

HEALTH & SAFETY DATA SHEET
TECHNICAL PAINT SERVICES
MSDS 100U10B

1. IDENTIFICATION OF THE PRODUCT: TWO PACK POLYURETHANE FINISH BASE.

PRODUCT NAME: A40, A41 & A117 Groups.

USE: Polyurethane paint (base for multi-component product).
Application by brush or roller.

2. COMPOSITION/INFORMATION ON INGREDIENTS

Substances presenting a health or environmental hazard within the meaning of the Dangerous Substances Directive 67/548/EEC or assigned an occupational exposure limit.

Name	CAS No.	%	EC Number	Classification
Solvent naphtha (petroleum), light aroma	64742-95-6	15 - 25	265-199-0	R10 Xn; R20, R65 Xi; R36/37/38 N; R51/53
Xylene	1330-20-7	15 - 25	215-535-7	R10 Xn; R20/21 Xi; R38
Ethylbenzene	100-41-4	3 - 5	202-849-4	F; R11 Xn; R20
Diamide wax mixture		1 - 3		R43 N; R51/53
Bis (1,2,2,6,6-pentamethyl-4-piperidyl) sebacate	41556-26-7	0.3 - 0.5	255-437-1	R43 N; R50/53
N-butyl acrylate	141-32-2	0.15 - 0.3	205-480-7	R10 Xi; R36/37/38 R43
Naphtha (petroleum), hydrodesulfurized heavy	64742-82-1	0.1 - 0.15	265-185-4	Xn; R65 N; R51/53

(*) See full text of phrases under chapter 16. Occupational exposure limits, if available, are listed in section 8.

3. HAZARDS IDENTIFICATION

HARMFUL. DANGEROUS FOR THE ENVIRONMENT.

Flammable. Harmful by inhalation and in contact with skin. Irritating to eyes, respiratory system and skin. May cause sensitization by skin contact. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

4. FIRST-AID MEASURES

GENERAL INFORMATION

In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person.

INHALATION

Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Give nothing by mouth. If unconscious, place in recovery position and get medical attention immediately.

INGESTION

If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Do not induce vomiting unless directed to do so by medical personnel. Lower the head so that vomit will not re-enter the mouth and throat.

SKIN CONTACT

Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do not use solvents or thinners.

EYE CONTACT

Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Seek immediate medical attention.

5. FIRE-FIGHTING MEASURES

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. Fire will produce dense black smoke. Exposure to decomposition products may cause a health hazard. Cool closed containers exposed to fire with water. Do not release run-off from fire to drains or watercourses. Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

EXTINGUISHING MEDIA

Recommended: alcohol resistant foam, CO₂, powders, water spray.

Not to be used: waterjet.

FIRE DEGRADATION PRODUCTS

Decomposition products may include the following materials: carbon oxides.

6. ACCIDENTAL RELEASE MEASURES

Avoid all direct contact with the spilled material. Exclude sources of ignition and be aware of explosion hazard. Ventilate the area. Avoid breathing vapour or mist. Refer to protective measures listed in sections 7 and 8. Contain and collect spillage with non-combustible absorbent materials, e.g. sand, earth, vermiculite, diatomaceous earth, and place in container for disposal according to local regulations (see section 13). Do not allow to enter drains or watercourses. Clean preferably with a detergent; avoid use of solvents. If the product contaminates lakes, rivers, or sewers, inform the appropriate authorities in accordance with local regulation.

7. HANDLING AND STORAGE

HANDLING

Vapours are heavier than air and may spread along floors. Vapours may form explosive mixtures with air. Prevent the creation of flammable or explosive concentrations of vapours in air and avoid vapour concentrations higher than the occupational exposure limits. In addition, the product should be used only in areas from which all naked lights and other sources of ignition have been excluded. Electrical equipment should be protected to the appropriate standard. To dissipate static electricity during transfer, ground the drum and connect to receiving container with bonding strap. No sparking tools should be used.

Avoid inhalation of vapour, dust and spray mist. Avoid contact with skin and eyes. Eating, drinking and smoking should be prohibited in area where this material is handled, stored and processed. Appropriate personal protective equipment: see Section 8. Always keep in containers made from the same material as the original one.

STORAGE

Store in accordance with local regulations for flammable liquids. Store in a cool, well-ventilated area away from incompatible materials and ignition sources. Keep out of the reach of children. Keep away from: Oxidizing agents, strong alkalis, strong acids. No smoking. Prevent unauthorized access. Containers that are opened must be carefully resealed and kept upright to prevent leakage.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING MEASURES

Arrange sufficient ventilation by local exhaust ventilation and good general ventilation to keep the airborne concentrations of vapours or dust lowest possible and below their respective threshold limit value. Ensure that eyewash stations and safety showers are within proximity of the work-station location.

HYGIENE MEASURES

Wash hands, forearms, and face thoroughly after handling compounds and before eating, smoking, using lavatory, and at the end of day.

INGREDIENT NAME

Solvent naphtha (petroleum), light aroma

OCCUPATIONAL EXPOSURE LIMITS

EU OEL (Europe, 1/2001).

TWA: 120 mg/m³ 8 hour(s). Form:

TWA: 25 ppm 8 hour(s). Form:

Xylene

EU OEL (Europe, 4/2006). Absorbed through skin.

Short term limit value: 442 mg/m³ 15 minute(s).

Short term limit value: 100 ppm 15 minute(s).

Limit value: 221 mg/m³ 8 hour(s).

Limit value: 50 ppm 8 hour(s).

Ethylbenzene

EU OEL (Europe, 4/2006). Absorbed through skin.

Short term limit value: 884 mg/m³ 15 minute(s).

Short term limit value: 200 ppm 15 minute(s).

Limit value: 442 mg/m³ 8 hour(s).

Limit value: 100 ppm 8 hour(s).

N-butyl acrylate

EU OEL (Europe, 4/2006).

Short term limit value: 53 mg/m³ 15 minute(s).

Short term limit value: 10 ppm 15 minute(s).

Limit value: 11 mg/m³ 8 hour(s).

Limit value: 2 ppm 8 hour(s).

Naphtha (petroleum), hydrodesulfurized heavy

80/1107/EEC (Europe, 2000).

TWA: 25 ppm 8 hour(s).

TWA: 145 mg/m³ 8 hour(s).

PERSONAL PROTECTIVE EQUIPMENT

GENERAL

Gloves must be worn for all work that may result in soiling. Apron/coveralls/protective clothing must be worn when soiling is so great that regular work clothes do not adequately protect skin against contact with the product. Safety eyewear should be used when there is a likelihood of exposure.

RESPIRATORY PROTECTION

If working areas have insufficient ventilation: When the product is applied by means that will not generate an aerosol such as, brush or roller, wear half or totally covering mask equipped with gas filter of type A, when grinding use particle filter of type P. When the product is applied by spraying and for continuous or prolonged work always wear an air-fed respirator e.g. hood with supply of fresh or compressed air or a full face, powered air purifying filter. Be sure to use an approved/certified respirator or equivalent.

SKIN PROTECTION

Wear suitable protective clothing. Always wear protective clothing when spraying.

HAND PROTECTION

Wear suitable gloves. For prolonged or repeated handling, use gloves. Barrier creams may help to protect the exposed areas of the skin, but should not be applied once exposure has occurred. Barrier creams may not be used under or instead of gloves. Since the actual work situation is unknown. Supplier of gloves should be contacted in order to find the appropriate type.

EYE PROTECTION

Use safety eyewear designed to protect against splash of liquids. Safety glasses with side shields.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE	Liquid
DENSITY	1.06 g/cm ³
SOLUBILITY	Very slightly soluble in the following materials: cold water and hot water.
FLASH POINT	Closed cup: 33°C (91.4°F)
EXPLOSION LIMITS	0.5 - 8 vol %
SOLVENT(S) % BY WEIGHT	Weighted average: 46 %
WATER % BY WEIGHT	Weighted average: 0 %
VOC CONTENT	Weighted average: 491 g/l (Calculated value for the mixture)
TOC CONTENT	Weighted average: 441 g/l
SOLVENT GAS	Weighted average: 0.108 m ³ /l

10. STABILITY AND REACTIVITY

Stable under recommended storage and handling conditions (see section 7).

Highly reactive or incompatible with the following materials: oxidizing materials.

Reactive or incompatible with the following materials: reducing materials.

When exposed to high temperatures (i.e. in case of fire) harmful decomposition products may be formed.

Decomposition products may include the following materials: carbon oxides.

11. TOXICOLOGICAL INFORMATION

EFFECTS & SYMPTOMS

Exposure to component solvent vapour concentrations may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Solvents may cause some of the above effects by absorption through the skin. Symptoms and signs include headaches, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin. If splashed in the eyes, the liquid may cause irritation and reversible damage. Accidental swallowing may cause stomach pain. Chemical lung inflammation may occur if the product is taken into the lungs via vomiting.

SENSITIZATION

Contains diamide wax mixture, bis (1,2,2,6,6-pentamethyl-4-piperidyl) sebacate, n-butyl acrylate. May produce an allergic reaction.

ACCUTE TOXICITY

Ingredient name	Result	Dose	Species
Solvent naphtha (petroleum), light aroma	LD50 Oral	8400 mg/kg	Rat
	LC50 Inhalation Gas.	5000 ppm	Rat
	LD50 Dermal	>1700 mg/kg	Rabbit
Xylene	LD50 Oral	4300 mg/kg	Rat
	LD50 Dermal	>5000 mg/kg	Rabbit
Ethylbenzene	LD50 Oral	3500 mg/kg	Rat
	LC50 Inhalation Gas.	2730 ppm	Rat
N-butyl acrylate	LD50 Dermal	2 mL/kg	Rabbit
	LD50 Oral	900 mg/kg	Rat

12. ECOLOGICAL INFORMATION

Do not allow to enter drains or watercourses. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Ingredient name	Result	Species	Exposure
Xylene	Acute LC50 8500 ug/L Marine water	Crustaceans - Palaemonetes pugio	48 hours
	Acute LC50 8200 - 10032 ug/L Fresh water	Fish - Oncorhynchus mykiss	96 hours
Ethylbenzene	Acute EC50 2930 - 4400 ug/L Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 >5200 ug/L Marine water	Crustaceans - Americamysis bahia	48 hours
	Acute LC50 280 - 290 ppm Marine water	Fish - Cyprinodon variegatus	96 hours
	Chronic NOEC 3300 ug/L Marine water	Fish - Menidia menidia	96 hours

13. DISPOSAL CONSIDERATIONS

GENERAL INFORMATION

The generation of waste should be avoided or minimized wherever possible. Residues of the product is listed as hazardous waste. Dispose of according to all local applicable regulations. Spillage, remains, discarded clothes and similar should be discarded in a fireproof container.



European waste catalogue no. (EWC) and national waste group, catalogue, code or number is given below.

European waste catalogue: 08 01 11*
 (EWC)

14. TRANSPORT INFORMATION

Transport may take place according to national regulation or ADR for transport by road, RID for transport by train, IMDG for transport by sea.

The transport classification is according to ADR 2009, IMDG edition 2008 (incl. Amdt. 34-08).

	UN No.	Proper Shipping name	Class	PG*	Label	Additional information
ADR/RID Class	UN1263	PAINT	3	III		ADR Tunnel Code: (E) H-14
IMDG Class	UN1263	PAINT	3	III		Emergency Schedules (EmS) F-E, S-E

PG*: Packing group

15. REGULATORY INFORMATION

Classification and labeling have been determined according to EU Directives 67/548/EEC and 1999/45/EC (including amendments) and take into account the intended product use.

PRODUCT USE Industrial applications, used by spraying.

SYMBOL Harmful, Dangerous for the environment.

CONTAINS Xylene.
Diamide wax mixture.

RISK PHRASES

R10	Flammable.
R20/21	Harmful by inhalation and in contact with skin.
R36/37/38	Irritating to eyes, respiratory system and skin.
R43	May cause sensitization by skin contact.
R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

SAFETY PHRASES

S23	Do not breathe vapour or spray.
S36/37	Wear suitable protective clothing and gloves.
S51	Use only in well-ventilated areas.

16. OTHER INFORMATION

RISK PHRASES IN FULL

R11	Highly flammable.
R10	Flammable.
R20	Harmful by inhalation.
R20/21	Harmful by inhalation and in contact with skin.
R65	Harmful: may cause lung damage if swallowed.
R38	Irritating to skin.
R36/37/38	Irritating to eyes, respiratory system and skin.
R43	May cause sensitization by skin contact.
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

The information contained in this safety data sheet is based on the present state of knowledge and EU and national legislation. It provides guidance on health, safety and environmental aspects for handling the product in a safe way and should not be construed as any guarantee of the technical performance or suitability for particular applications. It is always the duty of the user/employer to ascertain that the work is planned and carried out in accordance with the national regulations.

REFERENCE DOCUMENTS

STATUTORY

Air Navigation (Dangerous Goods) Regulations
Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations as amended
Chemical (Hazard Information and Packaging for Supply) (Amendment) Regulations
Consumer Protection Act 1987
Control of Lead at Work Regulations 1998
Control of Pollution (Amendment) Act 1989
Control of Substances Hazardous to Health Regulations
Dangerous Goods Safety Advisor Regulations
Environment Act 1995
Environmental Protection (Duty of Care) Regulations
Environmental Protection Act 1990
Factories Act 1961
Fire Precautions Act 1971
Hazardous Waste (England and Wales) Regulations
Health and Safety at Work Act 1974
International Rail/Road Transport -RID and ADR (Current editions)
List of Wastes (England) Regulations
Management of Health and Safety at Work Regulations 1999
Manual Handling Regulations 1992
Merchant Shipping (Dangerous Goods and Marine Pollutants) Regulations
Personal Protective Equipment at Work Regulations 1992
Provision and Use of Work Equipment Regulations
Waste Management Licensing Regulations

APPROVED CODES OF PRACTICE

ACOP - Control of Lead at Work (ACOP 2) - HSE Books
ACOP - Control of Substances Hazardous to Health/Control of Carcinogenic Substances- HSE Books
ACOP - Waste Management - The Duty of Care

HEALTH AND SAFETY EXECUTIVE

GUIDANCE NOTES

HS(G)37 - An Introduction to Local Exhaust Ventilation
EH40 - Workplace Exposure Limits
EH44 - Dust: General Principles of Protection
HS(G)53 - The Selection, Use and Maintenance of RPE
HS(G)71 - Storage of Packaged Dangerous Substances
HS(G)140 - Safe Use and Handling of Flammable Liquids
HS(G)193 - COSHH Essentials: easy steps to control chemicals
L23 - Manual Handling: Guidance on Regulations

BRITISH STANDARDS PUBLICATIONS

BS4275 - Recommendations for the Selection, Use and Maintenance of Respiratory Protective Equipment
EN166 - Personal eye protection - specifications
EN420 - General requirements for gloves

LEAD IN PREVIOUSLY PAINTED SURFACES

When surfaces are to be prepared for painting, account must be taken of the age of the property and the possibility that lead pigmented paint might be present. There is a possibility that ingestion or inhalation of scrapings or dust arising from the preparation work could cause adverse health effects.

As a working rule you should assume that this will be the case if the age of the property is pre 1960. Where possible, wet flattening or chemical stripping methods should be used with surfaces of this type to avoid the creation of dust. When dry flattening cannot be avoided, and effective local exhaust ventilation is not available, it is recommended that a dust respirator is worn, that is approved for use with lead dusts, and its type selected on the basis of the occupational hygiene (COSHH) assessment, taking into account the occupational hygiene exposure standard for lead in air. Furthermore, steps should be taken to ensure containment of the dusts created, and that all practicable measures are taken to clean up thoroughly all deposits of dusts in and around the affected area. Extra precautions will need to be taken when burning off old lead based paints as fumes containing lead will be produced. It is recommended that a respirator, approved for use with particulate fumes of lead is selected on the basis of the occupational hygiene (COSHH) assessment.

The Code of Practice for the Control of Lead at Works (reference ISBN 07176 1506 5 1998) should be consulted for advice on protective clothing and personal hygiene precautions.

Care should be taken to exclude visitors, members of the household and especially children from the affected area, during the actual work and the subsequent clean up operations. All scrapings, dust, etc. should be disposed of by the professional painting contractor as Hazardous Waste, with the relevant documentation under the Hazardous Waste Regulations, The Environmental Protection (Duty of Care) Regulations, The Controlled Waste (Registration of Carriers and Seizure of Vehicles) Regulations and the Waste Management Licensing Regulations.

The information contained in the Health and Safety Data Sheet is provided in accordance with the requirements of the CHIP Regulations. The product should not be used for purposes other than those shown in section 1 without first referring to the supplier and obtaining written handling instructions. As the specific conditions of use of the product are outside the suppliers control, the user is responsible for ensuring that the requirements of relevant legislation are complied with. This information contained in the safety data sheet is based on present knowledge and current national legislation. It provides guidance on health, safety and environmental aspects of the product and should not be construed as any guarantee of technical performance or suitability for particular application.

HEALTH & SAFETY DATA SHEET
TECHNICAL PAINT SERVICES
MSDS 100U10 C

1. IDENTIFICATION OF THE PRODUCT: TWO PACK POLYURETHANE CATALYST FOR USE WITH A40, A41 & A117 Groups.

PRODUCT NAME: AC40/70, AC41/70 and AC117/70.

USE: Polyurethane paint catalyst for use with multi-component product base.
Application by brush or roller.

2. COMPOSITION/INFORMATION ON INGREDIENTS

Substances presenting a health or environmental hazard within the meaning of the Dangerous Substances Directive 67/548/EEC or assigned an occupational exposure limit.

Name	CAS No.	%	EC Number	Classification
Prepolymer isocyanate HDI	*28182-81-2	50 - 75	500-060-2	R43
2-methoxy-1-methylethyl acetate	108-65-6	10 - 12.5	203-603-9	R10 Xi; R36
Xylene	1330-20-7	10 - 12.5	215-535-7	R10 Xn; R20/21 Xi; R38
Ethylbenzene	100-41-4	1 - 3	202-849-4	F; R11 Xn; R20
Hexamethylene-di-isocyanate	822-06-0	0.3 - 0.5	212-485-8	T; R23 Xi; R36/37/38 R42/43

(*) See full text of phrases under chapter 16. Occupational exposure limits, if available, are listed in section 8.

3. HAZARDS IDENTIFICATION

HARMFUL.

Flammable. Harmful by inhalation. May cause sensitization by skin contact. Contains isocyanates. See information supplied by the manufacturer. This information is provided by the current Safety Data Sheet.

4. FIRST-AID MEASURES

GENERAL INFORMATION

In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person.

INHALATION

Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Give nothing by mouth. If unconscious, place in recovery position and get medical attention immediately.

INGESTION

If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Do not induce vomiting unless directed to do so by medical personnel. Lower the head so that vomit will not re-enter the mouth and throat.

SKIN CONTACT

Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do not use solvents or thinners.

EYE CONTACT

Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. In all cases of doubt, or when symptoms persist, seek medical attention.

NOTES TO PHYSICIAN

If gasses have been inhaled, from the decomposition of the product, symptoms may be delayed.

5. FIRE-FIGHTING MEASURES

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. Fire will produce dense black smoke. Exposure to decomposition products may cause a health hazard. Cool closed containers exposed to fire with water. Do not release runoff from fire to drains or watercourses. Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

EXTINGUISHING MEDIA

Recommended: alcohol resistant foam, CO₂, powders, water spray.

Not to be used: waterjet.

FIRE DEGRADATION PRODUCTS

Decomposition products may include the following materials: carbon oxides, nitrogen oxides.

6. ACCIDENTAL RELEASE MEASURES

Avoid all direct contact with the spilled material. Exclude sources of ignition and be aware of explosion hazard. Ventilate the area. Avoid breathing vapour or mist. Refer to protective measures listed in sections 7 and 8. Contain and collect spillage with non-combustible absorbent materials, e.g. sand, earth, vermiculite, diatomaceous earth, and place in container for disposal according to local regulations (see section 13). Do not allow to enter drains or watercourses. Clean preferably with a detergent; avoid use of solvents. If the product contaminates lakes, rivers, or sewers, inform the appropriate authorities in accordance with local regulations.

7. HANDLING AND STORAGE

HANDLING

Vapours are heavier than air and may spread along floors. Vapours may form explosive mixtures with air. Prevent the creation of flammable or explosive concentrations of vapours in air and avoid vapour concentrations higher than the occupational exposure limits. In addition, the product should be used only in areas from which all naked lights and other sources of ignition have been excluded. Electrical equipment should be protected to the appropriate standard. To dissipate static electricity during transfer, ground the drum and connect to receiving container with bonding strap. No sparking tools should be used. Contains isocyanates. Exposure to isocyanate may result in acute irritation and/or sensitisation when breathing. **Care should be taken when re-opening partly-used containers.**

Avoid inhalation of vapour, dust and spray mist. Avoid contact with skin and eyes. Eating, drinking and smoking should be prohibited in area where this material is handled, stored and processed. Appropriate personal protective equipment: see Section 8. Always keep in containers made from the same material as the original one.

STORAGE

Store in accordance with local regulations for flammable liquids. Store in a cool, well-ventilated area away from incompatible materials and ignition sources. Keep out of the reach of children. Keep away from: Oxidizing agents, strong alkalis, strong acids. No smoking. Prevent unauthorized access. Containers that are opened must be carefully resealed and kept upright to prevent leakage.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING MEASURES

Arrange sufficient ventilation by local exhaust ventilation and good general ventilation to keep the airborne concentrations of vapours or dust lowest possible and below their respective threshold limit value. Ensure that eyewash stations and safety showers are within proximity of the work-station location.

HYGIENE MEASURES

Wash hands, forearms, and face thoroughly after handling compounds and before eating, smoking, using lavatory, and at the end of day.

INGREDIENT NAME

2-methoxy-1-methylethyl acetate

OCCUPATIONAL EXPOSURE LIMITS

EU OEL (Europe, 4/2006). Absorbed through skin.

Short term limit value: 550 mg/m³ 15 minute(s).

Short term limit value: 100 ppm 15 minute(s).

Limit value: 275 mg/m³ 8 hour(s).

Limit value: 50 ppm 8 hour(s).

Xylene

EU OEL (Europe, 4/2006). Absorbed through skin.

Short term limit value: 442 mg/m³ 15 minute(s).

Short term limit value: 100 ppm 15 minute(s).

Limit value: 221 mg/m³ 8 hour(s).

Limit value: 50 ppm 8 hour(s).

Ethylbenzene

EU OEL (Europe, 4/2006). Absorbed through skin.

Short term limit value: 884 mg/m³ 15 minute(s).

Short term limit value: 200 ppm 15 minute(s).

Limit value: 442 mg/m³ 8 hour(s).

Limit value: 100 ppm 8 hour(s).

PERSONAL PROTECTIVE EQUIPMENT

GENERAL

Gloves must be worn for all work that may result in soiling. Apron/coveralls/protective clothing must be worn when soiling is so great that regular work clothes do not adequately protect skin against contact with the product. Safety eyewear should be used when there is a likelihood of exposure.

RESPIRATORY PROTECTION

If working areas have insufficient ventilation: When the product is applied by means that will not generate an aerosol such as, brush or roller wear half or totally covering mask equipped with gas filter of type A, when grinding use particle filter of type P. When the product is applied by spraying and for continuous or prolonged work always wear an air-fed respirator e.g. hood with supply of fresh or compressed air or a full face, powered air purifying filter. Be sure to use an approved/certified respirator or equivalent.

SKIN PROTECTION

Wear suitable protective clothing. Always wear protective clothing when spraying.

HAND PROTECTION

Wear suitable gloves. For prolonged or repeated handling, use gloves. Barrier creams may help to protect the exposed areas of the skin, but should not be applied once exposure has occurred. Barrier creams may not be used under or instead of gloves. Since the actual work situation is unknown. Supplier of gloves should be contacted in order to find the appropriate type.

EYE PROTECTION

Use safety eyewear designed to protect against splash of liquids.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE

Liquid

MELTING POINT

-67.17°C based on data for: prepolymer isocyanate HDI

DENSITY

1.06 - 1.08 g/cm³

SOLUBILITY

Very slightly soluble in the following materials: cold water and hot water.

FLASH POINT

Closed cup: 40°C (104°F)

EXPLOSION LIMITS

1 - 10.8 vol %

SOLVENT(S) % BY WEIGHT

Weighted average: 25 %

WATER % BY WEIGHT

Weighted average: 0 %

VOC CONTENT

Weighted average: 268 g/l (Calculated value for the mixture)

TOC CONTENT

Weighted average: 197 g/l

SOLVENT GAS

Weighted average: 0.055 m³/l

10. STABILITY AND REACTIVITY

Stable under recommended storage and handling conditions (see section 7). Uncontrolled exothermic reactions occur with amines and alcohols. The product reacts slowly with water, resulting in the production of carbon dioxide. In closed containers, pressure build-up could result in distortion, expansion and, in extreme cases, bursting of the container.

Highly reactive or incompatible with the following materials: oxidizing materials.

Reactive or incompatible with the following materials: reducing materials.

When exposed to high temperatures (i.e. in case of fire) harmful decomposition products may be formed.

Decomposition products may include the following materials: carbon oxides, nitrogen oxides.

11. TOXICOLOGICAL INFORMATION

EFFECTS & SYMPTOMS

Exposure to component solvent vapour concentrations may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Solvents may cause some of the above effects by absorption through the skin. Symptoms and signs include headaches, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin. If splashed in the eyes, the liquid may cause irritation and reversible damage. Accidental swallowing may cause stomach pain. Chemical lung inflammation may occur if the product is taken into the lungs via vomiting.

Isocyanate containing products have characteristics that include producing acute irritation and/or sensitisation when breathing, subsequent asthmatic problems and lung contractions. Sensitised people can, as a result from this, show asthmatic symptoms with exposure to atmospheric concentrations far below the TLV. Repeated exposures will lead to permanent damage to the respiratory system.

SENSITIZATION

Contains prepolymer isocyanate HDI, hexamethylene-di-isocyanate. May produce an allergic reaction.

ACCUTE TOXICITY

Ingredient name	Result	Dose	Species
prepolymer isocyanate HDI	LD50	Oral 350 mg/kg	Mouse
2-methoxy-1-methylethyl acetate	LD50 Dermal	>5 g/kg	Rabbit
	LD50 Oral	8532 mg/kg	Rat
Xylene	LC50 Inhalation Gas.	5000 ppm	Rat
	LD50 Dermal	>1700 mg/kg	Rabbit
	LD50 Oral	4300 mg/kg	Rat
ethylbenzene	LD50 Dermal	>5000 mg/kg	Rabbit
	LD50 Oral	3500 mg/kg	Rat
hexamethylene-di-isocyanate	LC50 Inhalation Dusts and mists	124 mg/m ³	Rat

12. ECOLOGICAL INFORMATION

Do not allow to enter drains or watercourses.

Ingredient name	Result	Species	Exposure
xylene	Acute LC50 8500 ug/L Marine water	Crustaceans - Palaemonetes pugio	48 hours
	Acute LC50 8200 - 10032 ug/L Fresh water	Fish - Oncorhynchus mykiss	96 hours
ethylbenzene	Acute EC50 2930 - 4400 ug/L Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 >5200 ug/L Marine water	Crustaceans - Americamysis bahia	48 hours
	Acute LC50 280 - 290 ppm Marine water	Fish - Cyprinodon variegatus	96 hours
	Chronic NOEC 3300 ug/L Marine water	Fish - Menidia menidia	96 hours

13. DISPOSAL CONSIDERATIONS

GENERAL INFORMATION

The generation of waste should be avoided or minimized wherever possible. Residues of the product is listed as hazardous waste. Dispose of according to all local applicable regulations. Spillage, remains, discarded clothes and similar should be discarded in a fireproof container.



European waste catalogue no. (EWC) and national waste group, catalogue, code or number is given below.

European waste catalogue: 08 01 11*

(EWC)

14. TRANSPORT INFORMATION

Transport may take place according to national regulation or ADR for transport by road, RID for transport by train, IMDG for transport by sea. The transport classification is according to ADR 2009, IMDG edition 2008 (incl. Amdt. 34-08).

	UN No.	Proper Shipping name	Class	PG*	Label	Additional information
ADR/RID Class	UN1263	PAINT	3	III		ADR Tunnel Code: (E) H-14
IMDG Class	UN1263	PAINT	3	III		Emergency Schedules (EmS) F-E, S-E

PG*: Packing group

15. REGULATORY INFORMATION

Classification and labeling have been determined according to EU Directives 67/548/EEC and 1999/45/EC (including amendments) and take into account the intended product use.

PRODUCT USE Consumer applications, Industrial applications, Used by spraying.

SYMBOL Harmful.

CONTAINS prepolymer isocyanate HDI

RISK PHRASES

R10	Flammable.
R20	Harmful by inhalation.
R43	May cause sensitization by skin contact.

SAFETY PHRASES

S2	Keep out of the reach of children.
S23	Do not breathe vapor or spray.
S24	Avoid contact with skin.
S37	Wear suitable gloves.
S46	If swallowed, seek medical advice immediately and show this container or label.
S51	Use only in well-ventilated areas.

ADDITIONAL WARNING PHRASES

Contains isocyanates. See information supplied by the manufacturer. This information is provided by the current Safety Data Sheet.

OTHER EU REGULATIONS

Tactile warning of danger: Yes, applicable.

16. OTHER INFORMATION

RISK PHRASES IN FULL

R11	Highly flammable.
R10	Flammable.
R23	Toxic by inhalation.
R20	Harmful by inhalation.
R20/21	Harmful by inhalation and in contact with skin.
R36	Irritating to eyes.
R38	Irritating to skin.
R36/37/38	Irritating to eyes, respiratory system and skin.
R43	May cause sensitization by skin contact.
R42/43	May cause sensitization by inhalation and skin contact.

The information contained in this safety data sheet is based on the present state of knowledge and EU and national legislation. It provides guidance on health, safety and environmental aspects for handling the product in a safe way and should not be construed as any guarantee of the technical performance or suitability for particular applications. It is always the duty of the user/employer to ascertain that the work is planned and carried out in accordance with the national regulations.

REFERENCE DOCUMENTS

STATUTORY

Air Navigation (Dangerous Goods) Regulations
Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations as amended
Chemical (Hazard Information and Packaging for Supply) (Amendment) Regulations
Consumer Protection Act 1987
Control of Lead at Work Regulations 1998
Control of Pollution (Amendment) Act 1989
Control of Substances Hazardous to Health Regulations
Dangerous Goods Safety Advisor Regulations
Environment Act 1995
Environmental Protection (Duty of Care) Regulations
Environmental Protection Act 1990
Factories Act 1961
Fire Precautions Act 1971
Hazardous Waste (England and Wales) Regulations
Health and Safety at Work Act 1974
International Rail/Road Transport -RID and ADR (Current editions)
List of Wastes (England) Regulations
Management of Health and Safety at Work Regulations 1999
Manual Handling Regulations 1992
Merchant Shipping (Dangerous Goods and Marine Pollutants) Regulations
Personal Protective Equipment at Work Regulations 1992
Provision and Use of Work Equipment Regulations
Waste Management Licensing Regulations

APPROVED CODES OF PRACTICE

ACOP - Control of Lead at Work (ACOP 2) - HSE Books
ACOP - Control of Substances Hazardous to Health/Control of Carcinogenic Substances- HSE Books
ACOP - Waste Management - The Duty of Care

HEALTH AND SAFETY EXECUTIVE

GUIDANCE NOTES

HS(G)37 - An Introduction to Local Exhaust Ventilation
EH40 - Workplace Exposure Limits
EH44 - Dust: General Principles of Protection
HS(G)53 - The Selection, Use and Maintenance of RPE
HS(G)71 - Storage of Packaged Dangerous Substances
HS(G)140 - Safe Use and Handling of Flammable Liquids
HS(G)193 - COSHH Essentials: easy steps to control chemicals
L23 - Manual Handling: Guidance on Regulations

BRITISH STANDARDS PUBLICATIONS

BS4275 - Recommendations for the Selection, Use and Maintenance of Respiratory Protective Equipment
EN166 - Personal eye protection - specifications
EN420 - General requirements for gloves

LEAD IN PREVIOUSLY PAINTED SURFACES

When surfaces are to be prepared for painting, account must be taken of the age of the property and the possibility that lead pigmented paint might be present. There is a possibility that ingestion or inhalation of scrapings or dust arising from the preparation work could cause adverse health effects.

As a working rule you should assume that this will be the case if the age of the property is pre 1960. Where possible wet flattening or chemical stripping methods should be used with surfaces of this type to avoid the creation of dust. When dry flattening cannot be avoided, and effective local exhaust ventilation is not available, it is recommended that a dust respirator is worn, that is approved for use with lead dusts, and its type selected on the basis of the occupational hygiene (COSHH) assessment, taking into account the occupational hygiene exposure standard for lead in air. Furthermore, steps should be taken to ensure containment of the dusts created, and that all practicable measures are taken to clean up thoroughly all deposits of dusts in and around the affected area. Extra precautions will need to be taken when burning off old lead based paints as fumes containing lead will be produced. It is recommended that a respirator, approved for use with particulate fumes of lead is selected on the basis of the occupational hygiene (COSHH) assessment.

The Code of Practice for the Control of Lead at Works (reference ISBN 07176 1506 5 1998) should be consulted for advice on protective clothing and personal hygiene precautions.

Care should be taken to exclude visitors, members of the household and especially children from the affected area, during the actual work and the subsequent clean up operations. All scrapings, dust, etc. should be disposed of by the professional painting contractor as Hazardous Waste, with the relevant documentation under the Hazardous Waste Regulations, The Environmental Protection (Duty of Care) Regulations, The Controlled Waste (Registration of Carriers and Seizure of Vehicles) Regulations and the Waste Management Licensing Regulations.

The information contained in the Health and Safety Data Sheet is provided in accordance with the requirements of the CHIP Regulations. The product should not be used for purposes other than those shown in section 1 without first referring to the supplier and obtaining written handling instructions. As the specific conditions of use of the product are outside the suppliers control, the user is responsible for ensuring that the requirements of relevant legislation are complied with. This information contained in the safety data sheet is based on present knowledge and current national legislation. It provides guidance on health, safety and environmental aspects of the product and should not be construed as any guarantee of technical performance or suitability for particular application.