






## 1 Identification

- **Product identifier**
- **Trade name: H2232 2K HARDENER NORMAL**
- **Article number: H2232**
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
General Paint Co. SAL  
P.O. Box 7623  
Beirut  
LEBANON  
info@generalpaint.biz
- **Information department: Product safety department**
- **Emergency telephone number: 1-800-535-5053**

## 2 Hazard(s) identification

- **Classification of the substance or mixture**
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**
  -  Harmful  
Harmful by inhalation and in contact with skin. May cause sensitisation by inhalation.
  -  Irritant  
Irritating to eyes, respiratory system and skin.  
Flammable. Harmful to aquatic organisms.
- **Information concerning particular hazards for human and environment:**  
The product has to be labeled due to the calculation procedure of international guidelines.
- **Classification system:**  
The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.

---

- **Label elements**
- **Labelling according to EU guidelines:**  
The product has been classified and marked in accordance with directives on hazardous materials.
- **Code letter and hazard designation of product:**
  -  Harmful
- **Hazard-determining components of labeling:**  
Isophorone Diisocyanate homopolymer  
Homopolymer of hexamethylene diisocyanate
- **Risk phrases:**  
Flammable.  
Harmful by inhalation and in contact with skin.  
Irritating to eyes, respiratory system and skin.  
May cause sensitisation by inhalation.  
Harmful to aquatic organisms.
- **Safety phrases:**  
Keep locked up and out of the reach of children.

(Contd. on page 2)



**Trade name: H2232 2K HARDENER NORMAL**

(Contd. of page 1)

Do not breathe gas/fumes/vapour/spray (appropriate wording to be specified by the manufacturer).  
Do not empty into drains, dispose of this material and its container at hazardous or special waste collection point.  
Wear suitable protective clothing, gloves and eye/face protection.  
In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

- **Special labeling of certain preparations:**  
Contains isocyanates. See information supplied by the manufacturer.
- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



- **HMIS-ratings (scale 0 - 4)**



- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

**3 Composition/information on ingredients**

- **Chemical characterization: Mixtures**
- **Description:** Mixture of the substances listed below with nonhazardous additions.

· **Dangerous components:**

28182-81-2	Homopolymer of hexamethylene diisocyanate	25-50%
123-86-4	n-butyl acetate	25-50%
53880-05-0	Isophorone Diisocyanate homopolymer	10-25%
64742-95-6	Solvent naphtha (petroleum), light arom.	2.5-10%
108-65-6	2-methoxy-1-methylethyl acetate	2.5-10%
1330-20-7	xylene	2.5-10%

**4 First-aid measures**

- **Description of 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.
- **After inhalation:**  
Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.  
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:**  
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

(Contd. on page 3)



**Trade name: H2232 2K HARDENER NORMAL**

(Contd. of page 2)

- **After swallowing:** If symptoms persist consult doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed**  
No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

### 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** CO<sub>2</sub>, sand, extinguishing powder. Do not use water.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

### 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**  
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**  
Do not allow 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 to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**  
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
- **Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

### 7 Handling and storage

- **Handling:**
- **Precautions for safe handling**  
Ensure good ventilation/exhaustion at the workplace.  
Prevent formation of aerosols.
- **Information about protection against explosions and fires:**  
Keep ignition sources away - Do not smoke.  
Protect against electrostatic charges.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **Storage class:** 3

(Contd. on page 4)



**Trade name: H2232 2K HARDENER NORMAL**

(Contd. of page 3)

· **Specific end use(s)** No further relevant information available.

**8 Exposure controls/personal protection**

· **Additional information about design of technical systems:** No further data; see item 7.

· **Control parameters**

· **Components with limit values that require monitoring at the workplace:**

**123-86-4 n-butyl acetate**

PEL ()	Long-term value: 710 mg/m <sup>3</sup> , 150 ppm
REL ()	Short-term value: 950 mg/m <sup>3</sup> , 200 ppm Long-term value: 710 mg/m <sup>3</sup> , 150 ppm
TLV ()	Short-term value: 950 mg/m <sup>3</sup> , 200 ppm Long-term value: 713 mg/m <sup>3</sup> , 150 ppm

**108-65-6 2-methoxy-1-methylethyl acetate**

WEEL ()	Long-term value: 50 ppm
---------	-------------------------

**1330-20-7 xylene**

PEL ()	Long-term value: 435 mg/m <sup>3</sup> , 100 ppm
REL ()	Short-term value: 655 mg/m <sup>3</sup> , 150 ppm Long-term value: 435 mg/m <sup>3</sup> , 100 ppm
TLV ()	Short-term value: 651 mg/m <sup>3</sup> , 150 ppm Long-term value: 434 mg/m <sup>3</sup> , 100 ppm BEI

· **Ingredients with biological limit values:**

**1330-20-7 xylene**

BEI ()	1.5 g/g creatinine Medium: urine Time: end of shift Parameter: Methylhippuric acids
--------	----------------------------------------------------------------------------------------------

· **Additional information:** The lists that were valid during the creation were used as basis.

· **Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

- Keep away from foodstuffs, beverages and feed.
- Immediately remove all soiled and contaminated clothing.
- Wash hands before breaks and at the end of work.
- Avoid contact with the eyes and skin.

· **Breathing equipment:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

· **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

(Contd. on page 5)



**Trade name: H2232 2K HARDENER NORMAL**

(Contd. of page 4)

*Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation*

· **Material of gloves**

*The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.*

· **Penetration time of glove material**

*The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.*

· **Eye protection:**



*Tightly sealed goggles*

**9 Physical and chemical properties**

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

**Form:** Fluid

**Color:** Clear

· **Odor:** Characteristic

· **Odour threshold:** Not determined.

· **pH-value:** Not determined.

· **Change in condition**

**Melting point/Melting range:** Undetermined.

**Boiling point/Boiling range:** 124 °C (255 °F)

· **Flash point:** 25 °C (77 °F)

· **Flammability (solid, gaseous):** Not applicable.

· **Ignition temperature:** 370 °C (698 °F)

· **Decomposition temperature:** Not determined.

· **Auto igniting:** Product is not selfigniting.

· **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

· **Explosion limits:**

**Lower:** 1.2 Vol %

**Upper:** 7.5 Vol %

· **Vapor pressure at 20 °C (68 °F):** 10.7 hPa (8 mm Hg)

· **Density at 20 °C (68 °F):** 1.02848 g/cm<sup>3</sup> (8.583 lbs/gal)

· **Relative density** Not determined.

· **Vapour density** Not determined.

· **Evaporation rate** Not determined.

(Contd. on page 6)



**Trade name: H2232 2K HARDENER NORMAL**

(Contd. of page 5)

· <b>Solubility in / Miscibility with Water:</b>	Not miscible or difficult to mix.
· <b>Partition coefficient (n-octanol/water):</b>	Not determined.
· <b>Viscosity:</b>	
<b>Dynamic:</b>	Not determined.
<b>Kinematic:</b>	Not determined.
· <b>Solvent content:</b>	
<b>Organic solvents:</b>	47.1 %
<b>VOC content:</b>	47.1 % 484.1 g/l / 4.04 lb/gl
· <b>Solids content:</b>	52.9 %
· <b>Other information</b>	No further relevant information available.

### 10 Stability and reactivity

- **Reactivity**
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:**  
No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

### 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**

**64742-95-6 Solvent naphtha (petroleum), light arom.**

Oral	LD50	>6800 mg/kg (rat)
Dermal	LD50	>3400 mg/kg (rab)
Inhalative	LC50/4 h	>10.2 mg/l (rat)

- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Irritating effect.
- **Sensitization:** Sensitization possible through inhalation.

· **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:

Harmful  
Irritant

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**

1330-20-7	xylene	3
100-41-4	ethylbenzene	2B

(Contd. on page 7)



# Safety Data Sheet

acc. to OSHA HCS

Printing date 05/20/2014

Reviewed on 02/25/2014

Trade name: H2232 2K HARDENER NORMAL

(Contd. of page 6)

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

## 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Harmful to fish
- **Additional ecological information:**
- **General notes:**  
 Water hazard class 2 (Self-assessment): hazardous for water  
 Do not allow product to reach ground water, water course or sewage system.  
 Danger to drinking water if even small quantities leak into the ground.  
 Harmful to aquatic organisms
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

## 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**  
 Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

## 14 Transport information

- |                                  |            |
|----------------------------------|------------|
| · <b>UN-Number</b>               |            |
| · <b>DOT, ADR, IMDG, IATA</b>    | UN1263     |
| · <b>UN proper shipping name</b> |            |
| · <b>DOT</b>                     | Paint      |
| · <b>ADR</b>                     | 1263 Paint |
| · <b>IMDG, IATA</b>              | PAINT      |

(Contd. on page 8)



**Trade name: H2232 2K HARDENER NORMAL**

(Contd. of page 7)

· **Transport hazard class(es)**

· **DOT**



· **Class** 3 Flammable liquids.  
· **Label** 3

· **ADR, IMDG, IATA**



· **Class** 3 Flammable liquids  
· **Label** 3

· **Packing group**

· **DOT, ADR, IMDG, IATA** III

· **Environmental hazards:**

· **Marine pollutant:** No

· **Special precautions for user** Warning: Flammable liquids

· **Danger code (Kemler):** 30

· **EMS Number:** F-E,S-E

· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.

**15 Regulatory information**

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**  
· **Sara**

· **Section 355 (extremely hazardous substances):**

4098-71-9 3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate

· **Section 313 (Specific toxic chemical listings):**

1330-20-7 xylene

100-41-4 ethylbenzene

822-06-0 hexamethylene-di-isocyanate

4098-71-9 3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate

· **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

· **Proposition 65**

· **Chemicals known to cause cancer:**

100-41-4 ethylbenzene

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

(Contd. on page 9)





# Safety Data Sheet

acc. to OSHA HCS

Printing date 05/20/2014

Reviewed on 02/25/2014

**Trade name: H2232 2K HARDENER NORMAL**

(Contd. of page 8)

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

1330-20-7	xylene	I
100-41-4	ethylbenzene	D

· **TLV (Threshold Limit Value established by ACGIH)**

1330-20-7	xylene	A4
100-41-4	ethylbenzene	A3

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

· **Product related hazard informations:**

The product has been classified and marked in accordance with directives on hazardous materials.

· **Hazard symbols:**



Harmful

· **Hazard-determining components of labeling:**

Isophorone Diisocyanate homopolymer  
Homopolymer of hexamethylene diisocyanate

· **Risk phrases:**

Flammable.  
Harmful by inhalation and in contact with skin.  
Irritating to eyes, respiratory system and skin.  
May cause sensitisation by inhalation.  
Harmful to aquatic organisms.

· **Safety phrases:**

Keep locked up and out of the reach of children.  
Do not breathe gas/fumes/vapour/spray (appropriate wording to be specified by the manufacturer).  
Do not empty into drains, dispose of this material and its container at hazardous or special waste collection point.  
Wear suitable protective clothing, gloves and eye/face protection.  
In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

· **Special labeling of certain preparations:**

Contains isocyanates. See information supplied by the manufacturer.

· **Chemical safety assessment: A Chemical Safety Assessment has not been carried out.**

USA

(Contd. on page 10)



**Safety Data Sheet**  
acc. to OSHA HCS

Printing date 05/20/2014

Reviewed on 02/25/2014

**Trade name: H2232 2K HARDENER NORMAL**

(Contd. of page 9)

**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.*

- **Department issuing MSDS:** Product safety department
- **Contact:** Ms. Topaljikian

USA