

MATERIAL SAFETY DATA SHEET

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1. Identification of the preparation and company.		Date of issue: 06-11-2007
Product name and/or code: Junckers High Performance (All versions)		Replaces: 02-12-2004
Company name, full address and telephone number: Junckers Industrier A/S Vaerftsvej 4 DK-4600 Koege Denmark Telephone: Int + 45 56 65 18 95 Email: teknik@junckers.dk		Emergency phone number: Junckers Industrier A/S Vaerftsvej 4 DK-4600 Køge Phone: Int + 45 56 65 18 95
Product type: Waterborne copolymer	Additional component: Junckers High Performance Hardener	Intended use: Coating of interior wood

2. Hazards identification.

The product is not classified as dangerous according to the EC Directive 1999/45/EC.

The following must be considered:

Keep out of reach of children.

If swallowed, seek medical advice immediately and show this container or label.

3. Composition/Information on ingredients

Substances presenting a health or environmental hazard within the meaning of the Dangerous Substance Directive 67/548/EEC.

Name	EINECS-no.	Conc. (%)	Symbol	R-phrases (*)
N-methyl-2-pyrrolidone	212-828-1	2,5 - 10	Xi	36/38
Paraffins (petroleum), normal C>10	265-232-9	1 - 2,5	Xn	65-66

(*) for full text see Section 16.

4. First aid measures.

General:	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 the patient warm and at rest. If breathing has stopped, administer artificial respiration. Give nothing by mouth. If unconscious place in the recovery position and seek medical advice.
Eye contact:	Remove contact lenses. Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart, and seek medical advice.
Skin contact:	Remove contaminated clothing. Wash skin thoroughly with soap and water or use recognised skin cleanser. Do NOT use solvents or thinners.
Ingestion:	If accidentally swallowed obtain immediate medical attention. Keep at rest. DO NOT induce vomiting.

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5. Fire-fighting measures.

Extinguishing media:

Recommended: Alcohol resistant foam, CO2 powder, water spray.

Not to be used: Water jet.

Recommendations:

Fire will produce dense black smoke. Exposure to decomposition products may cause a health hazard.

Appropriate breathing apparatus may be required.

Cool closed containers exposed to fire with water.

Do not allow run-off from fire fighting to enter drains or water courses.

6. Accidental release measures.

Exclude sources of ignition and ventilate the area. Avoid breathing vapours.

Refer to protective measures listed in sections 7 and 8.

Contain and collect spillages 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 water courses.

Clean preferably with a detergent; avoid the use of solvents.

If the product contaminates lakes, rivers or sewers, inform appropriate authorities in accordance with local regulations.

7. Handling and storage.

Handling:

Keep container tightly closed.

Avoid skin and eye contact.

Avoid inhalation of vapour and spray mist.

Smoking, eating and drinking should be prohibited in application area.

For personal protection see Section 8.

Never use pressure to empty : container is not a pressure vessel.

Always keep in containers of same material as the original one.

Comply with the health and safety at work laws.

Storage:

Store in accordance with local regulations.

Store between 5 and 25°C in a dry, well ventilated place away from sources of heat and direct sunlight.

Keep away from sources of ignition.

Keep away from oxidizing agents, from strongly alkaline and strongly acid materials. No smoking. Prevent unauthorized access.

Containers which are opened must be carefully resealed and kept upright to prevent leakage.

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8. Exposure controls/Personal protection.

Engineering Measures:

Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and/or solvent vapours below the OEL, suitable respiratory protection must be worn.

Occupational exposure limits (OEL):

Substance	ppm	mg/m ³	Substance	ppm	mg/m ³
*Methyl-2-pyrrolidone	50	200	*Paraffins (petroleum), normal C>10	25	-

Those marked '**' are assigned by the supplier of the substance.

'Sk' indicates a risk of absorption through the skin. 'Sen' indicates a respiratory sensitiser.

Personal protection:

Respiratory protection:	If workers are exposed to concentrations above the exposure limit they must use appropriate, certified respirators.
Hand protection:	Use PE/EVA/PE gloves (4H). Barrier (=wearing) time: 4 hours. Dispose immediately after use. See manufacturers recommendations. Barrier creams may help to protect the exposed areas of the skin, they should however not be applied once exposure has occurred.
Eye protection:	Use safety eyewear designed to protect against splash of liquids.
Skin protection:	Personnel should wear anti-static clothing, made of natural fibre or of high temperature resistant synthetic fibre.

9. Physical and chemical properties.

	Product	Mixture		Product	Mixture
Physical state	Liquid	Liquid	Explosion limit, lower (vol%) :	-	0,8
Flash point, °C:	> 100	> 62	Organic solvents % (w/w):	Approx. 10	Approx. 15
Specific gravity, kg/l:	1,03	1,03	VOC		140
Solubility in water:	Miscible	Miscible	pH:	7 - 9	7 - 9

10. Stability and reactivity.

Stable under the recommended storage and handling conditions. (See section 7). When exposed to high temperatures may produce hazardous decomposition products such as carbon monoxide and dioxide, smoke, oxides of nitrogen.

Keep away from oxidising agents, strongly alkaline and strongly acidic materials in order to avoid exothermic reaction.

11. Toxicological information.

The preparation has been assessed following the conventional method of the Dangerous Preparative Directive 1999/45/EC and not classified.

Exposure to component solvents vapours concentration in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on kidney, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness.

Solvents may cause some of the above effects by absorption through the skin. 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.

The liquid splashed in the eyes may cause irritation and reversible damage.

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12. Ecological information.

The product should not be allowed to enter drains or water courses or be deposited where it can affect ground or surface waters.

13. Disposal considerations.

Do not allow into drains or water courses or dispose of where ground or surface waters may be affected. Wastes, including emptied containers, are controlled wastes and should be disposed of in accordance with regulations made under the Control of Pollution Act and the Environmental Protection Act. Using the information provided in this safety data sheet, advice should be obtained from the Waste Regulation Authority whether the special waste regulations apply.

14. Transport information.

The product is not classified as dangerous for carriage.

ADR/RID:

-

IMDG:

-

IATA:

-

15. Regulatory information.

Limitations for use: Not to be used by persons under 18 years of age.

In accordance with EC Directive 1999/45/EC the product is labelled as follows:

Symbol: -

Contains: -

Risk-phrases: -

Safety-phrases: -

Others: Safety data sheet available for professional user on request.

16. Other information.

Full text of R-phrases with no. Appearing in section 2:

R36/38: Irritating to eyes and skin.

R65: Harmful: may cause lung damage if swallowed.

R66: Repeated exposure may cause skin dryness or cracking.

The information in this Safety Data Sheet is required pursuant to the EC Directive 91/155/EC.

The information of this safety data sheet is based on the present state of knowledge and on current EU and national laws.

The product is not to be used for other purposes than those specified under section 1 without first obtaining written handling instruction.

It is always the responsibility of the user to take all necessary steps in order to fulfil the demand laid down in the local rules and legislation.

The information in this safety data sheet is meant as a description of the safety requirements of our product: it is not to be considered as a guarantee of the products' properties.

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1. Identification of the preparation and company.		Date of issue: 06-11-2007
Product name and/or code: Junckers High Performance Hardener (All versions)		Replaces: 02-12-2004
Company name, full address and telephone number: Junckers Industrier A/S Vaerftsvej 4 DK-4600 Koege Denmark Telephone: Int + 45 56 65 18 95 Email: teknik@junckers.dk		Emergency phone number: Junckers Industrier A/S Vaerftsvej 4 DK-4600 Koege Phone: Int + 45 56 65 18 95
Product type: Waterdispersible isocyanate hardener.	Additional component: Junckers High Performance	Intended use: Coating of interior wood.

2. Hazards identification.

In accordance with EC Directive 1999/45/EC the product is labelled as: Irritant.

Contains: Polyfunctional isocyanate

Risk-phrases: May cause sensitization by skin contact.

Other phrases: Contains isocyanates. See information provided by the manufacturer.

3. Composition/Information on ingredients

Substances presenting a health or environmental hazard within the meaning of the Dangerous Substance Directive 67/548/EEC.

Name	EINECS-no.	Conc. (%)	Symbol	R-phrases (*)
Polyfunctional isocyanate	Polymer	50-75	Xi	43
Hexamethylen-1,6-diisocyanate	212-485-8	< 0,1	T, Xi	23-36/37/38 42/43

(*) for full text see Section 16.

4. First aid measures.

General:	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 the patient warm and at rest. If breathing has stopped, administer artificial respiration. Give nothing by mouth. If unconscious, place in the recovery position and seek medical advice.
Eye contact:	Remove contact lenses, irrigate copiously with clean, fresh water for at least 10 minutes, holding the
Skin contact:	eyelids apart and seek medical advice. Remove contaminated clothing. Wash skin thoroughly with soap and water or use
Ingestion:	recognised skin cleanser. Do NOT use solvents or thinners. If accidentally swallowed obtain immediate medical attention. Keep at rest. DO NOT induce vomiting.

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5. Fire fighting measures.

Extinguishing media:

Recommended: Alcohol resistant foam, CO₂, powder, water spray/mist. Not to be used: Water jet.

Recommendations:

Fire will produce dense black smoke. Exposure to decomposition products may cause a health hazard. Appropriate breathing apparatus may be required.

Cool closed containers exposed to fire with water. Do not allow run-off from fire fighting to enter drains or water courses.

6. Accidental release measures.

Exclude sources of ignition and ventilate the area. Avoid breathing vapours. 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. Place in a suitable container. The contaminated area should be cleaned up immediately with a suitable decontaminant. One possible (flammable) decontaminant comprises (by volume) : water (45 parts), ethanol or isopropyl alcohol (50 parts), concentrated (d : 0,880) ammonia solution (5 parts). A non-flammable alternative is sodium carbonate (5 parts), water (95 parts). Add the same decontaminant to the remnants and let stand for several days until no further reaction in non-sealed container. Once this stage is reached, close container and dispose according to local regulations (see section 13). Do not allow to enter drains or watercourses. If the product contaminates lakes, rivers or sewage, inform appropriate authorities in accordance with local regulations.

7. Handling and storage.

Persons with a history of asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this preparation is used.

Examination of lung function should be carried out on a regular basis on persons spraying this preparation.

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 vapour in air and avoid vapour concentration higher than the occupational exposure limits.

In addition, the product should only be used in areas from which all naked lights and other sources of ignition have been excluded. Electrical equipment should be protected to the appropriate standard. Preparation may charge electrostatically: always use earthing leads when transferring from one container to another.

Operators should wear anti-static footwear and clothing and floors should be of the conducting type.

Keep container tightly closed. Precautions should be taken to minimise exposure to atmospheric humidity or water: CO₂ will be formed which in closed containers can result in pressurisation. Care should be taken when re-opening partly used containers. Isolate from sources of heat, sparks and open flame. No sparking tools should be used.

Avoid skin and eye contact. Avoid the inhalation of dust, particulates and spray mist arising from the application of this preparation. Avoid inhalation of dust from sanding. Smoking, eating and drinking should be prohibited in application area. For personal protection see Section 8.

Never use pressure to empty : container is not a pressure vessel. Always keep in containers of same material as the original one. Comply with the health and safety at work laws.

Storage:

Store in accordance with local regulations. Observe label precautions. Store between 5 and 25°C in a dry, well ventilated place away from sources of heat and direct sunlight.

Keep away from sources of ignition. Keep away from oxidising agents, from strongly alkaline and strongly acid materials as well as of amines, alcohols and water. No smoking. Prevent unauthorized access. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

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8. Exposure controls/Personal protection.

Persons with a history of asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this preparation is used.

Examination of lung function should be carried out on a regular basis on persons spraying this preparation.

Engineering Measures.

Provide adequate ventilation. This should be achieved by the use of local exhaust ventilation and good general extraction. Air-fed protective respiratory equipment must be worn by spray operator even when good ventilation is provided. In other operations, if local exhaust ventilation and good general extraction are not sufficient to maintain concentrations of particulates and solvent vapour below the OEL, suitable respiratory protection must be worn. (See Personal Protection.)
Exposure Limits.

Occupational exposure limits (OEL):

Substance	ppm	mg/m ³	Substance	ppm	mg/m ³
*Hexamethylen-1,6-diisocyanate	0,005	0,035	*Dipropyleneglycoldimethylether	100	

Those marked '**' are assigned by the supplier of the substance.

'Sk' indicates a risk of absorption through the skin. 'Sen' indicates a respiratory sensitiser.

Personal protection:

Respiratory protection:	By spraying : air fed respirator. By other operations than spraying : In well ventilated areas, air-fed respirators could be replaced by a combination of charcoal filter and particulate filter mask.
Hand protection:	Use PE/EVA/PE gloves (4H). Barrier (=wearing) time: 4 hours. Dispose immediately after use. See manufacturers recommendations. Barrier creams may help to protect the exposed areas of the skin, they should however not be applied once exposure has occurred.
Eye protection:	Use safety eyewear designed to protect against splash of liquids.
Skin protection:	Personnel should wear anti-static clothing made of natural fibre or of high temperature resistant synthetic fibre.

9. Physical and chemical properties.

	Product	Mixture		Product	Mixture
Physical state:	Liquid	Liquid	Explosion limit, lower (vol%)	0,8	0,8
Flash point, °C:	> 62	> 100	Organic solvents % (w/w):	10 - 40	10 - 20
Specific gravity, kg/l:	1,05	1,05	VOC		140
Solubility in water:	Miscible	Miscible	pH:	7 - 9	7 - 9
			Vapour density (rel. to air):	Heavier	Heavier

10. Stability and reactivity.

Stable under the recommended storage and handling conditions (see section 7). In a fire, hazardous decomposition products such as smoke, carbon monoxide, carbon dioxide, oxides of nitrogen, hydrogen cyanide, isocyanate may be produced. Keep away from oxidising agents, strongly alkaline and strongly acidic materials, amines, alcohols and water. Uncontrolled exothermic reactions occur with amines and alcohols. The product reacts slowly with water resulting in evolution of carbon dioxide. In closed containers, pressure build up could result in distortion, blowing and in extreme cases bursting of the container.

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11. Toxicological information.

Based on the properties of the isocyanate components and considering toxicological data on similar preparations, this preparation may cause acute irritation and/or sensitization of the respiratory system leading to an asthmatic condition, wheeziness and a tightness of the chest. Sensitized persons may subsequently show asthmatic symptoms when exposed to atmospheric concentrations well below the OEL. Repeated exposure may lead to permanent respiratory disability.

Exposure to component solvents vapours concentration in excess of the stated occupational exposure limit may result in adverse health effect such as mucous membrane and respiratory system irritation and adverse effect on kidney, liver and central nervous system. Symptoms and signs include headache, 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. Repeated or prolonged skin contact may lead to allergic contact dermatitis.

The liquid splashed in the eyes may cause irritation and reversible damage.

12. Ecological information.

The preparation has been assessed following the conventional method of the Dangerous Preparations Directive 1999/45/EC and is not classified as dangerous for the environment.

The product should not be allowed to enter drains or water courses.

13. Disposal considerations.

Do not allow into drains or water courses.

Wastes, including emptied containers, are controlled wastes and should be disposed of in accordance with waste regulations.

Waste code: 0801 0300.

14. Transport information.

The product is not classified as dangerous for carriage.

ADR/RID: -

IMDG: -

IATA: -

15. Regulatory information.

Limitations for use: Not to be used by persons under 18 years of age.

In accordance with EC Directive 1999/45/EC the product is labelled as follows:

Symbol:



Xi Irritant

Contains: Polyfunctional isocyanate

Risk-phrases: May cause sensitization by skin contact.

Safety-phrases: Keep out of reach of children.
Do not breathe vapour/spray.
Avoid contact with skin.
If swallowed, seek medical advice immediately and show this container or label.
Use only in well-ventilated areas.
This material and its container must be disposed of in a safe way.

Other phrases: Contains isocyanates. See information provided by the manufacturer.

16. Other information.

Full text of R-phrases with no. appearing in section 2:

R23 Toxic by inhalation.

R36/37/38 Irritating to eyes, respiratory system and skin.

R42/43 May cause sensitization by inhalation and skin contact.

R43 May cause sensitization by skin contact.

The information in this Safety Data Sheet is required pursuant to the EC Directive 91/155/EC.

The information in this Safety Data Sheet is required pursuant to the Safety Data Sheet Directive 91/155/EC, 93/112/EC and 2001/58/EC. The information of this safety data sheet is based on the present state of our knowledge and on current EU and national laws. The product is not to be used for other purposes than those specified under section 1 without first obtaining written handling instruction. It is always the responsibility of the user to take all necessary steps in order to fulfil the demand laid down in the local rules and legislation.

The information in this safety data sheet is meant as a description of the safety requirements of our product: it is not to be considered as a guarantee of the products' properties.