Section1. Identification

- **Product name :** Polyurethane Paint Hardener 2:1

Relevant identified uses of the substance or mixture and uses advised against

- **Identified uses :** Coating components for professional use.
- **Uses advised against :** This product is designed for metal and automotive application by professional painters only, in accordance with the manufactures' instructions specified in the technical data sheet.
- **Supplier's details :** EL-Mohandes Company for Trading & Manufacturing Chemicals
  Janaklis, Abu EL-Matamer Behira, EGYPT
  info@el-mohandes.com
- **Product information :** Product safety department
- **Emergency telephone number :** During regular working hours : 002 01021112629

Section 2. Hazards identification

- **OSHA/HCS status :** This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
- **Classification of the substance or mixture :**

FLAMMABLE LIQUIDS - Category 2
SKIN IRRITATION - Category 2
EYE IRRITATION - Category 2A
SKIN SENSITIZATION - Category 1
CARCINOGENICITY-Category 2

TOXIC TO REPRODUCTION (Fertility) - Category 2
TOXIC TO REPRODUCTION (Unborn Child)-Category 2
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE)(Respiratory Tract irritation)-Category 3
SPECIFIC TARGET ORGAN TOXICITY(SINGLE EXPOSURE)(Narcotic effects) - Category 3

Percentage of the mixture consisting of ingredient (s) of unknown acute oral toxicity : 6.1%
Percentage of the mixture consisting of ingredient (s) of unknown acute dermal toxicity : 17.8%
Percentage Of the Mixture Consisting Of Ingredient (s) of unknown acute inhalation toxicity : 17.8%

- **GHS label elements**
- **Hazard pictograms :**

Section 2. Hazards identification

- **Signal Word :** Danger
- **Hazard Statements :**
H225-Highly flammable liquid and vapor.
H319-Causes serious eye irritation.
H315-Causes skin irritation.
H317-May cause an allergic skin reaction.
H361-Suspected of damaging fertility or the fetal.
H351-Suspected of causing cancer.
H335 - May cause respiratory irritation.
H336-May cause drowsiness or dizziness.

Precautionary statements

- **prevention :**
P201- Obtain special instructions before usage.
P202 - Do not handle until all safety precautions have been read and understood.
P280- Wear protective gloves. Wear eye or face protection equipment. Wear protective clothing.
P210 - Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources.No Smoking.
P241-Use an explosion-proof electrical,ventilating,lighting and material handling equipment.
P242-Use only non-sparking tools.
P243-Take precautionary measures against static discharge.
P233-Keep container tightly closed.
P271-Use only outdoors or in a well-ventilated area.
P261-Avoid breathing vapor.
P264-Wash hands thoroughly after handling.
P272(OSHA)-Contaminated work clothing must not be allowed out of the workplace.

- **Response :**
P308+P313- If exposed or concerned : Get medical attention.
P304+P340+P312-IF INHALED : Remove the person to fresh air and keep comfortable for breathing.
Call a POISON CENTER or physician if you feel unwell.
P303+P361+P353 - If on skin (hair) :Take off immediately all contaminated clothing and rinse the skin with water or shower.
P302+P352+P363 - If on skin: Wash with plenty of soap and water.
Wash contaminated clothing before reuse.
P333+P313- If skin irritation or rash occurs : Get medical attention.
P305+P351+P338 - If in the eyes : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313- If eye irritation persists : Get medical attention.

- **Storage :** P 405-Store in a locked up place.
  P403-Store In a well-ventilated place.
  P235-Keep cool.
- **Disposal :** P501-Dispose of contents and container in accordance with all local, regional, national, and international regulations.
- **Hazards not other wise classified :**
  None known.

Section 3. Composition/information on ingredients

Ingredient Name	%	CAS number
n-butyl acetate	20-25	123-86-4
xylene	15-20	1330-20-7

Any concentration shown as a range is to protect confidentiality or is due to batch variation.
There are no additional ingredients present which, within the current knowledge of the supplier and in the concentration applicable, are classified as hazardous to the health or the environment and hence require reporting in this section.
Occupational exposure limits, if available, are listed in section 8.

Section 4. First aid measures

- **General information :** Symptoms of poisoning may even occur after several hours. Therefore medical observation for at least 48 hours after the accident is required.
- **After inhalation :** Supply fresh air; consult a doctor in case of complaints.
- **After skin contact :** Generally, the product does not irritate the skin.
- **After eye contact :** Rinse opened eye for several minutes under running water.
- **After swallowing :** If symptoms persist, consult doctor.

Section 5. Fire-fighting measures

- **Suitable extinguishing agents :**
  CO2, sand, and extinguishing powder. Do not use water.
- **For safety reasons unsuitable extinguishing agents :**
  Water with full jet
- **Protective equipment :** No special measures required.

Section 6. Accidental release measures

- **Person-related safety precautions :**
  Wear protective equipment. Keep unprotected persons away.
- **Measures for environmental protection :**
  Do not allow the product to reach sewage system or any water course.
  Inform respective authorities in case of seepage into water course or sewage system. Do not allow it to enter sewers/ surface or ground water.
- **Measures for cleaning/collecting :**
  Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
  Dispose contaminated material as waste according to item 13. Ensure adequate ventilation.
  Do not flush with water or aqueous cleansing agents.

Section 7. Handling and storage

- **Handling :**
- **Information for safe handling :**
  Ensure good ventilation/exhaustion at the workplace.
  Prevent formation of aerosols.

- **Information about fire - and explosion protection :**
  Keep ignition sources away - Do not smoke.
  Protect against electrostatic charges.

• **Storage :**
• **Requirements to be met by storerooms and receptacles :**

Store in a cool location.

• **Information about storage in one common storage facility :**

Not required.

• **Further information about storage conditions :**

Keep container tightly sealed.
Store in cool and dry conditions; in well-sealed receptacles.

Section 8. Exposure Controls/personal protection

Ingredient Name	Exposure Limits
123-86-4 n-butyl acetate	Short-term value: 966 mg/m^3, 200 ppm Long-term value: 724 mg/m^3, 150 ppm
1330-20-7 xylene	Short-term value: 441 mg/m^3, 100 ppm Long-term value: 220 mg/m^3, 50 ppm Sk; BMGV
1330-20-7 xylene	650 mmol/mol creatinine Medium: urine Sampling time: post shift Parameter: methyl hippuric acid

• **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, vapor, or dust concentrations below any lower explosive limits. Use an explosion-proof ventilation equipment.

• **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.

• **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. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
• **Eye/face protection :**	Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases, or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin protection

• **Hand protection :**	Chemical-resistant and impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during using that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for various glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
• **Body protection :**	Personal protective equipment for the body should be selected based on the task being performed and the risks involved. They should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the best protection from static discharges, clothing should include anti-static overalls, boots, and gloves.
• **Other skin protection :**	Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved. They should be approved by a specialist before handling this product.

• **Respiratory protection :** Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

Appearance	
Physical state :	Liquid.
Color :	According to product specification.
Odor :	Characteristic.
PH :	Not applicable.
Melting point :	Not applicable.
Boiling point :	124°C.
Flash point :	27°C
Point Evaporation rate :	Notavailable
Ignition temperature :	370°C
Lower and upper explosive :	Lower:1.2%
(flammable) limits :	Upper:7.5%
Vapor pressure :	29 hPa
Relative density :	0.94-0.96 g/cm^3

Section10. Stability and reactivity

- **Reactivity :** No specific test data related to reactivity available are for this product or its ingredients.
- **Chemical stability :** The product is stable.
- **Possibility of hazardous reactions :** Under normal conditions of storage and use, hazardous reactions will not occur.
- **Conditions to avoid :** Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapor to accumulate in low or confined areas.
- **Incompatible materials :** Reactive or incompatible with he following materials : Oxidizing materials
- **Hazardous decomposition products :** Under normal conditions of storage and use, hazardous decomposition of products should not happen.

Section 11. Toxicological information

Potential acute health the effects

- **Eye contact :** Causes serious eye irritation.
- **Inhalation :** Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.
- **Skin contact :** Causes skin irritation. May cause allergic skin reaction.
- **Ingestion :** Can cause central nervous system (CNS) depression.

Symptoms related to the physical, chemical, and toxicological characteristics.

- **Eye contact :** Adverse symptoms may include the following:
  Pain or irritation
  Watering
  Redness

• **Inhalation :**	Adverse Symptoms May Include The Following: Respiratory tract irritation Coughing Nausea or vomiting Headache Drowsiness /fatigue Dizziness/vertigo Unconsciousness Reduced fetal weight Increase in fetal deaths Skeletal malformations
• **Skin contact :**	Adverse symptoms may include the following : Irritation Redness Reduced fetal weight Increase fetal deaths Skeletal malformations
• **Ingestion :**	Adverse symptoms may include the following : Reduced fetal weight Increase in fetal deaths Skeletal malformations

Delayed, immediate effects, and chronic effects from short and long term exposure

Short term exposure

• **Potential immediate effects :**
Not available.

• **Potential delayed effects :**
Not available.

Long term exposure

• **Potential immediate effects :**
Not available.

• **Potential delayed effects :**
Not available.

• **Potential chronic health effects**
Not available.

• **General :**	Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
• **Carcinogenicity :**	Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.
• **Mutagenicity :**	No known significant effects or critical hazards.
• **Teratogenicity :**	Suspected of damaging the fetal.
• **Developmental effects :**	No known significant effects or critical hazards.
• **Fertility effects :**	Suspected of damaging fertility,

Numerical measures of toxicity Acute Toxicity estimates

Route	ATE value
Oral	5000 mg/kg (rat)
Dermal	12124 mg/kg (rabbit)
Inhalation(vapors)	5320 mg/l (mouse)

Section 12. Ecological information

There are no data available on the product itself. The product should not be allowed to enter drains watercourses, or waterways.

Section 13. Disposal considerations

• Disposal methods :

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions, and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional or local authority requirements.
Dispose the surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated materias to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way.

Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues.
Vapor from product residues may create a highly flammable or explosive atmosphere inside the container.
Do not cut, weld, or grind used containers unless they have been cleaned thoroughly and internally. Avoid dispersal of spilled material, run off and contact with soil, waterways, drains, and sewers.

Section 14.Transport information

	DOT Classification	TDG Classification	Mexico Classification	IMDG	IATA
UN number	UN1993	UN1993	UN1993	UN1993	UN1993
UN proper shipping name	PAINT	PAINT	PAINT	PAINT	PAINT
Transport hazard class(es)	3	3	3	3	3
Packinggroup	II	II	II	II	II
Environmental hazards	No.	No.	No.	Yes.	Yes.The environmentally hazardous substance mark is not required.

Section 15. Regulatory information

- **Labelling according to EU guidelines :**

  The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.

- **Code letter and hazard designation of product:**

  Xn Harmful
  F Highly flammable

- **Hazard-determining components of labelling :**

  Toluene

- **Risk phrases :**

  11 Highly flammable.
  48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation.
  63 Possible risk of harm to the fetal.
  65 Harmful: may cause lung damage if swallowed.
  67 Vapors may cause drowsiness and dizziness.

- **Safety phrases :**

  2 Keep out of reach of children.
  29/56 Do not empty into drains, dispose of this material and its container at hazardous or special waste collection point.
  36/37 Wear suitable protective clothing and gloves.
  46 If swallowed, seek medical advice immediately and show this container or label.

Section 16. Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Relevant phrases :**

  H226 Flammable liquid and vapour.
  H312 Harmful in contact with skin.
  H315 Causes skin irritation.
  H332 Harmful if inhaled.
  H336 May cause drowsiness or dizziness.

- **Department issuing MSDS :**

  Product safety department

• **Contact :** Mr. Emad

• **Abbreviations and acronyms :**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU) PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 3: Flammable liquids – Category 3
Acute Tox. 4: Acute toxicity – Category 4
Skin Irrit. 2: Skin corrosion/irritation – Category 2
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

طـريق الإسـكندرية القـاهرة الصحـراوي ، الكيلـو 71 ، جـناكـليس ، البـحيـرة - مصـر
ت 108 - 2 045 2452103 +2 | ف 2 045 2452101 +2
H Alexandria/Cairo Desert Road, Kilo 71, Janaklis, Abu El-Matamir, Behira, Egypt
P +2 045 2452103-108 | F +2 045 2452101
E info@el-mohandes.com | W www.el-mohandes.com