

**SAFETY DATA SHEET**

Date: 7.04.2009

Former date:

<b>1. IDENTIFICATION OF THE CHEMICAL AND OF THE MANUFACTURER, IMPORTER OR OTHER UNDERTAKING</b>			
<b>1.1 Identification of the substance or preparation</b>			
Trade name		<b>Motoväri 2U / Motoväri 4U</b>	
Code of the preparation			
<b>1.2 Use of the chemical</b>			
<b>1.2.1 The intended uses of the chemical</b>			
Marking agent for wood			
<b>1.3 Identification of the manufacturer, importer or other undertaking</b>			
<b>1.3.1 Manufacturer, importer, other undertaking</b>			
		Jarmat Oy	
<b>1.3.2 Contact information:</b>			
Street address		Pitkälahdenkatu 5	
Postcode and post office		FIN-74120 Iisalmi	
Post-office box		-	
Country		FINLAND	
Telephone number		+358-17-818265 /mobile: +358-3440-363535	
Telefax		+358-17-818260	
e-mail		matti.kyllonen@jarmat.fi	
internet		http://www.jarmat.fi	
<b>1.3.3 Information on foreign manufacturer</b>			
-			
<b>1.4 Emergency telephone</b>			
<b>1.4.1 Telephone number, name and address</b>			
Poison information center, Tukholmankatu 17, P.O.Box 790, 00029 HUS			
<b>2. HAZARDS IDENTIFICATION</b>			
Classification: Xi - Irritant			
R36: Irritating to eyes.			
<b>3. COMPOSITION AND INFORMATION ON INGREDIENTS</b>			
<b>3.1 Hazardous ingredients</b>			
<b>3.1.1 CAS number or other code</b>	<b>3.1.2 Name of the ingredient</b>	<b>3.1.3 Concentration</b>	<b>3.1.4 Warning symbol, R phrases and other data on the ingredient</b>
Confidential	Hygroscopic inorganic salt	25-30%	Xi; R36
<b>3.1.5 There has been a request for confidentiality of a substance according to Annex 3 of the decree</b> <input checked="" type="checkbox"/>			
<b>3.1.6 A substance not dangerous has been indicated as confidential</b> <input type="checkbox"/>			
<b>3.1.7 Other information</b>			
R- phrases in text - see section 16.			
<b>4. FIRST AID MEASURES</b>			
<b>4.1 Special instructions</b>			
<b>4.2 Inhalation</b>			
Remove to fresh air.			
<b>4.3 Skin contact</b>			
Remove soaked clothing and safety shoes. Rinse the skin with plenty of water and mild soap.			

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- 4.4 Eye contact**  
Rinse immediately with plenty of water. Contact a doctor if the irritation or other symptoms persists.
- 4.5 Ingestion**  
Contact a doctor.
- 4.6 Information to doctor or other trained persons giving first aid**  
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## 5. FIRE-FIGHTING MEASURES

- 5.1 Suitable extinguishing media**  
The product is not flammable. Use extinguishing media suitable for the environmental fire.
- 5.2 Extinguishing media which must not be used for safety reasons**  
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- 5.3 Special exposure hazards in a fire**  
If heated above the decomposition temperature there might be released toxic gases (containing chlorine).
- 5.4 Special protective equipment for fire-fighters**  
Use independent respirator and personal protection equipment.
- 5.5 Other instructions**  
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## 6. ACCIDENTAL RELEASE MEASURES

- 6.1 Personal precautions**  
Use suitable protection equipment (see section 8).
- 6.2 Environmental precautions**  
Prevent from releasing into environment with barriers or by covering with inorganic inert substance such as sand. If a release into the drains or water systems inform the local authorities according to national legislation.
- 6.3 Methods for cleaning up**  
Contain large spills in suitable, clean and dry containers for disposal. Should be handled as hazardous waste.  
Small spills should be absorbed in sand or earth and placed in suitable waste container for disposal.
- 6.4 Other instructions**  
Great amounts of solution will make the area slippery.

## 7. HANDLING AND STORAGE

- 7.1 Handling**  
Avoid contact with eyes and skin. Wash thoroughly after handling and wash the soaked clothing before next time of use.
- 7.2 Storage**  
Keep in closed original containers. Keep away from moisture and unsuitable materials such as barium oxide, calcium oxide, boric fluoride and methylvinylether.  
Remarks! Freezing point: -45°C - -50°C.
- 7.3 Specific use(s)**  
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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Exposure limit values

- 8.1.1 HTP values**  
Exposure limit values in Finland:  
No values established.
- 8.1.2 Other limit values**  
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- 8.1.3 Limit values in other countries**  
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### 8.2 Exposure controls

- 8.2.1 Occupational exposure controls**  
Ensure sufficient ventilation. Take care of safety shower and possibility for eye washing in the closed site of the working place.
- 8.2.1.1 Respiratory protection**

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In normal conditions not required. In case the ventilation is poor, use filter P2 and half mask as respiration protection.

**8.2.1.2 Hand protection**

Use gloves of PVC or other plastic material. Time for permeability is 4-8 hours. Don't use leather gloves.

**8.2.1.3 Eye protection**

Wear safety goggles/face shield.

**8.2.1.4 Skin protection**

Use suitable skin protection. Safety shoes of leather or other leather articles are not suitable as protection clothing.

**8.2.2 Environmental exposure controls**

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**9. PHYSICAL AND CHEMICAL PROPERTIES**

**9.1 General information (physical state, colour and odour)**

Liquid, colour according to pigment (red, blue, green, yellow, orange, black, etc.

**9.2 Important health, safety and environmental information**

9.2.1	pH	9-9.5
9.2.2	Boiling point/boiling range	-
9.2.3	Flash point	-
9.2.4	Flammability (solid, gas)	-
9.2.5	Explosive properties	
9.2.5.1	Lower explosive limit	-
9.2.5.2	Upper explosive limit	-
9.2.7	Vapour pressure	-
9.2.8	Relative density	1.27 – 1.28

**9.2.9 Solubility**

9.2.9.1	Water solubility	Soluble with water
9.2.9.2	Fat solubility (solvent-oil to be specified)	-
9.2.9.3	Solubility in other solvents	-
9.2.10	Partition coefficient: n-octanol/water	-
9.2.11	Viscosity	-
9.2.12	Vapour density	-
9.2.13	Evaporation rate	-
9.3	Other information	Freezing point: -45°C - 50 °C

**10. STABILITY AND REACTIVITY**

**10.1 Conditions to avoid**

The product is stable in normal conditions.

**10.2 Materials to avoid**

The product reacts vigorously with mixtures of borix oxide and calcium oxide. Vigorous polymerisation in case the product is mixed with methylvinylether. The product reacts also vigorously with bromofluoride.

**10.3 Hazardous decomposition products**

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If heated above the decomposition temperature there might be released toxic gases (containing chlorine).

<b>11.</b>	<b>TOXICOLOGICAL INFORMATION</b>
<b>11.1</b>	<b>Acute toxicity</b> The product is not tested. Waterfree product: LD50: 1000-4000 mg/kg, oral, rat. LD50: 2630 mg/kg, dermal, rat.
<b>11.2</b>	<b>Irritation and corrosiveness</b> Irritating to eyes.
<b>11.3</b>	<b>Sensitisation</b> -
<b>11.4</b>	<b>Sub-acute, sub-chronic and prolonged toxicity</b> The product is not mutagenic. Ames test (Salmonella typhimurium), negative.
<b>11.5</b>	<b>Empirical data on effects on humans</b> INHALATION: Inhalation might cause mild irritation. SKIN: Skin contact may cause mild irritation. Longterm skin contact might cause irritation. EYES: Might cause irritation of eyes. Classified as irritating for eyes. INGESTION: The toxicity is moderate by ingestion. May cause nausea, irritation of mouth, throat and digestive organisms.
<b>11.6</b>	<b>Other information on health effects</b> -
<b>12.</b>	<b>ECOLOGICAL INFORMATION</b>
<b>12.1</b>	<b>Ecotoxicity</b>
<b>12.1.1</b>	<b>Aquatic toxicity</b> Water-free product: LC50(96h): 4630 mg/l, fish (Fathead minnow), LC50(48h): 2770mg/l, daphnia magna, LC50(120h): 3130 mg/l, bacteria (Nitzschia lineria). The substance is not hazardous to aquatic organisms.
<b>12.1.2</b>	<b>Toxicity to other organisms</b> -
<b>12.2</b>	<b>Mobility</b> The product is soluble in water and mobile with water.
<b>12.3</b>	<b>Persistence and degradability</b>
<b>12.3.1</b>	<b>Biodegradation</b> The product is not biodegradable (inorganic product – criteria for biodegradation cannot be applied).
<b>12.3.2</b>	<b>Chemical degradation</b> -
<b>12.4</b>	<b>Bioaccumulative potential</b> No bioaccumulation.
<b>12.5</b>	<b>Other adverse effects</b> -
<b>13.</b>	<b>DISPOSAL CONSIDERATIONS</b>
	The product is classified, thus waste must be handled as hazardous waste as also uncleaned packaging. The waste should be delivered to a hazardous waste facility or to another place directed by the municipal waste authorities if recycling is not possible. Empty drums should be delivered to a place directed by the municipal waste authorities. The drums are not allowed to be re-used without proper cleaning and resurfacing.
<b>14.</b>	<b>TRANSPORT INFORMATION</b>
<b>14.1</b>	<b>UN number</b> -
<b>14.2</b>	<b>Packing group</b> -
<b>14.3</b>	<b>Land transport</b>
<b>14.3.1</b>	<b>Transport class</b> Not restricted for transport
<b>14.3.2</b>	<b>Risk code</b> -
<b>14.3.3</b>	<b>Name according to bill of freight</b>

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14.3.4 Other information

-  
**14.4 Sea transport**

14.4.1 IMDG class

-  
14.4.2 Correct technical name

-  
14.4.3 Other information

-  
**14.5 Air transport**

14.5.1 ICAO/IATA class

-  
14.5.2 Correct technical name

-  
14.5.3 Other information

-  
**15. REGULATORY INFORMATION**

**15.1 Information on the warning label**

15.1.1 Letter code of the warning symbol and indications of danger for the preparation  
Xi, Irritant

15.1.2 Names of the ingredients given on the warning label

15.1.3 R phrases  
R36: Irritating to eyes.

15.1.4 S phrases  
S23: Do not breathe mist.  
S24: Avoid contact with skin.

15.1.5 Special regulations on certain preparations

15.2 National regulations

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**16. OTHER INFORMATION**

16.1 List of the relevant R phrases  
R36: Irritating to eyes.

16.2 Training advice

16.3 Restrictions on use

16.4 Further information

16.5 Sources of key data used  
The safety data sheet of the rwa material ; 10.10.2007

16.6 Information which has been added, deleted or revised

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