

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1. Product identifier

Product form : Mixture  
Product name : 1204  
Type of product : Hardener (Crosslinker)

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

#### 1.2.1. Relevant identified uses

Intended for general public  
Main use category : Industrial use  
Industrial/Professional use spec : Intended for general public  
Industrial  
Use of the substance/mixture : Laminating hardener, casting, injection, winding, infusion, gluing, foaming, coatings and sealants.

#### 1.2.2. Uses advised against

No additional information available

### 1.3. Details of the supplier of the safety data sheet

RESOLTECH  
249 AVENUE GASTON IMBERT Zone Industrielle de Rousset  
13790 ROUSSET - France  
T +33 (0) 4 42 95 01 95 (8h-12h & 14h-18h) - F +33 (0) 4 42 95 01 98  
[fds@resoltech.com](mailto:fds@resoltech.com) - [www.resoltech.com](http://www.resoltech.com)

### 1.4. Emergency telephone number

Emergency number : ORFILA (FRANCE) : +33 (0)1 45 42 59 59 (24h/24, 7j/7)

Country	Organisation/Company	Address	Emergency number	Comment
United Kingdom	National Poisons Information Service Edinburgh Royal Infirmary of Edinburgh	Little France Crescent EH16 4SA Edinburgh	0344 892 0111	
United Kingdom	Guy's & St Thomas' Poisons Unit Medical Toxicology Unit, Guy's & St Thomas' Hospital Trust	Avonley Road SE14 5ER London	+44 20 7188 7188	

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

#### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Acute toxicity (oral), Category 4 H302  
Skin corrosion/irritation, Category 1, Sub-Category 1B H314  
Skin sensitisation, Category 1 H317  
Hazardous to the aquatic environment — Chronic Hazard, Category 3 H412  
Full text of H statements : see section 16

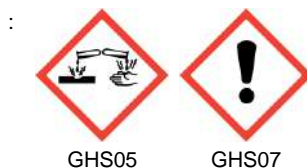
#### Adverse physicochemical, human health and environmental effects

No additional information available

## 2.2. Label elements

## Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP)



GHS05

GHS07

Signal word (CLP)

: Danger

Contains

: 3-aminomethyl-3,5,5-trimethylcyclohexylamine; Propylidynetrimethanol, propoxylated, reaction products with ammonia

Hazard statements (CLP)

: H302 - Harmful if swallowed.  
H314 - Causes severe skin burns and eye damage.  
H317 - May cause an allergic skin reaction.  
H412 - Harmful to aquatic life with long lasting effects.

Precautionary statements (CLP)

: P102 - Keep out of reach of children.  
P270 - Do not eat, drink or smoke when using this product.  
P271 - Use only outdoors or in a well-ventilated area.  
P273 - Avoid release to the environment.  
P280 - Wear protective gloves, protective clothing, eye protection.  
P301+P330+P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting.  
P304+P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.  
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation..

## 2.3. Other hazards

No additional information available

## SECTION 3: Composition/information on ingredients

## 3.1. Substances

Not applicable

## 3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Reaction products of di-, tri- and tetrapropoxylated propane-1,2-diol with ammonia	(CAS-No.) 9046-10-0 (EC-No.) 618-561-0 (REACH-no) 01-2119557899-12	40 – 80	Skin Corr. 1C, H314 Eye Dam. 1, H318 Aquatic Chronic 3, H412
3-aminomethyl-3,5,5-trimethylcyclohexylamine	(CAS-No.) 2855-13-2 (EC-No.) 220-666-8 (EC Index-No.) 612-067-00-9 (REACH-no) 01-2119514687-32	10 – 40	Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Oral), H302 Skin Corr. 1B, H314 Skin Sens. 1, H317 Aquatic Chronic 3, H412
Propylidynetrimethanol, propoxylated, reaction products with ammonia	(CAS-No.) 39423-51-3 (EC-No.) 500-105-6 (REACH-no) 01- 2119556886-20	10 – 40	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Eye Dam. 1, H318 Aquatic Chronic 2, H411

Full text of H-statements: see section 16

**SECTION 4: First aid measures****4.1. Description of first aid measures**

First-aid measures general	: In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. Allow affected person to breathe fresh air. Respiratory arrest: artificial respiration or oxygen. If unconscious place in recovery position and seek medical advice.
First-aid measures after skin contact	: Wash contaminated clothing before reuse. Take off contaminated clothes, wash skin with plenty of water or have a shower (during minimum 15 minutes) and if necessary take medical advice. If on skin and if skin irritation or rash occurs, seek medical advice and attention.
First-aid measures after eye contact	: Rinse immediately with plenty of water. Remove contact lenses, if present and easy to do. Continue rinsing. Continue to rinse eye with clean water for 20-30 minutes, retracting eyelids often. Consult an eye specialist if necessary.
First-aid measures after ingestion	: Rinse mouth. Do not induce vomiting because of corrosive effects. Immediately call a POISON CENTER/doctor.

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

Symptoms/effects after inhalation	: Cough. May cause respiratory irritation. Severe inhalation hazard.
Symptoms/effects after skin contact	: May cause moderate irritation.
Symptoms/effects after eye contact	: May cause moderate irritation, including burning sensation, tearing, redness or swelling. Risk of damage to eyes.
Symptoms/effects after ingestion	: May cause burns or irritation of the linings of the mouth, throat, and gastrointestinal tract.

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

For the Anti-poison Center indicate all the components including the non dangerous ones to obtain (when possible) a total of 100 %.

**SECTION 5: Firefighting measures****5.1. Extinguishing media**

Suitable extinguishing media	: Water spray. Foam. Dry powder. Carbon dioxide.
Unsuitable extinguishing media	: Do not use a heavy water stream.

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

Fire hazard	: Do not breathe fumes from fires or vapours from decomposition.
Hazardous decomposition products in case of fire	: Carbon dioxide. Carbon monoxide. Nitrogen oxides.

**5.3. Advice for firefighters**

Precautionary measures fire	: Evacuate personnel to a safe area. Do not enter fire area without proper protective equipment, including respiratory protection.
Firefighting instructions	: Exercise caution when fighting any chemical fire. Unauthorized persons are not admitted. Eliminate all ignition sources if safe to do so. Prevent fire fighting water from entering the environment.
Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection. Wear a self contained breathing apparatus. Special protective equipment for fire-fighters.

**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures**

General measures	: No open flames. No smoking. Spill should be handled by trained cleaning personnel properly equipped with respiratory and eye protection.
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**6.1.1. For non-emergency personnel**

No additional information available

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EC) No. 453/2010

### 6.1.2. For emergency responders

No additional information available

## 6.2. Environmental precautions

Avoid release to the environment. Notify authorities if liquid enters sewers or public waters.

## 6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Clean up any spills as soon as possible, using an absorbent material to collect it. Do not allow to enter drains or water courses.

## 6.4. Reference to other sections

Concerning personal protective equipment to use, see section 8. Concerning disposal elimination after cleaning, see section 13.

# SECTION 7: Handling and storage

## 7.1. Precautions for safe handling

Precautions for safe handling	: Provide good ventilation in process area to prevent formation of vapour. Avoid all unnecessary exposure. Do not handle until all safety precautions have been read and understood. Keep containers closed.
Hygiene measures	: Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace. Do not eat, drink or smoke when using this product. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

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

Storage conditions	: Store in original container. Store, if possible, in a cool, well ventilated place away from incompatible materials.
Incompatible products	: Strong acids. Oxidizing agent. Halogenated hydrocarbons.
Incompatible materials	: Heat sources.

## 7.3. Specific end use(s)

No additional information available

# SECTION 8: Exposure controls/personal protection

## 8.1. Control parameters

### 8.1.1 National occupational exposure and biological limit values

No additional information available

### 8.1.2. Recommended monitoring procedures

No additional information available

### 8.1.3. Air contaminants formed

No additional information available

### 8.1.4. DNEL and PNEC

No additional information available

### 8.1.5. Control banding

No additional information available

## 8.2. Exposure controls

### 8.2.1. Appropriate engineering controls

No additional information available

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## 8.2.2. Personal protection equipment

**Personal protective equipment:**

Self-contained breathing apparatus. Gloves. Gas mask. Protective clothing. Protective goggles. High gas/vapour concentration: gas mask with filter type K.

**Personal protective equipment symbol(s):**

## 8.2.2.1. Eye and face protection

**Eye protection:**

Chemical goggles or face shield

## 8.2.2.2. Skin protection

**Skin and body protection:**

Wear suitable protective clothing

**Hand protection:**

Nitrile-rubber protective gloves. Chemical resistant gloves (according to European standard NF EN 374 or equivalent)

## 8.2.2.3. Respiratory protection

**Respiratory protection:**

[In case of inadequate ventilation] wear respiratory protection. High gas/vapour concentration: gas mask with filter type K

## 8.2.2.4. Thermal hazards

No additional information available

## 8.2.3. Environmental exposure controls

**Consumer exposure controls:**

Avoid contact during pregnancy/while nursing.

**Other information:**

Do not eat, drink or smoke during use.

## SECTION 9: Physical and chemical properties

## 9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: colourless to slightly yellow.
Odour	: Amine-like.
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: 0.91
Solubility	: No data available

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Partition coefficient n-octanol/water (Log Pow)	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: 20 mPa·s
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No additional information available

### 10.2. Chemical stability

Stable in use and storage conditions as recommended in item 7.

### 10.3. Possibility of hazardous reactions

No additional information available

### 10.4. Conditions to avoid

Heat. Open flame. Sparks.

### 10.5. Incompatible materials

Strong acids. Oxidizing agent. metals. halogenated hydrocarbons.

### 10.6. Hazardous decomposition products

Carbon monoxide. Carbon dioxide. Nitrogen oxides.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

Acute toxicity (oral)	: Harmful if swallowed.
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

#### 1204

ATE CLP (oral)	1923.077 mg/kg bodyweight
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#### 3-aminomethyl-3,5,5-trimethylcyclohexylamine (2855-13-2)

LD50 oral rat	1030 mg/kg
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#### Reaction products of di-, tri- and tetrapropoxylated propane-1,2-diol with ammonia (9046-10-0)

LD50 oral rat	2885.3 mg/kg
LD50 dermal rabbit	2979.7 mg/kg
LC50 Inhalation - Rat (Vapours)	0.74 mg/l/4h

Skin corrosion/irritation	: Causes severe skin burns.
Serious eye damage/irritation	: Assumed to cause serious eye damage
Respiratory or skin sensitisation	: May cause an allergic skin reaction.
Germ cell mutagenicity	: Not classified

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Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified

## SECTION 12: Ecological information

## 12.1. Toxicity

Hazardous to the aquatic environment, short-term (acute)	: Not classified
Hazardous to the aquatic environment, long-term (chronic)	: Harmful to aquatic life with long lasting effects.

## 3-aminomethyl-3,5,5-trimethylcyclohexylamine (2855-13-2)

LC50 - Fish [1]	110 mg/l
EC50 - Crustacea [1]	23 mg/l
EC50 - Other aquatic organisms [1]	37 mg/l
EC50 72h - Algae [1]	> 50 mg/l

## Reaction products of di-, tri- and tetrapropoxylated propane-1,2-diol with ammonia (9046-10-0)

LC50 - Fish [1]	772.1 mg/l
EC50 - Crustacea [1]	418.34 mg/l
EC50 72h - Algae [1]	15 mg/l
ErC50 algae	15 mg/l

## 12.2. Persistence and degradability

No additional information available

## 12.3. Bioaccumulative potential

No additional information available

## 12.4. Mobility in soil

No additional information available

## 12.5. Results of PBT and vPvB assessment

Component	
Reaction products of di-, tri- and tetrapropoxylated propane-1,2-diol with ammonia (9046-10-0)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

## 12.6. Other adverse effects






No additional information available

**SECTION 13: Disposal considerations****13.1. Waste treatment methods**

No additional information available

**SECTION 14: Transport information**

In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
<b>14.1. UN number</b>				
UN 2735	UN 2735	UN 2735	UN 2735	UN 2735
<b>14.2. UN proper shipping name</b>				
AMINES, LIQUID, CORROSIVE, N.O.S.	AMINES, LIQUID, CORROSIVE, N.O.S.	Amines, liquid, corrosive, n.o.s.	AMINES, LIQUID, CORROSIVE, N.O.S.	AMINES, LIQUID, CORROSIVE, N.O.S.
<b>Transport document description</b>				
UN 2735 AMINES, LIQUID, CORROSIVE, N.O.S. (Reaction products of di-, tri- and tetrapropoxylated propane-1,2-diol with ammonia ; 3-aminomethyl- 3,5,5- trimethylcyclohexylamine), 8, II, (E)	UN 2735 AMINES, LIQUID, CORROSIVE, N.O.S. (Reaction products of di-, tri- and tetrapropoxylated propane-1,2-diol with ammonia ; 3-aminomethyl- 3,5,5- trimethylcyclohexylamine), 8, II	UN 2735 Amines, liquid, corrosive, n.o.s. (Reaction products of di-, tri- and tetrapropoxylated propane- 1,2-diol with ammonia ; 3- aminomethyl-3,5,5- trimethylcyclohexylamine), 8, II	UN 2735 AMINES, LIQUID, CORROSIVE, N.O.S. (Reaction products of di-, tri- and tetrapropoxylated propane-1,2-diol with ammonia ; 3-aminomethyl- 3,5,5- trimethylcyclohexylamine), 8, II	UN 2735 AMINES, LIQUID, CORROSIVE, N.O.S. (Reaction products of di-, tri- and tetrapropoxylated propane-1,2-diol with ammonia ; 3-aminomethyl- 3,5,5- trimethylcyclohexylamine), 8, II
<b>14.3. Transport hazard class(es)</b>				
8	8	8	8	8
				
<b>14.4. Packing group</b>				
II	II	II	II	II
<b>14.5. Environmental hazards</b>				
Dangerous for the environment : No	Dangerous for the environment : No Marine pollutant : No	Dangerous for the environment : No	Dangerous for the environment : No	Dangerous for the environment : No
No supplementary information available				

**14.6. Special precautions for user****Overland transport**

Classification code (ADR)	: C7
Special provisions (ADR)	: 274
Limited quantities (ADR)	: 1I
Excepted quantities (ADR)	: E2
Packing instructions (ADR)	: P001, IBC02
Mixed packing provisions (ADR)	: MP15
Portable tank and bulk container instructions (ADR)	: T11
Portable tank and bulk container special provisions (ADR)	: TP1, TP27
Tank code (ADR)	: L4BN
Vehicle for tank carriage	: AT

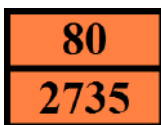


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Transport category (ADR) : 2  
Hazard identification number (Kemler No.) : 80  
Orange plates :



Tunnel restriction code (ADR) : E  
EAC code : 2X  
APP code : B

### Transport by sea

Special provisions (IMDG) : 274  
Limited quantities (IMDG) : 1 L  
Excepted quantities (IMDG) : E2  
Packing instructions (IMDG) : P001  
IBC packing instructions (IMDG) : IBC02  
Tank instructions (IMDG) : T11  
Tank special provisions (IMDG) : TP1, TP27  
EmS-No. (Fire) : F-A  
EmS-No. (Spillage) : S-B  
Stowage category (IMDG) : A  
Segregation (IMDG) : SG35

Properties and observations (IMDG) : Colourless to yellowish liquids or solutions with a pungent odour. Miscible with or soluble in water. When involved in a fire, evolve toxic gases. Corrosive to most metals, especially to copper and its alloys. Reacts violently with acids. Cause burns to skin, eyes and mucous membranes.

### Air transport

PCA Excepted quantities (IATA) : E2  
PCA Limited quantities (IATA) : Y840  
PCA limited quantity max net quantity (IATA) : 0.5L  
PCA packing instructions (IATA) : 851  
PCA max net quantity (IATA) : 1L  
CAO packing instructions (IATA) : 855  
CAO max net quantity (IATA) : 30L  
Special provisions (IATA) : A3  
ERG code (IATA) : 8L

### Inland waterway transport

Classification code (ADN) : C7  
Special provisions (ADN) : 274  
Limited quantities (ADN) : 1 L  
Excepted quantities (ADN) : E2  
Carriage permitted (ADN) : T  
Equipment required (ADN) : PP, EP  
Number of blue cones/lights (ADN) : 0

### Rail transport

Classification code (RID) : C7  
Special provisions (RID) : 274  
Limited quantities (RID) : 1L  
Excepted quantities (RID) : E2  
Packing instructions (RID) : P001, IBC02  
Mixed packing provisions (RID) : MP15  
Portable tank and bulk container instructions (RID) : T11  
Portable tank and bulk container special provisions (RID) : TP1, TP27  
Tank codes for RID tanks (RID) : L4BN  
Transport category (RID) : 2  
Colis express (express parcels) (RID) : CE6  
Hazard identification number (RID) : 80

### 14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

**SECTION 15: Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****15.1.1. EU-Regulations**

Contains no REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

Contains no substance subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

Contains no substance subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

**15.1.2. National regulations**

No additional information available

**15.2. Chemical safety assessment**

No additional information available

**SECTION 16: Other information****Indication of changes:**

Revision - See : \*.

Data sources : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Other information : Information in this safety data sheet is based on actual knowledge in our possession and our experience. This does not in any way excuse the user from knowing and applying all the regulations governing his activity. It is the sole responsibility of the user to take all precautions required in handling the product. It is the user's responsibility to take mentioned precaution measures and ensure that this information is complete and sufficient for the use of this product.

**Full text of H- and EUH-statements:**

Acute Tox. 4 (Dermal)	Acute toxicity (dermal), Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Chronic 2	Hazardous to the aquatic environment — Chronic Hazard, Category 2
Aquatic Chronic 3	Hazardous to the aquatic environment — Chronic Hazard, Category 3
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Skin Corr. 1B	Skin corrosion/irritation, Category 1, Sub-Category 1B
Skin Corr. 1C	Skin corrosion/irritation, Category 1, Sub-Category 1C
Skin Sens. 1	Skin sensitisation, Category 1
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

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This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.