AR-CO C	Revision nr. 1					
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R	Printed on 17/10/2014					
Page n. 1/11 Safety data sheet						
SECTION 1. Identification of the sub	stance/mixture and of the comp	any/undertaking				
1.1. Product identifier Product name	RAPPER					
	nixture and uses advised against FOR INDUSTRIAL / PROFESSIONAL USING LVENT-BASED DEGREASER DETERGENT					
1.3. Details of the supplier of the safety data sheet	t					
Name Full address	AR-CO CHIMICA S.R.L. Via Canalazzo 22/24					
District and Country	41036 MEDOLLA (MO) ITALY					
	Tel. +39 053558890					
	Fax +39 053558898					
e-mail address of the competent person						
responsible for the Safety Data Sheet Product distribution by	reach@arcochimica.it AR-CO CHIMICA					
1.4. Emergency telephone number For urgent inquiries refer to Numeri telefonici dei principali Centri Antiveleni italiani (attivi 24/24 ore)Centro Antiveleni di Milano 02 66101029 (CAV Ospedale Niguarda Ca` Granda -Milano) (H24)Centro Antiveleni di Pavia 0382 24444 (CAV IRCCS Fondazione Maugeri - Pavia)Centro Antiveleni di Bergamo 800 883300 (CAV Ospedali Riuniti - Bergamo)Centro Antiveleni di Firenze 055 7947819 (CAV Ospedale Careggi - Firenze)Centro Antiveleni di Roma 06 3054343 (CAV Policlinico Gemelli - Roma)Centro Antiveleni di Roma 06 49978000 (CAV Policlinico Umberto I - Roma)Centro Antiveleni di Napoli 081 7472870 (CAV Ospedale Cardarelli - Napoli)AR-CO CHIMICA+39 053558890 (ORE UFFICIO / OFFICE HOURS 08:00-12:30 / 14:00-17:30						
SECTION 2. Hazards identification.						
2.1. Classification of the substance or mixture.						
The product is classified as hazardous pursuant to t supplements). The product thus requires a safety datas Any additional information concerning the risks for heal	heet that complies with the provisions of EC R	egulation 1907/2006 and subsequent amendments.				
2.1.1. Regulation 1272/2008 (CLP) and following a	mendments and adjustments.					
Hazard classification and indication:	1044					
Skin Corr. 1B Eye Dam. 1	H314 H318					
STOT SE 3	H335					
2.1.2. 67/548/EEC and 1999/45/EC Directives and for Danger Symbols:	ollowing amendments and adjustments.					
R phrases: 34						

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The full wording of the Risk (R) and hazard (H) phrases is given in section 16 of the sheet.

2.2. Label elements.

Hazard labelling pursuant to EC Regulation 1272/2008 (CLP) and subsequent amendments and supplements.

	!
Signal words:	Danger
H314 H335	Causes severe skin burns and eye damage. May cause respiratory irritation.
P280 P304+P340 P310 P403+P233	Wear protective gloves / protective clothing / eye protection / face protection. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor / physician. Store in a well-ventilated place. Keep container tightly closed.
Contains:	ETHANOLAMINE

2.3. Other hazards.

Information not available.

SECTION 3. Composition/information on ingredients.

3.1. Substances.

Information not relevant.

3.2. Mixtures.

Contains:

Identification. ETHANOLAMINE	Conc. %.	Classification 67/548/EEC.	Classification 1272/2008 (CLP).
CAS. 141-43-5	9 - 30	C R34, Xn R20/21/22	Acute Tox. 4 H302, Acute Tox. 4 H312, Acute Tox. 4 H332, Skin Corr. 1B H314, STOT SE 3 H335
EC. 205-483-3			
INDEX. 603-030-00-8			
Reg. no. 01-2119486455-28-0000			
2-(2-BUTOXYETHOXY)ETHANOL			
CAS. 112-34-5 EC. 203-961-6	5 - 9	Xi R36	Eye Irrit. 2 H319
INDEX. 603-096-00-8			
Reg. no. 01-2119475104-44			
BENZYL ALCOHOL			
CAS. 100-51-6	5 - 9	Xn R20/22	Acute Tox. 4 H302, Acute Tox. 4 H332

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EC. 202-859-9 INDEX. 603-057-00-5 Reg. no. 01-2119492630-38 SODIUM XILENESULFONATE CAS. 1300-72-7 EC. 215-090-9 INDEX Reg. no. 01-2119513350-56-0003	1 - 5	Xi R36	Eye Irrit. 2 H319

Note: Upper limit is not included into the range.

The full wording of the Risk (R) and hazard (H) phrases is given in section 16 of the sheet. T+ = Very Toxic(T+), T = Toxic(T), Xn = Harmful(Xn), C = Corrosive(C), Xi = Irritant(Xi), O = Oxidizing(O), E = Explosive(E), F+ = ExtremelyFlammable(F+), F = Highly Flammable(F), N = Dangerous for the Environment(N)

SECTION 4. First aid measures.

4.1. Description of first aid measures.

EYES: Remove contact lenses, if present. Wash immediately with plenty of water for at least 30-60 minutes, opening the eyelids fully. Get medical advice/attention.

SKIN: Remove contaminated clothing. Rinse skin with a shower immediately. Get medical advice/attention.

INGESTION: Have the subject drink as much water as possible. Get medical advice/attention. Do not induce vomiting unless explicitly authorised by a doctor.

INHALATION: Get medical advice/attention immediately. Remove victim to fresh air, away from the accident scene. If the subject stops breathing, administer artificial respiration. Take suitable precautions for rescue workers.

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

For symptoms and effects caused by the contained substances, see chap. 11.

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

Information not available.

SECTION 5. Firefighting measures.

5.1. Extinguishing media.

SUITABLE EXTINGUISHING EQUIPMENT The extinguishing equipment should be of the conventional kind: carbon dioxide, foam, powder and water spray. UNSUITABLE EXTINGUISHING EQUIPMENT None in particular.

5.2. Special hazards arising from the substance or mixture.

HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE Do not breathe combustion products.

5.3. Advice for firefighters.

GENERAL INFORMATION

Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.

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SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS

Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

SECTION 6. Accidental release measures.

6.1. Personal precautions, protective equipment and emergency procedures.

Block the leakage if there is no hazard.

Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. These indications apply for both processing staff and those involved in emergency procedures.

6.2. Environmental precautions.

The product must not penetrate into the sewer system or come into contact with surface water or ground water.

6.3. Methods and material for containment and cleaning up.

Collect the leaked product into a suitable container. Evaluate the compatibility of the container to be used, by checking section 10. Absorb the remainder with inert absorbent material.

Make sure the leakage site is well aired. Check incompatibility for container material in section 7. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

6.4. Reference to other sections.

Any information on personal protection and disposal is given in sections 8 and 13.

SECTION 7. Handling and storage.

7.1. Precautions for safe handling.

Before handling the product, consult all the other sections of this material safety data sheet. Avoid leakage of the product into the environment. Do not eat, drink or smoke during use. Remove any contaminated clothes and personal protective equipment before entering places in which people eat.

7.2. Conditions for safe storage, including any incompatibilities.

Store only in the original container. Store the containers sealed, in a well ventilated place, away from direct sunlight. Keep containers away from any incompatible materials, see section 10 for details.

7.3. Specific end use(s).

Information not available.

SECTION 8. Exposure controls/personal protection.

8.1. Control parameters.

Regulatory References:

United Kingdom	EH40/2005 Workplace exposure limits. Containing the list of workplace exposure
	limits for use with the Control of Substances Hazardous to Health Regulations (as
	amended).
Éire	Code of Practice Chemical Agent Regulations 2011.

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OEL EU

Directive 2009/161/EU; Directive 2006/15/EC; Directive 2004/37/EC; Directive 2000/39/EC. **ACGIH 2012**

TLV-ACGIH

ETHANOLAMINE

Threshold Limit Value.						
Туре	Country	TWA/8h		STEL/15min		
		mg/m3	ppm	mg/m3	ppm	
WEL	UK	2,5	1	7,6	3	SKIN
OEL	IRL	2,5	1	7,6	3	SKIN
TLV-ACGIH		7,5	3	15	6	
OEL	EU	2,5	1	7,6	3	SKIN
UEL	EU	2,5	I	7,0	3	SKIN

2-(2-BUTOXYETHOXY)ETHANOL

Threshold Limit Value. Type	Country	TWA/8h		STEL/15min	
		mg/m3	ppm	mg/m3	ppm
OEL	EU	67,5	10	101,2	15

Legend:

(C) = CEILING ; INHAL = Inhalable Fraction ; RESP = Respirable Fraction ; THORA = Thoracic Fraction.

8.2. Exposure controls.

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration.

When choosing personal protective equipment, ask your chemical substance supplier for advice.

Personal protective equipment must be CE marked, showing that it complies with applicable standards.

Provide an emergency shower with face and eye wash station.

HAND PROTECTION

Protect hands with category III work gloves (see standard EN 374).

The following should be considered when choosing work glove material: compatibility, degradation, failure time and permeability.

The work gloves' resistance to chemical agents should be checked before use, as it can be unpredictable. The gloves' wear time depends on the duration and type of use.

SKIN PROTECTION

Wear category II professional long-sleeved overalls and safety footwear (see Directive 89/686/EEC and standard EN ISO 20344). Wash body with soap and water after removing protective clothing.

EYE PROTECTION

Wear airtight protective goggles (see standard EN 166).

RESPIRATORY PROTECTION

If the threshold value (e.g. TLV-TWA) is exceeded for the substance or one of the substances present in the product, use a mask with a type A filter whose class (1, 2 or 3) must be chosen according to the limit of use concentration. (see standard EN 14387). In the presence of gases or vapours of various kinds and/or gases or vapours containing particulate (aerosol sprays, fumes, mists, etc.) combined filters are required.

Respiratory protection devices must be used if the technical measures adopted are not suitable for restricting the worker's exposure to the threshold values considered. The protection provided by masks is in any case limited.

If the substance considered is odourless or its olfactory threshold is higher than the corresponding TLV-TWA and in the case of an emergency, wear open-circuit compressed air breathing apparatus (in compliance with standard EN 137) or external air-intake breathing apparatus (in compliance with standard EN 138). For a correct choice of respiratory protection device, see standard EN 529.

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SECTION 9. Physical and chemical properties.

9.1. Information on basic physical and chemical properties.

liquid
green
TECHNICAL
Not available.
12,5 +/- 0,50
Not available.
1,015 +/- 0,025
COMPLETELY SOLUBLE IN WATER
Not available.

9.2. Other information.

Information not available.

SECTION 10. Stability and reactivity.

10.1. Reactivity.

There are no particular risks of reaction with other substances in normal conditions of use.

BENZYL ALCOHOL: decomposes at temperatures higher than 870 °C with possibility of explosion.

10.2. Chemical stability.

The product is stable in normal conditions of use and storage.

10.3. Possibility of hazardous reactions.

explosion on contact with: phosphorus trichloride.

No hazardous reactions are foreseeable in normal conditions of use and storage.

2-(2-BUTOXYETHOXY)ETHANOL: can react with oxidising agents. It forms peroxides with atmospheric oxygen. When it reacts with aluminium is can generate hydrogen. May form explosive mixtures with air.

ETHANOLAMINE: can react dangerously with: acrylonitrile, chloroepoxypropane, chlorosulphuric acid, hydrogen chloride, iron-sulphur compounds, acetic acid, acetic anhydride, mesityl oxide, nitric acid, sulphuric acid, strong mineral acids, vinyl acetate, cellulose nitrate. BENZYL ALCOHOL: may react dangerously with: hydrobromic acid and iron in the presence of heat, oxidising agents and sulphuric acid. Risk of

10.4. Conditions to avoid.

None in particular. However the usual precautions used for chemical products should be respected.

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2-(2-BUTOXYETHOXY)ETHANOL: avoid contact with the air. ETHANOLAMINE: avoid exposure to air and sources of heat. BENZYL ALCOHOL: avoid exposure to the air, sources of heat and naked flames.

10.5. Incompatible materials.

2-(2-BUTOXYETHOXY)ETHANOL: oxidising substances, strong acids and alkaline metals. ETHANOLAMINE: iron, strong acids and strong oxidising agents. BENZYL ALCOHOL: sulphuric acid, oxidising substances and aluminium.

10.6. Hazardous decomposition products.

2-(2-BUTOXYETHOXY)ETHANOL: hydrogen. ETHANOLAMINE: nitrogen oxides, carbon oxides.

SECTION 11. Toxicological information.

11.1. Information on toxicological effects.

In the absence of experimental data for the product itself, health hazards are evaluated according to the properties of the substances it contains, using the criteria specified in the applicable regulation for classification. It is therefore necessary to take into account the concentration of the individual hazardous substances indicated in section 3, to evaluate the toxicological effects of exposure to the product.

This product is corrosive and causes serious burns and vesicles on the skin, which can arise even after exposure. Burns are very stinging and painful. Upon contact with eyes, it may cause serious harm, such as cornea opacity, iris lesions, irreversible eye coloration. Possible vapours are caustic for the respiratory system and may cause pulmonary edema, whose symptoms sometimes arise only after some hours.

Exposure symptoms may include: sting, cough, asthma, laryngitis, respiratory disorders, headache, nausea and sickness.

If swallowed, it may cause mouth, throat and oesophagus burns, sickness, diarrhoea, edema, larynx swelling and, consequently, asphyxia. Perforation of the gastro-intestinal tract is also possible.

This product may cause serious ocular lesions, cornea opacity, iris lesions, irreversible eye coloration.

Acute effects: stinging eyes. Symptoms may include: rubescence, edema, pain and lachrymation.

Vapour inhalation may moderately irritate the upper respiratory trait. Contact with skin may cause slight irritation.

Ingestion may cause health problems, including stomach pain and sting, nausea and sickness.

Acute effects: vapour inhalation may irritate the lower and upper respiratory tract and cause cough and respiratory disorders. At higher concentrations it can also cause pulmonary edema. Ingestion may cause health problems, including stomach pain and sting, nausea and sickness.

2-(2-BUTOXYETHOXY)ETHANOL: can be absorbed by inhalation, ingestion and skin contact; it is irritant to the skin and especially to the eyes; spleen damage may occur. Inhalation is unlikely to occur at room temperature due to the low vapour tension of the substance.

2-(2-BUTOXYETHOXY)ETHANOL LD50 (Oral). 3384 mg/kg Rat LD50 (Dermal). 2700 mg/kg Rabbit

BENZYL ALCOHOL LD50 (Oral). 1230 mg/kg Rat LD50 (Dermal). 2000 mg/kg Rabbit LC50 (Inhalation). > 4,1 mg/l/4h Rat

SECTION 12. Ecological information.

12.1. Toxicity. Information not available.

12.2. Persistence and degradability.

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Information not available.

12.3. Bioaccumulative potential.

Information not available.

12.4. Mobility in soil.

Information not available.

12.5. Results of PBT and vPvB assessment.

On the basis of available data, the product does not contain any PBT or vPvB in percentage greater than 0,1%. **12.6. Other adverse effects.**

Information not available.

SECTION 13. Disposal considerations.

13.1. Waste treatment methods.

Reuse, when possible. Product residues should be considered special hazardous waste. The hazard level of waste containing this product should be evaluated according to applicable regulations.

Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.

Avoid littering. Do not contaminate soil, sewers and waterways.

CONTAMINĂTED PACKAGING

Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

SECTION 14. Transport information.

These goods must be transported by vehicles authorized to the carriage of dangerous goods according to the provisions set out in the current edition of the Code of International Carriage of Dangerous Goods by Road (ADR) and in all the applicable national regulations. These goods must be packed in their original packagings or in packagings made of materials resistant to their content and not reacting dangerously with it. People loading and unloading dangerous goods must be trained on all the risks deriving from these substances and on all actions that must be taken in case of emergency situations.

Road and	d rail transport: ADR/RID Class:	8	UN:	3267
, v	Packing Group:	Ш		
	Label:	8		
	Nr. Kemler:	80		
	Proper Shipping Name:			
Carriage	by sea (shipping): IMO Class:	8	UN:	3267
8	Packing Group: Label: EMS:	III 8 F-A, S-B		
	LWO.	т- л , 3- D		

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	Marine Pollutant.	NO		
Transpo	rt by air: IATA:	8	UN:	3267
8	Packing Group:	Ш		
	Label:	8		

SECTION 15. Regulatory information.

 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture.

 Seveso category.

 None.

Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006.

Product.			
Point.	3		
Contained substance.			
Point.	55	Reg. no.: 01- 2119475104-44	
Substances in Candida	te List (Art. 59 REACH).		
None.			
Substances subject to a	authorisarion (Annex XIV REACH	<u>+).</u>	
None.			
Substances subject to e	exportation reporting pursuant to	(EC) Reg. 649/2012:	
None.			
Substances subject to t	he Rotterdam Convention:		
None.			
Substances subject to t	he Stockholm Convention:		
None.			
Healthcare controls.			
	s chemical agent must not unde ety are modest and that the 98/2		ilable risk-assessment data prove that the risks related to the
Ingredients according to	Regulation (EC) No 648/2004		

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15.2. Chemical safety assessment.

No chemical safety assessment has been processed for the mixture and the substances it contains.

SECTION 16. Other information.

Text of hazard (H) indications mentioned in section 2-3 of the sheet:

Acute Tox. 4 Skin Corr. 1B	Acute toxicity, category 4 Skin corrosion, category 1B
Eye Irrit. 2	Eye irritation, category 2
STOT SE 3	Specific target organ toxicity - single exposure, category 3
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H332	Harmful if inhaled.
H314	Causes severe skin burns and eye damage.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.

Text of risk (R) phrases mentioned in section 2-3 of the sheet:

R20/21/22	HARMFUL BY INHALATION, IN CONTACT WITH SKIN AND IF SWALLOWED.
R20/22	HARMFUL BY INHALATION AND IF SWALLOWED.
R34	CAUSES BURNS.
R36	IRRITATING TO EYES.

LEGEND:

- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- CAS NUMBER: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE NUMBER: Identifier in ESIS (European archive of existing substances)
- CLP: EC Regulation 1272/2008
- DNEL: Derived No Effect Level
- EmS: Emergency Schedule
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- INDEX NUMBER: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- **OEL: Occupational Exposure Level**
- PBT: Persistent bioaccumulative and toxic as REACH Regulation
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PNEC: Predicted no effect concentration
- REACH: EC Regulation 1907/2006
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA STEL: Short-term exposure limit
- TWA: Time-weighted average exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation
 WGK: Water hazard classes (German).

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GENERAL BIBLIOGRAPHY

- 1. Directive 1999/45/EC and following amendments
- Directive 1959/48/EEC and following amendments and adjustments
 Regulation (EC) 1907/2006 (REACH) of the European Parliament
 Regulation (EC) 1272/2008 (CLP) of the European Parliament

- 5. Regulation (EC) 790/2009 (I Atp. CLP) of the European Parliament
- 6. Regulation (EC) 453/2010 of the European Parliament
- 7. Regulation (EC) 286/2011 (II Atp. CLP) of the European Parliament
- 8. Regulation (EC) 618/2012 (III Atp. CLP) of the European Parliament
- 9. The Merck Index. 10th Edition
- Handling Chemical Safety
 Niosh Registry of Toxic Effects of Chemical Substances
- 12. INRS Fiche Toxicologique (toxicological sheet)
- 13. Patty Industrial Hygiene and Toxicology
- 14. N.I. Sax Dangerous properties of Industrial Materials-7, 1989 Edition
- 15. ECHA website

Note for users:

The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.

This document must not be regarded as a guarantee on any specific product property.

The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.

Provide appointed staff with adequate training on how to use chemical products.

Changes to previous review: The following sections were modified:

02 / 11 / 12.