Orica Mining Chemicals offer a wide range of flotation chemicals to assist our customer’s flotation process. These products are available off-the-shelf or can be tailored to meet individual needs and site requirements. The range of specialty collectors and frothers available to assist in the flotation process have been researched and formulated to ensure customers get the best flotation reagents for their ore type.

Orica’s technical team, with extensive experience in flotation and gold processing, are able to provide prompt and professional product support to customers.

**Collectors**

Collectors are used to make the mineral surface hydrophobic so the particles will attach to air bubbles on collision and float.

**Xanthates** are bulk sulphide collectors and are relatively inexpensive. Orica Mining Chemicals produce a number of xanthates, ranging from the weakest and most selective such as SEX to the strongest such as PAX where powerful non-selective flotation is needed. Products include SEX, SIPX, SIBX and PAX.

**Specialty collectors** are tailored by Orica Mining Chemicals to ensure specific site requirements are met. These collectors are neat and require no mixing on-site, allowing for ease-of-use and ensuring product reliability every time. Performance improvement results usually far outweigh any cost differential in providing the specialty product.

Specialised collectors include dithiophosphates and thionocarbamates as well as mercaptobenzothiazoles and mercaptans such as DSP 330 and DSP 033.

**Dithiophosphates** collectors are more selective than xanthates and do not require on-site mixing. Orica Mining Chemicals range includes DSP 012, DSP 007, DSP 013, each designed to collect gold.

**Thionocarbamates** are selective, easy to use collectors, designed specifically for copper minerals. The range includes DSP 009, DSP 110, DSP 032, DSP 120.

Blends can be specially formulated for individual needs and include DSP 017, DSP 020, DSP 052 and DSP 314, These blends have proven to be successful for customers with problematic ores that other collectors struggle with.

**Frothers**

Orica Mining Chemicals offer a wide range of frothers to create an ideal froth. The frothers are designed to be stable enough to float minerals until they make it to the launder, but weak enough to allow gangue minerals to drain back down into the pulp and out to the tail. Once the mineral is safely in the concentrate launder, the frother is then able to breakdown easily. To determine the most appropriate frother for each application, extensive laboratory testing and on-site customer trials are undertaken by Orica Mining Chemical’s technical team.

**MIBC** is the most commonly used frother in the industry. It has proven to be reliable for many different ores, especially when maximum selectivity is required.
Specialty – Weak
- **DSF 800** – Orica’s weakest frother. Being a Non-DG alcohol, it can be used as a safer alternative to MIBC due to its higher flash point. It produces a similar froth to MIBC.
- **DSF 004** – Is a medium to weak frother, suited for medium (optimum) sized particles. It is ideal where high recovery is needed at good concentration grade and has been used as an alternative to MIBC.

Specialty – Medium
- **DSF 109** – A frother ideal for copper and gold operations. Combines stability and drainage for recovery with excellent selectivity.
- **DSF 001** – Suitable for both coarse and fine particle feed sizes. Typical applications include roughing/scavenging in large capacity flotation cells.
- **DSF 802** – Medium to strong, robust frother. Suitable for a wide variety of gold and base metal ores including copper and nickel. Excellent in difficult water conditions.

Specialty – Strong
- **DSF 002** – Stronger than DSF 001. Ideal for gold and high sulphide content ores over a wide particle size range.
- **DSF 007** – Is the strongest of Orica’s frothers, producing a persistent froth with smaller bubbles from the same volume of air. Commonly used in coarse particle, flash and bulk sulphide flotation.

Proven Performance
Orica is the world’s largest supplier of commercial explosives and reagents to the mining industry. For more than a century, Orica has been at the forefront of product development and technical innovation. This technical expertise and experience is applied to advise on and develop solutions for the unique challenges faced by individual mines.

Technical Support
Orica strongly believes in continuous reagent development in partnership with customers. This is achieved through ongoing research and development to ensure the highest quality products are produced and new technology is implemented to deliver sustained benefits to customers. Continual monitoring and evaluation of customer requirements ensure Orica is able to adapt quickly to changing conditions and demand.

Orica has experienced metallurgists to help with the selection, design, laboratory testing and plant trialling of specialty reagents, as well as a team of technical staff with extensive experience in gold processing and flotation.

Safety, Health and Environment
Orica operates to the highest standard of safety, health and environment. This is guided by the vision ‘No Injuries to Anyone, Ever”. Orica is dedicated to maintaining a safe and healthy work environment for its employees and customers.

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The packaging and delivery methods used by Orica Mining Chemicals ensure that the highest level of product quality and safety is maintained during shipping. All packaging and transport methods comply with the ADG (Australian Dangerous Goods) Code and the IMDG (International Maritime Dangerous Goods) Code. All transport contractors used by Orica Mining Chemicals are required to be accredited to PACIA and are audited annually to ensure compliance with all appropriate procedures.

Further Information
Please visit [www.orica-miningchemicals.com](http://www.orica-miningchemicals.com) or contact the National Customer Service Centre
**Phone** 1300 550 063 (Australia only)
**Fax** 1300 555 070

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