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FLINTS
Theatrical Chandlers

SAFETY DATA SHEET – FLINTS ETCH PRIMER

1. IDENTIFCATION OF SUBSTANCE/PREPARATION & COMPANY

Product Name / Code:	Flints Rapid One-Pack Etch Primer / PAT115 / PAT116
REACH Key Notes:	N/A
Application of Substance:	Suitable for stoving or air-drying applications to ferrous and nonferrous metals that have been cleaned. Its main purpose, as with other etch primers, is to improve the adhesion of subsequent coats and so it should be recoated as soon as possible if being exposed to a damp environment. It can be applied by conventional spray, airless spray, hot spray, or brush.
Company:	Flints Theatrical Chandlers Ltd Unit 9 Deptford Trading Estate Blackhorse Road SE8 5HY
Telephone:	+44 (0) 20 7703 9786
Email:	sales@flints.co.uk

Telephone operated from 08:30 – 17:30 Monday to Friday, 09:00 – 14:00 Saturday.
In an emergency, seek advice from a medical professional.

2. HAZARDS IDENTIFICATION

Physical Hazards:	Flam. Liq. 3 - H226
Health Hazards:	Acute Tox. 4 - H302 Skin Irrit. 2 - H315 Eye Dam. 1 - H318 STOT SE 3 - H335, H336 STOT SE 3 - H335, H336
Environmental Hazards:	Aquatic Chronic 2 - H411 The product contains a substance which is toxic to aquatic organisms and which may cause long term adverse effects in the aquatic environment.
Classification 67/548/EEC or 1999/45/EC):	Xn; R22. Xi; R41, R37/38. N; R51/53. R10, R67
Physicochemical:	Heating may generate flammable vapours. Vapours may form explosive mixtures with air.
Pictogram (Label Elements):	
Signal Word:	Danger
Hazard Statements:	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.
H411 Toxic to aquatic life with long lasting effects.

Precautionary Statements:

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P332+P313 If skin irritation occurs: Get medical advice/ attention.
P501 Dispose of contents/ container in accordance with national regulations.

Contains:

BUTANOL-norm, PROPAN-2-OL, 1-METHOXY-2-PROPANOL, ISO-BUTANOL, PHENOL.

Supplementary Precautions:

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P240 Ground/ bond container and receiving equipment.
P241 Use explosion-proof electrical equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P261 Avoid breathing vapour/ spray.
P264 Wash contaminated skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P273 Avoid release to the environment.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
P302+P352 IF ON SKIN: Wash with plenty of water.
P312 Call a POISON CENTER/ doctor if you feel unwell.
P321 Specific treatment (see medical advice on this label).
P330 Rinse mouth.
P362+P364 Take off contaminated clothing and wash it before reuse.
P370+P378 In case of fire: Use foam, carbon dioxide, dry powder or water fog to extinguish. P391 Collect spillage.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Mixture	Identification	Classification	Classification (67/548/EEC or 1999/45/EC)
BUTANOL-norm 30-60%	CAS number: 71-36-3 EC number: 200-751-6	Flam. Liq. 3 - H226 Acute Tox. 4 - H302 Skin Irrit. 2 - H315 Eye Dam. 1 - H318 STOT SE 3 - H335, H336	R10 Xn;R22 Xi;R37/38,R41 R67
PROPAN-2-OL 10-30%	CAS number: 67-63-0 EC number: 200-661-7	Flam. Liq. 2 - H225 Eye Irrit. 2 - H319 STOT SE 3 - H336	F;R11 Xi;R36 R67
1-METHOXY-2-PROPANOL 10-30%	CAS number: 107-98-2 EC number: 203-539-1	Flam. Liq. 3 - H226 Acute Tox. 4 - H312 STOT SE 3 - H336	R10 R67
TRIZINC BIS(ORTHOPHOSPHATE) 1-5%	CAS number: 7779-90-0	Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410	N;R50/53

	EC number: 231-944-3 M factor (Acute) = 1 M factor (Chronic) = 1		
ISO-BUTANOL 1-5%	CAS number: 78-83-1 EC number: 201-148-0	Flam. Liq. 3 - H226 Skin Irrit. 2 - H315 Eye Dam. 1 - H318 STOT SE 3 - H335, H336	R10 Xi;R37/38,R41 R67
ZINC OXIDE <1%	CAS number: 1314-13-2 EC number: 215-222-5 M factor (Acute) = 1 M factor (Chronic) = 1	Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410	N;R50/53
PHENOL <1%	CAS number: 108-95-2 EC number: 203-632-7	Acute Tox. 3 - H301 Acute Tox. 3 - H311 Acute Tox. 3 - H331 Skin Corr. 1B - H314 Eye Dam. 1 - H318 Muta. 2 - H341 STOT RE 2 - H373	Muta. Cat. 3;R68 T;R23/24/25 C;R34 Xn;R48/20/21/22

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

4. FIRST AID MEASURES

General: Move affected person to fresh air at once. Get medical attention if any discomfort continues.

Eyes: **Rinse immediately with plenty of water.** Remove any contact lenses and open eyelids wide apart. Get medical attention. Show this Safety Data Sheet to the medical personnel. May cause permanent damage if eye is not immediately irrigated.

Skin: Remove affected person from source of contamination. Remove contaminated clothing. Wash skin thoroughly with soap and water. Get medical attention promptly if symptoms occur after washing.

Ingestion: Never give anything by mouth to an unconscious person. **Do not induce vomiting**. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Give plenty of water to drink. Get medical attention immediately. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing.

Inhalation: **Move affected person to fresh air at once.** Get medical attention. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media: Extinguish with the following media: Foam. Dry chemicals, sand, dolomite etc.

Specific Hazards: The product is flammable. Heating may generate flammable vapours. Thermal decomposition or combustion products may include the following substances: Toxic gases or vapours.

Firefighting Protective Actions: Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Cool containers exposed to flames with water until well after the fire is out.

Special Protective Equipment: Firefighters: Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Wear protective clothing as described in Section 8 of this safety data sheet.

Environmental Precautions: Avoid discharge into drains or watercourses or onto the ground.

Methods for Cleaning Up: Eliminate all sources of ignition. No smoking, sparks, flames or other sources of ignition near spillage. Provide adequate ventilation. Absorb spillage with non-combustible, absorbent material. Collect and place in suitable waste disposal containers and seal securely. For waste disposal, see Section 13. Avoid the spillage or runoff entering drains, sewers or watercourses.

7. HANDLING AND STORAGE

Usage Precautions: Keep away from heat, sparks and open flame. Avoid spilling. Avoid contact with skin and eyes. Provide adequate ventilation. Avoid inhalation of vapours. Use approved respirator if air contamination is above an acceptable level.

Storage Precautions: Keep away from oxidising materials, heat and flames. Store in tightly closed original container in a dry, cool and well-ventilated place. Keep only in the original container.

Storage Class: Flammable liquid storage.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

Occupational Exposure Limits:

BUTANOL-norm
Long-term exposure limit (8-hour TWA): WEL
Short-term exposure limit (15-minute): WEL 50 ppm(Sk) 154 mg/m^3(Sk)

PROPAN-2-OL
Long-term exposure limit (8-hour TWA): WEL 400 ppm 999 mg/m^3
Short-term exposure limit (15-minute): WEL 500 ppm 1250 mg/m^3

1-METHOXY-2-PROPANOL
Long-term exposure limit (8-hour TWA): WEL 100 ppm(Sk) 375 mg/m^3(Sk)
Short-term exposure limit (15-minute): WEL 150 ppm(Sk) 560 mg/m^3(Sk)

ISO-BUTANOL
Long-term exposure limit (8-hour TWA): WEL 50 ppm 154 mg/m^3
Short-term exposure limit (15-minute): WEL 75 ppm 231 mg/m^3
WEL = Workplace Exposure Limit

BUTANOL-norm (CAS: 71-36-3):

DNEL:

Workers - Inhalation; Long term local effects: 310 mg/m^3
Consumer - Oral; Long term systemic effects: 3.125 mg/kg/day
Consumer - Inhalation; Long term local effects: 55 mg/m^3

PNEC:
- Fresh water; 0.082 mg/
- Marine water; 0.0082 mg/l
- Intermittent release; 2.25 mg/l
- STP; 2476 mg/l
- Sediment (Freshwater); 0.178 mg/kg
- Sediment (Marinewater); 0.0178 mg/kg
- Soil; 0.015 mg/kg

PROPAN-2-OL (CAS: 67-63-0):

DNEL:
Industry - Dermal; Long term systemic effects: 888 mg/kg/day
Industry - Inhalation; Long term systemic effects: 500 mg/m^3
Consumer - Dermal; Long term systemic effects: 319 mg/kg/day
Consumer - Oral; Long term systemic effects: 26 mg/kg/day
Consumer - Inhalation; Long term systemic effects: 89 mg/m^3

PNEC:
- Fresh water, Marine water, Intermittent release; 140.9 mg/
- Sediment (Freshwater), Sediment (Marinewater); 552 mg/kg
- STP; 2251 mg/l
- Soil; 28 mg/kg

1-METHOXY-2-PROPANOL (CAS: 107-98-2):

DNEL:
Industry - Inhalation; Short term local effects: 553.5 mg/m^3
Industry - Dermal; Long term systemic effects: 50.6 mg/kg/day
Industry - Inhalation; Long term systemic effects: 369 mg/m^3
Consumer - Dermal; Long term systemic effects: 18.1 mg/kg/day
Consumer - Inhalation; Long term systemic effects: 43.9 mg/m^3
Consumer - Oral; Long term systemic effects: 3.3 mg/kg/day

PNEC:
- Fresh water; 10 mg/
- Marine water; 1 mg/l
- STP; 100 mg/l
- Sediment (Freshwater); 41.6 mg/kg
- Sediment (Marinewater); 4.17 mg/kg
- Soil; 2.47 mg/kg
- Intermittent release; 100 mg/l

TRIZINC BIS(ORTHOPHOSPHATE) (CAS: 7779-90-0):

DNEL:
Workers - Inhalation; Long term systemic effects: 5 mg/m^3
Workers - Dermal; Long term systemic effects: 83 mg/kg/day
Consumer - Dermal; Long term systemic effects: 83 mg/kg/day
Consumer - Inhalation; Long term systemic effects: 2.5 mg/m^3
Consumer - Oral; Long term: 0.83 mg/kg/day

PNEC:
- Fresh water; 0.0206 mg/
- Marine water; 0.0061 mg/l
- Sediment (Freshwater); 117.8 mg/kg
- Sediment (Marinewater); 56.5 mg/kg
- Soil; 35.6 mg/kg
- STP; 0.1 mg/l

ISO-BUTANOL (CAS: 78-83-1):

DNEL:	Workers - Inhalation; Long term local effects: 310 mg/m^3 Consumer - Inhalation; Long term local effects: 55 mg/m^3 Consumer - Oral; Long term local effects: 25 mg/kg
PNEC:	- Fresh water; 0.4 mg/ - Marine water; 0.04 mg/l - Intermittent release; 11 mg/l - Sediment (Freshwater); 1.52 mg/kg - Sediment (Marinewater); 0.152 mg/kg - Soil; 0.0699 mg/kg - STP; 10 mg/l

ZINC OXIDE (CAS: 1314-13-2):

DNEL:	Workers - Inhalation; Long term systemic effects: 5 mg/m^3 Workers - Dermal; Long term systemic effects: 83 mg/kg/day Consumer - Dermal; Long term systemic effects: 83 mg/kg/day Consumer - Inhalation; Long term systemic effects: 2.5 mg/m^3 Consumer - Oral; Long term: 0.83 mg/kg/day
PNEC:	- Fresh water; 0.0206 mg/ - Marine water; 0.0061 mg/l - Sediment (Freshwater); 117.8 mg/kg - Sediment (Marinewater); 56.5 mg/kg - Soil; 35.6 mg/kg - STP; 0.1 mg/l

Exposure Controls:

Protective Equipment:

Appropriate Engineering Controls:	Provide adequate general and local exhaust ventilation.
Eye/Face Protection:	The following protection should be worn: Chemical splash goggles.
Hand Protection:	Use protective gloves.
Other Skin and Body Protection:	Wear appropriate clothing to prevent any possibility of liquid contact and repeated or prolonged vapour contact. Provide eyewash station.
Hygiene Measures:	**DO NOT SMOKE IN WORK AREA!** Wash at the end of each work shift and before eating, smoking and using the toilet. Promptly remove any clothing that becomes contaminated. Wash promptly with soap and water if skin becomes contaminated. Use appropriate skin cream to prevent drying of skin. When using do not eat, drink or smoke.
Respiratory Protection:	If ventilation is inadequate, suitable respiratory protection must be worn. Wear a respirator fitted with the following cartridge: Organic vapour filter.

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9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Liquid
Odour:	Alcoholic
Boiling Point and Range:	82 – 119 @ ºC @ 760 mm Hg
Flash Point:	24°C CC (Closed cup)
Flammability or explosive limits:	Lower flammable/explosive limit: 0.8
Vapour Density:	>1
Relative Density:	0.84 - 0.96 @ 20°C (room temperature)
Solubility:	Slightly soluble in water
Viscosity:	100 - 150 cP @ 25°C
Volatility:	88
Volatile Organic Compound:	This product contains a maximum VOC content of <700 g/litre

10. STABILITY AND REACTIVITY

Chemical Stability:	Stable at normal ambient temperatures.
Conditions to Avoid:	Avoid heat. Avoid contact with the following materials: Strong oxidising agents.
Hazardous Decomposition Products:	Oxides of carbon. Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours.

11. TOXICOLOGICAL INFORMATION

Acute toxicity – oral:	ATE oral (mg/kg) 1,225.92287474
Acute toxicity – dermal:	ATE dermal (mg/kg) 11,761.0161518
Acute toxicity – inhalation:	ATE inhalation (gases ppm) 187,768.24034335 ATE inhalation (vapours mg/l) 804.72103004 ATE inhalation (dusts/mists mg/l) 134.12017167
Inhalation:	Vapours irritate the respiratory system. May cause coughing and difficulties in breathing. Vapours in high concentrations are narcotic. Symptoms following overexposure may include the following: Headache. Fatigue. Dizziness. Nausea, vomiting.
Ingestion:	Harmful if swallowed. May cause nausea, headache, dizziness and intoxication.
Skin Contact:	Prolonged or repeated exposure may cause severe irritation.
Eye Contact:	Severe irritation, burning and tearing. Risk of serious damage to eyes.
Target Organs:	Skin Eyes Respiratory system, lungs.

Toxicological information on ingredients:

	PROPAN-2-OL	1-METHOXY-2-PROPANOL	TRIZINC BIS(ORTHOPHOSPHATE)	ZINC OXIDE
Acute toxicity oral	(LD_{50} mg/kg): 5,840.0 Species: Rat	(LD_{50} mg/kg): 4,016.0 Species: Rat ATE oral (mg/kg): 4,016.0	(LD_{50} mg/kg): 5,000.0 Species: Rat ATE oral (mg/kg): 5,000.0	(LD_{50} mg/kg): 15,000.0 Species: Rat ATE oral (mg/kg): 15,000
Acute toxicity dermal	(LD_{50} mg/kg): 16.4 Species: Rabbit	(LD_{50} mg/kg): 2,000.0 Species: Rabbit ATE dermal (mg/kg): 2,000.0	N/A	N/A
Acute toxicity inhalation	(LC_{50} vapours mg/l): 10.0 Species: Rat	N/A	(LC_{50} dust/mist mg/l): 5.7 Species: Rat ATE inhalation (dusts/mists mg/l): 5.7	(LC_{50} dust/mist mg/l): 5.7 Species: Rat ATE inhalation (dusts/mists mg/l): 5.7

12. ECOLOGICAL INFORMATION

The product contains a substance which is toxic to aquatic organisms and which may cause long term adverse effects in the aquatic environment.

Ecological information on ingredients:

Acute Toxicity - BUTANOL-norm:

Fish: LC_{80}, 96 hours: 1000 mg/l, Algae
LC_{80}, 96 hours: 1740 mg/l, Pimephales promelas (Fat-head Minnow)
Aquatic Invertebrates: EC_{50}, 48 hours: 1983 mg/l, Daphnia magna
Aquatic Plants: EC_{50}, 72 hours: >500 mg/l, Fish

Acute toxicity - PROPAN-2-OL:

Fish: LC_{80}, 96 hours: 9640 mg/l, Pimephales promelas (Fat-head Minnow)
Aquatic Invertebrates: EC_{50}, 24 hours: >1000 , Daphnia magna
Aquatic Plants: EC_{50}, 72 hours: >1000 mg/l, Scenedesmus subspicatus
Microorganisms: EC_{50}, : >1000 mg/l, Activated sludge

Acute toxicity - 1-METHOXY-2-PROPANOL:

Fish: LC_{50}, 96 hours: 6812 mg/l, Leuciscus idus (Golden orfe)
Aquatic Invertebrates: EC_{50}, 48 hours: >21100 mg/l, Daphnia magna
Aquatic Plants: EC_{50}, 7 days: >1000 mg/l, Scenedesmus subspicatus
Microorganisms: EC_{50}, 3 hours: >1000 mg/l, Activated sludge

Acute toxicity - TRIZINC BIS(ORTHOPHOSPHATE):

Acute Aquatic Toxicity: $LE(C)_{50}$: 0.1 < L(E)C50 ≤ 1, M factor (Acute): 1
Chronic Aquatic Toxicity: NOEC: 0.01 < NOEC ≤ 0.1, Non-rapidly degradable, M factor (Chronic):1

Acute toxicity - ISO-BUTANOL

Fish: LC_{80}, 96 hours: 1120 - 1520 mg/l, Onchorhynchus mykiss (Rainbow trout)
LC_{80}, 96 hours: 1370 - 1670 mg/l, Pimephales promelas (Fat-head Minnow)
LC_{80}, 96 hours: 1480 - 1730 mg/l, Lepomis macrochirus (Bluegill)
Aquatic Invertebrates: EC_{50}, 48 hours: 1300 mg/l, Daphnia magna

Acute toxicity – ZINC OXIDE

Acute Aquatic Toxicity:	LE(C)$_{50}$: 0.1 < L(E)C50 ≤ 1, M factor (Acute): 1
Chronic Aquatic Toxicity:	NOEC: 0.01 < NOEC ≤ 0.1, Non-rapidly degradable, M factor (Chronic):1

Acute toxicity – PHENOL

Fish:	LC_{80}, 96 hours: 11.9 - 25.3 mg/l, Lepomis macrochirus (Bluegill)
	LC_{50}, 96 hours: 24.5 mg/l, Pimephales promelas (Fat-head Minnow)
	LC_{50}, 96 hours: 33.9 - 43.3 mg/l, Oryzias latipes (Red killifish)
	LC_{50}, 96 hours: 34.09 - 47.64 mg/l, Poecilia reticulata (Guppy)
	LC_{50}, 96 hours: 8.9 mg/l, Onchorhynchus mykiss (Rainbow trout)
	LC_{50}, 96 hours: 27.8 mg/l, Brachydanio rerio (Zebra Fish)
Aquatic Invertebrates:	LC_{50}, 48 hours: 10.2 - 15.5 mg/l, Daphnia magna
Aquatic Plants:	EC_{50}, 72 hours: 187 - 279 mg/l, Desmodesmus subspicatus
	EC_{50}, 96 hours: 46.42 mg/l, Pseudokirchneriella subcapitata
Biodegradation:	PROPAN-2-OL: - Degradation 95%: 21 days
	1-METHOXY-2-PROPANOL: - Degradation 96: 28 days
Partition Coefficient:	PROPAN-2-OL: log Pow: 0.05
	1-METHOXY-2-PROPANOL: log Kow: -0.43
Adsorption/Desorption Coefficient:	PROPAN-2-OL: Water - Kow: ~ 1.1 @ °C
	1-METHOXY-2-PROPANOL: Water - : ~ 0.6 @ °C
Henry's Law Constant:	PROPAN-2-OL: .00000338 atm m^3/mol @ 25°C
	1-METHOXY-2-PROPANOL: ~ 0.0000014 atm m^3/mol @ °C

This product does not contain any substances classified as PBT or vPvB.

13. DISPOSAL INFORMATION

Waste should be treated as controlled waste. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

14. TRANSPORT INFORMATION

UN Number (ADR/RID/IMDG/ICAO):	1263
Proper Shipping Name (ADR/RID):	PAINT (TRIZINC BIS(ORTHOPHOSPHATE)*2-4H20)
Proper Shipping Name (IMDG):	PAINT (TRIZINC BIS(ORTHOPHOSPHATE)*2-4H20)
Proper Shipping Name (ICAO):	PAINT (TRIZINC BIS(ORTHOPHOSPHATE)*2-4H20)
Proper Shipping Name (ADN):	PAINT (TRIZINC BIS(ORTHOPHOSPHATE)*2-4H20)
Transport Hazard Classes:	(ADR/RID/IMDG/ICAO): 3
Transport Labels:	
Packing Group (ADR/RID/IMDG/ICAO):	3
Environmentally Hazardous Substance / Marine Pollutant:	

Special Precautions for User:	EmS: F-E, S-E Emergency Action Code: 3YE Hazard Identification Number (ADR/RID): 30 Tunnel Restriction Code: (D/E)

15. REGULATORY INFORMATION

National Regulations:	The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (SI 2009 No. 716). Control of Substances Hazardous to Health Regulations 2002 (as amended).
EU Legislation:	Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).
Guidance:	Approved Classification and Labelling Guide (Sixth edition) L131.

16. OTHER INFORMATION

This data sheet is provided under CLP and REACH Regulation and is not intended to constitute an assessment of work place risk associated with product(s) used as required under any other Health and Safety Regulation.

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Revision:	**5**

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