 mg	Severe irritant Moderate irritant Moderate irritant
Solvent naphtha (petroleum), light arom.	Skin - Mild irritant Eye - Mild irritant	Rabbit Rabbit	- Primary Irritation Index: 0.5 <3. Draize score: 6 <15 or less.	- -	Mild irritation Mild Irritation
Xylene	Skin - Irritation Eyes - Irritation	Rabbit Rabbit	- -	87 mg 100 %	Mild irritant Moderate irritant
Acetone	Eyes - Irritation Eyes – Irritation Eyes - Irritation Skin - Irritation Skin - Irritation	Rabbit Rabbit Rabbit Rabbit Rabbit	- - - - -	10 microliter 24 hours 20mg 20 mg 24 hours 500 mg 395 mg	Mild irritant Moderate irritant Severe irritant Mild irritant Mild irritant

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target Organs
n-butanol (dry basis)	Category 3	Not determined	Respiratory tract irritation and Narcotic effects
Iso-butanol	Category 3	Not determined	Respiratory tract irritation and Narcotic effects
Propan-1-ol	Category 3	Not determined	Respiratory tract irritation and Narcotic effects
Butan-2-ol	Category 3	Not determined	Respiratory tract irritation and Narcotic effects
Solvent naphtha (petroleum), light arom.	Category 3	Not determined	Not determined
Acetone	Category 3	Not determined	Not determined

Specific target organ toxicity (repeated exposure)
No data available

Aspiration hazard

Name	Result
Solvent naphtha (petroleum), light aliph.	ASPIRATION HAZARD - Category 1
Solvent naphtha (petroleum), light arom.	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 damage.
Inhalation : Harmful if inhaled. May cause respiratory irritation. May cause drowsiness or dizziness.
Skin contact : Harmful in contact with skin.
Ingestion : 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 : No known significant effects or critical hazards.
Carcinogenicity : May cause cancer. Risk of cancer depends on duration and level of exposure.
Mutagenicity : May cause genetic defects.
Teratogenicity : Suspected of damaging the unborn child.
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 LC50 8.1 mg/l Acute EC 6.00 mg/l Acute EC50 9.4 mg/l	Fish Salmon Aquatic - Daphnia magna Algae - Green algae	96 hours 48 hours 8 hours
Propan-1-ol	Acute EC50 3200000 Acute EC50 4480000 ug/L Acute LC50 1000000 ug/L Acute LC50 2950000 ug/L Acute LC50 3000000	Algae - Selenastrum sp. Algae - Selenastrum sp. Crustaceans - Gammarus pulex Aquatic - Daphnia pulex - <1 days Fish - Alburnus alburnus - 8 cm	72 hours 96 hours 48 hours 48 hours 96 hours
Butan-2-ol	Acute EC50 4227000 ug/L Acute LC50 3670000 ug/L	Aquatic - Daphnia magna - 6 - 24 hrs. Fish - Pimephales promelas	48 hours 96 hours
Trizinc bis(orthophosphate)	Acute EC50 > 1.08 mg/l Acute LC50 0.09 mg/l	Water flea - Daphnia magna Fish - Oncorhynchus mykiss	48 hours 96 hours
n-butanol (dry basis)	Acute EC50 1983000 Acute LC50 100 - 500 mg/L	Aquatic - Daphnia magna 6-24 hrs. Fish - Lepomis macrochirus - 0.1 g	48 hours 96 hours
Xylene	Acute LC/EC50 8.05 mg/l Acute LC/EC50 >1 mg/l Acute LC/EC50 >45 mg/l	Fish - Rainbow trout Aquatic - Daphnia magna Algae - Green algae	96 hours 48 hours 3 hours
Acetone	Acute LC50 5540 mg/l Acute LC50 8300 mg/l Acute LC50 8120 mg/l Acute LC50 10 mg/l Acute EC50 >100 mg/l	Fish Oncorhynchus mykiss Fish Bluegill sunfish Fish Pimephales promelas Aquatic Daphnia magna Algae Pseudokirchneriella	96 hours 96 hours 96 hours 96 hours 24 hours

Persistence and degradability

Product/Ingredient name	Aquatic half-life	Photolysis	Biodegradability
Toluene	Water solubility: 500 mg/l at 20°C	-	Readily
Propan-1-ol	Fresh water 3 to 31 days	2.9 days	Readily
n-butanol (dry basis)	Fresh water 2 to 29 days	2 days	Readily
Xylene	Fresh water <28 days	1 to 2 day(s)	-
Solvent naphtha (petroleum), light aliph.	-	-	Readily
Acetone	Fresh water 5 days	-	Readily

Bioaccumalitive potential

Product/Ingredient name	$LogP_{ow}$	BCF	Potential
Toluene	-	<100	-
Propan-1-ol	0.25	3	Low
n-butanol (dry basis)	0.9	3	Low
Xylene	3.12	20	Low
Iso-butanol	0.8	-	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. 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	No	No	No
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 : 08/08/2019
Date of previous issue : 01/11/2017
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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