



## 2K STANDARD FAST AIR DRY HARDENER

**SAFETY DATA SHEET**

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Regulation (EU) No. 2015/830 - United Kingdom (UK).

Version: 02

Revision: 12.08.2015  
(Previous revision 18.04.2011)

Print date: 25.08.2015

**1. SECTION 1:  
Identification of the substance/mixture and of the company/undertaking;****1.1 Product Identifier;****Product Name** 2K Standard Fast Air Dry Hardener**Product Code:** 0307**Product Synonyms:****1.2 Relevant identified uses of the substance or mixture and uses advised against;****Product use** Professional use only. Spray application.**Use of the  
Substance/mixture** Hardener for coatings.**1.3 Details of the supplier of the safety data sheet;****Churchill Paints Ltd**  
Riverdane Road, Eaton Bank Trading Estate,  
Congleton, Cheshire, CW12 1PN  
Tel. +44(0)1260 290666, Fax. +44(0)1260 290 444**e-mail address of  
person responsible  
for this SDS** [sales@churchill-paints.co.uk](mailto:sales@churchill-paints.co.uk)**1.4 Emergency Telephone  
Number:**

+44(0) 1260 290 666 (office hours only)

**2. SECTION 2: Hazards identification;****2.1 Classification of the substance or mixture;****Product definition** Mixture**Classification In accordance with the Classification, Labelling and Packaging Regulation (EC) No 1272/2008****Physical hazards** Flam. Liq. 3, H226**Health hazards** Skin Irrit. 2, H315  
Skin Sens. 1, H317  
Acute Tox. 4, H332  
STOT SE 3, H335 (Respiratory tract irritation)



## 2K STANDARD FAST AIR DRY HARDENER

### *Environmental hazards*

Not Classified

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

## 2.2 Label elements

### *Hazard pictograms*



### *Signal word*

Warning

### *Hazard statements*

H226 - Flammable liquid and vapour.

H315 - Causes skin irritation.

H317 - May cause an allergic skin reaction.

H332 - Harmful if inhaled.

H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H335 - May cause respiratory irritation. (Respiratory tract irritation)

### *Precautionary Statements*

#### *Prevention*

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P280 - Wear protective gloves/protective clothing/eye protection/face protection.

#### *Response*

P303 + P361 + P353 – IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304 + P340 – IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P370 + P378 – In case of fire: Use ABC powder extinguisher to extinguish.

#### *Storage*

P403 + P235 – Store in a well-ventilated place. Keep cool.

#### *Disposal*

Not applicable

### *Hazardous Ingredients*

Hexamethylene di-isocyanate, oligomers

### *Supplemental label elements*

EUH204: Contains isocyanates. May produce an allergic reaction.

EUH208: Contains Hexamethylene di-isocyanate. May produce an allergic reaction.

**2K STANDARD FAST AIR DRY HARDENER**

*Annex XVII –  
Restrictions on the  
manufacture, placing  
on the market and  
use of certain  
dangerous substances,  
mixtures and  
articles.*

Not applicable

**2.3. Other hazards** PBT: This product is not identified as a PBT/vPvB substance.

<b>3. SECTION 3: Composition/information on ingredients</b>
---

**3.2 Mixtures** Mixture

<i>REACH Registration Number</i>	<i>Chemical name</i>	<i>% by wt.</i>	<i>CAS No.</i>	<i>EC No. (EINEC S)</i>	<i>Index No.</i>	<i>Classification Regulation (EC) No.1272/2008 [CLP]</i>
01-2119485796-17	<b>Hexamethylene di-isocyanate, oligomers</b>	≥25 - <50	28182-81-2	500-060-2	Non-applicable	Skin Sens. 1, H317 Acute Tox. 4, H332 STOT SE 3, H335
01-2119488216-32	<b>Xylene (mixture of isomers)</b>	≥25 - <50	1330-20-7	215-535-7	601-022-00-9	Acute Tox. 4, H312+H332 Flam. Liq. 3, H226 Skin Irrit. 2, H315
01-2119489370-35	<b>Ethyl benzene</b>	≥5 - <10	100-41-4	202-849-4	601-023-00-4	Acute Tox. 4, H332 Asp. Tox. 1 H304 Flam. Liq. 2, H225 STOT RE 2, H373
01-2119475791-29	<b>2-Methoxy-1-methylethyl acetate</b>	≥5 - <10	108-65-6	203-603-9	607-195-00-7	Flam. Liq. 3, H226
01-2119473980-30	<b>4-Methyl pentan-2-one</b>	≥5 - <10	108-10-1	203-550-1	606-004-00-4	Acute Tox. 4, H332 Eye Irrit. 2, H319 Flam. Liq. 2, H225 STOT SE 3, H335
01-2119457571-37	<b>Hexamethylene di-isocyanate</b>	≥0.2	822-06-0	212-485-8	615-011-00-1	Acute Tox. 3, H331 Eye Irrit. 2, H319 Resp. Sens. 1, H334 Skin Irrit. 2, H315 Skin Sens. 1, H317 STOT SE 3, H335

*The Full Text for all Hazard Statements on this SDS is displayed in Section 16.*

**2K STANDARD FAST AIR DRY HARDENER****4. SECTION 4: First aid measures****4.1. Description of first aid measures**

<b>Eye contact</b>	Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Seek immediate medical attention.
<b>Inhalation</b>	If spray/mist has been inhaled, proceed as follows. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. If breathing stops, provide artificial respiration. Get medical attention immediately.
<b>Skin contact</b>	Remove contaminated clothing immediately and wash skin with soap and water.
<b>Ingestion</b>	If swallowed, seek medical advice immediately and show the container or label. Keep person warm and at rest. Do NOT induce vomiting.
<b>Protection of first-aiders</b>	No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

**4.2. Most important symptoms and effects, both acute and delayed**

<b>Eye contact</b>	No known significant effects or critical hazards.
<b>Inhalation</b>	Harmful if inhaled. May cause respiratory irritation.
<b>Skin contact</b>	Defatting to the skin. May cause skin dryness and irritation. May cause an allergic skin reaction.
<b>Ingestion</b>	No known significant effects or critical hazards.
<b><u>Over-exposure signs/symptoms</u></b>	
<b>Eye contact</b>	No specific data.
<b>Inhalation</b>	Adverse symptoms may include the following: respiratory tract irritation coughing
<b>Skin contact</b>	Adverse symptoms may include the following: irritation redness dryness cracking
<b>Ingestion</b>	No specific data.



## 2K STANDARD FAST AIR DRY HARDENER

### 4.3. *Indication of any immediate medical attention and special treatment needed*

*Notes to physician* In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

*Immediate / special treatment:* No specific treatment.

## 5. SECTION 5: Firefighting measures

### 5.1. *Extinguishing media*

*Suitable extinguishing media*

Extinguish with foam, carbon dioxide, dry powder or water fog.

*Unsuitable extinguishing media*

Do not use water jet.

### 5.2. *Special hazards arising from the substance or mixture*

*Hazards from the Mixture*

Flammable liquid and vapour. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Runoff to sewer may create fire or explosion hazard.

*Hazardous combustion products*

Decomposition products may include the following materials:

Carbon dioxide  
Carbon monoxide  
Nitrogen oxides

### 5.3. *Advice for firefighters*

*Protective actions during firefighting*

Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Use water to keep fire-exposed containers cool and disperse vapours. Wear self-contained breathing apparatus. Wear protective clothing to prevent contact with skin and eyes.

*Special protective equipment for fire-fighters*

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

**2K STANDARD FAST AIR DRY HARDENER****6. SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures****For non-emergency  
Personnel**

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Isolate leaks providing there is no additional risk to those performing this task. Personal protection equipment must be used to avoid direct contact with the spillage. Shut off all ignition sources. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate.

**For emergency  
responders**

If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

**6.2. Environmental precautions**

Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

**6.3. Methods and material for containment and cleaning up****Small spill**

Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

**Large spill**

Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with noncombustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product.

**Special provisions**

Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Place in a suitable container. The contaminated area should be cleaned immediately with a suitable decontaminant. One possible (flammable) decontaminant comprises (by volume): water (45 parts), ethanol or isopropyl alcohol (50 parts) and concentrated (d: 0,880) ammonia solution (5 parts). A non-flammable alternative is sodium carbonate (5 parts) and water (95 parts). Add the same decontaminant to the remnants and let stand for several days until no further reaction in an unsealed container. Once this stage is reached, close container and dispose of according to local regulations (see section 13). Do not allow to enter drains or watercourses. If the product contaminates lakes, rivers, or sewers, inform the appropriate authorities in accordance with local regulations.

**2K STANDARD FAST AIR DRY HARDENER****6.4. Reference to other sections**

See Section 1 for emergency contact information.  
See Section 8 for information on appropriate personal protective equipment.  
See Section 13 for additional waste treatment information.

**7. SECTION 7: Handling and storage**

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

**7.1. Precautions for safe handling**

Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapour or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use non-sparking tools. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by earthing and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.

**7.2. Conditions for safe storage, including any incompatibilities****Storage precautions**

Storage temperature: 0 to 35°C (32 to 95°F). Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. Precautions should be taken to minimise exposure to atmospheric humidity or water. CO<sub>2</sub> will be formed, which, in closed containers, could result in pressurisation.

**7.3 Specific end use(s)**

Not available.

**8. SECTION 8: Exposure Controls/personal protection**

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).



## 2K STANDARD FAST AIR DRY HARDENER

## 8.1. Control parameters

<i>Occupational exposure limits to be monitored in the work environment</i>					
<i>Ingredient name:</i>	<i>Comment (from EH40)</i>	<i>Time-weighted average – 8 hrs (TWA).</i>		<i>Short-term exposure limits – 15min (STELs)</i>	
		<i>ppm.</i>	<i>mg/m<sup>3</sup></i>	<i>ppm.</i>	<i>mg/m<sup>3</sup></i>
<b>Ethylbenzene</b>	<b>Sk</b>	<b>100</b>	<b>441</b>	<b>125</b>	<b>552</b>
<b>Xylene</b>	<b>Sk</b>	<b>50</b>	<b>220</b>	<b>100</b>	<b>441</b>
<b>4-Methyl Pentan-2-one</b>	<b>Sk</b>	<b>50</b>	<b>205</b>	<b>75</b>	<b>307</b>
<b>2-Methoxy-1-Methylethyl Acetate (PMA)</b>	<b>Sk</b>	<b>50</b>	<b>274</b>	<b>100</b>	<b>548</b>

*Comments are from HSE Guidance Note EH40/2005 Workplace exposure limits (WELs)*

**Sk** : Can be absorbed through skin

## DNELs (Workers)

<i>Ingredient name:</i>	<i>Exposure</i>	<i>Short term</i>		<i>Long term</i>	
		<i>Systemic</i>	<i>Local</i>	<i>Systemic</i>	<i>Local</i>
<b>Xylene (mixture of isomers)</b>	<i>Oral</i>	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	<i>Dermal</i>	Non-applicable	Non-applicable	180 mg/kg	Non-applicable
	<i>Inhalation</i>	289 mg/m <sup>3</sup>	289 mg/m <sup>3</sup>	77 mg/m <sup>3</sup>	Non-applicable
<b>Hexamethylene di-isocyanate, oligomers</b>	<i>Oral</i>	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	<i>Dermal</i>	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	<i>Inhalation</i>	Non-applicable	1 mg/m <sup>3</sup>	Non-applicable	0.5 mg/m <sup>3</sup>
<b>Ethylbenzene</b>	<i>Oral</i>	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	<i>Dermal</i>	Non-applicable	Non-applicable	180 mg/kg	Non-applicable
	<i>Inhalation</i>	Non-applicable	293 mg/m <sup>3</sup>	77 mg/m <sup>3</sup>	Non-applicable



**2K STANDARD FAST AIR DRY HARDENER**

<b>2-Methoxy-1-methylethyl acetate</b>	<i>Oral</i>	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	<i>Dermal</i>	Non-applicable	Non-applicable	153.5 mg/kg	Non-applicable
	<i>Inhalation</i>	Non-applicable	Non-applicable	275 mg/m <sup>3</sup>	Non-applicable
<b>4-Methyl pentan-2-one</b>	<i>Oral</i>	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	<i>Dermal</i>	Non-applicable	Non-applicable	11.8 mg/kg	Non-applicable
	<i>Inhalation</i>	208 mg/m <sup>3</sup>	208 mg/m <sup>3</sup>	83 mg/m <sup>3</sup>	83 mg/m <sup>3</sup>
<b>Hexamethylene di-isocyanate</b>	<i>Oral</i>	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	<i>Dermal</i>	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	<i>Inhalation</i>	0.07 mg/m <sup>3</sup>	0.07 mg/m <sup>3</sup>	0.035 mg/m <sup>3</sup>	0.035 mg/m <sup>3</sup>

*DNELs (General Population)*

<i>Ingredient name:</i>	<i>Exposure</i>	<i>Short term</i>		<i>Long term</i>	
		<i>Systemic</i>	<i>Local</i>	<i>Systemic</i>	<i>Local</i>
<b>Xylene (mixture of isomers)</b>	<i>Oral</i>	Non-applicable	Non-applicable	1.6 mg/kg	Non-applicable
	<i>Dermal</i>	Non-applicable	Non-applicable	108 mg/kg	Non-applicable
	<i>Inhalation</i>	Non-applicable	Non-applicable	14.8 mg/m <sup>3</sup>	Non-applicable
<b>Ethylbenzene</b>	<i>Oral</i>	Non-applicable	Non-applicable	1.6 mg/kg	Non-applicable
	<i>Dermal</i>	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	<i>Inhalation</i>	Non-applicable	Non-applicable	15 mg/m <sup>3</sup>	Non-applicable
<b>2-Methoxy-1-methylethyl acetate</b>	<i>Oral</i>	Non-applicable	Non-applicable	1.67 mg/kg	Non-applicable
	<i>Dermal</i>	Non-applicable	Non-applicable	54.8 mg/kg	Non-applicable
	<i>Inhalation</i>	Non-applicable	Non-applicable	33 mg/m <sup>3</sup>	Non-applicable

**2K STANDARD FAST AIR DRY HARDENER**

4-Methyl pentan-2-one	<i>Oral</i>	Non-applicable	Non-applicable	4.2 mg/kg	Non-applicable
	<i>Dermal</i>	Non-applicable	Non-applicable	4.2 mg/kg	Non-applicable
	<i>Inhalation</i>	Non-applicable	Non-applicable	14.7 mg/m <sup>3</sup>	Non-applicable

*PNEC*

<i>Ingredient name:</i>	<i>Environmental sphere</i>	<i>PNEC value</i>
Xylene (mixture of isomers)	<i>Fresh water</i>	0.327 mg/L
	<i>Marine water</i>	0.327 mg/L
	<i>Fresh water sediment</i>	12.46 mg/kg
	<i>Marine water sediment</i>	12.46 mg/kg
	<i>Sewage Treatment</i>	6.58 mg/L
	<i>Soil</i>	2.31 mg/kg
Hexamethylene di-isocyanate, oligomers	<i>Fresh water</i>	0.127 mg/L
	<i>Marine water</i>	0.0127 mg/L
	<i>Fresh water sediment</i>	266700 mg/kg
	<i>Marine water sediment</i>	26670 mg/kg
	<i>Sewage Treatment</i>	38.3 mg/L
	<i>Soil</i>	53182 mg/kg
Ethylbenzene	<i>Fresh water</i>	0.1 mg/L
	<i>Marine water</i>	0.01 mg/L
	<i>Fresh water sediment</i>	13.7 mg/kg
	<i>Marine water sediment</i>	1.37 mg/kg
	<i>Sewage Treatment</i>	9.6 mg/L
	<i>Soil</i>	2.68 mg/kg
2-Methoxy-1-methylethyl acetate	<i>Fresh water</i>	0.635 mg/L
	<i>Marine water</i>	0.0635 mg/L
	<i>Fresh water sediment</i>	3.29 mg/kg
	<i>Marine water sediment</i>	0.329 mg/kg
	<i>Sewage Treatment</i>	100 mg/L
	<i>Soil</i>	0.29 mg/kg

**2K STANDARD FAST AIR DRY HARDENER**

4-Methyl pentan-2-one	<i>Fresh water</i>	0.6 mg/L
	<i>Marine water</i>	0.06 mg/L
	<i>Fresh water sediment</i>	8.27 mg/kg
	<i>Marine water sediment</i>	0.83 mg/kg
	<i>Sewage Treatment</i>	27.5 mg/L
	<i>Soil</i>	1.3 mg/kg
Hexamethylene di-isocyanate	<i>Fresh water</i>	0.0774 mg/L
	<i>Marine water</i>	0.00774 mg/L
	<i>Fresh water sediment</i>	0.01334 mg/kg
	<i>Marine water sediment</i>	0.001344 mg/kg
	<i>Sewage Treatment</i>	8.42 mg/L
	<i>Soil</i>	0.0026 mg/kg

**8.2 Exposure controls:****Appropriate engineering controls**

Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

**8.3 Individual protection measures, such as personal protective equipment (PPE)****Hygiene measures**

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Eye/face protection**

Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. The following protection should be worn: Chemical splash goggles.

**Skin protection**

**For hands,** chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. The most suitable glove should be chosen in consultation with the glove supplier/manufacture that can provide information about the breakthrough time of the glove material.

**For body,** Personal protective equipment should be selected based on the task being performed and the risks involved.



## 2K STANDARD FAST AIR DRY HARDENER

**For feet,** appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved.



Protective gloves



Overall



Safety boots

### *Respiratory Protection*

When spraying, use air-fed respirator. Gas/vapour filter, type A: organic vapours (EN141). Self-contained breathing apparatus must be available in case of emergency.

### *Environmental exposure controls*

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

## 9. SECTION 9: Physical and Chemical Properties

### 9.1. Information on basic physical and chemical properties

#### Appearance

<i>Physical State</i>	Liquid
<i>Colour</i>	Colourless
<i>Odour</i>	Characteristic
<i>Odour threshold</i>	Not available
<i>pH</i>	Not available
<i>Melting point</i>	Not available
<i>Freezing point</i>	Not available
<i>Initial boiling point</i>	136C
<i>Boiling range</i>	Not available
<i>Flash point</i>	24C
<i>Evaporation rate</i>	Not available
<i>Flammability (solid, gas)</i>	Not available
<i>Upper/lower Flammability or Explosive limits</i>	Not available
<i>Vapour pressure</i>	840 Pa
<i>Vapour density</i>	Not available
<i>Relative density</i>	0.94
<i>Solubility(ies)</i>	Not available
<i>Partition coefficient n-octanol/water</i>	Not available
<i>Auto-ignition temperature</i>	315C
<i>Decomposition temperature</i>	Not available
<i>Viscosity</i>	Not available

**2K STANDARD FAST AIR DRY HARDENER***Explosive properties* Not available*Oxidising properties* Not available**10. SECTION 10: Stability and reactivity****10.1 Reactivity:**

No specific test data related to reactivity available for this product or its ingredients.

**10.2 Chemical Stability:**

This product is stable.

**10.3. Possibility of hazardous reactions**

Under normal conditions of storage and use, hazardous reactions will not occur.

**10.4. Conditions to avoid**

In a fire, hazardous decomposition products may be produced.

**10.5. Incompatible materials**

Keep away from: oxidising agents, strong alkalis, strong acids, amines, alcohols, water. Uncontrolled exothermic reactions occur with amines and alcohols.

**10.6. Hazardous decomposition products**

Decomposition products may include the following materials: carbon monoxide, carbon dioxide, smoke, oxides of nitrogen, hydrogen cyanide, monomeric isocyanates.

**11. SECTION 11: Toxicological information****11.1. Information on toxicological effects**

<i>Ingredient name:</i>	<i>Acute toxicity test</i>	<i>Species</i>	<i>Dose</i>	<i>Exposure</i>
<b>Xylene (mixture of isomers)</b>	<i>Oral – LD<sub>50</sub></i>	Rat	>3500 mg/kg	
	<i>Dermal – LD<sub>50</sub></i>	Rabbit	>4200 mg/kg	
	<i>Inhalation – LC<sub>50</sub></i>	Rat	>20 mg/L	4 hrs
<b>Ethylbenzene</b>	<i>Oral – LD<sub>50</sub></i>	Rat	3500 mg/kg	
	<i>Dermal – LD<sub>50</sub></i>	Rabbit	15354 mg/kg	
	<i>Inhalation – LC<sub>50</sub></i>	Rat	17.2 mg/L	4 hrs
<b>2-Methoxy-1-methylethyl acetate</b>	<i>Oral – LD<sub>50</sub></i>	Rat	8532 mg/kg	
	<i>Dermal – LD<sub>50</sub></i>	Rat	>2000 mg/kg	
	<i>Inhalation – LC<sub>50</sub></i>	Rat	4345 ppm	6 hrs

**2K STANDARD FAST AIR DRY HARDENER**

<b>4-Methyl pentan-2-one</b>	<i>Oral – LD<sub>50</sub></i> <i>Dermal – LD<sub>50</sub></i> <i>Inhalation – LC<sub>50</sub></i>		2080 mg/kg >2000 mg/kg (ATEi) 11 mg/L (ATEi)	4 hrs
<b>Hexamethylene di-isocyanate</b>	<i>Oral – LD<sub>50</sub></i> <i>Dermal – LD<sub>50</sub></i> <i>Inhalation – LC<sub>50</sub></i>		>2000 mg/kg >2000 mg/kg (ATEi) 3 mg/L (ATEi)	4 hrs
<b>Hexamethylene di-isocyanate, oligomers</b>	<i>Oral – LD<sub>50</sub></i> <i>Dermal – LD<sub>50</sub></i> <i>Inhalation – LC<sub>50</sub></i>	Rat	5100 mg/kg >2000 mg/kg (ATEi) 11 mg/L (ATEi)	4 hrs

***Skin corrosion/irritation***

**Ingestion** – The consumption of a considerable dose can cause irritation of the throat, abdominal pain, nausea and vomiting.

**Inhalation** – Causes irritation in respiratory passages, which is normally reversible and limited to the upper respiratory passages.

***Serious eye damage/irritation***

Based on available Data, the classification criteria are not met. The liquid splashed in the eyes may cause irritation and reversible damage.

***Respiratory or skin sensitization***

Skin irritation should not occur when used as recommended. Repeated exposure may cause skin dryness or cracking.

***Germ cell mutagenicity***

Based on available data the classification criteria are not met.

***Carcinogenicity***

Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for the effects mentioned. For more information see section 3.

***Reproductive toxicity***

Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.

***Specific target organ toxicity - single exposure***

Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.

**2K STANDARD FAST AIR DRY HARDENER**

*Specific target organ toxicity - repeated exposure*

Based on available data, the classification criteria are not met, however, it does contain substances classified as dangerous with repeated exposure. For more information see section 3.

*Aspiration hazard*

Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.

## 12. SECTION 12: Ecological Information

### 12.1. Toxicity

<i>Ingredient name:</i>	<i>Acute toxicity test</i>	<i>Genus - Species</i>	<i>Dose</i>	<i>Exposure</i>
<b>Xylene (mixture of isomers)</b>	<i>LC<sub>50</sub></i>	Fish - Oncorhynchus mykiss	13.5 mg/L	96 hrs
	<i>EC<sub>50</sub></i>	Crustacean - Gammarus lacustris	0.6 mg/L	96 hrs
	<i>EC<sub>50</sub></i>	Algae – Skeletonema costatum	10 mg/L	72 hrs
<b>Ethylbenzene</b>	<i>LC<sub>50</sub></i>	Fish – Pimephales promelas	42.3 mg/L	96 hrs
	<i>EC<sub>50</sub></i>	Crustacean – Daphnia magna	75 mg/L	48 hrs
	<i>EC<sub>50</sub></i>	Algae – Chlorella vulgaris	63 mg/L	3 hrs
<b>2-Methoxy-1-methylethyl acetate</b>	<i>LC<sub>50</sub></i>	Fish – Pimephales promelas	161 mg/L	96 hrs
	<i>EC<sub>50</sub></i>	Crustacean – Daphnia sp.	481 mg/L	48 hrs
	<i>EC<sub>50</sub></i>			
<b>4-Methyl pentan-2-one</b>	<i>LC<sub>50</sub></i>	Fish – Leuciscus idus	900 mg/L	48 hrs
	<i>EC<sub>50</sub></i>	Crustacean – Daphnia magna	862 mg/L	24 hrs
	<i>EC<sub>50</sub></i>	Algae – Scenedesmus subspicatus	980 mg/L	48 hrs

**2K STANDARD FAST AIR DRY HARDENER***12.2. Persistence and degradability*

<i>Ingredient name:</i>	<i>Concentration</i>	<i>Duration of test</i>	<i>% Biodegradability</i>
Ethylbenzene	100 mg/L	14 days	90
2-Methoxy-1-methylethyl acetate	785 mg/L	8 days	100
4-Methyl pentan-2-one	100 mg/L	14 days	84
Hexamethylene di-isocyanate	100 mg/L	28 days	28

*12.3. Bioaccumulative potential*

<i>Ingredient name:</i>	<i>BCF</i>	<i>Log P<sub>ow</sub></i>	<i>Potential</i>
Xylene	9	2.77	Low
Ethylbenzene	1	3.15	Low
2-Methoxy-1-methylethyl acetate	1	0.43	Low
4-Methyl pentan-2-one	2	1.31	Low
Hexamethylene di-isocyanate, oligomers			
Hexamethylene di-isocyanate	3.2		Low

*12.4. Mobility in soil*

<i>Ingredient name:</i>	<i>K<sub>oc</sub></i>	<i>HLC</i> (Henry's law constant)	<i>Surface tension</i>
Xylene (mixture of isomers)	202	524.9 Pa.m <sup>3</sup> /mol	No data available
Ethylbenzene	520	798.4 Pa.m <sup>3</sup> /mol	28590 N/m (25C)
4-Methyl pentan-2-one	Data not available	Data not available	23500 N/m (25C)



**2K STANDARD FAST AIR DRY HARDENER****12.5. Results of PBT and vPvB assessment**

This product is not identified as a PBT/vPvB substance.

**12.6. Other adverse effects**

No known significant effects or critical hazards.

**13. SECTION 13: Disposal considerations****13.1. Waste treatment methods**

**Disposal methods** The generation of waste should be avoided or minimised wherever possible. Disposal of this product, should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

**Classification of waste according to Commission Regulation (EU) No 1357/2014****Hazardous property codes**

HP3	Flammable
HP4	Irritant – skin irritation and eye damage
HP5	Specific Target Organ Toxicity (STOT)/Aspiration Toxicity
HP6	Acute Toxicity
HP13	Sensitising

**European waste catalogue (EWC)**

<i>Waste code</i>	<i>Description</i>
08 01 11*	Waste paint and varnish containing organic solvents or other dangerous substances.

**Packaging**

<i>Waste code</i>	<i>Description</i>
15 01 04	Metallic cans

**2K STANDARD FAST AIR DRY HARDENER****14. SECTION 14: Transport information**

		<i>Land</i>	<i>Inland Waterways</i>	<i>Sea</i>	<i>Air</i>
		<i>ADR/RID</i>	<i>ADN</i>	<i>IMDG</i>	<i>ICAO</i>
14.1.	<i>UN number</i>	UN1263		UN1263	UN1263
14.2.	<i>UN proper shipping name</i>	Paint related material		Paint related material	Paint related material
14.3.	<i>Transport hazard class(es)</i>	3		3	3
14.4.	<i>Packing group</i>	III		III	III
14.5.	<i>Environmental hazards Marine pollutant</i>	No		No	No
14.6	<i>Special precautions for user</i>				
	<i>Special regulations</i>	163, 367, 640E, 650		163, 223, 944, 955	
	<i>Tunnel restriction code</i>	D/E			
	<i>EmS codes</i>			F-E, S-E	
	<i>Physico-chemical properties</i>	See section 9		See section 9	See section 9
	<i>Limited quantities</i>	5L		5L	
14.7	<i>Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</i>	Non-applicable		Non-applicable	Non-applicable

**15. SECTION 15: Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

*EU Regulation (EC) No. 1907/2006 (REACH) Annex XIV - List of substances subject to authorisation.*

None of the ingredients of this mixture are listed in Annex XIV.

*Annex XVII – Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles.*

Not applicable.

**2K STANDARD FAST AIR DRY HARDENER****15.2. Chemical safety assessment**

No Chemical Safety Assessment has been carried out.

**16. SECTION 16: Other information**

*This safety data sheet conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Regulation (EU) No. 2015/830.*

**Abbreviations and Acronyms**

DNEL	-	Derived No Effect Level
PNEC	-	Predicted No Effect Concentration
EUH statement	-	CLP-specific Hazard statement
ADR	-	European agreement concerning the international carriage of dangerous goods by road.
IMDG	-	International maritime dangerous goods code.
IATA	-	International Air Transport Association.
ICAO	-	International Civil Aviation Organisation.
BCF	-	Bio Concentration Factor
LD <sub>50</sub>	-	Lethal Dose 50
CL <sub>50</sub>	-	Lethal Concentration 50
EC <sub>50</sub>	-	Effective Concentration 50
Log P <sub>ow</sub>	-	Octanol-water partition coefficient
K <sub>oc</sub>	-	Partition coefficient of organic carbon

**Full Text of Physical Hazards**

H226 - Flammable liquid and vapour.

**Full Text of Health Hazards**

H315 - Causes skin irritation.  
 H317 - May cause an allergic skin reaction.  
 H332 - Harmful if inhaled.  
 H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
 H335 - May cause respiratory irritation. (Respiratory tract irritation)

**Full Text of Environmental Hazards**

N/A

**Full Text of CLP/GHS Classifications**

Acute Tox. 3,	H331	Toxic if inhaled
Acute Tox. 4	H312+H332	Harmful in contact with skin or if inhaled
Acute Tox. 4	H332	Harmful if inhaled
EUH 204	Contains isocyanates. May produce an allergic reaction.	
EUH208	Contains Hexamethylene di-isocyanate. May produce an allergic reaction.	
Asp. Tox. 1	H304	May be fatal if swallowed and enters airways
Eye Irrit. 2,	H319	Causes serious eye irritation.
Flam. Liq. 2	H225	Highly flammable liquid and vapour
Flam. Liq. 3	H226	Flammable liquid and vapour
Resp. Sens. 1	H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled
Skin Irrit. 2	H315	Causes skin irritation

**2K STANDARD FAST AIR DRY HARDENER**

Skin Sens. 1	H317	May cause an allergic skin reaction
STOT RE 2	H373	May cause damage to organs through prolonged or repeated exposure
STOT SE 3	H335	May cause respiratory irritation

*Classification procedure*

<i>Hazard classification</i>	<i>Method of evaluation</i>
Skin. Irrit. 2	Calculation
STOT SE 3	Calculation
Skin Sens. 1	Calculation
Acute Tox. 4	Calculation
Flam. Liq. 3	Calculation

**Disclaimer**

The information contained in this safety data sheet is based on the state of knowledge and national legislation at the time of the 'revision date' shown on page 1. Further updates to this safety data sheet, in line with changes to legislation and technical knowledge, will be available from Churchill Paints or the Churchill website. Contact Churchill Paints for the latest revision. This safety data sheet 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 applications. It is the user's responsibility to ascertain the suitability of the product for a specific use. As the specific conditions-of-use of the product are outside the supplier's control, the user is responsible for ensuring that the requirements of relevant legislation are complied with.