Safety Data Sheet

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name: **ISOCURE X16**

Recommended Use of the Chemical and Restrictions on Use Foundry. Production of moulds and cores. Binder.

Supplier: Ixom Operations Pty Ltd (Incorporated in Australia)
NZBN: 9429041465226
Street Address: 166 Totara Street
Mt Maunganui South
New Zealand

Telephone Number: +64 9 368 2700
Facsimile: +64 9 368 2710
Emergency Telephone: **0 800 734 607 (ALL HOURS)**

Please ensure you refer to the limitations of this Safety Data Sheet as set out in the "Other Information" section at the end of this Data Sheet.

2. HAZARDS IDENTIFICATION

Classified as a Dangerous Good according to NZS 5433:2012 Transport of Dangerous Goods on Land.

Classified as hazardous according to criteria in the Hazardous Substances (Minimum Degrees of Hazard) Notice 2017 and the Hazardous Substances (Classification) Notice 2017.

SIGNAL WORD: DANGER

Subclasses:
Subclass 3.1 Category C (medium hazard) - Flammable Liquids.
Subclass 6.1 Category D - Substances which are acutely toxic.
Subclass 6.1 Category E (respiratory tract irritant) - Substances that are respiratory tract irritants.
Subclass 6.6 Category B - Substances that are suspected human mutagens.
Subclass 6.9 Category B (Narcotic effects) - Substances that are narcotic.
Subclass 8.2 Category B - Substances that are corrosive to dermal tissue.
Subclass 8.3 Category A - Substances that are corrosive to ocular tissue.
Subclass 9.1 Category B - Substances that are ecotoxic in the aquatic environment.

Additives, Process Chemicals and Raw Materials (Flammable, Corrosive) Group Standard 2017
Approval Number: HSR002496

Hazard Statement(s):
H226 Flammable liquid and vapour.
H302+H312+H332 Harmful if swallowed, in contact with skin or if inhaled.
H314 Causes severe skin burns and eye damage.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.
H341 Suspected of causing genetic defects.
H411 Toxic to aquatic life with long lasting effects.

Precautionary Statement(s):

Prevention:
P102 Keep out of reach of children.
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 tightly closed.
P240 Ground/bond container and receiving equipment.
P241 Use explosion-proof electrical/ventilating/lighting equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P260 Do not breathe mist/vapours/spray.
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.
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P281 Use personal protective equipment as required.

Response:
P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P321 Specific treatment (see First Aid Measures on the Safety Data Sheet).
P363 Wash contaminated clothing before re-use.
P304+P340 IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
P312 Call a POISON CENTER or doctor/physician if you feel unwell.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER or doctor/physician.
P308+P313 IF exposed or concerned: Get medical advice/attention.
P370+P378 In case of fire: Use extinguishing media as outlined in Section 5 of this Safety Data Sheet for extinction.
P391 Collect spillage.

Storage:
P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P403+P235 Store in a well-ventilated place. Keep cool.
P405 Store locked up.

Disposal:
P501 In case of a substance that is in compliance with a HSNO approval other than a Part 6A (Group Standards) approval, a label must provide a description of one or more appropriate and achievable methods for the disposal of a substance in accordance with the Hazardous Substances (Disposal) Notice 2017. This may also include any method of disposal that must be avoided.

3. COMPOSITION AND INFORMATION ON INGREDIENTS

Components	CAS Number	Proportion	Hazard Codes
Solvent naphtha (petroleum), light aromatic	64742-95-6	30-50%	H226 H304 H335 H336 H411
Phenol	108-95-2	<10%	H301 H311 H331 H314 H341 H373
n-Butyl alcohol	71-36-3	<3%	H226, H302, H315, H318, H335, H336
Methanol (methyl alcohol)	67-56-1	<1%	H225 H331 H311 H301 H370
Non hazardous component(s)	-	to 100%	-

4. FIRST AID MEASURES

For advice, contact a Poisons Information Centre (e.g. phone Australia 131 126; New Zealand 0800 764 766) or a doctor.

Inhalation:
Remove victim from area of exposure - avoid becoming a casualty. Remove contaminated clothing and loosen remaining clothing. Allow patient to assume most comfortable position and keep warm. Keep at rest until fully recovered. If patient finds breathing difficult and develops a bluish discolouration of the skin (which suggests a lack of oxygen in the blood - cyanosis), ensure airways are clear of any obstruction and have a qualified person give oxygen through a face mask. Apply artificial respiration if patient is not breathing. Seek immediate medical advice.

Skin Contact:
If spilt on large areas of skin or hair, immediately drench with running water and remove clothing. Continue to wash skin and hair with plenty of water (and soap if material is insoluble) until advised to stop by the Poisons Information Centre or a doctor.

Eye Contact:
Immediately wash in and around the eye area with large amounts of water for at least 15 minutes. Eyelids to be held apart. Remove clothing if contaminated and wash skin. Urgently seek medical assistance. Transport promptly to hospital or medical centre.

Ingestion:
Rinse mouth with water. If swallowed, do NOT induce vomiting. Give a glass of water. Seek immediate medical assistance.

Indication of immediate medical attention and special treatment needed:
Treat symptomatically. Can cause corneal burns. There is aspiration risk associated with this material. Delayed pulmonary oedema may result. Inhalation of high concentrations may be associated with cardiac arrhythmias. Sympathomimetic drugs may initiate cardiac arrhythmias in persons exposed to this material.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media:
Normal foam, dry agent (carbon dioxide, dry chemical powder). Sand.

Unsuitable Extinguishing Media:
Water jet.

Hazchem or Emergency Action Code: 3W

Specific hazards arising from the chemical:
Flammable liquid. Avoid all ignition sources. Flameproof equipment is necessary in all areas where this chemical is being used. Nearby equipment must be earthed. Corrosive chemical. Environmentally hazardous.

Special protective equipment and precautions for fire-fighters:
On burning will emit toxic fumes, including those of oxides of carbon , hydrocarbons . Fire fighters to wear self-contained breathing apparatus and suitable protective clothing if risk of exposure to vapour or products of combustion. Heating can cause expansion or decomposition of the material, which can lead to the containers exploding. If safe to do so, remove containers from the path of fire. Keep containers cool with water spray.

6. ACCIDENTAL RELEASE MEASURES

Emergency procedures/Environmental precautions:
Shut off all possible sources of ignition. Clear area of all unprotected personnel. Do not allow container or product to get into drains, sewers, streams or ponds. If contamination of sewers or waterways has occurred advise local emergency services.

Personal precautions/Protective equipment/Methods and materials for containment and cleaning up: Slippery when spilt. Avoid accidents, clean up immediately. Wear protective equipment to prevent skin and eye contact and breathing in vapours. Work up wind or increase ventilation. Contain - prevent run off into drains and waterways. Use absorbent (soil, sand or other inert material). Collect and seal in properly labelled containers or drums for disposal. Use non-sparking tools.

7. HANDLING AND STORAGE

Precautions for safe handling: Avoid skin and eye contact and breathing in vapour. Keep out of reach of children. Take precautionary measures against static discharges. Wash hands before breaks and at the end of the work day. Launder contaminated clothing before reuse.

Conditions for safe storage, including any incompatibilities: Store in a cool, dry, well ventilated place. Store away from sources of heat or ignition. Store away from foodstuffs. Store away from incompatible materials described in Section 10. Keep containers closed when not in use - check regularly for leaks.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Workplace Exposure Standards: No value assigned for this specific material by the New Zealand Workplace Health & Safety Authority. However, Workplace Exposure Standard(s) for constituent(s):

n-Butyl alcohol: Ceiling 50 ppm, 150 mg/m^3, skin
Methyl alcohol: WES-TWA 200 ppm, 262 mg/m^3; WES-STEL 250 ppm, 328 mg/m^3, skin, bio, BEI 15mg/L (in urine)
Phenol: WES-TWA 1 ppm, 4 mg/m^3, skin

As published by the New Zealand Workplace Health & Safety Authority.

WES - TWA (Workplace Exposure Standard - Time Weighted Average) - The eight-hour, time-weighted average exposure standard is designed to protect the worker from the effects of long-term exposure.

WES - STEL (Workplace Exposure Standard - Short Term Exposure Limits) - The 15 minute average exposure standard. Applies to any 15 minute period in the working day and is designed to protect the worker against adverse effects of irritation, chronic or irreversible tissue change, or narcosis that may increase the likelihood of accidents. The WES-STEL is not an alternative to the WES-TWA; both short-term and eight-hour, time-weighted average exposures should be determined.

WES - Ceiling (Workplace Exposure Standard - Ceiling). A concentration that should not be exceeded during any part of the working day.

`Skin' Notice - absorption through the skin may be a significant source of exposure. The exposure standard is invalidated if such contact should occur.

'bio' - Biological Exposure Index.

These Workplace Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. These workplace exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.

Appropriate engineering controls:
Ensure ventilation is adequate and that air concentrations of components are controlled below quoted Workplace Exposure Standards. Vapour heavier than air - prevent concentration in hollows or sumps. DO NOT enter confined spaces where vapour may have collected. Keep containers closed when not in use.

If in the handling and application of this material, safe exposure levels could be exceeded, the use of engineering controls such as local exhaust ventilation must be considered and the results documented. If achieving safe exposure levels does not require engineering controls, then a detailed and documented risk assessment using the relevant Personal Protective Equipment (PPE) (refer to PPE section below) as a basis must be carried out to determine the minimum PPE requirements.

Individual protection measures, such as Personal Protective Equipment (PPE):
The selection of PPE is dependent on a detailed risk assessment. The risk assessment should consider the work situation, the physical form of the chemical, the handling methods, and environmental factors.

OVERALLS, CHEMICAL GOGGLES, RUBBER BOOTS, AIR MASK , GLOVES (Long), APRON.
* Not required if wearing air supplied mask.

Wear overalls, chemical goggles, full face shield, elbow-length impervious gloves, splash apron or equivalent chemical impervious outer garment, and rubber boots. Use with adequate ventilation. If determined by a risk assessment an inhalation risk exists, wear an air-supplied mask meeting the requirements of AS/NZS 1715 and AS/NZS 1716. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Liquid
Colour:	Tan
Odour:	Aromatic
Solubility:	Slightly miscible with water.
Specific Gravity:	1.04-1.07 @20°C
Relative Vapour Density (air=1):	>1
Vapour Pressure (20 °C):	9.3 hPa @25°C for solvents
Flash Point (°C):	41-49 (Closed cup)
Flammability Limits (%):	1%(V)-11.3%(V) for solvents
Autoignition Temperature (°C):	Not available
Boiling Point/Range (°C):	>117
pH:	Not available
Viscosity:	>20.5 mm2/s @40°C (Kinematic)

10. STABILITY AND REACTIVITY

Reactivity:	Reacts exothermically with isocyanates.
Chemical stability:	Stable if stored and handled under recommended conditions.
Possibility of hazardous reactions:	Hazardous polymerisation will not occur. Vapours may form explosive mixture with air.

Conditions to avoid:	Avoid aerosol formation. Avoid exposure to heat, sources of ignition, and open flame. Avoid exposure to direct sunlight.
Incompatible materials:	Incompatible with strong oxidising agents , strong alkalis , strong mineral acids , 1,3-butadiene , aluminium , copper , copper alloys , halogenated hydrocarbons , halogens , iron , lead , magnesium , zinc , alkali metals .
Hazardous decomposition products:	Oxides of carbon. Hydrocarbons.

11. TOXICOLOGICAL INFORMATION

No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label. Symptoms or effects that may arise if the product is mishandled and overexposure occurs are:

Ingestion:	Swallowing can result in nausea, vomiting, diarrhoea, abdominal pain and chemical burns to the gastrointestinal tract.
Eye contact:	A severe eye irritant. Corrosive to eyes; contact can cause corneal burns. Contamination of eyes can result in permanent injury.
Skin contact:	Contact with skin will result in severe irritation. Corrosive to skin - may cause skin burns. May cause skin sensitisation in sensitive individuals. Repeated or prolonged skin contact may lead to allergic contact dermatitis.
Inhalation:	Material is irritant to the mucous membranes of the respiratory tract (airways). Breathing in vapour can result in headaches, dizziness, drowsiness, and possible nausea. Breathing in high concentrations can produce central nervous system depression, which can lead to loss of co-ordination, impaired judgement and if exposure is prolonged, unconsciousness.

Acute toxicity:
Average Toxicity Estimate (ATE mix, oral): >300 - 2,000 mg/kg
Average Toxicity Estimate (ATE mix, dermal): >1,000 - 2,000 mg/kg
Average Toxicity Estimate (ATE mix, inhalation-vapour): >20 mg/L

Chronic effects: Pre-existing skin or respiratory tract allergy may increase the chance of developing increased allergy symptoms from exposure to this product.

Mutagenicity:	Suspected of causing genetic defects.
Aspiration hazard:	Not an aspiration hazard.

12. ECOLOGICAL INFORMATION

Ecotoxicity	Avoid contaminating waterways.
Persistence/degradability:	No information available.
Bioaccumulative potential:	Does not bioaccumulate.
Mobility in soil:	Mobile in soil and may contaminate groundwater.
Aquatic toxicity:	Toxic to aquatic organisms. May cause long lasting harmful effects to aquatic life.

13. DISPOSAL CONSIDERATIONS

Disposal methods:
Dispose of material through a licensed waste contractor. Advise flammable nature. Normally suitable for incineration by an approved agent.

14. TRANSPORT INFORMATION

Road and Rail Transport
Classified as a Dangerous Good according to NZS 5433:2012 Transport of Dangerous Goods on Land.

UN No:	2920
Transport Hazard Class:	8 Corrosive
Subrisk 1:	3 Flammable Liquid
Packing Group:	II
Proper Shipping Name or Technical Name:	CORROSIVE LIQUID, FLAMMABLE, N.O.S. (CONTAINS PHENOL AND SOLVENT NAPHTHA, PETROLEUM, LIGHT AROMATIC)
Hazchem or Emergency Action Code:	3W

Marine Transport
Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea; DANGEROUS GOODS.

UN No:	2920
Transport Hazard Class:	8 Corrosive
Subrisk 1:	3 Flammable liquid
Packing Group:	II
Proper Shipping Name or Technical Name:	CORROSIVE LIQUID, FLAMMABLE, N.O.S. (CONTAINS PHENOL AND SOLVENT NAPHTHA, PETROLEUM, LIGHT AROMATIC)
IMDG EMS Fire:	F-E
IMDG EMS Spill:	S-C

Air Transport
Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air; DANGEROUS GOODS.

UN No:	2920
Transport Hazard Class:	8 Corrosive
Subrisk 1:	3 Flammable Liquid
Packing Group:	II
Proper Shipping Name or Technical Name:	CORROSIVE LIQUID, FLAMMABLE, N.O.S. (CONTAINS PHENOL AND SOLVENT NAPHTHA, PETROLEUM, LIGHT AROMATIC)

15. REGULATORY INFORMATION

Classification:
Classified as hazardous according to criteria in the Hazardous Substances (Minimum Degrees of Hazard) Notice 2017 and the Hazardous Substances (Classification) Notice 2017.

Subclasses:
Subclass 3.1 Category C (medium hazard) - Flammable Liquids.
Subclass 6.1 Category D - Substances which are acutely toxic.
Subclass 6.1 Category E (respiratory tract irritant) - Substances that are respiratory tract irritants.
Subclass 6.6 Category B - Substances that are suspected human mutagens.
Subclass 6.9 Category B (Narcotic effects) - Substances that are narcotic.
Subclass 8.2 Category B - Substances that are corrosive to dermal tissue.
Subclass 8.3 Category A - Substances that are corrosive to ocular tissue.
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16. OTHER INFORMATION

Supplier Safety Data Sheet; 10/ 2016.
ISOCURE is a trademark of ASK Chemicals.

This safety data sheet has been prepared by Ixom Operations Pty Ltd Toxicology & SDS Services.

Reason(s) for Issue:
5 Yearly Revised Primary SDS
Change in Formulation
Change in Hazardous Chemical Classification
Change in Physical Properties

This SDS summarises to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. Since Ixom Operations Pty Ltd cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material.

If clarification or further information is needed, the user should contact their Ixom representative or Ixom Operations Pty Ltd at the contact details on page 1.

Ixom Operations Pty Ltd's responsibility for the material as sold is subject to the terms and conditions of sale, a copy of which is available upon request.