

**1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING****1.1 product identifier**

Product code : KT301RVG01  
 Product name : RAPIDEV; 20KG

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

Product use : Developer for Lithographic film  
 Uses advised against : None known.

**1.3 Details of the supplier of the safety data sheet**

Manufacturer / Distributor : Flint Group,  
 Print Media Europe,  
 Varn House,  
 Northbank Industrial Park,  
 Irlam,  
 Greater Manchester,  
 M44 5BL  
 England.

e-mail address of person responsible for this SDS : compliance.centre@flintgrp.com

**1.4 Emergency telephone number (with hours of operation)**

+44 (0) 161 775 5412 (8:00 h - 17:00 h)

**History**

Date of printing : 28.08.2013.  
 Date of issue/ Date of revision : 17.08.2013.  
 Date of previous issue : 29.09.2010.  
 Version : 4

**2. HAZARDS IDENTIFICATION****Classification and labeling according to Regulation (EC) 1907/2006 (REACH)**

Classification and labeling have been determined according to EU Directives 67/548/EEC and 1999/45/EC (including amendments) and take into account the intended product use.

**2.1b Classification of the substance or mixture**

The product is classified as dangerous according to Directive 1999/45/EC and its amendments.

Classification : Carc. Cat. 3; R40  
 Muta. Cat. 3; R68  
 R43

Physical/chemical hazards : Not applicable.

Human health hazards : Limited evidence of a carcinogenic effect. Possible risk of irreversible effects.  
 May cause sensitization by skin contact.

Environmental hazards : Not applicable.

**2.2b Label elements**

Hazard symbol or symbols :



Harmful

Risk phrases : R40- Limited evidence of a carcinogenic effect.  
 R68- Possible risk of irreversible effects.  
 R43- May cause sensitization by skin contact.

RAPIDEV; 20KG

## 2. HAZARDS IDENTIFICATION

**Safety phrases** : S23- Do not breathe gas, fumes or vapor.  
S36/37- Wear suitable protective clothing and gloves.  
S60- This material and its container must be disposed of as hazardous waste.

**Contains** : 1,4-dihydroxybenzene

### 2.3 Other hazards which do not result in classification

Results of PBT and vPvB assessment: See sections 12 for details.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

### 3.2 Mixtures

Substances presenting a health or environmental hazard within the meaning of the Dangerous Substances Directive 67/548/EEC.

Chemical name	%	REACH Registration number	CAS number	EC number	Classification
sodium sulphite	5-10		7757-83-7	231-821-4	Xi; R37 R31 [1]
sodium carbonate	1-5	01-2119485498-19-XXXX	497-19-8	207-838-8	Xi; R36 [1]
1,4-dihydroxybenzene	1-2.5		123-31-9	204-617-8	Carc. Cat. 3; R40 [1] Muta. Cat. 3; R68 [2] Xn; R22 Xi; R41 R43 N; R50

See section 16 for the full text of the R-phrases declared above

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

[1] Substance classified with a health or environmental hazard

[2] Substance with a workplace exposure limit

[3] PBT-substance

[4] vPvB-substance

Occupational exposure limits, if available, are listed in section 8.

Hazardous ingredients / Classification according to Regulation (EC) 1272/2008 (CLP)

Chemical name	CAS number	Hazard statements	Classification
sodium sulphite	7757-83-7	May cause respiratory irritation. Contact with acids liberates toxic gas.	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) [Respiratory tract irritation] - Category 3
sodium carbonate	497-19-8	Causes serious eye irritation.	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2
1,4-dihydroxybenzene	123-31-9	Harmful if swallowed. Causes serious eye damage.  May cause an allergic skin reaction. Suspected of causing genetic defects.  Suspected of causing cancer. Very toxic to aquatic life.	ACUTE TOXICITY: ORAL - Category 4 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1 SKIN SENSITIZATION - Category 1 GERM CELL MUTAGENICITY - Category 2 CARCINOGENICITY - Category 2 AQUATIC TOXICITY (ACUTE) - Category 1

**RAPIDEV; 20KG**

## **4. FIRST AID MEASURES**

### **4.1 Description of first aid measures**

- Inhalation** : Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.
- Skin contact** : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.
- Eye contact** : Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Seek immediate medical attention/advice.
- Ingestion** : If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Give nothing by mouth. Do NOT induce vomiting.

Use suitable protective equipment (section 8).

### **4.2 Most important symptoms and effects, both acute and delayed**

See toxicological information (section 11)

### **4.3 Indication of any immediate medical attention and special treatment needed**

In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and seek medical advice.

## **5. FIRE-FIGHTING MEASURES**

### **5.1 Extinguishing media**

- Suitable Extinguishing media** : Recommended:, alcohol-resistant foam, CO<sub>2</sub>, powders, water spray
- Extinguishing media not to be used** : Do not use water jet.

### **5.2 Special hazards arising from the substance or mixture**

Fire will produce dense black smoke. Exposure to decomposition products may cause a health hazard.

### **5.3 Advice for fire-fighters**

Appropriate breathing apparatus may be required. Cool closed containers exposed to fire with water. Do not release runoff from fire to drains or watercourses.

## **6. ACCIDENTAL RELEASE MEASURES**

### **6.1 Personal precautions, protective equipment and emergency procedures**

Exclude sources of ignition and ventilate the area.

Avoid breathing vapor or spray. Refer to protective measures listed in sections 7 and 8.

### **6.2 Environmental precautions**

Do not allow to enter drains or watercourses. If the product contaminates lakes, rivers, or sewers, inform the appropriate authorities in accordance with local regulations.

### **6.3 Methods and materials for containment and cleaning up**

Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Preferably clean with a detergent. Avoid using solvents.

### **6.4 Reference to other sections**

Note: see section 8 for personal protective equipment and section 13 for waste disposal.

## **7. HANDLING AND STORAGE**

### **7.1 Precautions for safe handling**

Keep container tightly closed. Avoid contact with skin and eyes. Avoid inhalation of vapor, spray or mist. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Put on appropriate personal protective equipment (see section 8). Always keep in containers made from the same material as the original one. Comply with the health and safety at work laws.

### **7.2 Conditions for safe storage, including any incompatibilities**

**RAPIDEV; 20KG**

## 7. HANDLING AND STORAGE

Store in accordance with all local, regional, national and international regulations.  
 Store in a dry, cool and well-ventilated area, away from incompatible materials (see section 10).  
 Observe label precautions. Keep container tightly closed and in a well-ventilated place.

Prevent unauthorized access. Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

### 7.3 Specific end use(s)

Not applicable.

### 7.4 Additional information

Not applicable.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters

Ingredient name	Occupational exposure limits
1,4-dihydroxybenzene	<b>EH40/2005 WELs (United Kingdom (UK), 12/2011).</b> TWA: 0.5 mg/m <sup>3</sup> 8 hour(s).

**Other Exposure limits** : CMR: See toxicological information (section 11)

### 8.2 Exposure controls

Provide adequate ventilation. Where reasonably practicable, this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and solvent vapors below the OEL, suitable respiratory protection must be worn.

#### Individual protection measures

**Respiratory system** : If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators.

**Skin and body** : Personnel should wear protective clothing.

**Hands** : The user must check that the final choice of type of glove selected for handling this product is the most appropriate and takes into account the particular conditions of use, as included in the user's risk assessment.

For prolonged or repeated handling, use the following type of gloves:

Recommended:

4-8 hours: polyethylene (PE) or Viton gloves.

References: <http://www.esig.org/en/library/publications/best-practice-guides>

**Eyes** : Use safety eyewear designed to protect against splash of liquids.

#### Environmental exposure controls

Do not allow to enter drains or watercourses.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

#### Appearance

- Physical state** : Liquid.
- Color** : Yellow.
- Odor** : Characteristic.
- Odor threshold** : Not available.
- pH** : 10.6
- Melting point** : Not available.
- Boiling point** : >= 100 °C
- Flash point** : Closed cup: > 100°C [theoretical]
- Evaporation rate** : Not available.

RAPIDEV; 20KG

**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Flammability (solid, gas)</b>	: Not applicable.
<b>Burning time</b>	: Not applicable.
<b>Burning rate</b>	: Not applicable.
<b>Explosion limits</b>	
<b>Lower:</b>	: Not available.
<b>Upper:</b>	: Not available.
<b>Vapor pressure</b>	: < 23 hPa
<b>Vapor density</b>	: Not available.
<b>Density</b>	: ~ 1.1 g/cm <sup>3</sup>
<b>Solubility</b>	: Soluble in water in any proportion.
<b>Octanol/water partition coefficient</b>	: Not available.
<b>Auto-ignition temperature</b>	: Not available.
<b>Decomposition temperature</b>	: Not available.
<b>Viscosity</b>	: Not available.
<b>Explosive properties</b>	: Not available.
<b>Oxidizing properties</b>	: Not available.

**9.2 Other information**

<b>SADT</b>	: Not available.
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**10. STABILITY AND REACTIVITY****10.1 Reactivity**

Not available.

**10.2 Chemical stability**

Stable under recommended storage and handling conditions (see section 7).

**10.3 Possibility of hazardous reactions**

Not available.

**10.4 Conditions to avoid**

When exposed to high temperatures may produce hazardous decomposition products.

**10.5 Incompatible materials**

Keep away from the following materials to prevent strong exothermic reactions:  
oxidizing agents, strong alkalis, strong acids

**10.6 Hazardous decomposition products**

Decomposition products may include the following materials:  
carbon monoxide, carbon dioxide, smoke, oxides of nitrogen

**11. TOXICOLOGICAL INFORMATION****11.1 Information on toxicological effects**

There is no data available on the preparation itself. The preparation has been assessed following the conventional method of the Dangerous Preparations Directive 1999/45/EC and classified for toxicological hazards accordingly. See sections 2 and 3 for details.

Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin. If splashed in the eyes, the liquid may cause irritation and reversible damage.

**Substances / Mixtures**

<b>Acute toxicity</b>	:
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Product/ingredient name	Result	Species	Dose	Exposure
sodium sulphite	LD50 Oral	Rat	3560 mg/kg	-
sodium carbonate	LD50 Oral	Rat	4090 mg/kg	-
1,4-dihydroxybenzene	LD50 Oral	Rat	302 mg/kg	-

RAPIDEV; 20KG

## 11. TOXICOLOGICAL INFORMATION

<b>Irritation/Corrosion</b>	: Not available.
<b>Sensitization</b>	: May produce an allergic reaction. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
<b>Mutagenicity</b>	: Not available.
<b>Carcinogenicity</b>	: Not available.
<b>Reproductive toxicity</b>	: Not available.
<b>Specific target organ toxicity (single exposure)</b>	: Not available.
<b>Specific target organ toxicity (repeated exposure)</b>	: Not available.
<b>Aspiration hazard</b>	: Not available.
<b>Chronic toxicity</b>	: Not available.
<b>Teratogenicity</b>	: Not available.

### Other information

#### **Toxicokinetics**

<b>Absorption</b>	: Not available.
<b>Distribution</b>	: Contains material which may cause damage to the following organs: upper respiratory tract, skin, eyes, central nervous system (CNS).
<b>Metabolism</b>	: Not available.
<b>Elimination</b>	: Not available.

## 12. ECOLOGICAL INFORMATION

There is no data available on the preparation itself.  
Do not allow to enter drains or watercourses.

The preparation has been assessed following the conventional method of the Dangerous Preparations Directive 1999/45/EC and is not classified as dangerous for the environment but contains a substance or substances dangerous for the environment. See section 3 for details.

### 12.1 Toxicity data

Product/ingredient name	Result	Species	Exposure
sodium sulphite	Acute LC50 660000 ug/L Fresh water	Fish - Gambusia affinis - Adult	96 hours
sodium carbonate	Acute EC50 242000 ug/L Fresh water	Algae - Navicula seminulum	96 hours
	Acute LC50 176000 ug/L Fresh water	Crustaceans - Amphipoda	48 hours
	Acute LC50 265000 ug/L Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 300000 ug/L Fresh water	Fish - Lepomis macrochirus - 3.88 cm - 0.96 g	96 hours
1,4-dihydroxybenzene	Acute EC50 130 to 150 ug/L Fresh water	Daphnia - Daphnia magna - Larvae	48 hours
	Acute LC50 44 ug/L Fresh water	Fish - Oncorhynchus mykiss - 3.5 cm - 0.5 g	96 hours

### 12.2 Persistence/degradability

Not available.

### 12.3 Bioaccumulative potential

Not available.

### 12.4 Mobility in soil

Not available.

### 12.5 Results of PBT and vPvB assessment

<b>PBT</b>	: P: Not available. B: Not available. T: Not available.
<b>vPvB</b>	: vP: Not available. vB: Not available.

### 12.6 Other adverse effects

<b>AOX</b>	: The product does not contain organically bound halogens which could lead to an AOX value in waste water.
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RAPIDEV; 20KG

## 13. DISPOSAL CONSIDERATIONS

### 13.1 Waste treatment methods

Do not allow to enter drains or watercourses.

Dispose of according to all federal, state and local applicable regulations.

**Methods of disposal** : The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. 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 local authority requirements. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

**European waste catalogue (EWC)** : The European Waste Catalogue classification of this product, when disposed of as waste, is: 09 01 01\* water-based developer and activator solutions. If this product is mixed with other wastes, this code may no longer apply. If mixed with other wastes, the appropriate code should be assigned. For further information, contact your local waste authority.

**Hazardous waste** : The classification of the product may meet the criteria for a hazardous waste.

## 14. TRANSPORT INFORMATION

**Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

### International transport regulations

This product is not regulated for carriage according to ADR/RID, IMDG, ICAO/IATA.

**14.1 UN number** : Not applicable.

**14.2 Proper shipping name** : Not applicable.

**14.3 Transport hazard class(es)** : Not applicable.

**14.4 Packing group** : Not applicable.

**14.5 Environmental hazards** : Not applicable.

**14.6 Special precautions for user** : Not applicable.

### 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable.

## 15. REGULATORY INFORMATION

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

**EU regulations** : The product is classified as dangerous according to Directive 1999/45/EC and its amendments.  
See sections 2 and 3 for details.

**VOC content** : < 1 %

**Europe inventory** : All components are listed or exempted.

**Industrial use** : The information contained in this safety data sheet does not constitute the user's own assessment of workplace risks, as required by other health and safety legislation. The provisions of the national health and safety at work regulations apply to the use of this product at work.

### 15.2 Chemical Safety Assessment

This product contains substances for which Chemical Safety Assessments are still required.

**RAPIDEV; 20KG**

## 16. OTHER INFORMATION

**CEPE MSDS Code** : 8

**Full text of R-phrases referred to in sections 2 and 3 - Europe**

R40- Limited evidence of a carcinogenic effect.

R68- Possible risk of irreversible effects.

R22- Harmful if swallowed.

R41- Risk of serious damage to eyes.

R36- Irritating to eyes.

R37- Irritating to respiratory system.

R43- May cause sensitization by skin contact.

R31- Contact with acids liberates toxic gas.

R50- Very toxic to aquatic organisms.

**The information in this Safety Data Sheet is required pursuant to Annex II to Regulation (EC) No 1907/2006.**

**Date of issue/Date of revision** : 17.08.2013.

**Version** : 4

Indicates information that has changed from previously issued version.

### Notice to reader

The information in this SDS is based on the present state of our knowledge and on current laws. The product is not to be used for purposes other than those specified under section 1 without first obtaining written handling instructions. It is always the responsibility of the user to take all necessary steps to fulfill the demands set out in the local rules and legislation. The information in this SDS is meant to be a description of the safety requirements for our product. It is not to be considered a guarantee of the product's properties.