MATERIAL SAFETY DATA SHEET

ADHESIVE AR 2030 KTE/9TX

SECTION 1 – PRODUCT AND COMPANY IDENTIFICATION

1.1 Identification of the substance or compound

Trade Name Adhesive AR 2030 KTE/9TX

Product Description Adhesive for brake shoes with graphite

1.3 Identification of the company EURO.RIGAN SRL

Via E. Ceca 7/9 14100 Asti (AT) - Italy

Tel. 0039 0141 / 476354 - 476919 fax 0141 / 476345

E-mail: info@eurorigan.com

1.4 Emergency phone call +39 0141 476919 or 476354

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous substances

Ingredients	CAS	EINECS	Classification	Concentration %	Risk phrases
Ethanol	64-17-5	200-578-6	F	10-15	R11
Acetone	67-64-1	200-662-2	Xi;F	25-30	R11,R36,R66,R67
Phenol	108-95-2	203-632-7	Muta. Cat.3;C;T;Xn	< 3	R23/24/25,R34, R48/20/21/22,R68
Isopropyl alcohol	67-63-0	200-661-7	Xi;F	25-30	R11;R36;R67
Formaldehyde	50-00-0	200-001-8	Carc. Cat.3 ;T ;C	< 0,2	R23/24/25,R34,R40,R43
Exametylentetramine	100-97-0	202-905-8	F;Xn	0,2	R11,R42/43

Note

In this section is indicated the classification of the substance(s) indicate included of the letters corresponding to hazard symbols and the codes of the relatives risk phrases (R) given in function to their risks for safety, health and environment. The mean of each risk code is indicated in the section 16 (main risk phrases used in the sections 2 and 3 of this Material Safety Data Sheet

SECTION 3 - HAZARDS IDENTIFICATION

Dangerous classification: Highly flammable, harmful **Specific dangers for humans and environment**:

Highly flammable. Irritating to eyes and skin. Repeated exposure may cause dryness and cracking. Vapours may cause drowsiness and dizziness. Possibility of irreversible effects

MATERIAL SAFETY DATA SHEET

ADHESIVE AR 2030 KTE/9TX

Main risks

Health's risks/ Random: Contact with eyes causes strong irritation, pink eye. Contact with skin cause inflammation. Repeated expositions may cause dryness and skin's chaps and vapour's inhalation may cause sleepiness and dizziness. The preparation is easily flammable

Exposition symptoms: dryness and skin's chaps for prolonged exposition. Eyes' breathing apparatus' and skin's irritation. Sleepiness and dizziness if inhaled

Environmental hazards: The preparation is not considered hazardous for environment. Don't spill, in any case, in water ways or in public sewer pipe

SECTION 4 - FIRST AID MEASURES

Skin contact

Wear out the polluted clothes

Wash immediately and plentifully with cold or warm water using if possible soap. Never put hot water Resort to medical attentions

Eye contact

Wash immediately and plentifully with running water at least for 15 minutes maintaining well opened the eyelids. Remove contact lens if requested. Resort to medical attention

Inhalation

Carry immediately outdoor the subject and in any case in a well refreshed area and maintain him at rest. In case of uneasiness or holding over of diseases contact a medical doctor. Give, if it's necessary (for example irregular breathing or breathing block) artificial respiration. In case of faintness provide for a transportation of the subject to the close hospital and maintain the subject in side position for transportation

Swallowing

If the subject is unconscious or in convulsion never give him anything through oral way. Do not induce vomit. Rinse the oral cavity giving him plentifully water avoiding he swallows it. Call for medical help immediately and show him this schedule

SECTION 5 – FIRE-FIGHTING MEASURES

Correct extinction apparatus: CO2 ,powder or sprayed water. Extinguish big dimension fires with spray water or alcohol resistant foam.

Do not use: DON'T USE WATER JET

Special equipment for Fire Brigades:

- -breath face mask (CEN:EN 137)
- -protective clothes (CEN:EN 469)
- -protective gloves (CEN:EN 659)
- -helmet (CEN:EN 443)

MATERIAL SAFETY DATA SHEET

ADHESIVE AR 2030 KTE/9TX

Special procedures

Void the area and fight the fire at adequate distance and over wind. Refresh with spray water closer packaging and not involved in fire. After extinguishing spread the area with absorbing fillers to avoid it became slippery. Never send the extinguish liquids through in public sewer pipes or other water ways. Waste them in accord to the local laws and rules.

Possible risks from exposition

Avoid inhalation of gas and vapours. For thermal decomposition carbon oxides may be generated and toxic fumes. Due to heat exposition within metallic drums overpressures may be generate and they may explode

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Personal-related safety precautions

Void and close the accesses to the area. Move away to remove sources of oxidative ignition and materials. Not to smoke. To supply a sufficient ventilation. To wear gloves, protective glasses, antispray and boots. In case of vapour development to wear fortified respiratory protection with filter for organic vapours. For further information to see also section 8 of this card

Measures for environmental protection

not to unload in drain or places does not authorize to you. In case of high deposit to collect the liquid that comes out in dedicated containers. Waste this material and the relative containers in a point of collection authorized and however in agreement to the norm and law enforced. If the product has fallen down in water course advise the competent authorities. The accidental drainage of large amounts of the product or its components can damage the aquatic organisms

Measures for cleaning / collecting

To contain and to absorb on inert absorbent material (avoid sawdust) and waste the material like dangerous refusal. To eliminate small residual deposits use running water to send to a system of authorized drainage.

To notify to the competent authorities the accidental deposit of the product and to remove the persons strangers from the place of the incident. Not to smoke, to use free flames or incandescent bodies or overheat

SECTION 7 – HANDLING AND STORAGE

7.1 Handling

To follow the common norms of manipulation of chemical agents. To avoid the contact with the eyes and the skin. To always wear protective clothes during the use . To preview always a good ventilation during the spilling and at the opening of the containers. To adopt provisions against electrostatic charges. Not to eat, drink, to conserve alimony or drinks in the job zone. Not to smoke. Pull out the contaminated dresses and wash them before re-use them

7.2 Storage

Maintain in an area with a very good ventilation, in a dry and fresh place and protected from the humidity and from the light. Conserve always in the original container however in containers watertight sluices. Maintain the product separated from oxidative agents and protected from sources of heat or ignition. The empty containers are dangerous. Use the same precautions like if they were full

SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

MATERIAL SAFETY DATA SHEET

ADHESIVE AR 2030 KTE/9TX

8.1 Limit exposure values

<u>Substance</u>	TLV	<u>STEL</u>
Acetone	500 ppm	750 ppm
Phenol	5 ppm	
Ethanol	1000 ppm	
Formaldehyde		0,3 ppm
Propan-2-olo	200 ppm	400 ppm

8.2 Exposure control

Recommended control equipment

Verify always a good ventilation and maintain the pollutants under the limit exposure values Schedule a shower area and an eyes bath

8.2.1 Professional exposure control

8.2.1.1 Breathing apparatus safeguard

Use apposite breathing equipment with organic vapour filter in case of inadequate ventilation (A2-P2 type) (CEN:EN 136;EN 141)

8.2.1.2 Protection of hands

Protective rubber gloves (CEN:EN 374-1/2/3; EN 420)

8.2.1.3 Eye protection

Safety watertight glasses (CEN:EN 166)

8.2.1.4 Skin protection

Solvent resistant protective dresses (CEN:EN 340; EN 369; EN 465)

8.2.2 Environmental exposure control

Prevent leaks or throw over in the neighbourhood. Prevent leaks or throw over in the neighbourhood. Pay attention against the spilling in public sewer pipes or other water ways. Waste this material and the relative containers in a dangerous and harmful authorized point of collection. Not eat, drink or smoke in the process and manipulation areas.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

9.1 General information

Appearance: liquid, black / amber colour

Smell: alcoholic

9.2 Main information for human health, safety and environment

pH: included between 4 and 5

MATERIAL SAFETY DATA SHEET

ADHESIVE AR 2030 KTE/9TX

Point/Boiling range: 72° C about Ignition point: 17°C about Flammability (solids, gas): flammable gas

Explosive characteristics: vapours in combination with air may be originate explosive mixtures

Combustive characteristics : doesn't exist
Vapour's pressure 85 mm Hg @ 20°C
Relative density : 0,9 – 0,96 g/cmc @ 21°C
Water miscibility : immiscible at 23°C

Viscosity: $75 - 95 \sec \text{ Ford Cup } \emptyset 6^* @ 21^{\circ}\text{C}$

Vapour's density : n.d. Evaporation speed : n.d Log Pow : < 1

SECTION 10 - STABILITY AND REACTIVITY

Stability: stable at normal temperature and pressure conditions

10.1 Not allowed conditions

Absolutely avoid contacts with oxidative or combustive agents. Avoid contacts with acids and alkaline metals; avoid high temperatures and verify that the drums stay away from direct sun rays. Avoid electrostatic charges

10.2 Not allowed materials

Soluble plastic materials, natural and synthetic rubbers, light metals and light metals in league

10.3 Dangerous substances generated by decomposition

In case of fire will be developed ,by thermal decomposition, simple Cox oxides.

Dangerous reactions/polymerization processes doesn't appears

SECTION 11 - TOXICOLOGICAL INFORMATION

Toxicological data on itself product are not available. Keep in regard the single components concentration to evaluate the toxicological effects due from the exposition to the product.

In succession are showed the toxicological information regarding the main components present in the product

Penetration ways: inhalation, ingestion and skin contact

Tests on mammals

Acute toxicity:

- Oral toxicity: LD50 (rat)

Acetone: 5800 mg/Kg; Ethanol: 7060 mg/Kg; Propan-2-olo: 5045 mg/Kg

^{*} this is a thixotropic product and subject to a viscosity decrease during the use

MATERIAL SAFETY DATA SHEET

ADHESIVE AR 2030 KTE/9TX

- Skin toxicity: LD₅₀ (rabbit)

Acetone: 20000 mg/Kg; Propan-2-olo 12800 mg/Kg

- Inhalation toxicity: LD₅₀ (rat)

Acetone: 50100 mg/cm/8hr; Ethanol: 20000 ppm/10 hr; Propan-2-olo: 16000 ppm/4 hr (LCLo)

Exposure risks

- Inhalation irritating for mucous membrane and for breathing apparatus. Due to prolonged exposition

an absorption phenomena may be appears. Due to prolonged or repeated exposition

vapours may cause anaesthetic side effects, head pain, dizziness with a nausea effect

- Skin contact strongly irritating. Due to prolonged o repeated contact a contact dermatitis or

sensitization phenomena may appears.

- Eyes contact strongly irritating

- Ingestion It may cause abdominal pain, breathing troubles, unconscious situations, vomit and

sickness

Sensitization capacity: not detected

Toxicity at short time: Inhalation of high concentration's vapours and the skin absorption of big quantities

may cause a narcotic effect. In the liquid form it's irritating for skin and may be

absorbed giving systematic toxicity

Toxicity at long time: by normal expositions or use of the product health's harms are unknown

Mutagenic effects: R 68 indicate the possibility of irreversible effects

Carcinogenesis: not carcinogenic classified

SECTION 12 - ECOLOGICAL INFORMATION

Water toxicity

Persistence and Biodegradability:

Not available data. Negative effects on environment, if properly used, are not expected

Description

The product is not dangerous classified for environment but can harm to the water lives if spilled in mass quantities in water ways. The risk evaluation is founded on concentration limits as defined from 1999/45/CE (more modification and adds) instruction criteria

Environmental harmful classification: not classified as an environmental harmful product

SECTION 13 - DISPOSAL CONSIDERATIONS

Product disposal: waste as dangerous refusal, under the update laws

European Refusal Code (CER): 080111* - wasted paints and varnishes containing organic solvents or other

dangerous substances

MATERIAL SAFETY DATA SHEET

ADHESIVE AR 2030 KTE/9TX

Due to its origin and to its actual position, other European Codes (CER) can be applied

Drums disposal: waste upon the actual normative

European Refusal Code (CER):150110* - packages containing harmful components or contaminated by them Due to its origin and to its actual position, other European Codes (CER) can be applied

SECTION 14 - TRANSPORT INFORMATION

Identification number (ONU nr.): 1263

Proper shipping name: Paint related material

Land transport	Maritime transport	Air transport
ADR Class: 3	IMO-IMDG Class: 3	ICAO/IATA Class: 3
Packing group: II	Packing group: II	Packing group: II
Classification code: F1	Marine pollutant: NO	
Label: n. 3	Label: n.3	Label: n.3
	EmS: F-E, S-E	
		1

SECTION 15 - REGULATORY INFORMATION

CEE Labelling

Symbol (s) and danger indication (s):



Xn - Harmful



F - Highly flammable

CONTAINS: PHENOL

- Risk (R) phrases

R11 Highly flammable

R36/38 Irritating to eyes and skin

R66 Repeated exposure may cause skin dryness or cracking

R67 Vapours may cause drowsiness and dizziness

R68 Possible risk of irreversible effects

- Safety precaution phrases (S)

S7/9 Keep container tightly closed and in a well ventilated place

S16 Keep away from sources of ignition – No Smoking!!

S24/25 Avoid contacts with skin and eyes

S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice

MATERIAL SAFETY DATA SHEET

ADHESIVE AR 2030 KTE/9TX

S36/37/39 Wear suitable protective clothing, gloves and eye/face protection

All the components present into the product are listed in EINECS or ELINCS, except those dispensed with CEE directory 67/548

SECTION 16 - OTHER INFORMATION

Date: September 2006

Revision type: Update into sections 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16

Safety schedule based on: Instruction 1999/45/CE and subsequent update and modifications

Decree law 14/3/2003 n.65

Instruction 2001/58/CE and subsequent update and modifications

Decree of Minister 7/9/2002

Decision 2000/532/CE and subsequent update and modifications

Decree of Minister 28/02/2006 Taking in of instruction 2004/74/CE

Within the XXIX adjustment to the instruction 67/548/CEE

Norms and referring sources

- Instruction 67/548/CEE and subsequent update and modifications

(Classification and labelling of dangerous substances) 29° adjustment

- Decree law 52/97 and subsequent update and modifications

(Classification and labelling of dangerous substances)

- Instruction 1999/45/CE and subsequent update and modifications

(Classification and labelling of dangerous substances)

- Decree law 14/3/2003 n.65

(Classification and labelling of dangerous substances)

- Instruction 2001/58/CE

(Specific information system about dangerous preparations)

- Decree 7/9/2002 of Health Minister

(taking in instruction 2001/58/CE regarding the specific information system about dangerous preparations)

- Decree law 11/5/99 n. 152 and subsequent update and modifications

(safeguard of waters from pollution)

- Decree law 5/2/97 and subsequent update and modifications

(waste handling)

- ADR International agreement about dangerous products transportation on the road
- International Maritime Dangerous Goods Code (IMDG)
- International Air Transport Association (IATA)
- SAX'S, Dangerous Properties of Industrial Materials

Main risk phrases used in the section 2 and 3 of the following safety schedule

R11 Highly flammable

R23/24/25 Toxic by inhalation, in contact with skin and if swallowed

R34 Causes burns

MATERIAL SAFETY DATA SHEET

ADHESIVE AR 2030 KTE/9TX

R36 Irritating to eyes

R40 Limited evidence of a carcinogenic effect R43 May cause sensitisation by skin contact

R48/20/21/22 Harmful: danger of serious damage to health by prolonged exposure through inhalation, in contact

with skin and if swallowed

R66 Repeated exposure may cause skin dryness or cracking

R67 Vapours may cause drowsiness and dizziness

R68 Possible risk of irreversible effects

The information indicated in this safety schedule are based on data known as correct and obtained, at the editing date, further the norms in act to that data, from the technical literature and the safety data sheets inherent the components within this product. These information must not be considered exhaustive but must be utilized, for a correct use of the product, near to the general norm existing in matter of work safety and environment respect. Euro.Rigan Company decline any responsibility about damages due from a wrong or inapt use of the product or, in any case, different from the final scope where the product is intended.

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