



EQUIPPING THE TYRE INDUSTRY

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## HEALTH AND SAFETY PRODUCT INFORMATION

**Product: 2K POLYURETHANE ADHESIVE PART 'A'      Date: 20<sup>th</sup> June 2014**

**Product code:**

**1.**

<b>Name and Address</b>
<b>Auto4 Ltd, Unit 4a Park Court, Park Lane Business Park, Kirkby In Ashfield, Nottinghamshire, NG17 9GU</b>

**2.**

<b>Composition/Information on ingredients</b>			
<b>Substance</b>	<b>EINECS/ELINCS CAS</b>	<b>Range [%]</b>	<b>Symbol / R-phr.</b>
Polypropylene glycol	25322-69-4	25 - < 50	Xn-22
Diphenylmethanediisocyanate, isomeres and Homologues	9016-87-9	25 - < 50	Xn-20-36/37/38-42/43
4,4'-Methylenediphenyl diisocyanate	202-966-0101-68-8	25 - < 50	Xn-20-36/37/38-42/43

**3.**

<b>Hazards identification</b>
R 20/22: Harmful by inhalation and if swallowed. R 36/37/38: Irritating to eyes, respiratory system and skin. R 42/43: May cause sensitisation by inhalation and skin contact.

4.

#### First-Aid measures

##### General information

Remove contaminated soaked clothing immediately and dispose of safely.

##### Inhalation

Ensure supply of fresh air. In the event of symptoms refer for medical treatment.

##### Skin contact

In case of contact with eyes rinse thoroughly with plenty of water and seek medical advice.

##### Eye contact

In case of contact with skin wash off immediately with soap and water.

Consult a doctor if skin irritation persists.

##### Ingestion

Do not induce vomiting. Rinse out mouth and give plenty of water to drink.

Supply with medical care.

##### Advice to doctor

Treat symptomatically.

5.

#### Fire-Fighting measures

##### Suitable extinguishing media

Foam. Dry powder. Water spray jet. Carbon dioxide.

##### Extinguishing media that must not be used

Full water jet.

##### Special exposure hazards arising from the substance or preparation itself or combustion products

Risk of formation of toxic pyrolysis products. In the event of fire the following can be released: Nitrogen oxides (NO<sub>x</sub>). Hydrogen cyanide (HCN).

##### Special protective equipment for firefighters

Use self-contained breathing apparatus. Do not inhale explosion and/or combustion gases.

##### Additional information

Fire residues and contaminated firefighting water must be disposed of in accordance with the local regulations.

6.

#### Accident release measures

##### Personal precautions

Use personal protective clothing. Use breathing apparatus if exposed to vapours/dust/aerosol. High risk of slipping due to leakage/spillage of product.

##### Methods for cleaning up/taking up

Pick up with absorbent material (e.g. sand, sawdust, general-purpose binder).

Dispose of absorbed material in accordance with the regulations.

##### Environmental precautions

Do not discharge into the drains/ surface waters/ groundwater.

Prevent spread over a wide area (e.g. by containment or oil barriers).

7.

<b>Handling and storage</b>
<p><b>Advice on safe handling</b> Provide suitable extraction at the processing machines. Use only in well ventilated areas.</p> <p><b>Advice on protection against fire and explosion</b> No special measures necessary.</p> <p><b>Advice on storage compatibility</b> Do not store together with oxidizing agents.</p> <p><b>Requirements for storage rooms and vessels</b> Prevent penetration into the ground. Keep only in original container.</p> <p><b>Further information on storage conditions</b> Keep container tightly closed. Keep container in a well-ventilated place. Store in a dry place</p>

8.

<b>Exposure controls/personal protection</b>			
<b>Ingredients with occupational exposure limits to be monitored: (GB)</b>			
<b>Substance</b>	<b>LTEL[ppm]</b>	<b>LTEL[mg/m<sup>3</sup>]</b>	<b>General remarks</b>
4,4'-Methylenediphenyl diisocyanate		0,02	as-NCO, Sen, 25/3
Diphenylmethanediisocyanate, isomeres and homologues		0,02	as-NCO, Sen, 25/3
LTEL: Long-term exposure limit			
<b>Respiratory protection</b>			
Breathing apparatus in the event of high concentrations.			
<b>Hand protection</b>			
Butyl rubber, >120 min (EN 374)			
<b>Eye protection</b>			
Safety glasses.			
<b>Skin protection</b>			
Light protective clothing.			
<b>General protective measures</b>			
Avoid contact with eyes and skin. Do not inhale gases/vapours/aerosols.			
<b>Hygiene measures</b>			
At work do not eat, drink, smoke or take drugs. After worktime and before work breaks the affected skin areas must be thoroughly cleaned. Keep away from tobacco. Use barrier skin cream.			
<b>Delimitation and monitoring of the environmental exposition</b>			
Not determined.			

9.

Physical and chemical properties	
<p><b>Form:</b> Liquid.  <b>Colour:</b> Dark brown.  <b>Odour:</b> Characteristic.  <b>pH-value:</b> Not applicable.    <b>pH-value, 1%</b> Not applicable.  <b>Boiling point [°C]:</b> 208    <b>Flash point [°C]:</b> 213  <b>Flammability:[°C]</b> Not determined.  <b>Lower explosion limit:</b> Not applicable.    <b>Upper explosion limit:</b> Not applicable.    <b>Combustible properties:</b> No.</p>	<p><b>Vapour pressure [kPa]:</b> Not determined.  <b>Density [g/ml]:</b> 1,2  <b>Solubility in water:</b> Reacts with water.  <b>Partition coefficient: noctanol/ water:</b> Not determined.  <b>Viscosity:</b> Not applicable.  <b>Relative vapour density determined in air:</b> Not determined.  <b>Evaporation speed:</b> Not determined.  <b>Melting point [°C]:</b> Not determined.  <b>Autoignition temperature [°C]:</b> Not determined.  <b>Decomposition temperature [°C]:</b> Not determined.  <b>Bulk density [kg/m<sup>3</sup>]:</b> Not determined.</p>

10.

Stability and reactivity
<p><b>Hazardous reactions</b>  Reactions with water. Reactions with alcohols, amines, aqueous acids and alkalies.  <b>Hazardous decomposition products</b>  No hazardous decomposition products known.</p>

11.

Toxicological information
<p><b>Acute oral toxicity OECD 401</b> Not determined.  <b>Acute dermal toxicity OECD 402</b> Not determined.  <b>Acute inhalational toxicity OECD 403</b> Not determined.  <b>Irritant effect on skin OECD 404</b> Not determined.  <b>Irritant effect on eye OECD 405</b> Not determined.  <b>Sensitization OECD 406</b> Not determined.  <b>Subacute toxicity</b> Not determined.  <b>Mutagenicity</b> Not determined.  <b>Experiences made in practice</b> None  <b>General remarks</b> No toxicological data are available. The product was classified on the basis of the calculation procedure of the preparation directive.  <b>Carcinogenicity</b> Not determined.  <b>Reproduction toxicity</b> Not determined.  <b>Chronic toxicity</b> Not determined.</p>

12.

<b>Ecological information</b>	
<b>Fish toxicity</b>	Not determined.
<b>Daphnia toxicity</b>	Not determined
<b>Behaviour in environment compartments</b>	Not determined
<b>Behaviour in sewage plant</b>	Not applicable.
<b>Bacteria toxicity</b>	Not determined
<b>Biological degradability</b>	Not applicable.
<b>COD</b>	Not determined
<b>BOD5</b>	Not determined
<b>AOX-advice</b>	No dangerous components.
<b>76/464/EC</b>	Not applicable.
<b>General information</b>	Ecological data are not available.

13.

<b>Disposal considerations</b>	
<b>Disposal / Product</b>	Dispose of as hazardous waste. Coordinate disposal with the authorities if necessary.
<b>Disposal / Contaminated packaging</b>	Uncontaminated packaging may be taken for recycling. Packaging that cannot be cleaned should be disposed of as for product.
<b>Waste no. (recommended)</b>	080501*

14.

<b>Transport information</b>			
<b>Classification according to ADR:</b>	not classified as Dangerous Goods		
<b>Declaration:</b>			
<b>Labelling:</b>			
<b>Factor, ADR 1.1.3.6:</b>	<b>Hazard-no:</b>	<b>Label:</b>	
<b>LQ, ADR 3.4.6:</b>	<b>Vapour pressure [kPa]:</b>	Not	
determined			
<b>Classification according to IMDG:</b>	not classified as Dangerous Goods		
<b>Declaration:</b>			
<b>Labelling:</b>			
<b>EmS:</b>	<b>Label:</b>	<b>LQ, [l/kg]:</b>	
<b>Classification according to IATA:</b>	not classified as Dangerous Goods		
<b>Declaration:</b>			
<b>Labelling:</b>			
<b>Label:</b>			

15.

<b>Regulatory information</b>
<p><b>Labelling:</b> The product is classified and labelled in accordance with EC directives</p> <p><b>Hazard symbols</b></p> <p style="text-align: center;"><b>Harmful</b></p> <p>Contains: 4,4'-Methylenediphenyl diisocyanate Diphenylmethanediisocyanate, isomeres and homologues Polypropylene glycol</p> <p>R 20/22: Harmful by inhalation and if swallowed. R 36/37/38: Irritating to eyes, respiratory system and skin. R 42/43: May cause sensitisation by inhalation and skin contact. S 23.3: Do not breathe vapour. S 36/37: Wear suitable protective clothing and gloves. S 45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Observe manufacturer's instructions.</p>

16.

<b>Other information</b>	
R 20: Harmful by inhalation. R 22: Harmful if swallowed. R 36/37/38: Irritating to eyes, respiratory system and skin. R 42/43: May cause sensitisation by inhalation and skin contact.	
Creation date	<b>20.06.06</b>
Replace sheet of	
<b>Text of R-Statements listed in ingredients</b>	
<b>This leaflet is for general guidance only and may contain inappropriate information under particular conditions. Samples will be provided on request to enable customers to satisfy themselves as to the suitability of the product for any specific purpose and to assess the product under their own working conditions.</b>	

**Technical Data: 2K POLYURETHANE ADHESIVE**

**Product Code: rr60**

#### **DESCRIPTION**

**2K Polyurethane Adhesive** is a unique urethane adhesive specially formulated for the bonding and repairing of vehicle body and plastic parts. It is supplied in a 1:1 ratio dual cartridge, in which the two components are automatically mixed and dispensed as a bubble-free, non-sag paste.

- ✓ **Quick and easy to use**
- ✓ **Suitable for application to a wide range of substrates**
- ✓ **Non-sag**
- ✓ **High flexibility**
- ✓ **Excellent resistance to vibration and impact**
- ✓ **Exceptional bond strength and durability**
- ✓ **Super fast curing,**
- ✓ **Non-shrinking**
- ✓ **Easy to sand within minutes**

- ✓ Can be overpainted when cured
- ✓ Remains flexible even at low temperatures
- ✓ Solvent free
- ✓ Resists oil, diesel and other chemicals
- ✓ Securely bonds different substrates to each other
- ✓ Excellent gap filling properties

<b>Chemical Description</b>	<b>Urethane-Prepolymer</b>
<b>Colour</b>	<b>Black</b>
<b>Shelf life</b>	<b>New 24 months, used 6 months.</b>
<b>Density</b>	<b>1,15 g/cm<sup>3</sup></b>
<b>Viscosity</b>	<b>40 poise / 4 Pascal</b>
<b>Temp. resistance</b>	<b>-40 to +140° C when cured</b>
<b>Optimum curing time</b>	<b>20 MINS</b>
<b>Tensile strength</b>	<b>21800 (kPa)</b>
<b>Elongation</b>	<b>25% (DIN53504)</b>
<b>Lapshear</b>	<b>6894 (kPa)</b>
<b>Shore Hardness (D)</b>	
- Flexible	ca. 60 (after 4 days)
- Universal	ca. 70 (after 4 days)
- Rigid	ca. 80 (after 4 days)
<b>Shear strength</b>	<b>16J/mm<sup>2</sup></b>
<b>Adhesion</b>	<b>700N (primed PP); 200N (non-primed PP); 700N (non-primed PC); 900N (non-primed ABS)</b>
<b>Cartridge size</b>	<b>50ml dual</b>
<b>Packaging</b>	<b>6 x 50ml</b>
<b>Working time</b>	<b>1 mins</b>
<b>Sandable</b>	<b>After 10 mins</b>
<b>Curing time</b>	<b>10 mins</b>

The information contained in this sheet represents our current data and best opinion as to the proper use in handling of this product under normal conditions. Any other use or process is the responsibility of the user.

ISSUE DATE 20.06.14