SAFETY DATA SHEET

ILUMITEX LACQUER TWO PACK WATER BASED (ACTIVATOR)

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY/UNDERTAKING

PRODUCT NAME: Ilumitex Lacquer Two Pack Water Based **(ACTIVATOR)**

COMPANY: Pittaway Special Coatings Ltd, 106-114 Flinton Street, Hull, HU3 4NA
TELEPHONE: 01482 329007
FAX: 01482 213053

2. COMPOSITION/INFORMATION ON INGREDIENTS

Hydrophilic aliphatic polyisocyanate.

Aliphatic polyisocyanate — % by weight: approx. 100
CAS No.: -- — azard Symbol: Xi
Index No.: -- — R-Phrase: 43
Threshold concentration for hazard symbol Xi = from 1%
(Classification according to definition principle)

Hexamethylene-1, 6-diisocyanate — % by weight: < 0,15
CAS No.: 822-06-0 — Hazard Symbol : T
Index No.: 615-011-00-1 — R-Phrase: 23-36/37/38-2/43
Threshold concentration for hazard symbol T = from 2.0%
Threshold concentration for hazard symbol XO = from 0.5%

3. HAZARDS IDENTIFICATION

Contains isocyanates – see section 15 for information.
May cause sensitisation by skin contact.

4. FIRST AID MEASURES

If the product contacts the eyes, rinse carefully and thoroughly with water and seek medical advice. In the event of skin contact, wipe off mechanically and wash affected areas thoroughly with soap and plenty of water. In case of irritation of the respiratory tract or swallowing, consult a doctor.

5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA: CO_2, foam, dry powder; in cases of larger fires, water spray should be used.

In the event of fire, carbon monoxide, nitrogen oxides, isocyanate vapor, and traces of hydrogen cyanide may be released. Firemen must wear self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

Do not empty into drains. Remove mechanically; cover the remainder with wet, absorbent material (e.g. sawdust, chemical binder based on calcium silicate hydrate, sand). After approx. one hour transfer to waste container and do not seal (evolution of CO_2!). Keep damp in a safe ventilated area for several days.

Further Disposal: Storage on approved landfill or special refuse dump, or by incineration.

7. HANDLING AND STORAGE

Keep container dry and tightly closed in a cool and well ventilated place. Further information on storage conditions, which must be observed to preserve quality, can be found in our product information sheet.

Ensure adequate ventilation or exhaust ventilation in the working area. Exhaust ventilation necessary if product is sprayed. Avoid contact with skin and eyes.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

For exposure controls see Chapter 15.

Wear suitable protective clothing, protective gloves (made of PVC or rubber) and protective goggles/mask. Respiratory protection required in insufficiently ventilated working areas and during spraying. An air-fed mask, or for short periods of work, a combination of charcoal filter and particulate filter is recommended.

In case of hypersensitivity of the respiratory tract (e.g. asthmatics and those who suffer from chronic bronchitis) it is inadvisable to work with the product.

Keep away from foodstuffs, drinks and tobacco. Wash hands before breaks and at end of work. Keep working clothes separate. Take off immediately all contaminated clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

FORM:	Liquid.	
COLOUR:	Yellowish.	
ODOUR:	Nearly odourless.	
SETTING POINT:	-15 ^{O}C	
INITIAL BOILING POINT:	>300 ^{O}C	
DENSITY:	approx. 1,16 g/cm^3 at 20^{o}C	DIN 53217
VAPOUR PRESSURE:	approx. 9 mbar at 50^{o}C	
Hexamethylene-1, 6-diisocyanate	0,014 mbar at 25^{o}C	
VISCOSITY:	approx. 3800 mPa.s at 23^{o}C	DIN 53019/1
SOLUBILITY IN WATER:	Insoluble; reacts as described in paragraph 10.	
pH VALUE:	Not applicable.	
FLASH POINT:	> 250^{o}C	DIN 53213
IGNITION TEMPERATURE:	465^{o}C	
EXPLOSIVE LIMITS:	Not applicable.	

10. STABILITY AND REACTIVITY

HAZARDOUS DECOMPOSITION PRODUCTS:	No hazardous decomposition products when stored and handled correctly.
HAZARDOUS REACTIONS:	Exothermic reaction with amines and alcohols; reacts slowly with water forming CO_2, in closed containers risk of bursting owing to increase of pressure.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity:
LD_{50} Oral, Rat: More than 2000 mg/kg.

Skin and mucous membrane compatibility, Rabbit:
Skin 4 hours exposure – slightly irritant.
Eyes – non-irritant.
(OECD-Guidelines for Testing of Chemicals, No. 404 and 405)

No pulmonary sensitization observed in animal tests:
No pulmonary sensitization potential was observed in the guinea pig model after either intradermal or inhalative induction with polyisocyanate based on hexamethylene disocyanate.

Skin sensitization according to Buehler (epicutaneous test):
In the guinea-pig the product did not show a sensitising effect
(OECD Guideline for Testing of Chemicals, No.406) (1997) *)

Skin sensitisation according to Magnusson/Kligmann (maximizing test):
In the guinea-pig the product has a sensitizing effect.
(OECD Guideline for Testing of Chemicals, No.406)

Salmonella/microsome test (Ames test):
No indication of mutagenic effects. *)

*) Toxicological studies of a comparable product.

Special Properties/Effects:
Over-exposure, especially during spraying operations without the necessary precautions, entails the risk of concentration-dependent irritating effects on eyes, nose, throat, and respiratory tract. Delayed appearance of the complaints and development of hypersensitivity (difficult breathing, coughing, asthma) are possible. Hypersensitive persons may suffer from these effects even at low isocyanate concentrations. Prolonged contact with the skin may cause tanning and irritating effects.

12. ECOLOGICAL INFORMATION

Biological Elimination Rate: 2% ; i.e. not readily degradable.
Test Method: Manometric respiration test.
Analysis Method: Directive 79/831/EEC.

Acute Fish Toxicity: LC_o = 1,8 mg/1
LC_{100} = 3,8 mg/1
Test Species: Brachydanio rerio (Zebra barbel) Duration of Test: 96 h
(LC_o/LC_{100} = 2,5 mg/1 calculated as geometric mean).
Acute Bacterial Toxicity: EC_{50} = 10000 mg/1.
(OECD Guideline for Testing of Chemicals, No.209).

As the compound is not readily biodegradable, long retention times in water are to be expected. This applies only in cases where no other elimination mechanisms (photodegradation, hydrolysis, adsorption) are active. In the light of the ecotoxicological data, the product is classified as toxic to fish.

In the case of discharge into surface waters where emissions of longer duration result in concentrations in the region of the effective threshold at the outflow, damage to the ecosystem cannot be excluded.

Do not allow to escape into waters, waste water or soil.

13. DISPOSAL CONSIDERATIONS

May be incinerated in a suitable facility provided local regulations are observed.

Empty containers may be disposed of after neutralising any product remaining on the walls of the container with a mixture of isopropanol, ammonia and water. Afterwards, remove warning labels.

14. TRANSPORT INFORMATION

GGVSee/IMDG Code: -- UN No.: -- MFAG: -- EmS: --
PG: -- MPO: --
GGVE/GGVS: Class -- No. -- RID/ADR: Class -- No. --
ADNR: Class -- No. -- Cat -- ICAO/IATA-DGR: Not restr.
Declaration for Land Shipment: --
Declaration for Sea Shipment: --
Declaration for Shipment by Air: --
Other Information: Not dangerous cargo. Keep dry. Slightly smelling. Keep away from foodstuffs, acids and alkalis.

15. REGULATORY INFORMATION

Labelling as required by the Chemicals (Hazard Information and Packaging for Supply) (Amendment) Regulations 1997 (CHIP 97) and corresponding EEC directives.

Symbol: Xi Hazard Description: irritant.
Contains isocyanates. See information supplied by the manufacturer.
R46: May cause sensitization by skin contact.
S24: Avoid contact with skin.

The above-mentioned manufacturer's information on the handling of isocyanates is contained in the safety data sheet for the product.

The European Committee of Paint, Printing Ink and Artists' Colours Manufacturers' Associations (CEPE) provides the following information on coatings containing isocyanates:
Ready-to-use paints containing isocyanates may have an irritant effect on mucous membranes – especially on breathing organs – and cause hypersensitivity reactions. Inhalation of vapor or spray mist may cause sensitisation. When handling paints containing isocyanates all precautions required for solvent-containing paints must be followed. Vapour and spray mist in particular should not be inhaled. Allergics and asthmatics as well as people prone to respiratory ailments should not work with isocyanate containing paints.

Maximum Exposure Limit (MEL) all isocyanates (as NCO): 0.02 mg/m^3 (8 hr TWA), 0.07 mg/m^3 (15 min STEL).

Any existing national regulations on the handling of isocyanates must be observed.

16. OTHER INFORMATION

A two component water thinnable, chemical resistant lacquer, based on an acrylic/isocyanate system, providing an easily cleanable graffiti resistant coating.

The data given here is based on current knowledge and experience. The purpose of this Safety Data Sheet is to describe the products in terms of their safety requirements. The data does not signify any warranty with regard to the products' properties.