Safety Data Sheet

1. Identification of the substance / preparation and the Company

1.1 Identification of the substance or preparation

Code: **E59**
Product name **REVOLUTION 2K**

1.2 Use of the substance / preparation

1.3 Company identification

Name **LOGGIA INDUSTRIA VERNICI S.r.l.**
Full address **VIA Colle d'Alba di Levante - B.go S. Donato**
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e-mail address of the competent person responsible for the Safety Data Sheet **laboratorio@loggia.it**

Product distribution by **Loggia Industria Vernici S.r.l.**

1.4 Emergency telephone

For urgent inquiries refer to **Centro Antiveleni - Università di Roma, Policlinico Umberto I tel. +39-06-490663**

2. Hazards Identification.

2.1 Substance/Preparation Classification.

This product is dangerous under 67/548/EEC and 1999/45/EC directives and subsequent amendments. Therefore, this product requires a safety data sheet according to the Regulation (EC) 1907/2006 and subsequent amendments. Further information on health and/or environmental hazards can be found in sections 11 and 12 of this sheet.

Danger Symbols: F-Xn

R phrases: 11-20/21

2.2 Danger Identification.

Because of its chemical-physical features, this product is graded as highly flammable (flash-point below 21 °C).
HARMFUL BY INHALATION AND IN CONTACT WITH SKIN.
This product contains sensitizing substance/s and may cause allergic reactions.

3. Composition / Information on ingredients.

Contains:

Name.		Concentration % (C).	Classification.	
XYLENE (MIXTURE OF ISOMERS)		12,5<= C <14		R 10
C.A.S. number	1330-20-7		Xn	R 20/21
EC number	215-535-7		Xi	R 38
INDEX number	601-022-00-9			Note C
DIPROPYLENE GLYCOL MONOMETHYL ETHER		0,1<= C <0,15		
C.A.S. number	34590-94-8			
EC number	252-104-2			

Substance with a community workplace exposure limit.

1-METHOXY-2-PROPANOL ACETATE		6<= C <7		R 10
C.A.S. number	108-65-6		Xi	R 36
EC number	203-603-9			
INDEX number	607-195-00-7			
MESITYLENE		0,15<= C <0,2		R 10
C.A.S. number	108-67-8		Xi	R 37
EC number	203-604-4		N	R 51/53
INDEX number	601-025-00-5			
1,2,4-TRIMETHYLBENZENE		0,7<= C <0,8		R 10
C.A.S. number	95-63-6		Xn	R 20
EC number	202-436-9		Xi	R 36/37/38
INDEX number	601-043-00-3		N	R 51/53
N-BUTYL ACETATE		8<= C <9		R 10
C.A.S. number	123-86-4			R 66
EC number	204-658-1			R 67
INDEX number	607-025-00-1			
SOLVENT NAPHTA (PETROLEUM), LIGHT AROM		4,5<= C <5	Xn	R 65
C.A.S. number	64742-95-6			Note H P 4
EC number	265-199-0			
INDEX number	649-356-00-4			
TINUVIN 5151		0,6<= C <0,7	Xi	R 43
EC number	400-830-7		N	R 51/53

The complete text of -R- phrases is specified in section 16.

4. First aid measures.

EYES: Irrigate copiously with clean, fresh water for at least 15 minutes. Seek medical advice.
SKIN: Wash immediately with plenty of water. Remove contaminated clothing. If irritation persists, seek medical attention. Wash contaminated clothing before using them again.
INHALATION: Remove to open air. If breathing is irregular, seek medical advice.
INGESTION: Obtain immediate medical attention. Induce vomiting only if indicated by the doctor. Never give anything by mouth to an unconscious person.

5. Fire-fighting measures.

GENERAL INFORMATION
Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health.
Excess pressure may form in containers exposed to fire at a risk of explosion. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water and the remains of the fire according to applicable regulations.
SUITABLE EXTINGUISHING MEDIA
The extinction equipment should contain carbon dioxide, foam or chemical powders. For product leaks and spills that have not caught fire, nebulised water can be used to dispel flammable fumes and protect the individuals taking part in stemming the leak.
EXTINGUISHING MEDIA WHICH SHALL NOT BE USED FOR SAFETY REASONS
Do not use jets of water. Water is not effective for putting out fires but can be used to cool containers exposed to flames to prevent explosions.
HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE
Do not breathe combustion products (carbon oxide, toxic pyrolysis products, etc).
SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS
Hardhat with visor, fireproof clothing (fireproof jacket and trousers with ties around arms, legs and waist) work gloves (fireproof, cut proof and dielectric), self-respirator (self-protector).

6. Accidental release measures.

PERSONAL PRECAUTIONS
Eliminate sources of ignition (cigarettes, flames, sparks, etc.) from the air in which the leak occurred. If there are no contraindications, spray solid products with water to prevent the formation of dust. Use breathing equipment if fumes or powders are released into the air. Block the leakage if there is no hazard. Do not handle damaged containers or leaked product before donning appropriate protective gear. Send away individuals who are not suitably equipped. For information on risks for the environmental and health, respiratory tract protection, ventilation and personal protection equipment, refer to the other sections of this sheet.
ENVIRONMENTAL PRECAUTIONS
The product must not penetrate the sewers, surface water, ground water and neighbouring areas.

METHODS FOR CLEANING UP
For liquid products, suck into a suitable container (made of material not incompatible with the product) and soak up any leaked product with absorbent inert material (sand, vermiculite, diatomeous earth, Kieselguhr, etc). Collect the majority of the remaining material and deposit in containers for disposal. For solid products, use spark proof mechanical tools to collect the leaked product and place in plastic containers. If there are no contraindications, use jets of water to eliminate product residues. Make sure the leakage site is well aired. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

7. Handling and storage.

Store in a well ventilated place, keeping the containers closed when not used. Do not smoke while handling. Keep far away from sources of heat, bright flames and sparks and other sources of ignition.

8. Exposure control / personal protection.

8.1 Exposure limit values.

Name	Type	Country	TWA/8h mg/m3	ppm	STEL/15min mg/m3	ppm	
XYLENE (MIXTURE OF ISOMERS)	TLV-ACGIH		434		651		Skin
	OEL	EU	221	50	442	100	Skin
	OEL	IRL		50		100	Skin
	WEL	UK		50		100	Skin
DIPROPYLENE GLYCOL MONOMETHYL ETHER	TLV-ACGIH		606		909		Skin
	OEL	EU	308	50			Skin
	OEL	IRL		50		100	Skin
	WEL	UK		50			Skin
1-METHOXY-2-PROPANOL ACETATE							
	OEL	EU	275	50	550	100	Skin
	OEL	IRL		50		100	Skin
	WEL	UK		50		100	Skin
MESITYLENE	TLV-ACGIH			25			
	OEL	EU	100	20			
	OEL	IRL		20			
	WEL	UK		25			
1,2,4-TRIMETHYLBENZENE	TLV-ACGIH		123				
	OEL	EU	100	20			
	OEL	IRL		20			
	WEL	UK		25			
N-BUTYL ACETATE	TLV-ACGIH		713		950		
	OEL	IRL		150		200	
	WEL	UK		150		200	

8.2 Exposure controls.

As the use of adequate technical equipment must always take priority over personal protection equipment, make sure that the workplace is well aired through effective local aspiration or bad air vent. If such operations do not make it possible to keep the concentration of the product below the permitted workplace exposure thresholds a suitable respiratory tract protection must be used. See product label for hazard details during use.
Ask your chemical substance suppliers for advice when choosing personal protection equipment. Personal protection equipment must comply with the rules in force indicated below.
RESPIRATORY PROTECTION.
If workplace maximum concentration thresholds are exceeded, wear a partial facemask with an ABEK2P3 fume and powder mask (see standard EN 141).If no technical measures are defined, to limit worker exposure, airway protection equipment, such as masks with cartridges for organic fumes and for powders/dusts, must be used. Facemasks only provide limited protection.For high concentrations in the workplace or in the case of an emergency, when exposure levels are unknown, wear an open circuit compressed air self-respirator (see standard EN 137) or an external air intake respirator with mask, partial mask or snorkel (see standard EN 138).
HAND PROTECTION

Protect hands with category III (ref. Directive 89/686/EEC and standard EN 374) work gloves, such as those in PVA, butyl, fluoroelastomer or equivalent. The following should be considered when choosing work glove material: degradation, breakage times and permeation. Work glove resistance to preparations should be checked before use, as it can be unpredictable. Gloves' limit depends on the duration of exposure.
EYE PROTECTION
Wear protective airtight goggles (ref. standard EN 166).
SKIN PROTECTION
Wear category III professional long-sleeved overalls and safety footwear (ref. Directive 89/686/CEE and standard EN 344). Wash body with soap and water after removing overalls.
An emergency eye washing and shower system must be provided.

9. Physical and chemical properties.

Solid on weight		
colour		of folder
Solubility		soluble in solvent
Odour		of solvent
physical state		liquid
pH.		Not available.
Boiling point.		Not available.
Flash point.	<	21 °C.
Explosive properties.		Not available.
Vapour pressure.		Not available.
Specific gravity.		1,100 Kg/l

10. Stability and reactivity.

The product is stable in normal conditions of use and storage. When heated or in the event of a fire, carbon oxides may be released and vapours which are dangerous to health. The vapours may also form explosive mixtures with the air.

Xylene is stable but may give violent reactions if placed in contact with strong oxidants such as nitric acid, sulfuric acid, perchlorates and similar agents. It is biodegradable in water and decomposes in the sunlight (photodegradable).
1-methyl-2-methoxyethyl acetate: it is stable but in presence of air, it can gradually form peroxides which explode due to the rise in temperature. It can react violently with oxidizing agents and strong acids and alkaline metals. Avoid copper, aluminium and their alloys when storing. Store under inert atmosphere, repaired from humidity because it easily hydrolyses.
Nbutyl acetate easily decomposes with water especially when heated.

11. Toxicological information.

Acute effects: inhalation and cutaneous absorption of this product are harmful. This product may irritate mucosas, the upper respiratory tract, and eyes. Exposure symptoms may include: stinging and irritated eyes, mouth, nose, throat; cough, respiratory disorders, dizziness, headache, nausea and sickness.
In the most serious cases, inhalation of this product may cause larynx and bronchial tube edema and irritation, chemical pneumonia and pulmonary edema. Upon contact with skin, this product may irritate it, causing an increase in skin temperature, swelling and itchiness. Ingestion of even small amounts of this product may cause health problems (stomach pain, nausea, sickness, diarrhoea).

Xylene: has a toxic effect on the CNS (encephalopathies). Irritating to the skin, conjunctivae, cornea and respiratory apparatus.

TITANIUM DIOXIDE: oral LD50 (mg/kg) > 10000 (RAT).
2-METHOXY-1-METHYLETHYL ACETATE: oral LD50 (mg/kg) > 5000 (RAT) ; dermal LD50 (mg/kg) > 5000 (RAT).

12. Ecological information.

Use this product according to good working practices. Avoid littering. Inform the competent authorities, should the product reach waterways or sewers or contaminate soil or vegetation.

13. Disposal consideration.

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.
Waste transportation may be subject to ADR restrictions.
CONTAMINATED PACKAGING
Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

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 rail transport:

ADR/RID Class:	3	UN:	1263
Packing Group:	II		
Label:	3		
Nr. Kemler:	33		
Proper Shipping Name:	Paint or paint related material		
Special Provision:	640D		

Carriage by sea (shipping):

IMO Class:	3	UN:	1263
Packing Group:	II		
Label:	3		
EMS:	F-E	S-E	
Proper Shipping Name:	Paint or paint related material		

Transport by air:

IATA:	3	UN:	1263
Packing Group:	II		
Label:	3		
Cargo:			
Packaging instructions:	307	Maximum quantity:	60 L
Pass.:			
Packaging instructions:	305	Maximum quantity:	5 L
Special Instructions:	A3, A72		

15. Regulatory information.

Xn

HARMFUL

F

HIGHLY FLAMMABLE

R 11	HIGHLY FLAMMABLE.
R 20/21	HARMFUL BY INHALATION AND IN CONTACT WITH SKIN.
S 9	KEEP CONTAINER IN A WELL-VENTILATED PLACE.
S 16	KEEP AWAY FROM SOURCES OF IGNITION - NO SMOKING.
S 33	TAKE PRECAUTIONARY MEASURES AGAINST STATIC DISCHARGES.
S 36/37	WEAR SUITABLE PROTECTIVE CLOTHING AND GLOVES.
S 43	IN CASE OF FIRE, USE . . . (INDICATE IN THE SPACE THE PRECISE TYPE OF FIRE-FIGHTING EQUIPMENT. IF WATER INCREASES RISK, ADD - 'NEVER USE WATER`).

Contains: XYLENE (MIXTURE OF ISOMERS)

Contains: 2-BUTANONE OXIME
TINUVIN 5151

May cause allergic reactions.

Danger labelling under directives 67/548/EEC and 1999/45/EC and following amendments and adjustments.

Workers exposed to this chemical agent must not undergo health checks, provided that available risk-assessment data prove that the risks related to the workers' health and safety are modest and that the 98/24/EC directive is respected.

16. Other information.

Text of -R- phrases quoted in section 3 of the sheet.

R 10	FLAMMABLE.
R 20	HARMFUL BY INHALATION.
R 20/21	HARMFUL BY INHALATION AND IN CONTACT WITH SKIN.
R 36	IRRITATING TO EYES.
R 36/37/38	IRRITATING TO EYES, RESPIRATORY SYSTEM AND SKIN.
R 37	IRRITATING TO RESPIRATORY SYSTEM.
R 38	IRRITATING TO SKIN.
R 43	MAY CAUSE SENSITIZATION BY SKIN CONTACT.
R 51/53	TOXIC TO AQUATIC ORGANISMS, MAY CAUSE LONG-TERM ADVERSE EFFECTS IN THE AQUATIC ENVIRONMENT.
R 65	HARMFUL: MAY CAUSE LUNG DAMAGE IF SWALLOWED.
R 66	REPEATED EXPOSURE MAY CAUSE SKIN DRYNESS OR CRACKING.
R 67	VAPOURS MAY CAUSE DROWSINESS AND DIZZINESS.

GENERAL BIBLIOGRAPHY

1. Directive 1999/45/EC and following amendments;
2. Directive 67/548/EEC and following amendments and adjustments (technical adjustment XXIX);
3. Regulation (EC) 1272/2008 (CLP) of the European Parliament;
4. Regulation (EC) 1907/2006 (REACH) of the European Parliament;
5. The Merck Index. - 10th Edition;
6. Handling Chemical Safety;
7. Niosh - Registry of Toxic Effects of Chemical Substances;
8. INRS - Fiche Toxicologique (toxicological sheet);
9. Patty - Industrial Hygiene and Toxicology;
10. N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition;

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.

Changes to previous review.
The following sections were modified:
02 / 03 / 08 / 09 / 11 / 14 / 15 / 16