

TIP TOP COROFLAKE 28 / TIP TOP COROFLAKE 28 T / TIP TOP COROFLAKE 28 ST
00359-1127

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

1.1. Product identifier

TIP TOP COROFLAKE 28 / TIP TOP COROFLAKE 28 T / TIP TOP COROFLAKE 28 ST

Art.-No.

Tip Top Coroflake 28: 590 0071, 590 0552
Tip Top Coroflake 28 T: 590 0072
Tip Top Coroflake 28 ST: 590 0490, 590 0760

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

Use of the substance/mixture

Coating material

1.3. Details of the supplier of the safety data sheet

TIP TOP Oberflächenschutz Elbe GmbH

Heuweg 4

D-06886 Wittenberg

Telephone: +49(0)3491/635-50

Telefax: +49(0)3491/635-552

Responsible for the safety data sheet: sds@gbk-ingelheim.de

1.4. Emergency telephone Emergency telephone :+49 (0) 6132 / 84463 (GBK Gefahrgut Buero GmbH, Ingelheim)
number:

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Indications of danger: Harmful

R phrases:

Flammable.

Harmful by inhalation.

Irritating to eyes and skin.

GHS classification

Hazard categories:

Flammable liquid: Flam. Liq. 3

Acute toxicity: Acute Tox. 4

Skin corrosion/irritation: Skin Irrit. 2

Serious eye damage/eye irritation: Eye Irrit. 2

Specific target organ toxicity - single exposure: STOT SE 3

Specific target organ toxicity - repeated exposure: STOT RE 1

Hazard Statements:

Flammable liquid and vapour.

Causes skin irritation.

Causes serious eye irritation.

Harmful if inhaled.

May cause respiratory irritation.

Causes damage to organs through prolonged or repeated exposure.

2.2. Label elements

Pictograms:

GHS02-GHS07-GHS08



Signal word:

Danger

Hazardous components which must be listed on the label

Styrene

Hazard statements

H226 Flammable liquid and vapour.

H315 Causes skin irritation.

TIP TOP COROFLAKE 28 / TIP TOP COROFLAKE 28 T / TIP TOP COROFLAKE 28 ST
00359-1127

| | |
|------|---|
| H319 | Causes serious eye irritation. |
| H332 | Harmful if inhaled. |
| H335 | May cause respiratory irritation. |
| H372 | Causes damage to organs through prolonged or repeated exposure. |

Precautionary statements

| | |
|----------------|--|
| P210 | Keep away from heat/sparks/open flames/hot surfaces. - No smoking. |
| P260 | Do not breathe vapour. |
| P280 | Wear protective gloves/protective clothing/eye protection/face protection. |
| P303+P361+P353 | IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. |
| P304+P340 | IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. |
| P305+P351+P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P405 | Store locked up. |

2.3. Other hazards

Vapours may form explosive mixture with air.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical characterization

Epoxide-vinyl ester-resin in styrene

Hazardous components

| EC No | Chemical name | Quantity |
|------------------|--|-----------|
| CAS No | Classification | |
| Index No | GHS classification | |
| REACH No | | |
| 202-851-5 | Styrene | 20 - 40 % |
| 100-42-5 | Xn - Harmful, Xi - Irritant R10-20-36/38 | |
| 601-026-00-0 | Flam. Liq. 3, Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3, STOT RE 1, Asp. Tox. 1; H226 H332 H315 H319 H335 H372 H304 | |
| 01-2119457861-32 | | |
| 201-204-4 | Methacrylic acid | < 2,5 % |
| 79-41-4 | C - Corrosive, Xn - Harmful R21/22-35 | |
| 607-088-00-5 | Acute Tox. 4, Acute Tox. 4, Acute Tox. 4, Skin Corr. 1A, STOT SE 3; H302 H312 H332 H314 H335 | |
| 01-2119463884-26 | | |
| 200-659-6 | Methanol | < 0,2 % |
| 67-56-1 | F - Highly flammable, T - Toxic R11-23/24/25-39/23/24/25 | |
| 603-001-00-X | Flam. Liq. 2, Acute Tox. 3, Acute Tox. 3, Acute Tox. 3, STOT SE 1; H225 H301 H311 H331 H370 | |
| 01-2119433307-44 | | |

Full text of R and H phrases: see Section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

Remove contaminated soaked clothing immediately.
In the event of persistent symptoms receive medical treatment.
Take away from danger area and lay down affected person.

After inhalation

Move to fresh air in case of accidental inhalation of vapours.
Seek medical treatment immediately.

After contact with skin

Wash off immediately with soap and plenty of water.
Treat subsequently with skin cream.
Consult a doctor if skin irritation persists.

TIP TOP COROFLAKE 28 / TIP TOP COROFLAKE 28 T / TIP TOP COROFLAKE 28 ST
00359-1127

After contact with eyes

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
Consult (eye) doctor immediately.

After ingestion

Do not induce vomiting.
Summon a doctor immediately.
Rinse out mouth and give plenty of water to drink.
Never give anything by mouth to an unconscious person.
Induce vomiting only upon the advice of a physician.

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

Harmful by inhalation.
Causes skin irritation.
Causes serious eye irritation.
May cause respiratory irritation.
Causes damage to organs through prolonged or repeated exposure. (the ear)

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

Treat symptoms.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Alcohol-resistant foam, dry chemical, carbon dioxide (CO₂), water-spray.

Extinguishing media which must not be used for safety reasons

Full water jet.

5.2. Special hazards arising from the substance or mixture

Fire may produce:
Carbon monoxide and carbon dioxide.
Irritant/corrosive, flammable as well as toxic distillation gases (carbonization gases).

5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective suit.

Additional information

Vapours are heavier than air and spread along ground.
The vapour/air mixture is explosive, even in empty, uncleaned receptacles.
Cool containers at risk with water spray jet.
Collect contaminated firefighting water separately, must not be discharged into the drains.
Fire residues and contaminated firefighting water must be disposed of in accordance with the local regulations.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

In case of vapour formation use respirator.
Ensure adequate ventilation.
Remove persons to safety.
Use personal protective clothing.
Keep away sources of ignition.

6.2. Environmental precautions

Do not discharge into the drains/surface waters/groundwater.

6.3. Methods and material for containment and cleaning up

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder).
Shovel into suitable container for disposal.

6.4. Reference to other sections

Observe protective instructions (see Sections 7 and 8).
Information for disposal look up chapter 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

TIP TOP COROFLAKE 28 / TIP TOP COROFLAKE 28 T / TIP TOP COROFLAKE 28 ST
00359-1127

Advice on safe handling

Keep container tightly closed.
Vapours are heavier than air and spread along ground.
Use only in thoroughly ventilated areas.
Provide suitable extraction at the processing machines.

Advice on protection against fire and explosion

Keep away from heat and sources of ignition.
Do not smoke.
Take precautionary measures against static discharges.
Use only explosion-proof equipment.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed in a dry, cool and well-ventilated place.
Pay attention to anti-explosion rules.
Avoid temperatures above 50°C.

Advice on storage compatibility

Incompatible with:
Oxidizing agents, Metal halogenides, Peroxides

Further information on storage conditions

Keep away from food, drink and animal feeding stuffs.

7.3. Specific end use(s)

Coating material

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits (EH40)

| CAS No | Substance | ppm | mg/m ³ | fibres/ml | Category | Origin |
|----------|------------------|-----|-------------------|-----------|---------------|--------|
| 79-41-4 | Methacrylic acid | 20 | 72 | | TWA (8 h) | WEL |
| | | 40 | 143 | | STEL (15 min) | WEL |
| 67-56-1 | Methanol | 200 | 266 | | TWA (8 h) | WEL |
| | | 250 | 333 | | STEL (15 min) | WEL |
| 100-42-5 | Styrene | 100 | 430 | | TWA (8 h) | WEL |
| | | 250 | 1080 | | STEL (15 min) | WEL |

8.2. Exposure controls

Occupational exposure controls

Ensure adequate ventilation, especially in confined areas.
Pay attention to explosion protection guidelines.

Protective and hygiene measures

Do not inhale vapours.
Wash hands before breaks and immediately after handling the product.
When using, do not eat, drink or smoke.
Treat subsequently with skin cream.
Remove and wash contaminated clothes before re-use.

Respiratory protection

In case of insufficient ventilation wear suitable respiratory equipment (gas filter type A).

Hand protection

Chemical protective gloves made of nitrile, nitrile/cotton, butyl or neoprene, with a minimum thickness of 0.7 mm, permeation time of approx. 480 minutes.

This recommendation refers exclusively to the chemical compatibility and the lab test conforming to EN 374 carried out under lab conditions.

Requirements can vary as a function of the use. Therefore it is necessary to adhere additionally to the recommendations given by the manufacturer of protective gloves.

Pls. find examples in the protective gloves database under: <http://bestglove.com/site/chemrest/>

TIP TOP COROFLAKE 28 / TIP TOP COROFLAKE 28 T / TIP TOP COROFLAKE 28 ST
00359-1127

Eye protection

Eye wash bottle with pure water.
Tightly fitting goggles.

Skin protection

Long sleeved clothing.
Solvent-resistant apron.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|-----------------|-----------|
| Physical state: | Liquid |
| Colour: | Yellowish |
| Odour: | Pungent |

Test method

Changes in the physical state

| | |
|-------------------------|---------------------------|
| Flash point: | 35 °C |
| Lower explosion limits: | 1,1 vol. % |
| Upper explosion limits: | |
| Ignition temperature: | 490 °C |
| Vapour pressure: | 6 hPa |
| (at 20 °C) | |
| Density: | < 1,2 g/cm ³ |
| Water solubility: | Immiscible |
| (at 20 °C) | |
| Viscosity / dynamic: | 2000 - 2500 mPa·s |
| Flow time: | > 40 s Ford beaker, no. 6 |

SECTION 10: Stability and reactivity

10.1. Reactivity

No decomposition if stored and applied as directed.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Reactions with oxidizing agents.
Reactions with peroxides.

10.4. Conditions to avoid

To avoid thermal decomposition, do not overheat.
Vapour/air mixtures are explosive at intensive warming.
Heating can release vapours which can be ignited.
Avoid temperatures above 50°C.
If heating up polymerisation.

10.5. Incompatible materials

Oxidizing agents, Metal halogenides, Peroxides

10.6. Hazardous decomposition products

Irritant/corrosive, flammable as well as toxic distillation gases (carbonization gases).
Carbon monoxide and carbon dioxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity

No toxicological data available.
Harmful by inhalation.
Styrene
LD50/oral/rat: 5000 mg/kg
LD50/dermal/rat: > 2000 mg/kg

TIP TOP COROFLAKE 28 / TIP TOP COROFLAKE 28 T / TIP TOP COROFLAKE 28 ST
00359-1127

LC50/inhalation/rat: 11,8 mg/l/4h

Irritation and corrosivity

Skin irritation: Irritant

Eye irritation: Irritant

Sensitising effects

Not classified.

Severe effects after repeated or prolonged exposure

STOT - Single exposure: Category 3 [May cause respiratory irritation.]

STOT - Repeated exposure: Category 1 [Causes damage to organs through prolonged or repeated exposure. (the ear)]

Aspiration hazard: Not classified.

Carcinogenic/mutagenic/toxic effects for reproduction

Carcinogenicity: Not classified.

Mutagenicity: Not classified.

Teratogenicity: Not classified.

Additional information on tests

Classification in compliance with the assessment procedure specified in the Regulation (EC) no 1272/2008.

Empirical data on effects on humans

Inhalation of high vapour concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.

Repeated or prolonged exposure may cause skin irritation and dermatitis, due to degreasing properties of the product.

SECTION 12: Ecological information

12.1. Toxicity

Ecological data are not available.

Styrene

LC50/Pimephales promelas/96 h = 4,02 mg/kg

EC50/Daphnia magna/48 h = 4,7 mg/kg

EC50/Pseudokirchneriella subcapitata/72 h > 4,9 mg/kg

12.2. Persistence and degradability

No data available.

12.3. Bioaccumulative potential

No data available.

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

According to Regulation (EC) No 1907/2006 (REACH) none of the substances, contained in this product are a PBT / vPvB substance.

12.6. Other adverse effects

Hazardous water pollutant.

Product is toxic to fish and their nutrient animals.

Further information

Do not flush into surface water or sanitary sewer system.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Advice on disposal

Can be incinerated, when in compliance with local regulations.

Where possible recycling is preferred to disposal.

Waste disposal number of waste from residues/unused products

080409 WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS; wastes from MFSU of adhesives and sealants (including waterproofing products); waste adhesives and sealants containing organic solvents or other dangerous substances
Classified as hazardous waste.

Contaminated packaging

Contaminated packaging should be emptied as far as possible and after appropriate cleansing may be taken for reuse.

Packaging that cannot be cleaned should be disposed of like the product.

TIP TOP COROFLAKE 28 / TIP TOP COROFLAKE 28 T / TIP TOP COROFLAKE 28 ST
00359-1127

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number: UN1866
14.2. UN proper shipping name: Resin solution
14.3. Transport hazard class(es): 3
14.4. Packing group: III
Hazard label: 3



Classification code: F1
Limited quantity: 5 L / 30 kg
Transport category: 3
Hazard No: 30
Tunnel restriction code: D/E

Other applicable information (land transport)

Viscous substance - excepted quantity if in containers with a capacity up to 450 l (subsection 2.2.3.1.5 ADR).

Inland waterways transport (ADN)

14.1. UN number: UN1866
14.2. UN proper shipping name: Resin solution
14.3. Transport hazard class(es): 3
14.4. Packing group: III
Hazard label: 3



Classification code: F1
Limited quantity: 5 L / 30 kg

Other applicable information (inland waterways transport)

Viscous substance - excepted quantity if in containers with a capacity up to 450 l (subsection 2.2.3.1.5 ADN).

Marine transport (IMDG)

14.1. UN number: UN1866
14.2. UN proper shipping name: Resin solution
14.3. Transport hazard class(es): 3
14.4. Packing group: III
Hazard label: 3



Limited quantity: 5 L / 30 kg
EmS: F-E, S-E

Other applicable information (marine transport)

Viscous substance - excepted quantity if in containers with a capacity up to 30 l (subsection 2.3.2.5 IMDG Code).

Air transport (ICAO)

UN/ID number: UN1866
14.2. UN proper shipping name: Resin solution
14.3. Transport hazard class(es): 3
14.4. Packing group: III
Hazard label: 3

TIP TOP COROFLAKE 28 / TIP TOP COROFLAKE 28 T / TIP TOP COROFLAKE 28 ST
00359-1127



| | |
|--|-------------|
| Limited quantity Passenger: | Y344 / 10 L |
| IATA-packing instructions - Passenger: | 355 |
| IATA-max. quantity - Passenger: | 60 L |
| IATA-packing instructions - Cargo: | 366 |
| IATA-max. quantity - Cargo: | 220 L |

14.5. Environmental hazards

Dangerous for the environment: no

14.6. Special precautions for user

Handle in accordance with good industrial hygiene and safety practice.

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

The transport takes place only in approved and appropriate packaging.

SECTION 15: Regulatory information

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

EU regulatory information

1999/13/EC (VOC): < 5 %; < 90 g/l

National regulatory information

Employment restrictions: Observe employment restrictions for young people. Observe employment restrictions for child bearing mothers and nursing.

Water contaminating class (D): 2 - water contaminating

15.2. Chemical safety assessment

For this substance a chemical safety assessment has not been carried out.

SECTION 16: Other information

Full text of R phrases referred to under Sections 2 and 3

| | |
|-------------|---|
| 10 | Flammable. |
| 11 | Highly flammable. |
| 20 | Harmful by inhalation. |
| 21/22 | Harmful in contact with skin and if swallowed. |
| 23/24/25 | Toxic by inhalation, in contact with skin and if swallowed. |
| 35 | Causes severe burns. |
| 36/38 | Irritating to eyes and skin. |
| 39/23/24/25 | Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed. |

Full text of H statements referred to under Sections 2 and 3

| | |
|------|---|
| H225 | Highly flammable liquid and vapour. |
| H226 | Flammable liquid and vapour. |
| H301 | Toxic if swallowed. |
| H302 | Harmful if swallowed. |
| H304 | May be fatal if swallowed and enters airways. |
| H311 | Toxic in contact with skin. |
| H312 | Harmful in contact with skin. |
| H314 | Causes severe skin burns and eye damage. |
| H315 | Causes skin irritation. |
| H319 | Causes serious eye irritation. |
| H331 | Toxic if inhaled. |
| H332 | Harmful if inhaled. |
| H335 | May cause respiratory irritation. |
| H370 | Causes damage to organs. |
| H372 | Causes damage to organs through prolonged or repeated exposure. |

Further Information

Data of items 4 to 8, as well as 10 to 12, do partly not refer to the use and the regular employing of the product (in this sense consult information on use and on product), but to liberation of major amounts in case of accidents and irregularities.

The information describes exclusively the safety requirements for the product(s) and is based on the present level of our



TIP TOP COROFLAKE 28 / TIP TOP COROFLAKE 28 T / TIP TOP COROFLAKE 28 ST

00359-1127

knowledge.

The delivery specifications are contained in the corresponding product sheet.

This data does not constitute a guarantee for the characteristics of the product(s) as defined by the legal warranty regulations.

(n.a. = not applicable; n.d. = not determined)

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)