

**2K PREMIUM SLOW / LOW BAKE 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: 20.05.2016
(Previous revision 27.09.2010)

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1. SECTION 1: Identification of the substance/mixture and of the company/undertaking;

1.1 Product Identifier;

Product Name 2K Premium Slow/Low Bake Hardener

Product Code: 0302

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

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



2K PREMIUM SLOW / LOW BAKE HARDENER

Skin Sens. 1, H317
 Acute Tox. 4, H332
 STOT SE 3, H335 (Respiratory tract irritation)

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 PREMIUM SLOW / LOW BAKE 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.

3. SECTION 3: Composition/information on ingredients

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	Hexamethylene di-isocyanate, oligomers	≥ 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	Xylene (mixture of isomers)	≥ 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	Ethyl benzene	≥ 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	2-Methoxy-1-methylethyl acetate	≥ 5 - < 10	108-65-6	203-603-9	607-195-00-7	Flam. Liq. 3, H226
01-2119473980-30	4-Methyl pentan-2-one	≥ 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	Hexamethylene di-isocyanate	≥ 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



2K PREMIUM SLOW / LOW BAKE HARDENER

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

4. SECTION 4: First aid measures

4.1. Description of first aid measures

Eye contact 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.

Inhalation 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.

Skin contact Remove contaminated clothing immediately and wash skin with soap and water.

Ingestion If swallowed, seek medical advice immediately and show the container or label. Keep person warm and at rest. Do NOT induce vomiting.

Protection of first-aiders

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

Eye contact No known significant effects or critical hazards.

Inhalation Harmful if inhaled. May cause respiratory irritation.

Skin contact Defatting to the skin. May cause skin dryness and irritation. May cause an allergic skin reaction.

Ingestion No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact No specific data.

Inhalation Adverse symptoms may include the following:
respiratory tract irritation
coughing

Skin contact Adverse symptoms may include the following:
irritation
redness
dryness
cracking



2K PREMIUM SLOW / LOW BAKE HARDENER

Ingestion No specific data.

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



2K PREMIUM SLOW / LOW BAKE HARDENER

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.

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 non-combustible, 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



2K PREMIUM SLOW / LOW BAKE HARDENER

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.

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. CO₂ will be formed, which, in closed containers, could result in pressurisation.

7.3 *Specific end use(s)*

Not available.



2K PREMIUM SLOW / LOW BAKE HARDENER

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).

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/m³</i>	<i>ppm.</i>	<i>mg/m³</i>
Ethylbenzene	Sk	100	441	125	552
Xylene	Sk	50	220	100	441
4-Methyl Pentan-2-one	Sk	50	205	75	307
2-Methoxy-1-Methylethyl Acetate (PMA)	Sk	50	274	100	548

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>
Xylene (mixture of isomers)	<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 ³	289 mg/m ³	77 mg/m ³	Non-applicable
Hexamethylene di-isocyanate, oligomers	<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 ³	Non-applicable	0.5 mg/m ³

**2K PREMIUM SLOW / LOW BAKE HARDENER**

Ethylbenzene	<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 ³	77 mg/m ³	Non-applicable
2-Methoxy-1-methylethyl acetate	<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 ³	Non-applicable
4-Methyl pentan-2-one	<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 ³	208 mg/m ³	83 mg/m ³	83 mg/m ³
Hexamethylene di-isocyanate	<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 ³	0.07 mg/m ³	0.035 mg/m ³	0.035 mg/m ³

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>
Xylene (mixture of isomers)	<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 ³	Non-applicable

**2K PREMIUM SLOW / LOW BAKE HARDENER**

Ethylbenzene	<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 ³	Non-applicable
2-Methoxy-1-methylethyl acetate	<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 ³	Non-applicable
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 ³	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

**2K PREMIUM SLOW / LOW BAKE HARDENER**

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
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.



2K PREMIUM SLOW / LOW BAKE HARDENER

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.

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

Physical State

Liquid

Colour

Colourless

**2K PREMIUM SLOW / LOW BAKE HARDENER**

<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>	136°C
<i>Boiling range</i>	Not available
<i>Flash point</i>	24°C
<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>	315°C
<i>Decomposition temperature</i>	Not available
<i>Viscosity</i>	Not available
<i>Explosive properties</i>	Not available
<i>Oxidising properties</i>	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,

**2K PREMIUM SLOW / LOW BAKE HARDENER**

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>
Xylene (mixture of isomers)	<i>Oral – LD₅₀</i>	Rat	>3500 mg/kg	
	<i>Dermal – LD₅₀</i>	Rabbit	>4200 mg/kg	
	<i>Inhalation – LC₅₀</i>	Rat	>20 mg/L	4 hrs
Ethylbenzene	<i>Oral – LD₅₀</i>	Rat	3500 mg/kg	
	<i>Dermal – LD₅₀</i>	Rabbit	15354 mg/kg	
	<i>Inhalation – LC₅₀</i>	Rat	17.2 mg/L	4 hrs
2-Methoxy-1-methylethyl acetate	<i>Oral – LD₅₀</i>	Rat	8532 mg/kg	
	<i>Dermal – LD₅₀</i>	Rat	>2000 mg/kg	
	<i>Inhalation – LC₅₀</i>	Rat	4345 ppm	6 hrs
4-Methyl-Pentan-2-One	<i>Oral – LD₅₀</i>	Rat	2080 mg/kg	
	<i>Dermal – LD₀</i>	Rat	>2000 mg/kg bw	24 hrs
	<i>Inhalation – LC₅₀</i>	Rat	11.6 mg/L air	4 hrs
Hexamethylene di-isocyanate	<i>Oral – LD₅₀</i>		>2000 mg/kg	
	<i>Dermal – LD₅₀</i>		>2000 mg/kg (ATEi)	
	<i>Inhalation – LC₅₀</i>		3 mg/L (ATEi)	4 hrs

**2K PREMIUM SLOW / LOW BAKE HARDENER**

Hexamethylene di-isocyanate, oligomers	<i>Oral – LD₅₀</i>	Rat	5100 mg/kg	4 hrs
	<i>Dermal – LD₅₀</i>		>2000 mg/kg (ATEi)	
	<i>Inhalation – LC₅₀</i>		11 mg/L (ATEi)	

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.

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

**2K PREMIUM SLOW / LOW BAKE HARDENER**

<i>Ingredient name:</i>	<i>Acute toxicity test</i>	<i>Genus - Species</i>	<i>Dose</i>	<i>Exposure</i>
Xylene (mixture of isomers)	<i>LC₅₀</i>	Fish - Oncorhynchus mykiss	13.5 mg/L	96 hrs
	<i>EC₅₀</i>	Crustacean - Gammarus lacustris	0.6 mg/L	96 hrs
	<i>EC₅₀</i>	Algae – Skeletonema costatum	10 mg/L	72 hrs
Ethylbenzene	<i>LC₅₀</i>	Fish – Pimephales promelas	42.3 mg/L	96 hrs
	<i>EC₅₀</i>	Crustacean – Daphnia magna	75 mg/L	48 hrs
	<i>EC₅₀</i>	Algae – Chlorella vulgaris	63 mg/L	3 hrs
2-Methoxy-1-methylethyl acetate	<i>LC₅₀</i>	Fish – Pimephales promelas	161 mg/L	96 hrs
	<i>EC₅₀</i>	Crustacean – Daphnia sp.	481 mg/L	48 hrs
	<i>EC₅₀</i>			
4-Methyl pentan-2-one	<i>LC₅₀</i>	Fish – Leuciscus idus	900 mg/L	48 hrs
	<i>EC₅₀</i>	Crustacean – Daphnia magna	862 mg/L	24 hrs
	<i>EC₅₀</i>	Algae – Scenedesmus subspicatus	980 mg/L	48 hrs

12.2. Persistence and degradability

<i>Ingredient name:</i>	<i>Concentration</i>	<i>Duration of test</i>	<i>% Biodegradability</i>
Xylene (mixture of isomers)			Readily biodegradable
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

**2K PREMIUM SLOW / LOW BAKE HARDENER***12.3. Bioaccumulative potential*

<i>Ingredient name:</i>	<i>BCF</i>	<i>Log P_{ow}</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			No data available
Hexamethylene di-isocyanate	3.2		Low

12.4. Mobility in soil

<i>Ingredient name:</i>	<i>K_{oc}</i>	<i>HLC</i> <i>(Henry's law constant)</i>	<i>Surface tension</i>
Xylene (mixture of isomers)	202	524.9 Pa.m ³ /mol	No data available
Ethylbenzene	520	798.4 Pa.m ³ /mol	28590 N/m (25C)
2-Methoxy-1-methylethyl acetate	No data available	No data available	No data available
4-Methyl pentan-2-one	No data available	No data available	23500 N/m (25C)

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.

**2K PREMIUM SLOW / LOW BAKE HARDENER****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

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.	UN number	UN1263		UN1263	UN1263
14.2.	UN proper shipping name	Paint related material		Paint related material	Paint related material
14.3.	Transport hazard class(es)	3		3	3
14.4.	Packing group	III		III	III

**2K PREMIUM SLOW / LOW BAKE HARDENER**

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.

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out.

16. SECTION 16: Other information
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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

**2K PREMIUM SLOW / LOW BAKE HARDENER**

		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 ₅₀	-	Lethal Dose 50
LC ₅₀	-	Lethal Concentration 50
EC ₅₀	-	Effective Concentration 50
Log P _{ow}	-	Octanol-water partition coefficient
K _{oc}	-	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*

Flam. Liq. 2	H225	Highly flammable liquid and vapour
Flam. Liq. 3	H226	Flammable liquid and vapour
Asp. Tox. 1	H304	May be fatal if swallowed and enters airways
Acute Tox. 4	H312+H332	Harmful in contact with skin or if inhaled
Skin Irrit. 2	H315	Causes skin irritation
Skin Sens. 1	H317	May cause an allergic skin reaction
Eye Irrit. 2,	H319	Causes serious eye irritation.
Acute Tox. 3,	H331	Toxic if inhaled
Acute Tox. 4	H332	Harmful if inhaled
Resp. Sens. 1	H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled
STOT SE 3	H335	May cause respiratory irritation
STOT RE 2	H373	May cause damage to organs through prolonged or repeated exposure
EUH 204		Contains isocyanates. May produce an allergic reaction.
EUH208		Contains Hexamethylene di-isocyanate. May produce an allergic reaction.



2K PREMIUM SLOW / LOW BAKE HARDENER

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

About this Safety Data Sheet.

The United Nations developed a 'Globally Harmonised System' (GHS) on classification and labelling of chemicals and the CLP Regulation adopts this system across all European Union countries, including the UK. 'CLP' is the European Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures.

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

When changes are required to Safety Data Sheets, these will be highlighted in the subsequent revision with a red bar to the left hand side of the change.

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.